Economic Report of the President



Transmitted to the Congress
February 2003

together with
THE ANNUAL REPORT
of the
COUNCIL OF ECONOMIC ADVISERS

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ECONOMIC REPORT
OF THE PRESIDENT

ECONOMIC REPORT OF THE PRESIDENT

To the Congress of the United States:

The economy is recovering from the effects of the slowdown that began in the middle of 2000 and led to the subsequent recession. The American economy has been hit hard by the events of the past three years, most tragically by the effects of the terrorist attacks of September 11, 2001. Our economy and investor confidence were hurt when we learned that some corporate leaders were not playing by the rules. The combined impact of these events, along with the three-year decline in stock values that impacted business investment, slowed growth in 2002. Despite these challenges, the economy's underlying fundamentals remain solid—including low inflation, low interest rates, and strong productivity gains. Yet the pace of the expansion has not been satisfactory; there are still too many Americans looking for jobs. We will not be satisfied until every part of our economy is vigorous and every person who wants a job can find one.

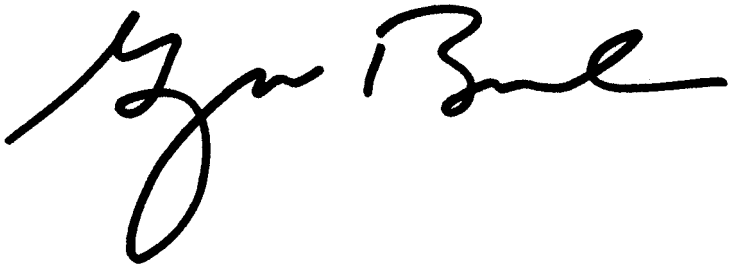
We are taking action to restore the robust growth that creates jobs. In January, I proposed a growth and jobs plan to add needed momentum to our economic recovery. We will accelerate the tax relief already approved by Congress and give it to Americans now, when it is most needed. Lowering tax rates and moving more Americans into the lowest tax bracket will help our economy grow and create jobs. Faster marriage tax relief and a faster increase in the child tax credit will especially help middle-class families, and should take effect now. We will take steps to encourage small business investment, helping them to expand and create jobs. We will end the unfair double taxation of corporate income received by individuals. By putting more money back in the hands of shareholders, strengthening investor

confidence in the market, and encouraging more investment, we will have more growth and job creation. These steps will allow Americans to keep more of their own money to spend, save, or invest. They will boost the economy, ensure that the recovery continues, and provide long-term economic benefits through higher productivity and higher incomes.

As our economy recovers, we also have an obligation to help Americans who have lost their jobs. That is why we extended unemployment payments for workers who lost their jobs and improved incentives for investment to create new jobs. I also proposed a bold new program of reemployment accounts to help workers searching for jobs.

Our commitment to a strong economy does not stop with these important steps. We will continue to strengthen investor confidence in the integrity of our markets. We will develop better ways to train workers for new jobs. We will make the Nation's regulations and tax code less onerous and more reflective of the demands of a dynamic economy, and expand opportunities for open trade and stronger growth in all nations, especially for emerging and developing economies.

Our Nation's economic progress comes from the innovation and hard work of Americans in a free market that creates opportunities no other system can offer. Government does not create wealth, but instead creates the economic environment in which risk takers and entrepreneurs create jobs. With the right policies focused on growth and jobs, strong economic fundamentals—and hard work—I am confident we will extend economic opportunity and prosperity to every corner of America.



THE WHITE HOUSE
FEBRUARY 2003

THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., January 29, 2003.

MR. PRESIDENT:

The Council of Economic Advisers herewith submits its 2003 Annual Report in accordance with the provisions of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Robert Glenn Hubbard
Chairman

Randall S. Kroszner
Member

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Overview

The events of 2002 brought new challenges for the U.S. economy and for America's economic policy. Efforts to strengthen homeland security and prosecute the war against terrorism placed new demands on the economy. The recovery from the 2000-01 economic slowdown continued, but with an unsatisfactory pace of job creation. These developments make it all the more important to undertake policies that promote growth, both in the United States and in the global economy.

Reliance on markets is key to enhancing growth. Thanks to the flexibility of markets, consumers, businesses, workers, and investors can continuously adapt to changing economic circumstances. The market constantly reshapes and redirects economic activity and economic output in response to changes in producers' supplies and costs and in consumers' incomes, demands, and the prices they face. In turn, the market itself evolves, as new information, new technologies, altered supplies, and other changes in the economic and physical environments pose new problems and open up new opportunities. Put simply, markets are dynamic.

This *Report* emphasizes the importance of dynamic markets in the U.S. economy and the need to design public policies so as to preserve and build on this dynamism. In particular, it discusses recent developments and policies in the areas of corporate governance, labor markets, regulation, taxation, and international economic development. It describes the lessons that have been learned from recognizing the dynamic flexibility of the U.S. economy, and how the President's policy initiatives are putting those lessons into practice, to foster economic growth and prosperity in the United States and around the world.

Assessing Macroeconomic Performance

Chapter 1 of the *Report* reviews the most important events for the economy in 2002. The components of aggregate demand—consumption, investment, government purchases, and net exports—are discussed in turn. Particular attention is paid to the valuation of the Nation's stock of productive assets and to the link between these asset values and demand. The chapter then discusses the near-term outlook for the economy and the outlook for productivity growth, because growth in productivity—output per worker—is the main influence on long-run growth and living standards.

The U.S. economy grew at an annual rate of 3.4 percent through the first three quarters of 2002. (The advance release for GDP in the last quarter of 2002 became available only after this *Report* went to press.) Although output rebounded after the terrorist attacks of September 2001, job growth during the recovery has remained unsatisfactory. However, the continued recovery in output over the past year, and especially the robust improvements in productivity, foreshadow a return to more vibrant job creation in the future.

The contraction of 2001, although one of the mildest on record, turned out to have started earlier and to have been more severe than data available before July 2002 had indicated. The revised data that became available at that time revealed that output had dropped moderately in each of the first three quarters of 2001 before the rebound began in late 2001 and early 2002. Output fell by a cumulative total of 0.6 percent from the peak at the end of 2000 to the trough in the third quarter of 2001, much less than in most previous recessions. The mildness of the recession—in spite of the effects of terrorist attacks, continued declines in the stock market, and concerns over corporate governance—reflects in large part the benefits derived from the flexibility of the market-driven U.S. economy.

Monetary and fiscal policy also provided support for demand in the face of these adverse developments. In 2001, faced with signs of a slowing of economic activity, the Federal Reserve reduced the target Federal funds rate 11 times during the year, for a total reduction of 4.75 percentage points, to 1.75 percent. The Federal Reserve then held the Federal funds rate steady through most of 2002, until a half-percentage-point cut on November 6 brought it down to 1.25 percent.

Recent U.S. fiscal policy has pursued the goal of promoting economic growth. Among the central components of a pro-growth fiscal policy are measures to limit the share of output commanded by the government, and measures to reduce disincentives to work, save, and invest. The Economic Growth and Tax Relief Reconciliation Act (EGTRRA), enacted in June 2001, lowered marginal tax rates for all taxpayers. This tax cut will have important incentive effects that will lead to higher incomes and improved long-term living standards. EGTRRA also provided important support for economic activity in the short term, because of the way in which the tax rate reductions were set in place and the timing of the act's passage.

On January 7, 2003, the President proposed a plan to enhance the long-term growth of the economy while supporting the emerging recovery. The President's plan would accelerate to January 1, 2003, many features of the 2001 tax cut that are currently scheduled to be phased in over several years (including reductions in marginal income tax rates, additional marriage penalty relief, a larger child credit, and a wider 10 percent income tax bracket); it would eliminate the double taxation of corporate income by excluding dividends from individual taxable income; it would increase to

$75,000 the expensing limit for small business investment; and it would provide $3.6 billion to the States to fund Personal Reemployment Accounts for unemployed workers (described below). The package would provide near-term support to investment and improve the long-term efficiency of capital markets, while at the same time insuring against a softening of consumption by putting more money in consumers' pockets.

Relatively slow economic growth in several countries that are important U.S. trading partners contributed to a widening of the U.S. current account deficit, a broad measure of the balance of the Nation's international goods and services transactions, in 2002. The current account is equivalent to the difference between net national investment and net national saving, and therefore a large current account deficit can reflect high investment, low saving, or both. It follows that there is no one "right" level for the current account balance. Indeed, the crucial question in assessing the current account is not how large it is, but instead whether investment is growing at a rate that supports higher income and improved living standards for American households. The foreign capital inflows that are the counterpart of the current account deficit are a potentially important way in which to fund this investment.

Improving Corporate Governance

Corporate governance is the system of checks and balances that serves to align the decisions of corporate managers with the desire of shareholders to maximize the value of their investments. It is a largely private sector activity built on the bedrock of the Nation's legal infrastructure. Good corporate governance can substantially reduce the costs to investors of delegating decisions to managers, as must inevitably occur when corporations obtain external financing. Good governance also contributes to the ability of U.S. corporations to maintain dispersed ownership and to the existence of well-developed financial markets. It enables corporations to compete more effectively in financial and product markets that have become increasingly global. The economy then benefits through more effective use of the available factors of production, including managerial talent, external capital, and natural and human resources. Importantly, strong corporate governance improves the attractiveness of corporate investments to households and other investors by more closely aligning managers' actions with investors' interests, and by making information about the corporation and the quality and diligence of its management more transparent to outsiders.

Chapter 2 of this *Report* examines the evolution of institutions for corporate governance in the United States. Last year was marked by important reforms in U.S. corporate governance, including new laws, government regulations,

and private sector initiatives. The reforms were in part a response to the failure of some managers and accountants to provide accurate information about corporate financial and operating performance—events that drew attention to possible weaknesses in the current system of governance.

In calling for reform in March of last year, the President articulated a plan based on three core principles of good corporate governance: accuracy and accessibility of information, accountability of management, and independence of external auditors. The plan recognizes both the complexity of modern corporate governance systems and their inherent flexibility. Its call for a careful reexamination of private governance customs and legal rules was followed by a series of private and public sector initiatives. These include stepped-up enforcement efforts by State and Federal Government authorities, facilitated by the President's creation of a Corporate Fraud Task Force in July to focus on conduct by managers and accountants that has been a source of concern. The President also signed the Sarbanes-Oxley Act in July, which the Securities and Exchange Commission is now implementing through a series of new regulations.

Under the Sarbanes-Oxley Act, a new regulatory body is being created to strengthen the incentives of auditors to meet their legal obligation to serve the interests of shareholders and other investors. The Securities and Exchange Commission must issue new disclosure regulations, including rules designed to make it easier for investors to gauge the incentives and performance of corporate managers. State governments are also instituting changes; State law is fundamental to the governance structures of corporations. Private sector organizations were among the first to respond to the President's call for reform. Self-regulatory organizations such as those that operate the Nation's stock exchanges contribute in important ways to the quality of U.S. corporate governance. Along with individual investor organizations, corporate officials, and others, these organizations have taken steps to strengthen U.S. corporate governance.

Even in the midst of these reforms, it is important to remember that change is not new to U.S. corporate governance. The U.S. system of corporate governance is designed to be flexible. This flexibility indeed accounts for its capacity to support economic growth over the decades, and for its strong global reputation. The chapter highlights the three main components of the U.S. corporate governance system: external governance mechanisms, internal corporate governance, and laws and regulations. External and internal corporate governance mechanisms serve to align managers' interests with those of shareholders and can adapt to changing market conditions. The surety provided by the U.S. legal system in upholding the contracts that investors enter into when they supply capital to corporations contributes to the flexibility of the corporate governance system. This framework, which relies

on both the flexibility of private institutions and the integrity of public institutions, remains in place throughout the present reforms and provides a model for other economies to follow.

Designing Dynamic Labor Market Policies

As noted above and in Chapter 1, employment growth during 2002 did not keep pace with the recovery in output. From December 2001 through December 2002, nonfarm payroll employment fell by 181,000, while the unemployment rate stayed between 5.5 and 6.0 percent. These statistics may give the impression of a static labor market. Yet dynamism remains the predominant characteristic of the labor market in the United States: in 2002 millions of workers found new jobs, started new businesses, and raised their earnings. Chapter 3 of this *Report* documents some important dimensions of these labor market dynamics and discusses their implications for employment and productivity growth and for the design of policy.

The mobility of workers—across jobs, up the opportunity ladder, and even in and out of employment—is one important dimension of a dynamic labor market and one of the great strengths of the U.S. labor market. American workers change jobs frequently, particularly during the first decade of their working lives, in part because doing so allows them to gain new experience and skills and, importantly, to increase their earnings—most earnings growth for younger workers comes about through job changes. For these new entrants, however, employment itself is the key aspect of this dynamic, because tenure on a job provides returns in terms of skill development and on-the-job training. This improvement in skills, in turn, makes possible the upward ratcheting effect through which movement between jobs contributes to increased earnings. Although staying on the ladder of upward mobility means maintaining an attachment to the labor market, it does not necessarily mean staying put in any one job. In a well-functioning labor market, there are large and constant flows between employment and unemployment, and a substantial number of jobs are created and destroyed each year. These large, bidirectional flows are further evidence of the flexibility of the U.S. economy, as expanding firms and industries take on more workers while those in decline contract their labor forces. Research shows that frequent job changes for the young are, in an important sense, the means through which individuals are matched to the jobs that will provide them with the best opportunities.

Government policies are more effective when they recognize and foster labor market mobility. Policies can support this mobility—and earnings growth—by encouraging skill development and education. Another important policy goal is to meet the desire of individuals for social insurance

against the adverse consequences of short-term macroeconomic fluctuations and personal misfortune. Policymakers face some difficult tradeoffs in designing social insurance, however, because the provision of insurance can itself distort behavior, making individuals less likely to enter employment or to exert full effort toward finding a job. As an example, for decades the Aid to Families with Dependent Children program provided insurance against destitution, but it also created a financial incentive for recipients to stay out of the work force. Welfare reform and the Earned Income Tax Credit are examples of policies that have supported individuals in time of need while also giving them incentives to enter the labor market and find jobs.

The Administration has proposed a new policy to foster skill development and increase the rewards associated with work for those unemployed workers who face the most difficulty in finding new employment. Qualifying workers would receive a Personal Reemployment Account, with funds to be used for expenses such as training, child care, or relocation. These accounts would be targeted to those unemployed workers who are deemed most likely to exhaust their unemployment benefits before finding a new job. Those who find a new job within 13 weeks would be entitled to a cash payment of the remaining funds in the account as a "reemployment bonus." Personal Reemployment Accounts thus would provide not only support for training and skill development, but also a monetary incentive for unemployed workers to find new jobs.

Developing Regulation for a Dynamic Economy

Competitive, efficient, and equitable markets are the cornerstone of a flexible and dynamic economy. Regulation of economic activity is an essential element of a market economy, but regulation can hinder economic growth and well-being just as it can advance them. Well-formulated regulation can lead to improved market outcomes, but regulation that is ill conceived or that is not cost-effective can have unintended consequences that actually make matters worse.

Chapter 4 of this *Report* illustrates how both the government and the private sector play critical roles in ensuring a flexible economic environment that promotes growth and prosperity by allowing economic resources to be redeployed as opportunities evolve. The chapter provides a framework for the evaluation of regulatory policies, focusing on Federal regulation and how it can foster or hinder economic dynamism.

Regulation stems from a number of needs. Some demands for regulation reflect a desire to improve the efficiency of markets rendered imperfect by

spillover effects, informational problems, or lack of competition. By compensating for or correcting these market imperfections, such regulation may enhance growth. Other demands for regulation, in contrast, reflect a desire to change market outcomes, for reasons that may be compassionate or selfish, far-sighted or opportunistic. Regulatory policy must identify and deny those demands for regulation that seek only economic rents for a privileged few, and instead be based on sound science and economics, along with a careful evaluation of the social needs behind the desire for regulation.

The chapter suggests some guidelines for evaluating both new regulations and proposed regulatory reforms that will help reduce the costs of regulation and achieve the best possible outcomes. When regulation is necessary, it should be flexible and market based, and the burden of each regulation should be justified by the benefits it confers. An important Administration initiative is the revision of the Office of Management and Budget's Guidelines for the Conduct of Regulatory Analysis and the Format of Accounting Statements. Conducted jointly by the Council of Economic Advisers and the Office of Management and Budget, this initiative stresses the principles of sound regulatory policy based on economic analysis.

Part of a complete understanding of the consequences of regulation is recognizing that the impact and efficacy of specific regulations can change over time with changes in technology, economic conditions, and scientific knowledge. The chapter provides several examples, one of which is the President's Clear Skies Initiative. Aimed at reducing power plant emissions of atmospheric pollutants, this program was designed in light of scientific evidence linking impairments of human health to exposure to certain polluting chemicals. Importantly, however, Clear Skies has also been crafted in such a way that economic incentives provide the mechanism for reduction of these pollutants at least cost to the economy.

Regulatory review and reform offer an important means for policymakers to control the buildup of regulatory costs and limit the economic harm of outdated regulations. Yet although many regulatory reforms have been clear successes, others have created new problems. Examples include the experience with reform of the savings and loan industry in the 1980s and the more recent experience with electricity markets in California. To avoid in the future the kinds of unsatisfactory outcomes that resulted from these episodes, regulatory reform should be guided by the same basic principles as the development of new regulations.

Analyzing Tax Policy

An efficient tax system adequately finances government activities while imposing as few distortions as possible on household and business decisions. A tax system with high marginal tax rates or a complicated structure impedes work effort and saving and hinders the risk taking and entrepreneurship that are the foundations of growth. Tax rates that are unequal across activities encourage tax avoidance and lead to potentially wasteful efforts at regulation, reporting, and monitoring to control it. Tax deductions, exclusions, and credits are often undertaken with the aim of targeting resources to worthwhile social goals, but they can create considerable complexity for taxpayers. They can also impose high effective tax rates in the range of income over which the tax benefits are gradually withdrawn, in some cases discouraging additional work effort among the very people the preferences were intended to help. The combined result of all of these imperfections can be a tax system that imposes significant compliance costs and wastes resources by misallocating them to nonproductive activities.

Chapter 5 of this *Report* considers how tax policy changes could improve economic growth and real incomes for all Americans. Such changes involve difficult questions of how best to balance the sometimes competing objectives of simplicity, fairness, and faster long-term growth. The chapter considers some approaches that economists have identified to achieve the gains of higher incomes and efficiency within the framework of the existing tax system. Even relatively modest changes can lead to important improvements in economic incentives and efficiency. In particular, the opportunity exists to reduce significant differentials in tax rates across different activities and to lower the tax on the return to capital, in ways that improve incentives. Small improvements in this regard can have large long-run effects, because saving and investment decisions made now will affect capital accumulation, technological change, and innovation for years to come.

The chapter discusses the President's proposal to abolish the double tax on corporate income. The current taxation of corporate income is an important example of how the current tax code falls short of the goal of taxing income only once. Taxing corporate income twice, once at the corporate and again at the individual level, reduces the after-tax reward to investing. It distorts corporate financing decisions, diminishes capital formation, and results in too little capital being allocated to the corporate sector. As a result, the capital stock grows more slowly than it could otherwise, lowering the productivity of workers and thus the growth of their real wages. The President's plan to eliminate this double taxation will boost long-term efficiency and support increased investment that will promote higher near-term growth and job creation.

Taxing all income once, but only once, would greatly improve the efficiency with which government revenue is raised. Tax preferences represent a policy decision to exclude some income from the tax base, but this poses a tradeoff: a higher overall tax rate is then required to raise a given amount of revenue—and the higher rate in turn increases the inevitable distorting effects of taxation on the economy. Even taxing all income just once, however, would leave in place the tax code's current distortion of the decision between current consumption and future consumption (that is, saving). A tax system based on consumption rather than income would remove this distortion, but it would also require a higher average tax rate than a system based on comprehensive income, because the consumption tax would have a smaller tax base (although it would be larger than the present income tax base). The benefits of a consumption tax would have to be weighed against the disincentive effects from this higher rate.

The chapter also discusses ways in which the dynamism of the U.S. economy affects the evaluation of tax policies. For example, the effect of the tax system on an individual taxpayer is not well represented by a one-year, static snapshot of his or her income. Rather, its impact changes significantly over time as the taxpayer proceeds through the stages of life and his or her earnings rise and fall. Earnings typically rise through the working years, as the individual gains experience and accumulates human capital, and then fall as the individual retires and exits the work force. One's tax bill is also affected by, among other things, changes in employment, marriage and divorce, having and raising children, giving to charity, starting up a business, and buying and selling assets. The ebbs and flows of the business cycle also have an impact. In evaluating the distribution of the tax burden and how changes in the tax code affect that distribution, it is therefore important to consider the full range of individuals' lifetime experiences. For example, a college student is likely to have little income today but will benefit from tax relief upon entering the labor force. Conversely, a working couple nearing retirement who currently pay the top marginal income tax rate would benefit today from a reduction in that rate, but they might benefit less in the future once they have retired and their income is lower. In short, because everyone's tax situation changes over time for a variety of reasons, proper analysis of the distribution of taxation must consider not just who will benefit from tax relief today but who will benefit in the future as well.

Promoting Global Growth

Chapter 6 of this *Report* examines how countries throughout the world can promote economic growth and thereby enhance the well-being of their people. In recent years many countries, especially in the developing world,

have experienced robust growth, which has led to reduced poverty, lower infant mortality, improved health outcomes, and longer life expectancy. Many others, however, have been far less successful at promoting growth and have not seen similar improvements in social indicators.

The central theme of the chapter is that all countries can experience faster growth by creating an economic environment in which market signals lead to better economic performance. Three principles guide these growth-oriented policy reforms. The first is economic freedom, in which encouraging competition and entrepreneurship leads to stronger growth. Economic freedom involves, among other things, a stable domestic macroeconomic environment with low inflation, appropriate government regulation, encouragement of entrepreneurial initiative, and openness to the global economy. The second pro-growth principle is governing justly. This involves safeguarding the rule of law, controlling corruption, and securing political freedom—all aspects of policy that are vital for developing trust in the accountability and reliability of government. The third principle is investing in people. These investments include those that promote the health and education of the population, making workers more productive.

No one of these principles is enough to guarantee strong growth; rather, all three are mutually reinforcing aspects of a pro-growth agenda. The specific policy measures that will implement these pro-growth principles similarly involve a number of elements: responsible fiscal and monetary policies, an appropriate size and role of government, domestic flexibility and internal competition, openness to the global economy, a healthy and educated population, and sound institutions. Countries that pursue a broad range of policies consistent with these principles perform better than those that do not. During the 1980s and 1990s, for example, those countries that were more open to the international economy grew much faster on average than those that were more closed.

The President has inaugurated three important policy initiatives designed to stimulate economic performance in countries around the world: trade liberalization initiatives negotiated pursuant to Trade Promotion Authority, which will promote countries' openness to international trade and investment; the Millennium Challenge Account, which will provide direct financial assistance to developing countries adopting pro-growth policies; and reform of the multilateral development banks, which will encourage private sector involvement in results-oriented development programs undertaken by the World Bank and the regional development banks.

Through these and other policies, the United States will help countries address the challenge of improving their economic growth. Ultimately, however, creating a pro-growth environment is up to each country's own people and government. The initiatives of the United States will help in

important ways, especially by reinforcing pro-growth decisions by governments and individuals. They are not, however, substitutes for the adoption of good policies in developing countries themselves, which are ultimately the key to success.

The pro-growth agenda embodied in these three policy initiatives will enhance growth and prosperity both at home and abroad. This is the most direct way to improve standards of living and thus the lives of people around the world.

Conclusion

The United States is recovering from both an economic downturn and the aftershocks of the terrorist attacks of September 2001. Government policies have aided this recovery in important ways, with support from both fiscal and monetary initiatives. Perhaps most important in ensuring recovery, however, has been the underlying flexibility and dynamism of the U.S. economy. In the midst of the downturn, workers continued to find new opportunities, savers continued to reallocate their funds in search of greater returns, and firms continued to regroup and to invest in future growth. The economic policies of the Administration will likewise continue to support this quest for growth, both here at home and around the world.

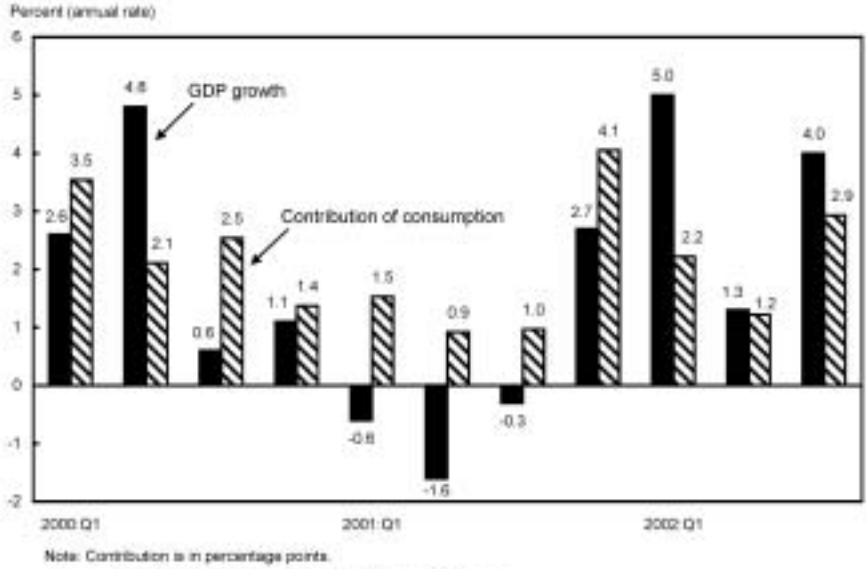
CHAPTER 1

Macroeconomic Performance in 2002

The U.S. economy solidified its forward progress in 2002, with the third quarter of the year marking the fourth consecutive quarter of economic growth. This progress followed a contraction in 2001 that was deeper and longer than initial data suggested, but still mild by historical standards. Real gross domestic product (GDP) declined by 0.6 percent during the first three quarters of 2001, about one-fourth the average percentage decline over the previous seven recessions. Growth resumed in the fourth quarter of 2001—despite the terrorist attacks in September—and real GDP rose at an annual rate of 3.4 percent in the first three quarters of 2002 (Chart 1-1). Although economic activity probably weakened in the fourth quarter, the ongoing improvement in productivity growth, together with lean inventories, foreshadowed a return to more normal levels of production and job growth in the quarters ahead.

The economic recovery of 2002 resulted from a constellation of factors, including the resiliency of the economy after the terrorist attacks and the

Chart 1-1 **GDP Growth and the Contribution of Consumption**
GDP expanded in 2002, in large part because of healthy gains in consumption expenditures.



Note: Contribution is in percentage points.
Source: Department of Commerce (Bureau of Economic Analysis)

lagged effects of stimulative monetary and fiscal policy in 2001. Although the Federal Reserve lowered the Federal funds rate only once in 2002—by half a percentage point on November 6—the 475-basis-point reduction over the course of 2001 continued to stimulate the economy throughout the year. (A basis point is 0.01 percentage point.) Monetary stimulus was complemented by fiscal stimulus, in the form of the tax rate reductions included in the Economic Growth and Taxpayer Relief Reconciliation Act of 2001 (EGTRRA) and the investment incentives in the Job Creation and Worker Assistance Act (JCWAA) of 2002. In the long run, EGTRRA's reductions in marginal tax rates will raise potential output by increasing labor supply and encouraging the entrepreneurial activities that are the building blocks of economic growth. In the short run, however, the tax cuts buoyed disposable income and helped keep consumption high. Robust consumption, in turn, was a crucial locus of strength in the overall economy, contributing an average of 2.1 percentage points to real GDP growth during the first three quarters of the year. Additionally, the tax incentives in JCWAA, which the President signed in March, provided needed support to investment at a time when stability in this component of final demand was especially important.

In 2002 discussions of both economic activity and economic policy paid particular attention to the valuation of the economy's stock of productive assets. One of the more favorable developments for many Americans in 2002 was the continued appreciation of their most important investment: their home. Housing prices rose 6.2 percent from the third quarter of 2001 to the third quarter of 2002, following an 8.7 percent increase in the same period a year earlier. As discussed below, housing values were buoyed not only by low mortgage interest rates, which reached levels not seen in more than a generation, but also by rising demand, continuing strength in purchases of second homes, and ongoing improvements in mortgage finance. Strength in housing values contributed to robust increases in residential investment, providing another important impetus to final demand in 2002.

In the aggregate, however, the appreciation in housing wealth was overshadowed by continued losses in the stock market. Like those for all of the world's major equity exchanges, U.S. stock indexes lost ground in 2002, continuing a general slide that began in the spring of 2000. From the market's high point in the first quarter of 2000 to the fourth quarter of 2002, stockholders lost nearly $7 trillion in equity wealth. These losses continued to weigh heavily on economic growth and job creation in 2002, by reducing the wealth of consumers and raising the cost of equity capital for investing firms. The precise reasons for the bear market of 2000-02 are subject to debate, but the market's 3-year slide was probably influenced by two general factors: a decline in expected profit growth and an increase in the premium that investors required to hold risky assets. These factors continued to play important roles

in the first three quarters of 2002 as the stock market continued its decline. Specifically, corporate accounting scandals called into question the reported profits of some firms, while risk premiums (as measured by the difference, or spread, between the yields of corporate bonds and those of U.S. Treasuries) rose to near-record levels. Although some observers attributed most of the market's decline to the corporate scandals, it is worth noting that equity prices fell around the world, even in countries with different accounting systems and governance institutions.

The stock market's decline has caused some to question the productivity improvements of the late 1990s. Yet even though investors may have overestimated the value of particular technology-intensive investments, it would be a mistake to infer that technological improvements hold little promise for future economic growth. Detailed analyses of the sources of productivity growth indicate that the post-1995 productivity improvement owes much to the U.S. economy's ability to profit from technological innovation. If technology continues to progress at its recent pace, rising productivity will continue to bring about improvements in living standards that compare quite favorably with the more modest gains of only one or two decades ago.

In the short run, however, economic growth is determined by demand factors as well as by the economy's technology and potential to supply goods and services. The next section discusses the individual components of GDP from the demand side. There and elsewhere in the chapter, the discussion pays particular attention to the links between asset markets (which set the prices for stocks, bonds, and houses) and the components of real aggregate demand (consumption, investment, government purchases, and net exports).

GDP and Its Components in 2002

Consumption

Consumption continued to be the prime locomotive for the recovery in 2002, rising at an annual rate of 3.0 percent over the first three quarters of the year. (GDP data for the fourth quarter were not yet available as this *Report* went to press.) Expenditure on consumer durables was especially strong, in large part because of strong motor vehicle sales. Zero-percent financing offers and other aggressive sales promotions sent automobile sales soaring to more than 18 million units at an annual rate in July and August. (Automobile sales were also especially strong in December.) Largely as a result, expenditure on consumer durables accounted for more than 1.7 percentage points of GDP growth in the third quarter. Consumption of nondurable goods was especially

strong in the first quarter, rising 7.9 percent at an annual rate, but tailed off afterward. Finally, consumption of services remained robust, accounting for about 1 percentage point of GDP growth in each of the first three quarters of the year.

Disposable Income and Consumption

In 2002 strength in consumption resulted in large part from strength in purchasing power, as low inflation, tax relief, and steady nominal income growth kept real disposable incomes high. On the price side, financing incentives reduced the effective cost of new cars, allowing motor vehicle sales to be a main driver of final demand in the middle of the year. Other categories with favorable price developments for consumers included food and beverages, where prices rose only 1.5 percent in 2002, and apparel, where prices declined 1.8 percent. On the income side, nominal personal income rose at an annual rate of 4.5 percent during the first three quarters of 2002, and tax cuts enacted the previous year allowed consumers to keep more of their income gains for themselves. The passage of EGTRRA in 2001 reduced Federal tax liabilities by about $56 billion in calendar year 2001 and about $78 billion in 2002, helping disposable personal income, or nominal income net of taxes, to rise at a robust annual rate of 9.0 percent during the first three quarters of the year. Taken together, low price inflation and healthy growth in nominal disposable personal income meant that real disposable personal income grew at an annual rate of 7.0 percent during the first three quarters of 2002, which compares well with past recoveries. Ultimately, the strong growth in real disposable income is a reflection of the high rate of productivity growth that the Nation continues to enjoy.

The Stock Market and Consumption

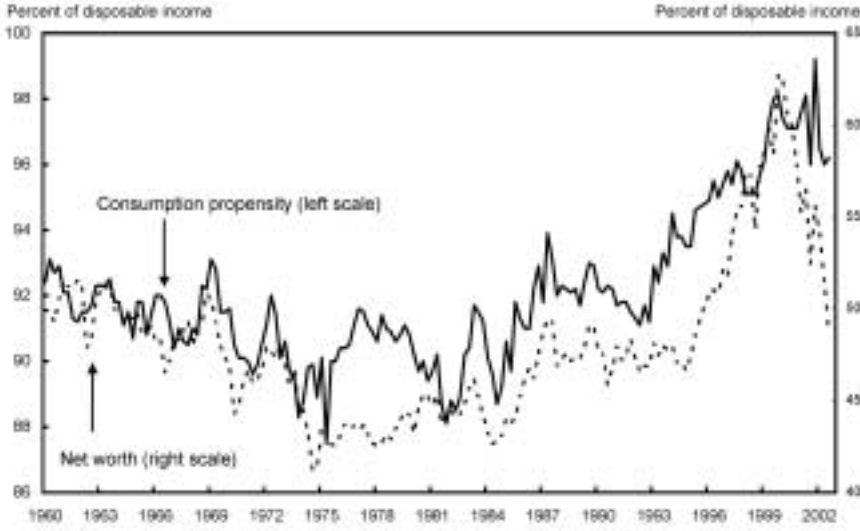
One of the most closely watched influences on consumption in 2002 was the stock market, as many observers feared that continued retrenchment in equity values would dampen consumers' willingness to spend. One link between the stock market and consumption arises from the market's role as an informal measure of the strength of the economy. Because consumers often look to the stock market for information about the health of the economy, consumer attitudes from survey data have long been closely correlated with stock indexes, and that correlation remained robust in 2002. Yet the stock market is much more than an informal economic barometer. Because equity holdings are an important component of household wealth, changes in the stock market affect consumers' ability to purchase goods and services, not just their views of the future.

Economists have long been interested in precisely how changes in stock prices affect consumption decisions. As a matter of accounting, an increase in

an individual's wealth (equities as well as other assets) must ultimately bring about an increase in his or her consumption, unless the extra wealth is to be passed on to heirs as a bequest. The important empirical question is whether the increase in consumption occurs quickly enough for wealth to affect consumption at short horizons. The empirical relationship between aggregate wealth and the average propensity to consume out of disposable income suggests that the answer is yes, at least according to evidence through 2000. Chart 1-2 shows that as household net worth rose in the late 1990s (primarily because of the increase in stock prices), the average propensity to consume increased to levels not seen in half a century. In more sophisticated analyses that take other determinants of consumption into account, aggregate data on wealth and consumption suggest that a one-dollar reduction in stock market wealth eventually reduces yearly consumption by 3 to 5 cents.

Although economic theory suggests a direct, causal impact of stock market wealth on consumption, patterns in aggregate data do not by themselves prove that this impact exists. Wealth and consumption might move together over time because both are determined by some third factor, such as expectations about the future. Indeed, the aggregate relationship between wealth and consumption does not appear to have been very strong in the past 3 years, as wealth has declined yet the average propensity to consume has remained stable. However, recent empirical analysis using individual-level data is generally supportive of the theoretical link between wealth and consumption (Box 1-1).

Chart 1-2 **Net Worth and Consumption Propensity**
During the past four decades, net worth and the propensity to consume out of disposable income have tended to move together in aggregate data.



Sources: Department of Commerce (Bureau of Economic Analysis) and Board of Governors of the Federal Reserve System.

Box 1-1. Measuring the Effect of Stock Market Wealth on Consumption

Economists have long recognized that a close relationship between wealth and consumption exists in aggregate data, but until recently attempts to find microeconomic evidence isolating a true causal relationship between the two variables have had limited success. Part of the reason is the general difficulty of finding evidence for macroeconomic relationships in microeconomic data. Data on individual consumers are often noisy, in that period-to-period changes in their consumption are influenced by a number of idiosyncratic factors. For example, a family's decision whether to buy a new car might be influenced by an increase in stock market wealth, but also by the arrival of a new baby or the decision of one family member to take a new job. The noise problem is compounded when available datasets measure certain crucial household variables imperfectly. Most individual-level datasets are adapted from surveys or administrative data that were not expressly designed to test economic theories, and so they often omit important information, such as precise measurements of wealth holdings or consumption choices.

The noise problem in microeconomic data becomes less important if the underlying changes in macroeconomic variables are large relative to any background idiosyncrasies and measurement errors. As an example, the large runup in stock prices before March 2000 gave researchers a valuable opportunity to observe the link between wealth and consumption at the individual level. One such study found that, from 1983 to 1999, U.S. households that owned stocks did tend to consume more when stock prices rose, whereas households that did not own stocks left their consumption patterns unchanged. A second study used another dataset and focused on the second half of the 1990s, when the increase in stock prices was most pronounced. This study attempted to identify, from a number of demographic factors, those U.S. households that were likely to hold stocks, and it found that these households were the ones that increased their consumption the most during this period. Studies such as these suggest that the aggregate relationship between wealth and consumption reflects at least in part a true causal component, so that the decline in aggregate stock market wealth would be expected to slow consumption growth somewhat after the market began to decline in 2000.

If one takes the midpoint of the range noted above for the relationship between changes in stock market wealth and changes in consumption (3 to 5 cents per dollar), the $7 trillion reduction in equity wealth since early 2000 would be expected to eventually lower yearly consumption by about $280 billion. A reduction of this magnitude would have represented nearly 4 percent of consumption and almost 3 percent of GDP in 2002.

Empirical findings also suggest that the response of consumption to changes in stock market wealth is drawn out over time, and this has crucial implications for the precise path of consumption over the next few years. Because one would expect that the appreciation of equities before 2000 would still be increasing consumption today, some of the implied $280 billion drop in consumption after 2000 may simply represent a "cancellation" of a consumption increase that had not yet taken place. Moreover, positive influences from the other determinants of consumption (such as current income and the continuing appreciation in housing wealth) are likely to offset the stock market's negative effects on personal spending. For these and other reasons, private forecasters predict that actual consumption will continue to grow in the years ahead, along with GDP.

The Housing Market and Consumption

Along with healthy growth of disposable income, another positive determinant of consumption growth in 2002 was the strength of the housing market. (The sources of this strength, discussed in more detail below, include record low mortgage rates and continued growth in housing demand, fueled in part by high immigration and the demand for second homes.) Housing wealth is more widely distributed among American families than stock market wealth, and housing equity continued to rise in 2002. A common way for this equity to support consumption is through borrowing against home equity: the outstanding value of revolving home equity loans at commercial banks rose from $155.5 billion in December 2001 to $212.3 billion in December 2002. Another way that homeowners can tap the equity in their homes, for higher consumption or for spending on home improvements, is by refinancing their outstanding mortgages when interest rates have fallen. Of course, simply refinancing a mortgage at a lower interest rate can reduce monthly mortgage payments and free up extra cash. Many refinancers, however, choose to remove equity from their homes by taking out a new mortgage with a larger principal than the amount outstanding on the original mortgage. These "cash-out" refinancings boomed in 2002 as a result of the continued appreciation in housing prices and declining long-term interest rates. According to the Federal Home Loan Mortgage Corporation (Freddie Mac), holders of conventional, conforming mortgages liquefied about $59 billion in equity in the first three quarters of 2002. It is impossible

to know for certain how this money was allocated among consumption, home improvements, the paying down of nonmortgage debts, and the purchase of other financial assets. Some survey research suggests, however, that about half of this $59 billion would be allocated toward consumption and home improvements (two sources of aggregate demand), which would have raised GDP by about 0.4 percent above its baseline level through the first three quarters of the year (Box 1-2).

Finally, housing equity can also be liquefied from the sale of an existing home. Typically, the buyer of a new home takes out a mortgage that is larger

Box 1-2. Measuring the Effect of Mortgage Refinancing on Consumption

Mortgage refinancings boomed in 2002 as interest rates fell and housing prices rose. Many refinancers chose a "cash-out" option that left them a pool of funds to spend after they retired their original mortgage. A key question is how consumers used these funds: spending on consumption or home improvements would add directly to aggregate demand, whereas paying down debts, making a purely financial investment, or paying taxes would not. Some new data released in 2002 showed that the potential effect of cash-out refinancing on aggregate demand was large. According to Freddie Mac, holders of conventional, conforming mortgages cashed out $110 billion through the first three quarters of 2002, and they used about half of the proceeds ($51 billion) to pay down second mortgages or home equity lines of credit. (A conforming mortgage is one that falls within the acceptance limit for securitization by Freddie Mac or Fannie Mae, which was $300,700 in 2002.) This left a maximum of $59 billion that could be used for spending that would boost aggregate demand. The amount of funds freed up by cash-out refinancing among holders of larger mortgages is not known precisely but would add to this total.

To learn more about how this liquefied equity is being used, the Federal Reserve has sponsored occasional surveys of households to ask how they spent funds obtained through cash-out refinancing. The most recent survey covered refinancings in 2001 and early 2002. The survey found that about 16 percent of liquefied equity was used for consumption and 35 percent for home improvements, for a total of 51 percent that would add to aggregate demand. (Another 26 percent of the funds was used to pay down nonmortgage debt, and the remaining 23 percent was used to fund investments in private businesses or financial securities or to pay taxes.) These percentages are almost identical to results from an earlier survey that covered refinancings in 1998 and early 1999, which also found that about half of liquefied equity

added to aggregate demand. Allocating 51 percent of the $59 billion in cashed-out equity to demand in the first three quarters of 2002 suggests an increase in GDP of about 0.4 percent.

One reason that only a portion of the liquefied funds added to aggregate demand is that many consumers do not need to borrow against their houses to finance their spending. By taking out a nonmortgage loan or by drawing down savings, these consumers are free to adjust month-to-month spending as they see fit. Some evidence that only "liquidity constrained" consumers spend much of the funds freed up by refinancing comes from another survey, which follows a sample of families over time and has often been used to study income dynamics in the United States. In addition to its standard questions on income and spending patterns, this survey has included some questions related to refinancing activity. Using these data, researchers found that, among those who refinanced from 1991 to 1994, spending increases were far more pronounced among families that were likely to have trouble borrowing from other sources.

than that retired by the seller. The increase in net debt is often close to the seller's capital gain on the house. From the economy's point of view, such a transaction allows the capital gain to be turned into liquidity, although the seller often uses this liquidity to purchase another home. If so, this type of equity liquefaction does not raise the seller's consumption of other goods, although it may raise residential investment if the new home purchase by the seller of the original house results in a net increase in housing construction.

Nonresidential Investment

Nonresidential investment was one of the weakest components of demand in 2002. In the first three quarters of the year, business fixed investment declined at an annual rate of 3.1 percent, in large part because of a precipitous 17.8 percent fall in investment in structures. The other, larger component of business fixed investment, equipment and software, fell at an annual rate of 2.7 percent in the first quarter of the year, but then rebounded to rise at an annual rate of 5.0 percent in the second and third quarters. In light of the weak investment performance, many observers wondered whether the economy suffered from a capital overhang, built up by excessive investment in the years immediately before the 2001 recession. As discussed in last year's *Report*, this possibility is hard to verify, because it requires an estimate of the "correct" amount of capital relative to the economy's output, a figure that is hard to know with certainty. Yet as the 2002 *Report* also noted,

some empirical evidence had emerged in 2001 indicating that a modest overhang had developed the previous year for some capital goods, notably servers, routers, switches, optical cabling, and large trucks. However, evidence that a widespread overhang continues to hinder overall investment outside of a few particular industries is harder to find. In any case, the growth rate of capital services has fallen sharply over the past 2 years, from an average of more than 5.9 percent a year from 1998 to 2000 to 3.6 percent in 2001 and about 3.4 percent in 2002. This low rate of growth means that any general capital overhang that had developed by 2000 is likely to have been significantly reduced by the end of 2002.

Another important business investment development in 2002 was the change in business inventories. In 2001 firms drew down $61.4 billion in real inventories (in 1996 dollars), but real inventory investment turned positive in the second and third quarters of 2002. Although the level of inventory investment remained modest, the change in that investment after the drawdown of 2001 added several percentage points to GDP growth, especially in the first quarter. As the year drew to a close, inventory-to-sales ratios remained close to their lowest levels in years, suggesting further room for inventory expansion in 2003.

Although the short-term outlook for investment in both inventories and equipment and software is positive, the outlook for investment in structures is more uncertain. One potential positive influence on structures investment going forward is the Congress' passage of a terrorism risk insurance bill in late 2002, which will facilitate the construction of projects that are difficult to insure privately against terrorist attacks. Yet vacancy rates for both office and industrial space remained high in 2002, suggesting that the rebound in structures investment may not begin for some time.

The Stock Market and Nonresidential Investment

As noted above, one of the factors depressing business investment in 2002 was the stock market. However, the link between the stock market and investment differs from that between the stock market and consumption. An individual firm's equity value is linked to its investment not because of wealth effects, but rather because stock prices and investment are both forward-looking variables. Technically, the stock price represents the value of the future stream of dividends to be paid by the firm, discounted by a required rate of return that is appropriate for risky assets. A firm with strong future investment prospects will attract investors hoping to share in the profits generated by the firm. As these investors bid up the stocks of companies with the best investment prospects, these firms will come to have the highest stock values. Indeed, in the simplest model of business finance, stock prices and investment potential are so closely correlated that no other information besides a firm's stock price is needed to predict its investment activity.

In such a world, a firm with a high stock price can easily fund its investment projects by issuing more equity, which investors willingly absorb if they believe that the firm's investment prospects are good. In what amounts to the same thing, firms may also borrow in the capital markets to finance investment, because lenders will be able to recognize firms with favorable prospects as good credit risks. In fact, in this textbook case, the choice between equity financing and debt financing does not matter to the value of the firm. It is true that equity financing is more flexible than debt financing, because the payment of dividends is under the control of the firm, whereas the schedule of interest payments on debt is fixed at the time of the borrowing. But if individual stockholders as well as firms can borrow and lend freely in credit markets, a firm will be unable to increase its overall value simply by changing its mix of debt and equity financing. For example, a firm can raise its expected earnings per share by repurchasing some of its outstanding shares with borrowed money. But increasing the firm's exposure to credit markets in this way makes ownership in the firm riskier, which reduces the willingness of investors to hold equity in the firm. The net result is that the overall value of the firm does not increase. The firm's debt-for-equity switch affects only the fraction of its cash flows allocated toward creditors rather than shareholders. The firm's ability to carry out "real" investment projects is the same as before.

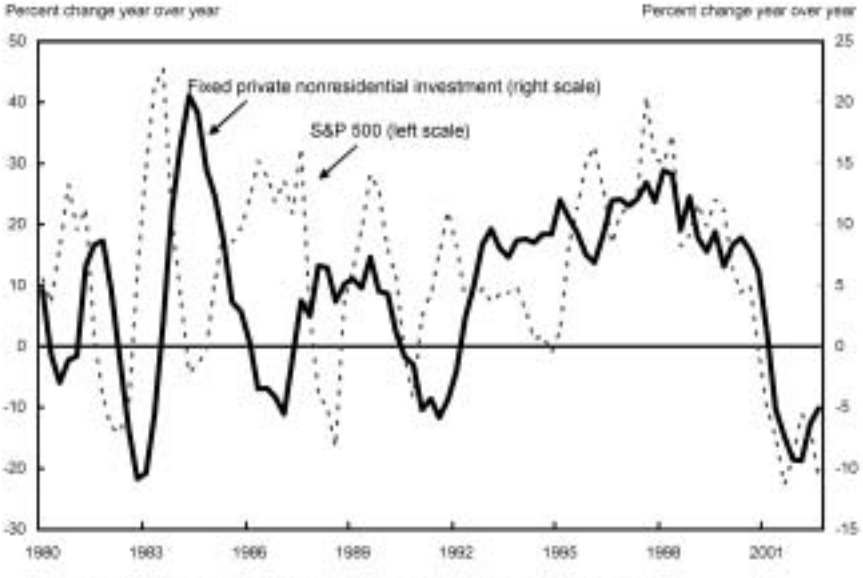
Although the U.S. stock market does provide useful signals for overall investment, the real world diverges from the textbook model in important ways. One set of complications arises because managers of the firm are typically better informed about the firm's prospects than outside investors. The resulting informational asymmetry prevents investors from attaching values to firms that perfectly reflect the firms' investment prospects, so that the close correlation between stock market values and investment found in the textbook model is lost. Another consequence of informational differences is that firms must often fund investment from internal sources (such as retained earnings or cash flow) rather than external sources (such as issuing equity or borrowing in credit markets).

A second set of complications in the financing of investment is due to the income tax. Firms are allowed to deduct interest payments as part of the cost of doing business, but dividends paid to stockholders are not granted equal treatment. As a consequence, dividend income is taxed twice, once at the corporate level and again at the level of the individual dividend recipient. This double taxation of dividends makes new equity financing less attractive to firms than debt financing. Moreover, if investors and managers do not share the same information, the resulting reliance on debt financing can have damaging consequences for investment during economic downturns. One concern is that the inflexibility of interest payments, relative to dividends, means that a recession could cause widespread liquidity problems among borrowing firms. A second problem is that, when aggregate conditions

worsen, lenders with incomplete information about firms may reduce credit to firms that are good credit risks as well as those that are bad risks. The resulting credit crunch may depress business investment by more than the economic fundamentals would warrant.

These general principles of investment and corporate finance help to illuminate recent movements in both the stock market and business investment. To start with, the correlation between the change in stock prices and growth in business fixed investment was quite close after 1995 (Chart 1-3). Although the stock market has typically been imperfectly correlated with investment over the past two decades, both variables rose markedly from 1995 to 2000 and fell sharply thereafter. One interpretation of this pattern is that although informational asymmetries and other complications can generally obscure the relationship between stock prices and investment, the rise in both reflected a widely perceived increase in the value of physical capital installed in firms after 1995. As many observers have noted, investors may have overestimated the value of installed capital in many industries, driving the stock prices of some firms to unsustainable levels and thereby encouraging these firms to invest too much. Even so, capital markets worked well in the late 1990s, in the sense that the signals sent by market participants and manifested in stock prices were received clearly by investing firms.

Chart 1-3. **Equity Prices and Fixed Private Nonresidential Investment**
Unlike in earlier periods, the stock market and investment moved closely together after 1995.

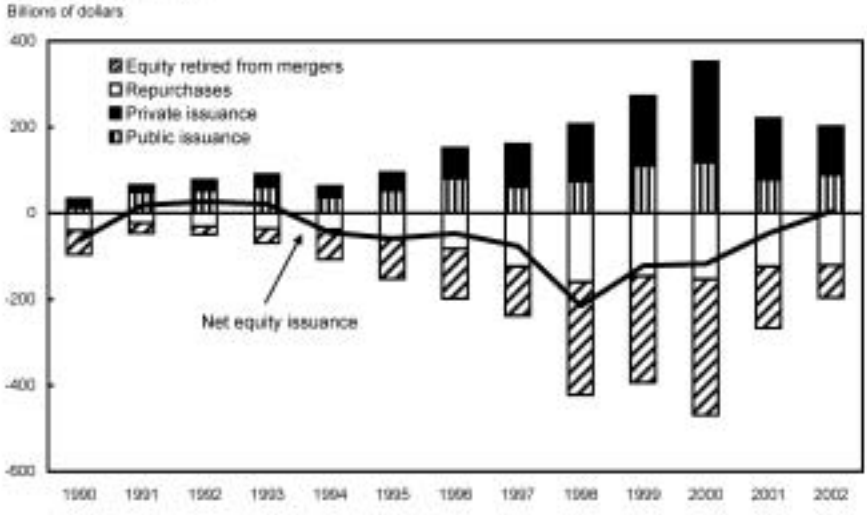


Sources: Department of Commerce (Bureau of Economic Analysis) and Standard & Poor's

The boom in the stock market might have been expected to encourage firms to finance investment by issuing equity, but it turns out that net issuance of equity was actually negative in the late 1990s (Chart 1-4). To be sure, many firms did issue equity in order to finance new investments, through initial public offerings as well as the private venture capital market, both of which surged through 2000. Yet these gross equity issues were more than offset by share repurchases and merger-based stock retirements at other firms, so that debt, not equity, served as the major source of business financing during the investment boom. Business debt rose steadily throughout this period, with net issuance of long-term corporate bonds and short-term commercial paper playing especially important roles (Chart 1-5). Of course, a major reason for this pattern of rising debt alongside a booming stock market was that discussed above: the bias toward debt financing built into the tax code.

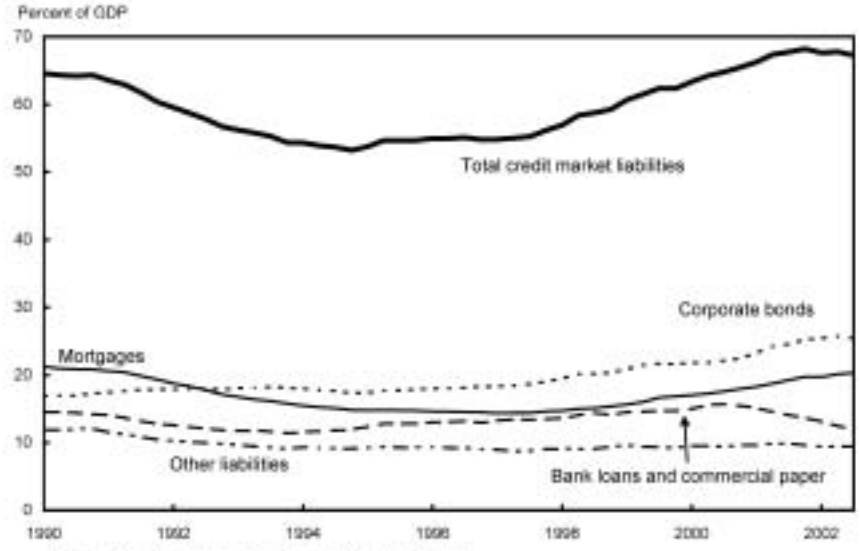
In a general sense, the decline in the stock market after early 2000 can be traced to both of the factors that determine equity prices: expectations of future corporate earnings, and the risk premium that investors require in order to hold equities. Evidence that expectations of earnings growth were adjusted downward as the stock market fell comes from surveys of Wall Street analysts who track individual firms. According to one such survey,

Chart 1-4 **Nonfinancial U.S. Equity Issuance**
Though the booming stock market reduced the cost of equity capital to firms, net issuance of equity was negative in the late 1990s. More stock was retired through mergers and stock repurchases than was issued either publicly or privately.



Note: Data for 2002 are for the first half at an annual rate.
Source: Board of Governors of the Federal Reserve System.

Chart 1-5 **Credit Market Liabilities of the Nonfinancial Business Sector**
Although bank loans and commercial paper have declined in recent years, increases in longer term debt have kept total business debt stable.

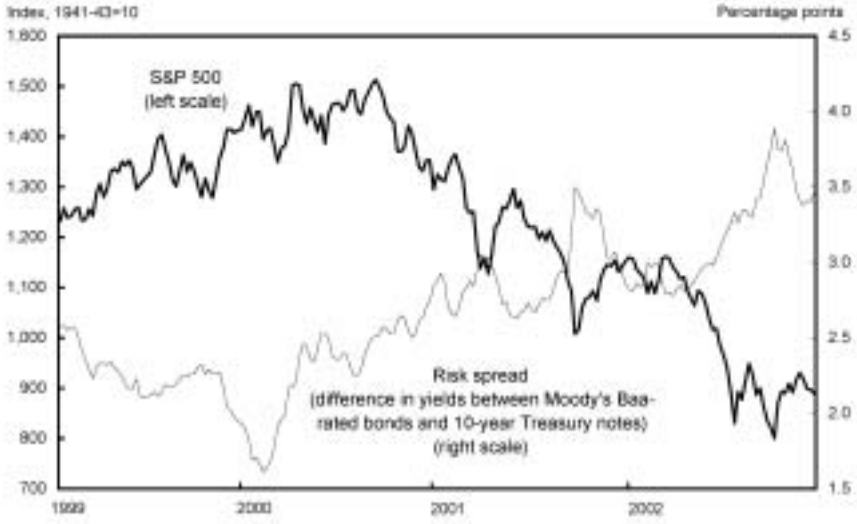


Source: Board of Governors of the Federal Reserve System.

5-year-ahead earnings growth forecasts for the firms in the Standard & Poor's 500 index fell from a peak of more than 18 percent in mid-2000 to slightly more than 13 percent by September 2002. Other data provide evidence of an increase in market aversion to risk, which lowers the price that investors are willing to pay for a stream of uncertain corporate earnings. A common measure of the market's aversion to risk is the interest rate spread between corporate bonds and U.S. Treasury bonds, because corporate bonds are subject to default risk whereas Treasuries are not. The widening gap between yields for corporate and Treasury securities after 2000 coincided closely with the decline in the stock market during this period (Chart 1-6). Spreads continued to widen sharply in 2002, reaching near-record levels, indicating that risk aversion played a key role in markets in the months following September 11, 2001.

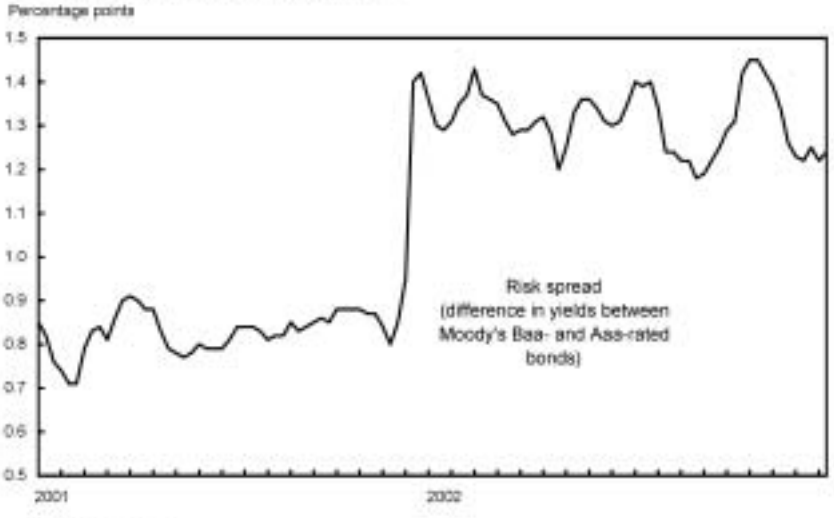
In addition to reductions in both earnings expectations and risk tolerance, corporate governance was an often-cited factor in the stock market's behavior in 2002. Well-publicized allegations of corporate wrongdoing and questionable accounting practices may have caused investors to doubt the reported earnings of some firms. One way to gauge the seriousness of corporate governance concerns in 2002 is to examine the interest rate spreads *within* the investment-grade corporate bond market and, specifically, the difference between interest rates paid by the highest-rated corporate borrowers and those paid by firms with somewhat lower credit ratings. As Chart 1-7 shows,

Chart 1-6 **Equity Markets and Risk Spreads**
The decline of the stock market after 2000 coincided with an increase in risk spreads, suggesting that investors became less willing to hold all risky assets over this period.



Note: Weekly data.
Sources: Department of the Treasury, Moody's Investors Service, and Standard & Poor's.

Chart 1-7 **Corporate Bond Risk Spreads**
Concerns over corporate governance and economic growth contributed to a widening of bond spreads within the corporate sector in late 2001.



Note: Weekly data.
Source: Moody's Investors Service.

this spread widened sharply in the closing months of 2001. Although this period was one of heightened uncertainty over the pace of near-term economic growth, it also featured a number of important allegations of corporate misbehavior, and the widening bond spread suggests that investors became less willing to tolerate relatively high levels of risk at less-than-premium-grade firms as 2002 began.

Although the effect of these revelations on interest rates and bond prices appears pronounced, their effect on broad equity price indexes in 2002 is less clear. To be sure, the revelations of questionable practices had important consequences for the stock prices of many firms. Regarding the U.S. stock market as a whole, however, it is important to recall, as noted above, that all of the world's major stock markets lost ground in 2002. The precise determinants of these movements are difficult to identify, but the uniformity of stock market movements around the world suggests that a key driver of U.S. stock prices in 2002 was a worldwide decrease in tolerance for risky assets combined with lower projected earnings growth, and not necessarily the corporate governance concerns specific to the United States.

As discussed in Chapter 2, government plays an important role in the regulation of corporate behavior, complementing the monitoring mechanisms for invested funds that arise naturally in well-developed financial markets. In March 2002 the President offered a 10-point reform plan addressing a wide range of corporate governance issues, and in July he signed the landmark Sarbanes-Oxley Act. The quick response to the accounting scandals signaled by passage of this act underscored both the seriousness of corporate responsibility issues and the importance of maintaining confidence in markets.

Given the link between investment and stock prices discussed above, it should not be surprising that investment softened considerably after early 2000. A key question was whether the temporary slowing of economic growth would combine with the business sector's reliance on debt financing to engender a liquidity crisis or a credit crunch, either of which would depress investment even further. By and large, however, credit markets in 2001 and 2002 continued to function without the sharp increase in the nonprice rationing of credit that is typical of a credit crunch. Short-term business lending did decline in 2001 and 2002, as both commercial paper and commercial and industrial (C&I) bank loans fell. (See Chart 1-5 above.) By itself, however, a decline in lending is not evidence of a credit crunch, in which loans are no longer allocated by price and creditworthy firms are denied loans at posted interest rates. Although nonfinancial business debt as a percentage of GDP has declined somewhat over the past year, this decline has been less severe than during many other business cycles. It is true that C&I loans and short-term commercial paper outstanding have fallen sharply,

but many firms have simply substituted long-term bonds for commercial paper in order to reduce rollover risk and lock in favorable long-term interest rates. Corporate bond issuance was especially strong in 2001, before the increase in borrowing spreads within the corporate sector (portrayed in Chart 1-7) raised borrowing costs for firms that lacked the highest credit ratings. Another factor leading to reduced bank lending was the general decline in business loan demand that typically accompanies economic downturns. Specific evidence for a decline in loan demand comes from an October 2002 Federal Reserve survey, which found that senior loan officers at most domestic banks put a decline in loan demand, not restrictions in loan supply, at the heart of the decline in bank lending to businesses.

The relative stability of the business debt-to-GDP ratio in the aftermath of the 2001 recession contrasts sharply with the decline in debt that followed the 1990-91 recession, when many feared that a credit crunch had taken hold. As can be seen from Chart 1-5, the earlier debt decline was strongly influenced by a sharp decline in commercial mortgages. This drop in mortgage credit was, in turn, prompted by an earlier change in the tax code that made commercial real estate investments less attractive on a purely tax basis, as well as by continuing weakness in the savings and loan industry. Because these headwinds to debt accumulation are not relevant for the current period, it is much less likely that a sustained deleveraging of the corporate sector like that observed in the early 1990s now lies ahead for the U.S. economy.

In summary, the link between stock prices and business investment has proved especially strong since 1995. Both the stock market and business investment reflected the optimism of investors in the late 1990s, and both reflected the subsequent scaling back of expected profits as well as reduced tolerance for risk. Yet even though the investment boom of the late 1990s was funded primarily with debt and not equity, the drop in equity values did not degenerate into a full-blown credit crunch that hindered investment unnecessarily. As a result, rationing of credit is not expected to hinder the investment recovery that private forecasters predict for the coming year.

Residential Investment

In contrast to the softness in nonresidential investment, residential investment grew briskly in 2002, sparked by the lowest mortgage interest rates in more than a generation. After hitting a recent peak of 8.64 percent in May 2000, interest rates for conventional, fixed-rate 30-year loans fell to 5.93 percent by the end of December 2002, their lowest level since 1965. Low mortgage rates contributed to the 6.8 percent increase in single-family housing starts over their already high level of 2001, while boosting sales of new homes to record levels near the end of the year. The strength of housing construction during

Chart 1-8 **Housing Starts**
In contrast to their performance in past downturns, housing starts remained robust during the 2001 recession.



the past 3 years stands in contrast to past business cycles, when housing starts were not nearly as robust (Chart 1-8).

Strong housing construction is also a natural consequence of rising housing prices, although that rise moderated to an annual rate of 3.4 percent in the third quarter of 2002 from an annual rate of about 9 percent in the first half of the year. The continued appreciation of housing during the last several years has led some observers to contend that the housing market is caught in a bubble, in which buyers pay high prices for assets simply because they hope to sell those assets to other investors at even higher prices, a scheme that collapses quickly when no further purchasers can be found. Proponents of the housing bubble theory noted that houses were particularly expensive relative to rents, which indicated that high shelter costs alone did not explain the entire rise in housing prices. Housing prices also rose much more quickly than the median household income in 2001, which left the price-to-income ratio at its highest level in more than two decades.

Because it is difficult to know the precise motivations of the millions of persons who buy homes (or any other assets), it is impossible to know for sure whether any sharp increase in home prices is a bubble. Yet the high transactions costs involved in selling houses make a bubble in the housing market unlikely. Moreover, new sources of housing demand have emerged in the past two decades to support the fundamental value of owner-occupied

houses. One is the growth in purchases of second homes by baby-boomers, many of whom are now in their prime earning years. Perhaps more important is the recent surge in immigration into the United States. In the 10 years preceding the 2000 Census, the number of foreign-born residents in the United States rose by 11.3 million, or 57 percent, compared with an increase of only 5.7 million in the previous 10-year period. As a result, the share of foreign-born individuals in the total U.S. resident population reached 11.1 percent in the 2000 Census. This is well above their 4.7 percent share in 1970 and comparable to the 13 to 15 percent shares recorded during the golden age of immigration from 1860 to 1920.

By itself, a surge in immigration would be expected to raise shelter costs in general, but not necessarily the price of homes relative to rents. Yet there is evidence that the timing of the immigration wave, along with recent developments in mortgage finance, has raised demand for owner-occupied homes separately from the demand for rental housing. Some recent research has pointed out that immigrants who arrived in the 1980s have only recently been able to make the transition to home ownership, because it takes time to save for a down payment. Also, developments in mortgage finance over the 1990s have made home purchases more affordable by narrowing the spread between mortgage interest rates and benchmark U.S. Treasury yields. The liberalization of mortgage finance would be expected to exert a strong, independent effect on home demand, by enlarging the pool of potential buyers of any nationality. This liberalization could well have combined with improvements in the financial positions of previous immigrants to result in a strong source of housing demand in the past several years. According to the 2001 American Housing Survey, sponsored by the Department of Housing and Urban Development, foreign-born residents have accounted for a sizable share of first-time home purchases since 1997, when the increase in house prices began in earnest. The survey shows that there were more than 5.7 million foreign-born homeowners in the United States in 2001, and more than 20 percent of them had purchased their first house since 1997. Although many of these new homeowners were members of minority groups, the rate of homeownership among minorities still lags behind that of whites. To redress this imbalance, in June 2002 the Administration announced an initiative to add 5.5 million minority homeowners by the end of the decade.

Net Exports

Although the output of the U.S. economy remained below potential in 2002, its growth rate still outpaced those of many other industrialized countries. Slow growth among many of the United States' major trading partners, in turn, contributed to slow growth in U.S. exports compared with that of

imports. Exports rose at an annual rate of 7.4 percent during the first three quarters of the year, while imports grew 11.1 percent. This discrepancy between the rates of growth in exports and imports led to an increase in the U.S. trade deficit, so that net exports exerted a drag on GDP growth in the first half of the year. (Net exports were essentially unchanged in the third quarter.)

Because changes in the trade deficit are often quantitatively important for year-to-year changes in GDP growth, U.S. trade performance is an important concern. Imports and exports both provide benefits to consumers and firms. Imports provide U.S. firms with a wider variety of low-cost inputs, and consumers with wider variety and lower prices for goods. Moreover, competition from international producers induces domestic firms to raise their productivity, which raises incomes in the long run. Trade therefore boosts consumer satisfaction at home and ensures that American producers remain competitive, by increasing the size of the market in which they operate. In light of the benefits of trade to both Americans and foreigners, the Administration has made the expansion of trade a central policy objective. Two important trade-related developments in 2002 were the Congress' granting of Trade Promotion Authority to the President (after an 8-year hiatus) and the launching of an ambitious initiative to reduce barriers to agricultural trade, announced at the ongoing Doha round of trade negotiations within the World Trade Organization. These developments and others are described in more detail in Chapter 6, which discusses the importance of free trade measures in promoting economic growth around the world.

Government Purchases

The war on terrorism continued to exert upward pressure on Federal Government purchases in 2002. In late March the President requested that the Congress provide an additional appropriation of $27.1 billion, primarily to fund this effort. More than half of this amount was allocated to activities of the Department of Defense and various intelligence agencies. Most of the rest was needed for homeland security (mainly for the new Transportation Security Administration) and for the emergency response and recovery efforts in New York City. Although most of this spending was required for one-time outlays only, it nevertheless contributed to the 6.4 percent annual rate of increase in real Federal Government purchases in the first three quarters of 2002. State and local government purchases rose at a more moderate 1.7 percent annual rate during the same period.

The Labor Market, Productivity, and Real Wages

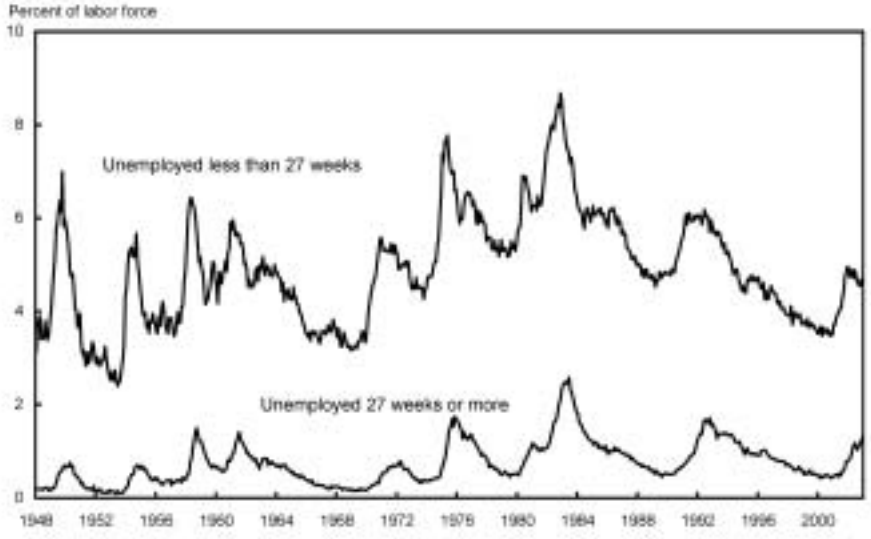
Although the labor market improved in 2002 after weakness in the wake of the September 2001 attacks, most major labor market indicators showed little progress over the course of the year. The unemployment rate hovered between 5.5 and 6.0 percent throughout the year, after rising 1.8 percentage points in 2001. Nonfarm payroll employment in 2002 was similarly weak, with 181,000 jobs lost during the year, compared with 1.4 million jobs lost the previous year.

As in past business cycles, the decline in manufacturing employment has been especially pronounced. Factory employment fell by 592,000 in 2002, following a decline of 1.3 million in 2001 and about 100,000 in 2000. Another feature of previous business cycles that has recurred in the past 2 years is the increase in the number of workers who report a long unemployment spell. Like the overall unemployment rate, the number of workers unemployed for 26 weeks or more rose in 2001 and remained high in 2002 (Chart 1-9). The rise in long-term unemployment is one of the most troublesome features of recessions, because long-term joblessness is costly to those unable to find work. Indeed, the difficulties endured by the long-term unemployed were a key reason for the passage of the Job Creation and Worker Assistance Act in March, which extended unemployment benefits for many of these workers. Yet, as Chart 1-9 shows, the pattern of long-term unemployment observed in 2001 and 2002 was similar to patterns traced out in previous postwar fluctuations.

In other ways, however, the recent behavior of the labor market has been different from that in past business cycles. One difference is the high fraction of job losers who reported a permanent rather than temporary separation in 2001. In the government's monthly Current Population Survey, each respondent who reports a job loss is asked whether he or she expects to return to work with the same employer. (Those who expect to return are typically on an explicitly temporary layoff, although this need not be the case.) Research from the Bureau of Labor Statistics found that, in the initial quarters of the four recessions before 1990, slightly more than half of job losers were permanently separated from their previous employers, with the rest on temporary layoff. In the three quarters after the business cycle peak of 1990, however, the share of permanent job losers rose to almost three quarters, and the comparable proportion for the March 2001 peak is nearly 90 percent.

The rising proportion of job losers facing a permanent separation in recessions may reflect structural changes in the labor market during the past two decades, including the rise in temporary help employment. A firm facing a transitory increase in demand may use a temporary worker (formally employed by a temporary help firm) rather than add staff to its regular work

Chart 1-9 **Duration of Unemployment**
The increase in long-term unemployment in the most recent business cycle is typical of postwar recessions.



Note: Duration-specific unemployment is seasonally adjusted independent of total unemployment.
Source: Department of Labor (Bureau of Labor Statistics).

force. When demand falls, the firm would then permanently sever the relationship with this worker; in the past the firm might have placed one of its own workers on temporary layoff. This explanation is consistent with the sharp rise in temporary help employment over the past 20 years as well as the sharp drop in 2001. Yet it is important to keep in mind that the fraction of workers losing their jobs in 2001 remained well below that in recent recessions, because of the mildness of the 2001 contraction.

Although year-to-year fluctuations in the labor market are of immediate concern, sustained improvements in the living standards of American workers depend on more structural, long-term factors. As discussed in Chapter 3, these factors include the flexibility and dynamism of the American labor market, which matches millions of workers with new jobs each month and provides incentives for investments that make workers more productive. Indeed, pro-growth labor market policies in the United States have helped the economy achieve a sizable increase in labor productivity growth since 1995. When this increase began, many economists were skeptical that it was permanent, because productivity growth in a given quarter or year can be strongly influenced by the business cycle. Indeed, macroeconomic research has long established the procyclicality of productivity as a stylized fact, with output per worker rising faster in expansions than in recessions. This productivity pattern can be explained by the reluctance of firms to hire early in a recovery, before

they are sure that a robust recovery has taken hold. This reluctance means that existing employees must work harder to fill the higher number of orders when demand first begins to rise. The resulting increase in worker effort causes output to rise faster than hours worked, so that the data indicate an increase in productivity even without any improvement in the underlying technology of production. Economists therefore prefer to observe improved productivity performance over an extended period before pronouncing that a change in productivity growth has taken place.

As productivity growth has stayed high since 1995, the productivity improvement has increasingly come to be seen as lasting. Data from 2001 and 2002 only strengthen this conclusion. During the seven quarters ending in the third quarter of 2002—a period that includes a recession and a recovery—labor productivity grew at an annual rate of 3.2 percent, somewhat higher than the annual rate of 2.5 percent from 1995 to 2000 and much higher than the 1.4 percent trend from 1973 to 1995. (A formal analysis of recent productivity data is presented later in the chapter.) An improvement of only about 2 percentage points in productivity growth may not sound impressive, but over time even a small increase in productivity growth brings about a large improvement in living standards. For example, growth in productivity of 1.4 percent a year implies that productivity doubles every 50 years, but growth of 2.5 percent implies a doubling every 28 years.

Strong productivity growth also helps to keep inflation down, by allowing real wages to grow without an increase in unit labor costs, which would drive up firms' costs of production and therefore push output prices upward. Indeed, another bright spot in 2002 was the behavior of inflation and real wages. The consumer price index (CPI) rose 2.4 percent in 2002 (December to December), close to its 1.6 percent rate of increase in 2001. The core CPI, which does not include the volatile food and energy components, rose 1.9 percent.

Inflation is difficult to measure, because of the dynamic nature of consumers' choices (Box 1-3), and it is not directly linked to long-run living standards. Nonetheless, low inflation is fundamental to a healthy economy. High and variable inflation not only can cloud the relative price signals needed to allocate resources efficiently, but also can introduce other distortions through the income tax. Additionally, bringing inflation down from high levels typically requires sustained (and costly) increases in unemployment. The low inflation observed in 2002 gave policymakers the flexibility to support the fledgling recovery without being overly concerned that they would increase price pressures in doing so.

Taken together, rapid productivity growth and low inflation meant that real wages continued to grow in 2002. As measured by the employment cost index, real compensation for private industry workers grew 2.1 percent over the four quarters ending in the third quarter of 2002. This compares with

Box 1-3. New Measures of Consumer Price Inflation

Following through on a request from the Congress, the Bureau of Labor Statistics has developed a new measure of consumer price inflation. Unlike the current official Consumer Price Index for Urban Consumers, the new measure not only adjusts for consumer substitution between goods in response to movements in relative prices, but also uses current expenditure weights rather than weights that are several years out of date. The fact that weights from different adjoining years are "chained" together gives the new measure of inflation its name: the chained CPI, or C-CPI. The chained CPI is a supplemental series and is not intended to replace the official CPI, versions of which are used to index Social Security benefits, pensions, Federal tax brackets, and many private contracts.

Any consumer price index must somehow aggregate the many prices faced by consumers into a single number. The official CPI aggregates prices by using a fixed market basket. (Currently the basket reflects consumption shares in 1999-2000 for 211 major categories of goods and services.) The disadvantage of using a fixed-weight basket is that the resulting price index is unable to reflect the reallocations that consumers make when relative prices change. For example, if the price of chicken were to rise while that of steak held steady, consumers might well buy more steak; then the use of fixed weights would overstate the increase in the cost of meat generally, caused by the increase in the cost of chicken. The new chained index reflects this substitution, but at some cost. Specifically, the new index requires data on consumer expenditure before *and after* these substitutions have occurred. But whereas prices are relatively easy to measure on a real-time basis, expenditure shares are not, which means that current expenditure shares must be estimated for the most recent periods.

Because it reflects substitution by consumers, the new measure uses expenditure weights that are constantly changing as consumption patterns change. As a result, the expenditure weights do not get out of date as they do with a fixed-weight index. The difference that this use of up-to-date weights makes is particularly important to the contribution of computers to the cost of living, because the relative price of computers has fallen during the past two decades even as the expenditure share of computers has risen. A fixed-weight basket would tend to understate the weight of computers in current consumption, because its expenditure weights are typically years out of date. As the price of computers has fallen over time, the underweighting of computers in a fixed-weight index causes this index to overstate the increase in the cost of living. The chained CPI does not suffer from this problem, because its weights are constantly being updated.

real compensation growth of only 1.3 percent during the same period a year earlier. Although increases in benefits (such as employer payments for health insurance) accounted for much of the acceleration in total compensation growth, annualized real growth in wages and salaries also accelerated, from 0.9 percent to 1.7 percent across the same two periods.

In short, the sluggish performance of the labor market in 2002 was an unwelcome development for many workers and their families, as well as a matter of concern for policymakers. But rapid productivity growth, low inflation, and healthy real wage gains set the stage for future improvements in both unemployment and job growth in the years ahead.

Macroeconomic Policy and the Budget Outlook

The U.S. economy has suffered a number of serious setbacks in the past 3 years, including the terrorist attacks of September 2001, the significant loss of stock market wealth since 2000, and the recent corporate accounting scandals. Yet the contraction of 2001 was one of the mildest on record, with recovery proceeding steadily, if modestly, in 2002. One reason for the economy's stability in the face of these adverse developments was the stance of macroeconomic policy, both monetary (set by the Federal Reserve) and fiscal (set by the President and the Congress). This section analyzes the effects of monetary and fiscal policy in detail, illustrating their likely impact on macroeconomic performance in 2002 as well as the fiscal outlook for the years ahead.

Monetary Policy

In 2001, faced with signs of a slowing of economic activity, the Federal Reserve reduced its policy interest rate, the Federal funds rate, 11 times during the year, from 6.50 percent to 1.75 percent. The Federal Reserve then held the funds rate steady through most of 2002, until a further half-percentage-point cut on November 6 brought it down to 1.25 percent. Although the Federal funds rate thus remained constant for most of 2002, earlier rate reductions continued to stimulate the economy throughout the year. Understanding the reasons for this lag requires an understanding of the channels through which monetary policy affects the economy. A lowering of interest rates stimulates demand through four main channels: encouraging consumption (particularly of durables), stimulating business investment (by lowering the cost of capital), promoting residential investment (as seen from the booming housing sector), and lowering the foreign exchange value of the dollar (which tends to raise exports and lower imports). All of these effects take time to be felt. Consumers must plan how best to take advantage of

lower borrowing costs, firms must plan new investments, and importers and exporters must determine how any change in the dollar's exchange value will affect their prices and costs.

Measuring the size of these effects as well as the time needed for them to be fully expressed is an active area of macroeconomic research. One method for measuring the effect of monetary policy uses formal models of the economy, in which the behavioral relationships governing consumption, investment, imports, and exports are fully specified. After the researcher specifies a time path for the Federal funds rate, the model supplies the likely path for each component of aggregate demand, based on the behavioral relationships embedded in the model's equations. In contrast to this model-based method, a more data-based method for measuring the effects of monetary policy omits any formal modeling of behavioral relationships, instead using statistical techniques to measure the past effect of funds rate changes on a few key variables, such as output and the price level. An important goal of this method is to take account of other factors, such as changes in fiscal policy and temporary shocks to aggregate demand and prices, which may also have affected the economy when a given change in monetary policy was taking place. Although the precise channels of monetary policy are not specified in the data-based method, it is hoped that the answers are less sensitive to particular assumptions, which can differ across large behavioral models.

Results from both model-based and data-based methods suggest that monetary policy changes take effect only after a lag of several months, but that these effects are long-lasting, so that the rate reductions in 2001 are likely to have stimulated the economy throughout 2002. To gain a sense of the magnitudes involved, one well-known model of the economy predicts that, holding other factors constant, a 1-percentage-point decrease in the Federal funds rate raises real GDP by 0.6 percent above its baseline level after 1 year. This effect of monetary stimulus on real GDP rises to 1.7 percent after 2 years. Data-based methods broadly concur with this assessment: one study shows that the typical decrease in the funds rate raises output steadily in subsequent quarters, reaching a maximum effect on output after about 18 months. Both methods therefore imply that interest rate cuts in 2001 continued to exert considerable economic stimulus in 2002.

Fiscal Policy

An important goal of fiscal policy is to promote growth by limiting the share of output commanded by the government. In 2001 the Congress and the Administration made major progress along these lines with passage of the Economic Growth and Tax Relief Reconciliation Act, which featured a broad-based cut in marginal tax rates. The long-term benefits of such a policy

are clear, as high marginal tax rates discourage the entrepreneurship and risk taking on which the strength of the U.S. economic system depends. Yet although the goal of EGTRRA was to improve long-term living standards and limit the size of the government, the legislation conferred important short-term benefits as well, thanks to the way in which the tax rate reductions were set in place and the timing of the act's passage. A new lower tax rate of 10 percent was introduced at the bottom range of the previous 15 percent bracket, and taxpayers in 2001 were given an advance rebate on their likely savings due to this reduction.

Rebate checks ($300 for most single taxpayers, $600 for most married couples filing jointly) arrived in mailboxes in the summer of 2001. The timing of the resulting $36 billion infusion of spendable income into the economy could not have been more favorable. Although the depth of the 2001 recession would not be known until revised GDP figures were announced the next year, GDP had already declined by 0.6 percent at an annual rate in the first quarter of 2001 and by 1.6 percent in the second quarter. As estimated from the traditional relationship between overall GDP and current income, the tax plan added about 1.2 percentage points of growth at an annual rate in the third quarter. As a result, without the checks, third-quarter GDP would have declined at an annual rate of 1.5 percent rather than the 0.3 percent rate actually observed. In the fourth quarter, tax relief continued to add 1.2 percentage points to the annual rate of real GDP growth, so that instead of rising at an annual rate of 2.7 percent, GDP would have risen by only 1.5 percent in the absence of the rebates.

The rebate checks mailed in 2001 represented only a small fraction of the tax relief from the EGTRRA package. In addition to lowering marginal tax rates, EGTRRA increases the incentives for saving, for making bequests to heirs, and for investment. As a result, tax relief from EGTRRA probably helped the private sector create 800,000 jobs by the end of 2002 relative to the baseline level without tax relief, while raising GDP growth by about 0.5 percentage point over the course of that year.

In March 2002 the President signed the Job Creation and Worker Assistance Act, which implemented a tax policy especially appropriate for the fledgling recovery. The act promoted investment by allowing firms to immediately write off (that is, expense) 30 percent of the value of qualified investments in the year of purchase for investments made through September 11, 2004. As discussed in Chapter 5, government policies can significantly improve growth by removing tax distortions that penalize investment or other productive activities. For example, introducing expensing lowers the cost of capital, thereby making more investment opportunities profitable on an after-tax basis. The act stimulates investment by allowing partial expensing through most of 2004. In addition to reducing the tax-adjusted cost of investment, the act extended

unemployment benefits to workers who have exhausted their regular benefits. This enhanced the role of unemployment insurance as one of the economy's most important automatic stabilizers.

The Federal Budget

After 4 years of surpluses, the unified Federal budget recorded a deficit of $158 billion in fiscal 2002, or about 1.5 percent of GDP. The return of the deficit was primarily due to four factors: the lingering effects of the recession of 2001, the stock market plunge, increased Federal expenditure necessitated by the war on terrorism, and the costs of homeland security. Recessions tend to increase budget deficits because they lead to higher outlays (for unemployment insurance, for example) at the same time that they reduce tax receipts (because taxable income falls). The decline in receipts during the most recent downturn in the business cycle has been especially pronounced. Total receipts in fiscal 2002 were $1,853 billion, having fallen $138 billion, or about 7 percent, from their level in fiscal 2001. This represented a much larger percentage decrease in receipts than in previous, far more severe recessions. One of the most important reasons for the dramatic decline in receipts given the mildness of the 2001 contraction was the coincident decline in the stock market. The stock market's decline reduced capital gains receipts in addition to reducing taxes on wage and salary income for workers whose jobs are closely tied to equity markets. More detailed information on the precise sources of the decline in receipts will not be available until the Treasury completes its regular annual examination of individual tax returns. Even with the decline in receipts, however, the budget deficit was relatively small as a fraction of GDP compared with those seen in previous periods of war and recession.

The President's Jobs and Growth Initiative

On January 7, 2003, the President proposed a plan to enhance the long-term growth of the economy while supporting the emerging recovery. At the start of 2003 the consensus of private forecasters predicted accelerating growth in real GDP over the course of the year, which would raise investment, reduce unemployment, and increase job growth. This consensus view is reflected in the Administration's outlook, discussed below. Yet the recovery in investment could be delayed by weaker-than-expected profit growth, higher required rates of return arising from geopolitical and other risks, or a prolonged period during which companies focus on repairing their balance sheets. More general risks to recovery in 2003 include an increased sense of caution, which could lead households to pull back on their spending plans, and the potential for further terrorist attacks. To insure against these

near-term risks while boosting long-term growth, the President has proposed a focused set of initiatives. Specifically, the President's plan would:

- Accelerate to January 1, 2003, many features of the 2001 tax cut that are currently scheduled to be phased in over several years. These include the reductions in marginal income tax rates, additional marriage penalty relief, a larger child credit, and a wider 10 percent income tax bracket
- Eliminate the double taxation of corporate income by excluding dividends from individual taxable income
- Increase expensing limits for small business investment, raising to $75,000 the amount that small businesses may deduct from their taxable income in the year the investment takes place
- Provide $3.6 billion to the States to fund Personal Reemployment Accounts for unemployed workers. These accounts would allow eligible workers to spend up to $3,000 to defray the costs of finding or training for a new job. Workers could keep any unspent balance in their account if they find work within 13 weeks of going on unemployment.

Accelerating the marginal tax rate reductions would insure against a softening of consumption by putting more money in consumers' pockets through long-term tax cuts, which have been shown to be more effective than temporary cuts in boosting near-term spending. Ending the double tax on corporate income would increase the ability of corporations to raise equity capital, providing near-term support to investment while improving the long-term efficiency of capital markets. (For more on how eliminating the double tax on corporate income would help the economy, see Chapter 5.) The provisions also support investment by small firms. Higher expensing limits would make it easier for small firms to expand by reducing the tax-adjusted cost of capital; lower marginal tax rates would increase growth incentives for small business owners whose business income is taxed at individual rates. Finally, Personal Reemployment Accounts, discussed in more detail in Chapter 3, would provide unemployed workers with a new set of incentives as they look for work. Accounts of this type, which reward unemployed workers for finding jobs quickly, have been shown in experiments in several States to increase the speed with which unemployed workers find new jobs. Moreover, by allowing workers a choice between using the funds to support their job search and using them for job training expenses, the accounts are well suited for the dynamic U.S. labor market.

The Effect of Tax Relief on Interest Rates

One of the most widely discussed issues in fiscal policy concerns the effect of tax relief on interest rates. It is widely agreed that, in the immediate

aftermath of a permanent tax cut, consumption increases because consumers have more disposable income. This increase in consumption raises GDP in the near term, especially if the economy is operating below its potential, with large amounts of unused labor and capital. In the long run, lower tax rates have somewhat complicated, offsetting effects on GDP. On the negative side, if the reduction in tax rates is not accompanied by spending reductions, it will increase the budget deficit and may reduce national saving. Lower national saving, in turn, will shrink the pool of loanable funds available in capital markets, which increases interest rates and reduces investment. Ultimately, lower investment leads to a smaller stock of productive capital, resulting in lower wages, lower productivity, and lower output. Offsetting this, however, is the positive effect of tax relief that operates through improved incentives to work and take risks, for example by creating a new firm or by making a new investment. Incentives to undertake these activities improve after a cut in marginal tax rates, because the tax reduction allows more of the rewards to be captured by workers, entrepreneurs, and investors and not by the government. When tax relief extends to capital income (such as dividends), as proposed in the President's most recent jobs and growth initiative, an additional positive effect arises through stronger incentives to save. These positive effects on GDP operating through improved incentives also have an impact on future budget deficits and investment, because deficits will be less onerous if the economy grows in response to the improved investment climate.

Assessing the ultimate effect of tax relief on GDP and future government debt thus requires gauging both the negative effects that arise through higher interest rates and the positive effects that come from improved incentives. Unfortunately, measuring the effect through incentive channels is difficult, because there have been few episodes of large, broad-based tax relief during the last several decades. Moreover, even these historical episodes occurred amid a host of other economic developments, making it difficult to isolate the direct effect of lower taxes on working and saving.

Obtaining a rough estimate of the interest rate effect is less difficult, because widely accepted economic theory allows precise predictions of how much an increase in the stock of debt should affect interest rates. The first step in making this calculation is to note that an additional dollar of government debt does not reduce the capital stock by a full dollar. About 40 cents of the additional debt will be offset by larger capital inflows from abroad, so that the U.S. capital stock would fall by only about 60 cents. The next step is to translate this 60-cent-per-dollar decrease in the capital stock into an ultimate change in long-term interest rates. This is done by noting that the interest rate on a bond should be closely related to the marginal product that physical capital earns in the marketplace. This is so because the two should converge to

the point where investors are indifferent between holding financial securities or holding physical capital in their portfolios. Reducing the physical capital stock will increase the marginal return to capital in the marketplace by making capital scarce relative to other factors of production; the key question is by how much this marginal return rises. Some calculations (shown in Box 1-4) imply that interest rates rise by about 3 basis points for every $200 billion in additional government debt.

Given this relationship between government debt and interest rates, concerns that higher interest rates would choke off the stimulative effects of recent tax reductions seem unwarranted. For example, this relationship implies that the $1.3 trillion in tax relief included in EGTRRA would raise interest rates by only about 19 basis points—a modest cost to be set against the long-term incentive-based benefits expected from lower marginal tax rates.

The modest effect of government debt on interest rates does not mean that tax cuts pay for themselves with higher output. Although the economy grows in response to tax reductions (because of higher consumption in the

Box 1-4. Calculating the Effect of Higher Government Debt on Interest Rates

The effect of government debt on interest rates depends on the productivity of capital in the economy, because additional government debt "crowds out" capital, increasing its scarcity relative to labor and thereby raising its return in the marketplace. The higher return to capital also increases the required return on other assets, such as bonds, which drives up interest rates. One can get some idea of the productivity of capital in the United States by measuring how much of total U.S. output is paid to suppliers of capital as opposed to suppliers of labor. Gross capital income is usually about one-third of total U.S. output, with the rest going to labor. Mathematically, the constancy of the capital share implies that the marginal return on each unit of capital is proportional to the output-to-capital ratio (Y/K). This proportionality implies that the percentage change in the marginal return to capital induced by a change in the capital stock is the same as the percentage change in Y/K, which is simply the percentage change in Y minus the percentage change in K. Some additional calculations show that the constant one-third capital share implies that output should fall by one-third of 1 percent for every 1 percent decline in capital. This allows us to write the ultimate percentage change in the marginal return to capital as (percent change in Y) – (percent change in K) = (–0.33 percent) – (–1.0 percent) = 0.67 percent. In other words, the marginal product of capital *rises* by 0.67 percent when the capital stock *falls* by 1.0 percent.

Box 1-4.—*continued*

Government data show that the U.S. capital stock was about $28 trillion in 2001, so that 1 percent of the capital stock is $280 billion. Because one dollar of debt reduces the capital stock by about 60 cents, an increase in government debt of about $467 billion is required to crowd out 1 percent of the capital stock ($467 billion x 0.60 = $280 billion). Government data also imply that the gross marginal product of capital is about 10 percent, which implies that a 1 percent decline in the capital stock would raise interest rates by about 6.7 basis points. A conservative rule of thumb based on this relationship is that interest rates rise by about 3 basis points for every additional $200 billion in government debt.

short run and improved incentives in the long run), it is unlikely to grow so much that lost tax revenue is completely recovered by the higher level of economic activity. The small effect of debt on interest rates does show, however, that attempts to stimulate the economy by *raising* taxes in order to *lower* interest rates are likely to be unsuccessful, especially if the taxes raised are those that discourage private saving and investment. The resulting reduction in interest rates will probably be too small to outweigh the negative effects of tax increases that work through distorted incentives. Further, the modest effect of increased debt on interest rates suggests that policymakers should not be afraid to use fiscal policy when doing so improves the long-run health of the economy. As long as the change in fiscal policy does not bring about large, systemic imbalances in the economy—such as a high debt-to-GDP ratio, or rapidly rising interest costs as a share of Federal outlays—policymakers should not be paralyzed by the fear that any benefits from tax reductions are likely to be undone by the increase in interest rates they bring about.

Developments in the Rest of the World

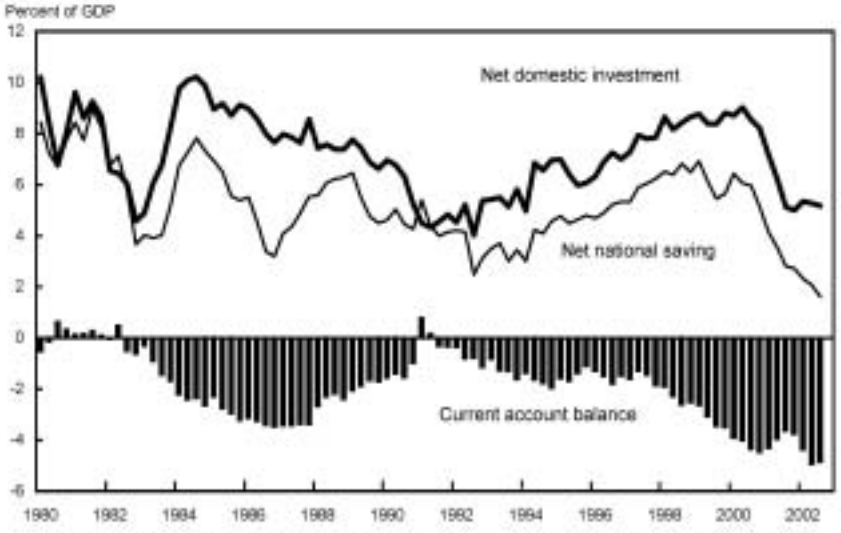
Growth in many of the United States' major trading partners was even more disappointing in 2002 than was growth at home. Although growth in Canada, America's largest trading partner, was a surprisingly robust 4.0 percent during the four quarters ending in the third quarter of 2002, growth elsewhere lagged far behind. The economy of the United Kingdom grew only 2.1 percent over the same period; growth rates in Germany (0.4 percent), Italy (0.5 percent), France (1.0 percent), Japan (1.3 percent), and Mexico (1.8 percent) were even lower. Low demand for U.S. exports combined with the emerging recovery in the United States (which increased U.S. demand for imports) sent the U.S. trade deficit to a record high in 2002.

Discussion of the U.S. position in international markets is often framed in terms of the current account, a broader measure of international transactions. In addition to the trade balance in goods and services, the current account includes net investment income, net compensation of resident alien workers, and net unilateral transfers. Because the trade component is by far the largest in the current account balance, the widening in the trade deficit in 2002 contributed strongly to the widening in the current account deficit. The latter reached a record 4.9 percent of GDP in the second quarter of 2002 before falling slightly, to 4.8 percent, in the third quarter.

One advantage of framing international finance discussions in terms of the current account is that, as a matter of national accounting, the current account balance equals the difference between net national saving and net national investment. For example, if U.S. saving were smaller than U.S. investment in a given period, the difference—the excess of investment over saving—must have been financed by foreigners. In the process of financing U.S. investment, foreign investors obtain U.S. assets, either in portfolio form (that is, as stocks, bonds, or other financial securities) or though direct controlling ownership of physical capital. These assets then generate investment income in the form of dividends, interest payments, and profits that can be repatriated to the investors abroad. Balance of payments data therefore resemble a "sources and uses of funds" statement for the Nation as a whole, providing useful information on the amounts of internal and external investment financing. High levels of investment in the late 1990s meant that the U.S. capital stock grew quickly in the late 1990s, but the accumulation of past current account deficits requires an increasing portion of the income earned by this capital to flow abroad. Over the past year, the U.S. current account deficit has widened because net investment has been essentially flat while net saving has fallen (Chart 1-10).

The relationship between the current account deficit and net investment by foreigners in U.S. assets also makes clear how changes in international

Chart 1-10 **Saving, Investment, and the Current Account Balance**
The current account deficit narrowed in 2001 as net domestic investment fell more quickly than saving, but it widened in 2002.



Note: The current account balance equals net national saving minus net domestic investment plus the statistical discrepancy.
Source: Department of Commerce (Bureau of Economic Analysis).

demand for U.S. assets can affect the trade balance, and vice versa. Consider an increase in foreigners' demand for U.S. assets. Their resulting accumulation of U.S. assets can affect international trade flows through an appreciation of the dollar, because foreigners must obtain dollars in order to purchase U.S. assets. Appreciation of the dollar tends to make imports cheaper for U.S. residents, and U.S. exports more expensive to consumers abroad; both these effects move the trade balance (and the current account) toward deficit.

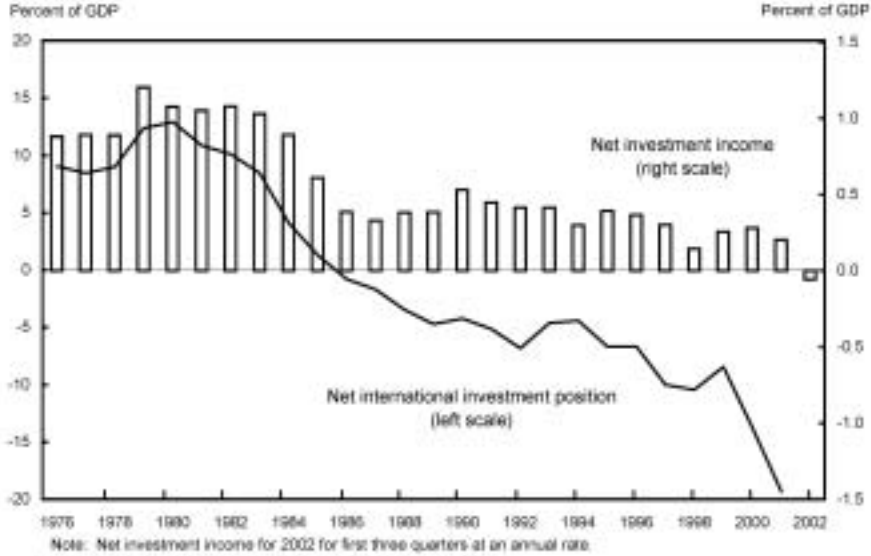
In light of the large number of trade-related and financial forces operating on the current account, it is impossible to label a current account deficit of a given magnitude either good or bad. As noted above, recent current account deficits result from U.S. investment outpacing domestic saving. One factor contributing to high U.S. investment relative to saving is the rapid increase in U.S. productivity relative to that in many other major countries, which makes the United States a good place to invest. Because productivity growth is ultimately responsible for rising living standards, the current account deficit reflects at least in part some very good news about the American economy.

Even so, a current account deficit indicates that the United States is consuming and investing more than it is producing. As Chart 1-10 shows,

the U.S. current account has typically been in deficit for the past two decades. As a result, the net international investment position in the United States (the value of U.S. investment holdings abroad less that of foreign holdings in the United States) has moved from an accumulated surplus of slightly less than 10 percent of GDP in the late 1970s to a deficit of almost 20 percent of GDP in 2001 (Chart 1-11). Recent increases in the current account deficit have led to some concerns that continued current account deficits (and the increase in the United States' international debt that would result) might not be sustainable. Clearly, debt cannot increase without limit. Because debt has to be serviced by the repatriation of capital income abroad, the ratio of a country's debt to its income has to stabilize at some point.

Yet the United States today is far from the point at which servicing its international debt becomes an onerous burden. In fact, until last year, more investment income was generated by U.S. investment in foreign countries than by foreign investments inside the United States, even though the net international investment position of the United States moved into deficit almost two decades ago (Chart 1-11). Given the United States' negative international investment position, the fact that, until 2002, more investment income flowed into the United States than flowed out of it implies that the

Chart 1-11 **International Investment Position and Investment Income**
Although the Nation's net international investment position became negative in the mid-1980s, net investment income remained positive until 2002.



Note: Net investment income for 2002 for first three quarters at an annual rate.
Source: Department of Commerce (Bureau of Economic Analysis)

rates of return on U.S. investment abroad were higher than the returns enjoyed by foreign investors in the United States. (Further analysis of international investment data indicates that these differences in rates of return are especially pronounced for direct investment, and less so for portfolio investment.) Although debt service became a net transfer from the United States to the rest of the world in 2002, this debt service is unlikely to amount to a significant portion of U.S. output in the foreseeable future.

Near-term developments in the U.S. current account depend on a number of factors. One of the most important is the rate of economic growth in the rest of the world. Faster growth abroad raises the demand for U.S. exports, which reduces the trade and current account deficits. A second factor affecting the U.S. current account is the propensity of U.S. residents to save. As Chart 1-2 showed, saving rates fell sharply in the 1990s; as noted above, this may have stemmed from the strong appreciation in the stock market, which allowed wealth to grow quickly without any increase in active saving out of disposable income. The retrenchment in asset prices that began in early 2000 may encourage some consumers to increase their active saving to pre-1995 levels. For any given level of domestic investment, an increase in the saving rate lessens the need to borrow from abroad and thereby reduces the current account deficit. In any event, it is far preferable to reduce the current account deficit by saving more than by reducing investment, because lower investment results in slower growth in the capital stock, a lower growth rate of labor productivity, and slower growth in living standards.

A third factor affecting the evolution of the current account is the future demand by foreign investors for U.S. assets. To the extent that foreign investors reduce their demand for U.S. assets and substitute holdings in other countries for those assets, the real exchange value of the dollar will fall, holding other factors constant. Conversely, the real value of the dollar will rise with an increase in the demand for U.S. assets. Such an increase in demand might result from continued productivity growth in the United States or from an increase in the perceived safety of U.S. assets relative to the rest of the world.

Moderate changes in foreign demand for dollar-denominated assets need not have large disruptive effects on the U.S. economy. Gradual shifts in the terms of trade would engender offsetting increases or decreases in the growth of consumption and imports, leaving real GDP little affected. In fact, if productivity growth remains relatively high in the United States while inflation remains low, a moderate shift in global demand away from U.S. assets and the subsequent decline in the real value of the dollar may not even require a change in the nominal exchange rate, because the real value of the dollar falls with a constant nominal exchange rate when inflation at home is lower than inflation abroad.

Moreover, history has shown that even a substantial decline in the value of the dollar need not result in sharply lower prices for U.S. stocks, bonds, or other assets. From the fourth quarter of 1985 to the fourth quarter of 1990, the real, trade-weighted exchange value of the dollar fell by nearly 24 percent while the current account deficit shrank from more than 3 percent of GDP to less than 1 percent. At the same time, however, stock prices rose by about 47 percent while long-term interest rates (which move inversely to bond prices) fell by more than 1 percentage point.

In the end, the key determinant of the sustainability of the U.S. international debt position is continued confidence in the economic policies of the United States. As long as the United States pursues its current market-oriented, pro-growth policies, there is no reason to believe that the current account deficit represents a problem for continued economic growth.

The Economic Outlook

The economy continues to display supply-side characteristics favorable to long-term growth. Productivity growth remains strong, and inflation remains low and stable. Real GDP is expected to grow faster than its 3.1 percent potential rate during the next 4 years, and then to grow at a 3.1 percent annual rate during the balance of the budget window. The Administration's projections are shown in Table 1-1.

TABLE 1-1.—*Administration Forecast*[1]

Year	Nominal GDP	Real GDP (chain-type)	GDP price index (chain-type)	Consumer price index (CPI-U)	Unemployment rate (percent)	Interest rate, 91-day Treasury bills (percent)	Interest rate, 10-year Treasury notes (percent)	Nonfarm payroll employment (millions)
	Percent change, fourth quarter to fourth quarter				Level, calendar year			
2001 (actual)	2.0	0.1	2.0	1.9	4.8	3.4	5.0	131.9
2002	4.2	2.9	1.2	2.3	5.8	1.6	4.6	130.8
2003	4.8	3.4	1.4	2.0	5.7	1.6	4.2	132.5
2004	5.2	3.6	1.5	2.1	5.5	3.3	5.0	135.2
2005	5.0	3.4	1.6	2.1	5.2	4.0	5.3	137.9
2006	5.0	3.3	1.7	2.2	5.1	4.2	5.4	140.4
2007	4.9	3.1	1.8	2.2	5.1	4.2	5.5	142.6
2008	5.0	3.1	1.8	2.3	5.1	4.3	5.6	144.7

[1] Based on data available as of November 29, 2002.

Sources: Council of Economic Advisers, Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), Department of the Treasury, and Office of Management and Budget.

Near-Term Outlook

The Administration expects that aggregate economic activity will have weathered a quarter of weakness at the end of 2002, following which it will gather strength during 2003, with real GDP growing 3.4 percent during the four quarters of the year. The unemployment rate, which was 5.9 percent in the fourth quarter of 2002, is projected to edge down about 0.3 percentage point by the fourth quarter of 2003.

As discussed earlier, real GDP growth in 2002 was accounted for by solid growth in consumption, a modest pickup in exports, and an increase in inventory investment. Although investment in equipment and software was slow, it stabilized during the first quarter of 2002 and began to grow in the second and third quarters, foreshadowing one way in which the composition of growth is projected to differ next year: the growth rate of equipment and software investment is projected to pick up in 2003. (Another difference is that the contribution of inventory investment is projected to wane.) Several factors are expected to lead to a rebound in equipment and software investment. Any capital overhang that might have arisen during the late-1990s investment boom has been reduced, because the level of investment fell in 2001; expectations of future GDP growth have stabilized after falling during 2001; and the replacement cycle is approaching for the short-lived capital goods put in place during the investment boom of 1999 and 2000. At the same time, the financial foundations for investment remain positive: real short-term interest rates are low, and prices of computers are falling more rapidly than they did in 2000. (Computer investment accounted for a third of all nonresidential investment growth from 1995 to 2000.) Less bright is the outlook for nonresidential structures, which still appears weak even after 2 years of decline. Even so, structures investment is projected to stabilize around the second half of 2003, as the maturing recovery generates higher occupancy rates for office buildings and greater demand for commercial properties. The recent passage of legislation for terrorism risk insurance may unblock some planned investments in structures that were held up because of lack of insurance.

Real exports, which turned up in 2002, are projected to improve further during 2003, reflecting the widely held expectation of stronger growth among the United States' trading partners and the lagged effects of the past year's decline in the dollar. Although real imports and exports are expected to grow at similar rates during the four quarters of 2003, the United States imports more than it exports, and therefore the dollar value of imports is expected to increase more than the dollar value of exports. As a result, net exports are likely to become more negative during the course of 2003.

Less change is expected for the largest component of aggregate demand, consumption, which is expected to remain robust in 2003. The negative influence of the stock market decline on household wealth, and thus on

consumption, is expected to wane as this decline recedes into history. Consumption growth will also be supported by fiscal stimulus and the lagged effects of recent interest rate cuts. Finally, low interest rates will continue to support the purchase of consumer durables, just as they did for much of 2002.

Inflation Forecast

As measured by the GDP price index, inflation fell to 0.8 percent during the four quarters ending in the third quarter of 2002—down from 2.6 percent during the same period a year earlier. This broad-based index of prices of goods and services produced in the United States is expected to rise somewhat faster, at 1.4 percent during 2003, as the restraining effects of falling energy prices and low food price inflation subside and the economy strengthens. Inflation is expected to remain low, however, as the unemployment rate is now above the level that the Administration considers to be the center of the range consistent with stable inflation, and capacity utilization in the industrial sector is substantially below its historical average. Inflation by the GDP measure is projected to edge up to 1.8 percent by 2007 and to stay there for the remainder of the budget window.

As measured by the CPI, inflation during the 12 months ended in December 2002 was 2.4 percent; core inflation was 1.9 percent. The CPI, which differs from the GDP price index both in its methodology and in that it includes only consumer goods and services, is projected to rise 2.0 percent in 2003, close to last year's core rate.

The difference between the CPI and the GDP measure of inflation has an important effect on Federal budget projections. A larger difference increases the Federal budget deficit because cost-of-living adjustments for Social Security and other programs that are indexed for inflation increase with the CPI, whereas Federal revenue tends to increase with the slower growing GDP price index. For a given level of nominal income, increases in the CPI also cut Federal revenue because they raise the thresholds of income tax brackets and affect other inflation-indexed features of the tax code. Of the two indexes, the CPI tends to increase faster, in part because it measures the price of a fixed market basket. (See Box 1-3 above on the new chain-weighted CPI.) In contrast, the GDP price index increases less rapidly than the CPI because it reflects the choices of economic agents to shift their purchases away from those items with increasing relative prices and toward items with decreasing relative prices. In addition, the GDP price index includes investment goods, such as computers, whose relative prices have been falling rapidly. Computers, in particular, receive a much larger weight in the GDP price index (0.7 percent) than in the CPI (0.2 percent).

During the 7 years from 1994 through 2001, the difference between inflation in the CPI-U-RS (a version of the CPI designed to be consistent

with current methods) and the rate of change in the GDP price index averaged 0.5 percentage point a year, and it was 0.8 percentage point during the four quarters ending in the third quarter of 2002. The difference is expected to shrink to 0.6 percentage point in 2003-04 and to revert to its recent mean of 0.5 percentage point in 2005 and beyond.

Long-Term Outlook

The Administration forecasts real annual GDP growth to average 3.4 percent during the first 4 years of the projection. As this is somewhat above the expected rate of increase in productive capacity, the unemployment rate is projected to decline as a consequence. In 2007 and 2008, real GDP growth is projected to continue at its long-run potential rate of 3.1 percent. The growth rate of the economy over the long run is determined by the growth rates of its supply-side components, which include population, labor force participation, productivity, and the workweek. The Administration's forecast is shown in Table 1-2.

TABLE 1-2.—*Accounting for Growth in Real GDP, 1960-2008*

[Average annual percent change]

Item	1960 Q2 to 1973 Q4	1973 Q4 to 1990 Q3	1990 Q3 to 2002 Q3	2002 Q3 to 2008 Q4
1) Civilian noninstitutional population aged 16 or over	1.8	1.5	1.0	1.1
2) Plus: Civilian labor force participation rate	.2	.5	.0	.0
3) Equals: Civilian labor force [1]	2.0	2.0	1.0	1.0
4) Plus: Civilian employment rate [1]	.0	-.1	.0	.1
5) Equals: Civilian employment [1]	2.0	1.9	1.0	1.1
6) Plus: Nonfarm business employment as a share of civilian employment [1 2]	.1	.1	.2	.4
7) Equals: Nonfarm business employment	2.1	2.0	1.2	1.6
8) Plus: Average weekly hours (nonfarm business)	-.5	-.4	-.1	.0
9) Equals: Hours of all persons (nonfarm business)	1.7	1.7	1.1	1.6
10) Plus: Output per hour (productivity, nonfarm business)	2.9	1.4	2.2	2.1
11) Equals: Nonfarm business output	4.6	3.1	3.3	3.8
12) Plus: Ratio of real GDP to nonfarm business output [3]	-.3	-.2	-.4	-.5
13) Equals: Real GDP	4.2	2.9	2.9	3.2

[1] Adjusted for 1994 revision of the Current Population Survey.
[2] Line 6 translates the civilian employment growth rate into the nonfarm business employment growth rate.
[3] Line 12 translates nonfarm business output back into output for all sectors (GDP), which includes the output of farms and general government.

Note.—The periods 1960 Q2, 1973 Q4, and 1990 Q3 are business cycle peaks.
Detail may not add to totals because of rounding.

Sources: Council of Economic Advisers, Department of Commerce (Bureau of Economic Analysis), and Department of Labor (Bureau of Labor Statistics).

The Administration expects nonfarm labor productivity to grow at a 2.1 percent annual average pace over the forecast period, virtually the same as that recorded from the business cycle peak in 1990 through the third quarter of 2002. This projection is notably more conservative than the nearly 2¾ percent average rate actually recorded since 1995. The cautious projection of productivity growth guards against several downside risks:

- Nonresidential fixed investment has fallen about 12 percent since its peak in mid-2000. The slower pace of investment means that the near-term growth of capital services is likely to be reduced from its average pace from 1995 to 2002, leading to a lesser contribution to productivity growth from the use of these capital services.
- As discussed in Box 1-5, about half of the post-1995 structural productivity acceleration is attributable to growth in total factor productivity (TFP) outside of the computer sector. This growth is due to technological progress, better business organization, and other factors that are hard to identify. Although there is no reason to expect this process to slow, the Administration forecast adopts a cautious view of the pace of TFP growth, setting it near its longer term average rather than at the higher post-1995 pace.

Box 1-5. Accounting for the Recent Strength in Productivity Growth

The most important macroeconomic characteristic of the late-1990s boom, rapid productivity growth, remains intact. Annual productivity growth has averaged almost 3 percent during the past 2 years, a period that includes a recession (when productivity usually slows) and the early stages of a recovery (when productivity usually rises rapidly). This growth, moreover, has occurred despite a roughly 12 percent decline in nonresidential investment spending since 2000.

Table 1-3 presents the results of an analysis of some of the factors that influence productivity growth and compares their influence in two periods: 1973-95 and 1995-2002. According to a model constructed by the Council of Economic Advisers that is designed to capture the cyclical behavior of productivity growth, the productivity acceleration after 1995 would have been 0.30 percentage point a year stronger but for the delayed hiring needed to accommodate increases in aggregate demand that occurred before and during 1995 (second line of Table 1-3). Productivity adjusted for this cyclical effect, or structural productivity, has accelerated by 1.73 percentage points since 1995 (third line of Table 1-3). Cyclical factors held down productivity growth by 1.8 percentage points in 2001, as the economy entered a shallow recession, and then boosted

Box 1-5.—*continued*

productivity growth by about 1.5 percentage points in the early stages of a recovery in 2002. (These figures average to -0.15 percentage point, as shown in the table.) Thus during 2001 and 2002 structural productivity is estimated to have grown 2.8 percent and 3.6 percent, respectively. This estimated pace is similar to that for the 1995-2002 period as a whole and well in excess of the 1.4 percent annual pace during the 1973-95 period.

In the accounting system adopted here, productivity increases can arise from any of four sources: growth in the amount of capital services per worker-hour throughout the economy (capital deepening), improvements in the skills of the work force (labor quality), total factor productivity (TFP) growth in computer-producing industries, and TFP in other industries. TFP growth is the increase in aggregate output over and above that due to increases in capital or labor inputs. For example, TFP growth may result from a firm redesigning its production process in a way that increases output while keeping the same number of machines, materials, and workers as before.

As can be seen in the fourth line of the table, capital services per hour contributed 0.52 percentage point more to productivity growth after 1995 than before, with information technology accounting for most of this acceleration. But in the wake of the drop in investment during the past 2 years, one might think that this growing contribution of capital deepening could not be sustained. Growth in capital services, which had averaged 5.5 percent annually from 1995 to 2000, dropped to about 3 1/2 percent during the past 2 years. The drop in information capital services growth has been more pronounced: from a 16 percent annual pace before 2001 to 8 3/4 percent annually in 2001 and 2002. This slowdown has been completely offset, however, by the decline in hours in 2001 and 2002, with the result that capital services per hour has grown even faster than in the late 1990s.

The Bureau of Labor Statistics measures labor quality in terms of the education and experience of the work force. The agency uses differences in earnings paid to workers with different characteristics to infer relative differences in productivity. Measured in this way, labor quality has risen as the education and skills of the work force have increased. However, the increase occurred at about the same rate both before and after 1995, so that labor quality does not account for any of the post-1995 acceleration of productivity.

The rate of growth of TFP in computer-producing industries has been rising, as evidenced by the rapid decline in computer prices relative to prices in the rest of the business sector. Relative computer prices fell at a 26 percent annual rate during 1995-2000. Although this rate of decline has slowed a bit in the past 2 years—to 21 percent—it remains impressive. Calculations using relative computer prices as an indirect measure of productivity growth in the computer-producing industries indicate that the

annual contribution of computer manufacturing to productivity growth in the private nonfarm business sector accelerated 0.13 percentage point, to 0.31 percent, during 1995-2002 on average. However, that contribution has edged back down during the past 2 years to 0.21 percentage point a year.

The final contribution comes from accelerating TFP in the economy outside the computer-producing industries. This contribution is calculated as a residual; it captures the extent to which technological change and other business and workplace improvements outside the computer-producing industries have boosted productivity growth since 1995. This factor accounts for about 1.08 percentage points of the post-1995 acceleration in structural productivity, or about 60 percent of the total. Taken at face value, it implies that improvements in the ways capital and labor are used throughout the economy are central to the post-1995 acceleration in productivity, but because it is calculated indirectly, as a residual, it is equally an illustration of the limits on our ability to account for the acceleration.

In summary, structural productivity growth remained almost as strong in 2001 and 2002 as in the years immediately preceding. Growth in TFP likewise continued strong, with industries outside the computer sector making substantial contributions.

TABLE 1-3.—*Accounting for the Productivity Acceleration Since 1995*

[Private nonfarm business sector; average annual rates]

Item	1973 to 1995	1995 to 2002	Acceleration (percentage points)	2000 to 2002
Labor productivity growth rate (percent)	1.39	2.81	1.42	3.05
Percentage point contributions:				
Less: Business cycle effect	.02	-.28	-.30	-.15
Equals: Structural labor productivity	1.37	3.10	1.73	3.21
Less: Capital services per hour	.73	1.25	.52	1.64
Information capital services	.41	.82	.40	.69
Other capital services	.32	.43	.11	.94
Labor quality	.27	.26	-.02	.26
Equals: Structural TFP	.36	1.57	1.21	1.29
Less: Computer sector TFP	.18	.31	.13	.21
Equals: Structural TFP excluding computer sector TFP	.18	1.25	1.08	1.07

Note.—Labor productivity is the average of income- and product-side measures of output per hour worked. Total factor productivity (TFP) is labor productivity less the contributions of capital services per hour (capital deepening) and labor quality.

Data are adjusted for the July 2002 annual revision to the national income and product accounts (NIPA).

Productivity for 2002 is inferred from data for the first three quarters.

Detail may not add to totals because of rounding.

Sources: Department of Commerce (Bureau of Economic Analysis) for output and computer prices; Department of Labor (Bureau of Labor Statistics-BLS) for hours, and for capital services and labor quality through 2000, but the BLS figures have been adjusted by the Council of Economic Advisers for the effects of the July 2002 NIPA revision; and Council of Economic Advisers for the business cycle effect, and for capital services and labor quality for 2001-2002.

In addition to productivity, growth of the labor force (also shown in Table 1-2) is projected to contribute 1.0 percentage point a year to growth of potential output on average through 2008. Labor force growth results from growth in the working-age population and changes in the labor force participation rate. The Bureau of the Census projects that the working-age population will grow at an average annual rate of 1.1 percent through 2008. The labor force participation rate is expected to be roughly flat through 2008, although it may begin to decline around that year, which is the year that the oldest baby-boomers (those born in 1946) reach the early-retirement age of 62.

In sum, potential real GDP is projected to grow at about a 3.1 percent annual pace, slightly above the average pace since 1973. Actual real GDP growth during the 6-year forecast period is projected to be slightly higher, at 3.2 percent, because the civilian employment rate (line 4 of Table 1-2) makes a small (0.1 percentage point) and transitory contribution to growth through 2006. This contribution then ends as the unemployment rate stabilizes at 5.1 percent.

Interest Rate Outlook

Following a large decline in 2001, the interest rate on 91-day Treasury bills fell an additional 50 basis points in 2002 and ended the year at 1.2 percent. These reductions reflected the Federal Reserve's efforts to stimulate the economy, which left real short-term rates (that is, nominal rates less expected inflation) close to zero. Real rates are not expected to remain this low once the recovery becomes firmly established, and nominal rates are projected to increase gradually to 4.3 percent by 2007, which would leave the real interest rate on Treasury bills close to its historical average.

The Administration projects that the yield on 10-year Treasury notes, which was 4.2 percent when the projection was finalized at the end of November, will stay at that level for 2003 and then rise very slowly, reaching 5.6 percent by 2008. At that time their yield will be 3.3 percentage points above expected CPI inflation—a relationship that is consistent with the historical average since 1959. From 2005 onward the projected term premium (the premium of the 10-year rate over the 91-day rate) of 1.3 percentage points is in line with its historical average.

Income Forecast

One important purpose of the Administration's forecast is to estimate future government revenue, which requires a forecast of the components of taxable income. The Administration's income-side projection is based on the historical stability of the long-run labor and capital shares of gross domestic income (GDI). During the first three quarters of 2002, the labor share of GDI was on the low side of its historical average of 58.0 percent. From this

starting point, it is projected to rise to its long-run average and then remain at this level over the forecast period. The labor share consists of wages and salaries, which are taxable, other labor income (that is, fringe benefits), which is not taxable, and employers' contributions for social insurance. The Administration forecasts that the wage and salary share will decline while other labor income grows faster than wages. This pattern has generally been in evidence since 1960 except for a few years in the late 1990s.

The capital share (the complement of the labor share) of GDI is expected to fall slightly before leveling off at its historical average. Within the capital share, a near-term decline in depreciation (a consequence of the decline in short-lived investment during the past 2 years) is offset by a rise in economic profits, which averaged 7.5 percent of GDI during the first three quarters of 2002, a bit below the post-1973 average of 8.0 percent. Economic profits are expected to rise to roughly 8 percent of GDI and to remain flat at that level for the duration of the projection period. The pattern of book profits (known in the national income and product accounts as "profits before tax") reflects the 30 percent expensing provisions of the Job Creation and Worker Assistance Act. These expensing provisions reduce taxable profits from the third quarter of 2001 through the third quarter of 2004. The expiration of the expensing provisions increases book profits thereafter, however, because the fraction of investment goods expensed during the 3-year window will not be eligible for depreciation thereafter. Other taxable income (the sum of rent, dividends, proprietors' income, and personal interest income) is projected to fall, mainly because of the delayed effects of past declines in long-term interest rates, which reduce personal interest income during the projection period.

Conclusion

The Administration believes that the economy is likely to grow somewhat faster than in the projection presented here, as the long-run benefits from the full reductions in marginal tax rates and the dividend exclusion are felt. These should lead to increases in labor force participation and increased entrepreneurial activity. The Administration, however, chooses to adopt conservative economic assumptions that are close to the consensus of professional forecasters. As such, the assumptions provide a prudent, cautious basis for the budget projections. Yet the Administration's policies are designed to enhance U.S. economic growth, not just maintain it. The remaining chapters of this *Report* illustrate ways in which pro-growth economic policies can improve economic performance at home and abroad, by striking the right balance between the encouragement and regulation of firms, by promoting flexibility and dynamism in labor markets, and by reducing tax-based disincentives to economic activity.

CHAPTER 2

Corporate Governance and Its Reform

Corporate governance is the system of checks and balances that guides the decisions of corporate managers. As such, it affects the strategy, operations, and performance of business firms over a large segment of the economy: corporations during 2001 accounted for 60 percent of U.S. gross domestic product (GDP). Corporate governance also affects the ability of those outside the corporation—including investors—to monitor the quality of management and its decisions and to influence and even control some of those decisions. This observability, or transparency, can greatly enhance a corporation's ability to raise funds from outside investors. It can also make it easier for other outsiders, including suppliers and customers, to transact with the corporation, by making the incentives and abilities of its managers and other employees more clear.

Households increasingly participated in the ownership of corporate stock during the 1990s. Fewer than one-third of U.S. households—31.6 percent—owned corporate stock directly or indirectly in 1989. By 1992 that number had grown to 36.7 percent. More than half—51.9 percent—of households owned stock as of 2001, the latest year for which comparable survey statistics are available. The greatest percentage-point increases in household stock ownership appear to have occurred in groups where it was lowest at the start of the decade, for example among households with moderate rather than high levels of income.

Access to well-developed financial markets accounts for some of the success that U.S. corporations and their managers have enjoyed in attracting capital from outside investors. U.S. securities markets are among the best in the world. Their relative depth and liquidity make it easier for investors to buy and sell common stock and other corporate securities, and this makes investments in U.S. corporations more attractive. The relative efficiency of U.S. securities markets is not the only reason for households' willingness to invest in corporations, however.

To compete successfully in well-developed financial markets, corporations must win and maintain investors' confidence. To do this, managers must provide sufficient information about their firms' prospects to persuade investors that they can realistically expect a competitive return on their investments. This is not always easy, even for a seasoned corporation whose investment prospects are strong. Part of the difficulty is that managers, as insiders, generally know more than outside investors know about the

corporation, the managers' competence, and their likely diligence in managing the investors' funds. Facing this information disadvantage, investors demand reliable information about the corporation and its management. Specifically, they seek assurance that the corporation's investment prospects—and its managers' competence—are as good as the managers might claim.

Investors also demand assurance that managers will work diligently in their interest. It is not generally realistic for investors to expect managers to exercise the same diligence with funds provided by others that they would if only their own funds were at stake. Thus some costs of delegating decisions to management inevitably arise when managers go outside the corporation for funds. These costs of separating ownership from control—what economists sometimes call agency costs—are not the same for all corporations, because the importance of managerial discretion in decision making tends to vary across industries, and among firms in the same industry. Diligent managers with good investment prospects may thus run the risk of being overlooked by investors or receiving funds on less favorable terms, if they do not adequately meet investors' demand for information. For their part, investors who lack reliable information can miss out on good investment prospects.

The value to managers, investors, and other participants in corporations of finding efficient ways to meet this demand for assurance about the quality of corporate investment opportunities can be high. One solution is for managers to create systems of checks and balances that shape the conduct of their corporations and that outsiders can readily observe. Checks and balances governing the choice of managers and projects, for example, can commit the corporation, through rules and incentives, to employ more talented managers and to pursue more promising investment prospects. Transparent systems for setting management compensation and procedural safeguards on managers' actions can reduce the agency costs of delegating decisions to management. By creating strong systems of corporate governance, managers can thus improve both the efficiency of their firms and the terms on which financing is available to them.

Strong corporate governance generally involves some form of publicly revealed commitment to whatever checks and balances have been instituted. This can be critical to meeting investor demand for assurance. Typically it is not enough for managers simply to claim that they have instituted certain systems and procedures and promise to maintain them; investors must be able to verify that those systems and procedures are actually in place and that the commitment to maintain them is real. This assures investors that these arrangements are not likely to unravel when they are not looking.

The standards for strong corporate governance are thus high. Fortunately, managers of U.S. corporations have a solid foundation on which to build. Nationwide markets for capital and for management talent, together

with a strong legal system and a long tradition of sound internal corporate governance, provide managers with incentives to innovate and powerful tools for communicating credibly with outsiders.

One might think that laws and regulations by themselves could provide investors the assurances they seek. Some researchers have indeed attributed the comparative success of U.S. corporations in attracting small investors to the relative strength of the U.S. legal system. The capacity of the U.S. court system to provide impartial adjudication stands in contrast with what researchers have found in some other countries. The lack of a court system that can resolve disputes fairly can limit the willingness of investors—especially small or unsophisticated investors—to provide corporations with funds. This may partly explain why, in some other countries, large institutions such as banks play a bigger role in supplying financing to corporations than they do in the United States, where households play a greater role. The impartial adjudication of disputes by U.S. courts is something many U.S. investors may take for granted.

Yet some effective corporate governance solutions have evolved in the United States without express legal or regulatory guidance. Some contemporary institutions whose existence is usually attributed to certain laws appear, in fact, to predate those laws. The presence, relatively early in the Nation's history, of strong financial markets—such as major stock exchanges—made it easier for managers to create strong, transparent systems of checks and balances that did not rely on the courts. Those conditions appear to have allowed managers and corporations to develop reputations for quality, or to efficiently rely on the reputations of well-known intermediaries, as means of providing assurance to outside investors. Finally, legal solutions are sometimes limited by the fact that contracts are often left incomplete, in the sense that they do not specify what should happen under all possible contingencies. This reflects the potentially prohibitive costs of writing agreements down so that a judge can later verify their existence in the event of a dispute. It is costly not just to anticipate possible future sources of disagreement, but also to involve attorneys and other legal experts in drafting provisions to deal with those eventualities, not to mention any time that might be spent in court.

The existence of *both* strong markets and a strong legal system can thus explain U.S. corporations' comparative effectiveness in meeting investor demand for assurance. Market solutions and legal solutions can be substitutes or complements for one another. Their comparative strengths can change over time as market conditions change. It would thus be a mistake to view the advantage of one over the other as absolute. As markets evolve, the effectiveness of legal solutions can change, and with it the comparative advantage of markets in helping managers more closely align their actions with the shareholders' interest and communicate this alignment credibly to investors.

Accordingly, effective corporate governance in the United States rests on a foundation with three parts: legal institutions, external market forces, and internal governance systems that respond to both. The next section of this chapter explains how these parts work together to enable corporations to develop systems of corporate governance that are responsive to investors. It discusses how this foundation permits corporations to make adjustments to their corporate governance systems over time, to respond to changing market conditions.

This adaptive capacity of U.S. corporate governance has indeed been critical to the ability of corporations—and the government—to respond to recent changes in market conditions. During 2002, corporate managers faced heightened demand for assurance from investors. At the same time, allegations of misconduct by some managers and external auditors underscored the value of updating some of the laws and regulations that govern corporate conduct. The alleged misconduct, in part, involved failure to provide accurate information about corporate financial and operating performance. These difficulties—and related, potentially severe harms to investors and employees—underscored concerns about possible weaknesses in U.S. corporate governance that had emerged over the past decade. Many corporations have instituted changes accordingly. It was in this setting—and in light of the important role that U.S. corporations, and thus U.S. corporate governance, play in the global economy—that the President in March 2002 called for meaningful reform.

In calling for reform, the President set forth a plan that applies three core principles of effective corporate governance: accuracy and accessibility of information, accountability of management, and independence of auditors. The plan recognizes the complexity of modern corporate governance systems and their inherent flexibility. The call for careful reexamination of private customs and legal rules led to further changes in private sector institutions and the creation, in July 2002, of the Corporate Fraud Task Force, comprising law enforcement officials from the Department of Justice, the Securities and Exchange Commission (SEC), and other government agencies. (Table 2-1 illustrates the stepped-up enforcement efforts of the SEC during this period and some of the results achieved during the same period.) It also led, that same month, to the President signing new legislation, the Sarbanes-Oxley Act of 2002, which the SEC is now implementing through a series of new regulations being issued in phases during 2002 and 2003. These changes constitute one of the most significant reforms of U.S. corporate governance since the establishment of the SEC itself in 1934.

The President's plan targeted the underlying causes of concern about investor confidence. The suggestion of a crisis in investor confidence, which captured the attention of policymakers during 2002, followed a substantial increase in the number of earnings and other financial restatements—corrections to previously

TABLE 2-1.—*SEC Enforcement Efforts and Outcomes, 2000-2002*

SEC activity	FY 2000	FY 2001	FY 2002
Financial fraud and issuer reporting actions filed	103	112	163
Officer and director bars sought	38	51	126
Temporary restraining orders filed	33	31	48
Asset freezes	56	43	63
Trading suspensions	11	2	11
Subpoena enforcement actions	8	15	19
Disgorgement ordered (millions)	$463	$530	$1,328
Penalties ordered (millions)	$44	$56	$116

Source: Securities and Exchange Commission.

issued statements—by U.S. public corporations, dating back to the mid-1990s. There are sometimes good reasons for corporations to restate earnings. Yet a Federal agency report noted that financial restatements by large, well-known public companies "have erased billions of dollars of previously reported earnings and raised questions about the credibility of accounting practices and the quality of corporate financial disclosure and oversight in the United States." The occurrence of so many restatements, in combination with high-profile allegations of misconduct, created an impression that abuses in financial reporting had become widespread.

Restatements of financial reports raise concern because they can leave investors doubting the quality of the restated reports or, worse, those of other companies that have not issued restatements. Similarly, although relatively few restatements appear to be linked to management misconduct, innocent managers can suffer from the perception that a few managers create about the quality of management generally. The appearance of widespread restatements or misconduct can thus create a misimpression about the conduct of corporations nationwide. In fact, most large U.S. corporations have shown no signs of having to restate their earnings or otherwise warranting scrutiny from the SEC, the entity charged with enforcing U.S. financial disclosure rules. This remains true even after investors, enforcement officials, and managers not implicated in any offenses stepped up their efforts to expose misconduct, following the President's call for reform in March 2002.

During the late 1990s the number of companies that filed earnings restatements grew dramatically. After averaging 50 a year from 1991 to 1997, the number of restatements increased to 96 in 1998, 204 in 1999, 163 in 2000, and 153 in 2001, according to one study of certain types of

restatements, compiled through a keyword search of news databases. About 10 percent of companies listed on major stock exchanges issued restatements from January 1997 through June 2002, according to another study using a similar method. The implication is that about 90 percent of public corporations, which have been the focus of concern, stuck with their original financial reports during that period. Moreover, signs of error or misconduct in financial reporting have not been randomly distributed among U.S. corporations but rather have tended to concentrate in certain industries. Earnings restatements have occurred with greater frequency among technology companies than among other companies, for example.

The more frequent occurrence of restatements in some industries may reflect the unusual challenges those industries faced during the second half of the 1990s. Those circumstances may have created valid reasons for restating earnings but may also have created new opportunities for misconduct, which the markets and legislators have moved quickly to correct. Governance structures themselves also tend to vary across corporations. The different experiences of corporations in different industries, under different market conditions and at different times, underscore the importance of exercising caution before applying any one governance solution to all corporations or unduly locking corporations into inflexible regulatory solutions.

The rest of this chapter is in two main parts. The first part surveys the economic foundation of corporate governance and its reform. Corporate governance was once solely the province of law: legal scholars and practitioners generated much of what was written on the subject, not to mention most of the governance advice that corporations received. However, advances in economic research over the past few decades, primarily in corporate finance, have shed light on the critical role that corporate governance can and does play in enhancing corporate efficiency and in increasing the depth and liquidity of financial markets. The second part of the chapter provides an overview of recent reforms and their anticipated contribution to the quality of corporate governance, with special attention to new Federal legislation passed during 2002. This is followed by a brief discussion of the relation between corporate governance in the United States and that in other countries, an issue that is receiving greater attention as markets become more global.

As empirical research has evolved, its focus has shifted to add richness and depth to the understanding that economists now possess of how good corporate governance can promote investors' interests, corporate efficiency, and economic efficiency more generally. Two decades ago, empirical economic research into corporate governance focused on how and whether the entrenchment of managers might lead corporations to change their internal governance practices and structures in ways that might benefit the managers at undue expense to shareholders. More recently, as markets have become more global, research has

turned to the differences between countries' systems of corporate governance and whether those differences have grown or diminished in recent years.

These shifts in focus reflect the evolution of markets and the demands they place on researchers to provide practical insights and, in some instances, guidance. The result has been an increase in the scope and depth of economists' understanding of how corporate governance systems build on the foundation that markets and the law provide, as indicated by the discussion below of some legal rules that appear to undermine the effectiveness of U.S. corporate governance. Specifically, regulations that may once have had a beneficial effect now appear to place undue restrictions on investors in their ownership of stock and their exercise of the rights attached to ownership. As a related matter, some rules that seek to influence the ability of small investors to obtain information appear to rest on an incomplete understanding of the production and distribution of information, particularly as it affects small investors. The emergence of economic research on the role of information and on the economic foundations of corporate governance has complemented the development of corporate governance policy both in the private sector and in government.

Foundations of Corporate Governance

Businesses that organize themselves as corporations are better able than other kinds of businesses to raise capital from outside investors. This advantage is supported by corporate law, which allows individuals and organizations to invest in a corporation without incurring unlimited liability for the corporation's actions or bearing the costs of participating directly in its management, in order to share in the business's profits. Limited liability also accounts for the ease with which stock can be traded. When stock is bought and sold, voting rights typically change hands, and this causes market forces to affect the outcomes of shareholder votes in ways that do not apply to other kinds of elections. This transferability of rights distinguishes the voting rights of stockholders from those of citizens.

Yet strong legal institutions cannot alone account for the success that the corporation has enjoyed as an organizational form in the United States. When investors supply external financing, they delegate key decisions about the use of those funds to managers. The cost of this separation of ownership from control can be high, to the point of limiting a corporation's profitable access to outside financing. Even very detailed provisions in laws and contracts cannot realistically eliminate this cost: closing all the relevant loopholes in those provisions, updating them to keep up with changes in market conditions and technology, and enforcing them against violation would be prohibitively costly.

Accordingly, managers and investors can have powerful incentives to discover or invent other ways to reduce these remaining costs of separating ownership from control, for if they succeed, the corporation can grow and investors can participate in the resulting higher profits. However, these costs can vary markedly across corporations and industries and over time. This creates incentives for managers and investors to monitor existing solutions and continue to seek new means of reducing the costs of separating ownership from control.

It is here that the three-part foundation of corporate governance in the United States becomes important. The first part comprises the external markets that put pressure on managers to perform, bringing their incentives more closely into alignment with the shareholders' interest and creating incentives for them to develop new strategic or institutional means of reducing the costs of separating ownership from control. The second is the internal governance structure of the corporation, which adds a complementary set of rules and incentives to align management's actions with the shareholders' interests. Finally, the legal system provides investors and other participants in the corporation's affairs with a means of impartial dispute resolution. Related to this is the role that regulation plays in shaping corporate governance solutions. Some features of contemporary corporate governance may indeed be built upon preexisting regulations or other legal rules. The opposite may also be true, however: some contemporary features of U.S. corporate governance predate modern securities regulation. Market, legal, and regulatory solutions interact and can complement one another in aligning the incentives of managers and the interests of shareholders.

Market-Imposed Discipline: External Governance Mechanisms

The market institutions that have emerged in the United States to align managers' and investors' interests tend to complement the legal discipline that the courts provide. They do this by overlaying a more flexible yet fairly standardized system of checks and balances onto the more rigid system of court-enforced rules and laws.

As U.S. corporate governance has evolved since the mid-20th century, experts in economics, finance, and law initiated extensive study of how the sometimes-hidden forces of the marketplace operate on the corporation. The result is that competition in at least three distinct external markets is now recognized as shaping the governance structures of corporations:

- Competition in the market for corporate control
- Labor market competition
- Product market competition.

Box 2-1. Do Bad Bidders Make Good Targets?

During the 1980s, interest grew in the use of hostile and friendly takeovers as means of disciplining bad management and of helping to reallocate management and other resources among competing uses. Research on this topic indicated that takeovers have favorable or at worst neutral consequences for shareholders, on average. Yet some bidders paid higher prices than others. This raised questions about whether the disciplinary reach of the market for corporate control might extend to corporations whose managers bid for other firms too aggressively. The evidence is that corporations whose shareholders appear most likely to have been harmed by their managers' overly aggressive acquisitions are indeed more likely to become acquisition targets themselves. After a completed acquisition, managers appear to face a greater chance of being replaced. Moreover, managers of targeted corporations often face market discipline whether or not the takeover bid succeeds. Takeover targets are often poor performers, and management turnover appears to occur more frequently after the defeat of a takeover bid if the target is a poorly performing corporation.

Merger and acquisition activity can in some instances strengthen corporate governance by committing the corporation to the issuance of more debt, ensuring the payout of free cash flow and closer monitoring by debtholders. Although research from other countries, such as Japan, indicates that there, too, the threat of takeover can strengthen managers' incentives to act in the shareholders' interest, evidence of a well-functioning market for corporate control has been more visible in the United States. For all these reasons, economists view the market for corporate control as an important source of management discipline, complementing the beneficial effects of other market forces and regulatory oversight. Mergers and acquisitions have a useful role to play in corporate governance. In the market for corporate control, bad bidders make good targets.

Each of these sources of market discipline contributes to managers' incentives to act in the interests of shareholders. This market discipline in each instance can take the form of reputational sanctions: managers will bear losses in their own expected future income if market participants decide to revise downward their beliefs about the quality of the corporation or its managers in response to unfavorable news about their conduct.

The pressures of these distinct markets are most readily apparent at different times in different industries and corporations (Box 2-1). Striking evidence on the role of external markets in disciplining managers—and in

reallocating assets among competing uses—emerged in the 1980s, for example. During this period, changes in technology and in regulation led many corporations to substitute external financing for internal financing. This also exposed the managers of some of these corporations to the real chance of being removed, as outside investors acquired significant amounts of equity and debt. Helping in this transition was the emergence of individual investors who specialized in acquiring companies even against the express wishes of incumbent management. Many of the so-called hostile takeovers of the 1980s occurred in a few specific industries such as oil and gas. The opportunity to improve corporate performance through restructuring made many of these transactions profitable.

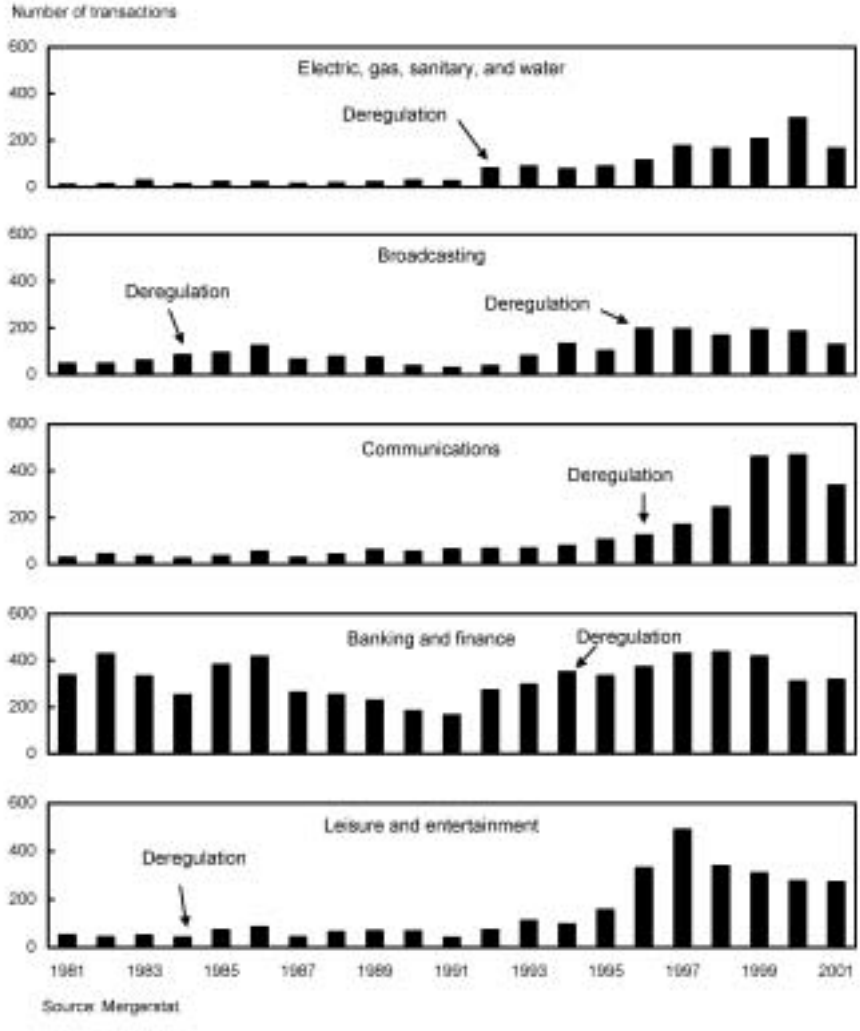
Mergers and other corporate control transactions play a valuable role in redistributing assets among alternative uses. By facilitating competition between management teams, and between organizational forms, the market for corporate control continuously affects the structure of corporations and the way managers do their jobs. Transactions in this market tend to occur in waves and to concentrate in specific industries, however, largely because the gains from corporate control transactions often derive from industry-specific technological and regulatory change, as Chart 2-1 illustrates.

Although managers continued to face pressure from the market for corporate control during the early 1990s, relatively few transactions occurred, as data on tender offers in Chart 2-2 illustrate. Economic research at that time documented some of the other external market forces and internal governance mechanisms that help align managers' incentives with the shareholders' interest. Evidence on CEO turnover illustrates the contribution of the labor market toward this alignment.

Managers face the threat that poor performance will cost them their jobs, independent of the level of activity in the market for corporate control. Research from the late 1980s and early 1990s indicates that CEOs were significantly more likely to lose their jobs following poor performance of their firms than at other times—a reflection of market discipline, in this case labor market discipline. Board members of companies that violated financial reporting rules also appear to suffer losses. The number of other directorships held by its directors appears to decline significantly after a firm is charged with accounting fraud. Indeed, evidence from a recent study suggests that individual employees often lose their jobs after their contributions to corporate misconduct become known. All of this illustrates the practical importance of the labor market as a source of discipline on management's performance, apart from the market for corporate control.

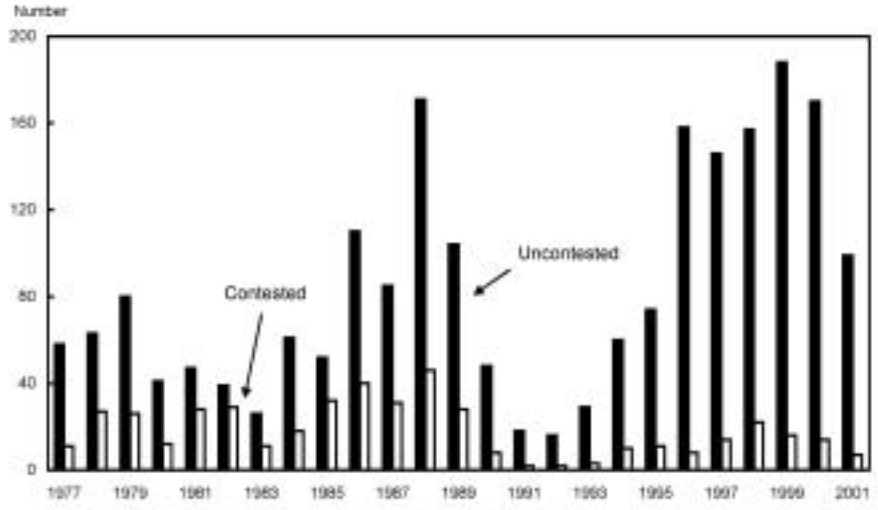
Finally, product markets are an important source of discipline for managers, with a lasting and pervasive effect on the conduct of business of all sizes. If corporations fail to deliver goods and services of suitable quality at a competitive

Chart 2-1 **Merger and Acquisition Transactions by Industry, with Deregulation**
Corporate control transactions often occur in waves after regulatory and technological change, such as occurred during the 1990s.



price, consumers will not buy from them. This gives managers powerful incentives to put their efforts into marketing good-quality products at reasonable prices. Product market competition is so critical to the performance of corporations that laws have been passed and remain vigorously enforced to prevent it from being extinguished by collusion or merger. In fact, product markets can in some instances provide discipline against abuses by corporations against consumers, in addition to the discipline that the courts provide.

Chart 2-2 **Tender Offers**
The mid-1980s and late 1990s witnessed surges in tender offer activity. Hostile, or contested, offers were relatively more important in the 1980s. The overall level of activity was greater in the 1990s.



Note: A tender offer is an offer to the shareholders to buy their shares at above the current price, usually to obtain significant influence or control over the corporation.
Source: Mergerstat.

Internal Governance Mechanisms

External market forces shape not just management conduct but also the design of mechanisms internal to the firm. For example, to avoid being subjected to a hostile takeover or to the threat of a proxy fight, managers have integrated outside observers into their internal decision processes and have taken other steps to improve the quality of their firms' internal governance. They have also divested assets that have higher value in applications outside the corporation.

Internal features of corporate governance can be difficult to discern from outside the corporation. Were it not so, managers would not exercise as much discretion as they often do over the corporation's choices, and the agency costs of separating ownership from control would not be as high as they are. Yet a few features of internal corporate governance are strikingly visible from without. Examples include the distribution of voting rights attached to stock ownership, the relation between debt and equity in the firm's financial structure, the composition of the board of directors, and, to some extent, the compensation of managers.

All features of internal corporate governance have the potential to affect corporate efficiency. Only those features that outsiders can readily observe—and that managers cannot easily alter—directly affect outside investors' beliefs about their likely returns from investing in the corporation. Debt finance provides one example. By taking on a significant amount of debt,

such as bank debt, managers can publicly commit to having a reputable lender monitor the conduct of their business more closely and more often than might otherwise occur.

The attachment of voting rights to stock provides a means of influencing the actions of management that is independent of any debt that may exist. The distribution of voting rights among shareholders is indeed important to internal governance, as are the rules governing how and on what issues shares may be voted. By exercising their voting rights, shareholders ratify managers' choices about some of the more transparent features of internal corporate governance, such as the composition of the board. Shareholders' exercise of their voting power became a focus of economic research during the 1990s, following changes in State laws that appeared to make it more difficult for individual large shareholders to unseat ineffective managers. This period saw growing demand from institutional investors for guidance on how best to exercise voting rights held as fiduciaries.

Shareholders: Ownership and Control

When a corporation decides to go public, its current investors must decide what ownership and control rights to retain for themselves and what to offer for sale to new investors. Going public can, of course, generate substantial agency costs related to separating ownership from control. Prospective new investors anticipate these potentially high costs. Their willingness to acquire stock as part of a new issue accordingly reflects the quality of the steps taken by the incumbent owner-managers to commit the corporation to a strong system of internal governance. Research suggests that the value of such a system is far greater in those industries, and under those market conditions, where the costs to outsiders of monitoring the actions of management are relatively high.

One way for the incumbent owner-managers to make a commitment to good governance is to retain a large fraction of the corporation's stock. The effect is to increase the sensitivity of the managers' own wealth to changes in the wealth of shareholders. Because the incumbent management has greater control over the firm's decisions than do other shareholders, the effect of increased managerial ownership is to bring the incentives of management, and thus the actions of the corporation, more closely into alignment with the shareholders' interest (Box 2-2).

Observed differences in the concentration of management's stock ownership across companies indeed appear traceable to differences in the costs of eliminating barriers to external influence, and the value of doing so. Managers possess relatively large ownership stakes, on average, in corporations that operate in volatile markets or in industries where management's discretionary actions affect shareholder wealth yet are difficult for outsiders to observe and evaluate. They tend to possess relatively small ownership

Box 2-2. Who Owns Corporations?

In the United States, a corporation's stockholders are its ultimate owners. Possession of common stock and related equity securities confers two fundamental rights of ownership: the right to participate in the corporation's future profits and the right to vote on certain decisions of the corporation, such as the appointment of directors. Stockholders learn what issues are up for a vote by reading the proxy statement that they receive by mail before each shareholders' meeting. Meetings usually occur annually. These rights are established by State law and reinforced by Federal laws and regulations, such as disclosure laws, that obligate corporations to keep current and prospective future shareholders informed.

Well-developed financial markets have allowed U.S. public corporations to distribute their stock widely. Already in the 1930s, concern arose that the diffuse ownership of U.S. public corporations might undermine their efficiency. One study famously expressed the view that professional managers lacked adequate incentives to serve the shareholders' interest, and that shareholders with small ownership stakes had little incentive or ability to monitor and, when necessary, intervene to correct the situation. Fifty years later, research into the market forces and other mechanisms that guide managers' actions intensified. This work revealed that top-level managers of large public corporations owned significant blocks of stock in their firms.

Indeed, management ownership of stock in U.S. public corporations appears to have increased since the 1930s. One study reports that the proportion of shares owned by managers of public corporations actually grew between 1935 and 1995, from an average of 12.9 percent to an average of 21.1 percent. This increase appears to have occurred between the 1930s and 1970s: little change occurred between 1980 and 2001, according to recent research.

Consistent with the incentive-aligning value of stock ownership, management's ownership stake is typically smaller in companies where management discretion plays a less critical role and where external oversight is less costly or easier to achieve—this is the case in static or low-volatility market environments and in heavily regulated industries. Managers' ownership of stock in companies in the utilities industry and other regulated industries is less concentrated than it is in other industries, on average, and this pattern was present in both 1935 and 1995. This evidence is consistent with the views of many economists that an important function of management ownership of stock is to reduce the cost of separating ownership from control by aligning management's incentives more closely with the investors' interest in ways that outsider investors can readily observe.

stakes in corporations that operate in less volatile markets and in regulated industries where managerial discretion matters less to shareholder wealth. This suggests that management's stock ownership responds at least in part to the market's demand for an appropriate alignment between managers' incentives and shareholders' interests.

One alternative to concentrated managerial stock ownership is for one or more investors who are not managers to accumulate a significant block of shares. Corporations that have such outside blockholders can be easier to acquire, because some of the transactions costs of concentrating ownership in the hands of one or a few investors have already been borne. The presence of a large blockholder can thus increase management's risk of ouster due to poor performance. This can in turn deter shirking and other bad management practices, even if the blockholder does not directly exercise his or her rights of influence or control.

Blockholders who own voting stock in the corporation can, of course, influence the strategy or management of the corporation directly, by exercising their voting rights. Blockholders have greater abilities and incentives to exercise these rights than do smaller shareholders, for two reasons. First, ownership of more voting rights in the corporation gives each blockholder a greater chance of influencing the outcome of any shareholder vote or related decision. Second, the entitlement to a greater share of the corporation's future cash flows that comes with block ownership can make it significantly more profitable for an outside blockholder to incur the upfront costs of seeking to influence the outcome of a vote or other corporate decision. These features indicate that the presence of outside blockholders can significantly affect the quality of discipline that managers receive from the market, and the quality of corporate governance generally.

Research on corporate blockholders has considered the possibility that they, like managers, might have idiosyncratic interests that conflict with the interests of shareholders generally. Concerns that large investors might treat themselves preferentially have arisen in the context of research into the source of the premium at which voting stock tends to trade over other, nonvoting stock, for example. The many different kinds of outside investors that appear to exist and the nature of their incentives remain to be fully explored by economic research.

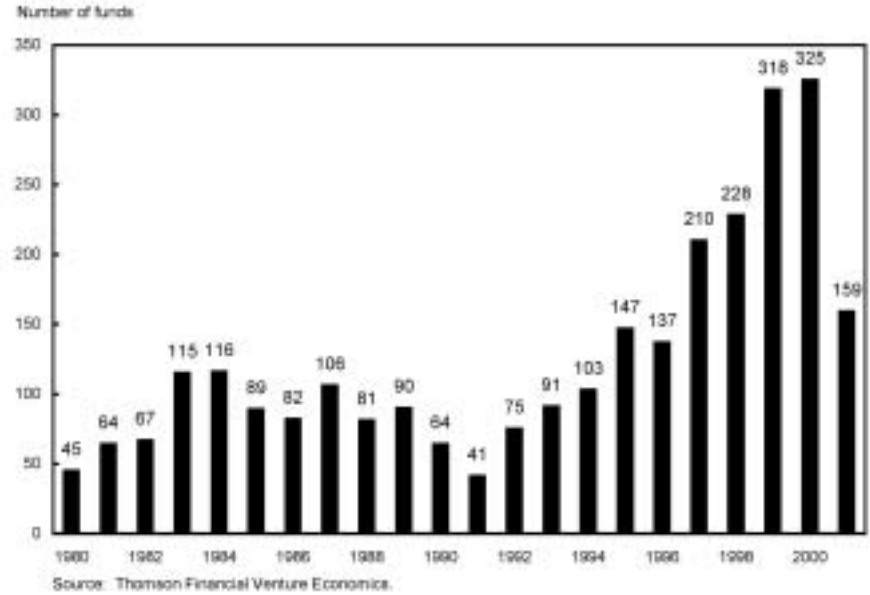
Suppliers of Venture Capital

Venture capitalists differ from some other stockholders in that they tend to follow a dual strategy, acquiring large ownership stakes while also participating actively in the governance of the corporation. Their large stakes can allow them to capture enough of whatever gains accrue from their intervention to cover the high cost of the effort that successful intervention can

require. Venture capital investors play a greater role in corporate governance in countries, such as the United States, where stock markets are relatively well developed. The presence of such markets makes it easier for venture capitalists eventually to sell their stakes to other investors who wish to own smaller stakes and be less involved in the strategic or the day-to-day decisions of the corporation. The emerging corporations that make the best use of venture capital firms' resources tend to be relatively risky, with high rates of failure. Thus, when venture capital investments succeed, the returns can be very high, even though the expected return on any individual investment may be relatively low. Chart 2-3 illustrates changes in the level of venture capital activity that have occurred over time in response to shifts in the demand for the financing and expertise they bring to emerging businesses.

Recent studies indeed call attention to venture capital as a good source of financing for corporations that face especially great difficulty in credibly communicating their businesses' future prospects to potential investors. Such corporations include those whose value derives primarily from future growth opportunities and those that have difficulty obtaining loans because they cannot readily meet the collateral and other requirements of banks or other lenders. Rather than try to satisfy a prospective lender, such firms often concentrate equity ownership with the entrepreneur and a venture capitalist. This may pave the way for some dispersed outside equity ownership.

Chart 2-3 **Net New Venture Capital Funds**
Opportunities for profitable creation of new venture capital funds arose during the 1990s.



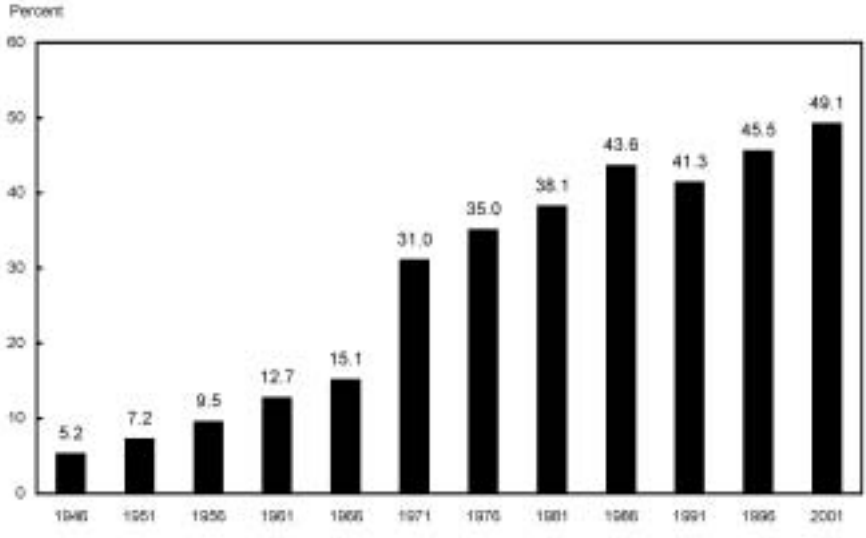
Source: Thomson Financial Venture Economics.

Institutional Investors

The ability of shareholders other than managers to exercise their voting rights in the firm can also play an effective role in aligning management's actions with the shareholders' interest. During the 1970s and 1980s, institutional investors accumulated equity stakes in U.S. corporations of a size not seen in the last half-century, as Chart 2-4 illustrates. As their ownership has grown, so has the visible role of institutional investors in corporations. In the 1980s these institutions—which include pension funds, mutual funds, and insurance companies—were often seen as passive participants in corporate governance, and evidence supports this view. This changed during the 1990s. Yet constraints on the role of institutional ownership have remained.

For example, the Investment Company Act of 1940 substantially restricts the ability of institutions to discipline corporate management on behalf of households and other investors. These restrictions appear to have arisen from a desire to promote the diversification of institutional holdings and to limit institutions' influence over corporate management. Modern economic research, however, has clarified the conditions that must prevail for diversification to be adequate. It appears that the Investment Company Act's notion of diversification would not stand up to modern economic theory: the act requires excessive diffusion of funds across firms without ensuring true diversification. For example, a mutual fund that invests all its assets across a large

Chart 2-4 **Percent of Equity Held by Institutions**
Institutional participation in corporate stock ownership has grown significantly over the past decade, and is nearly quadruple the level of 40 years ago, before regulatory change led to dramatic expansion.



Source: Board of Governors of the Federal Reserve System.

number of software companies would conform to the letter of the act but would not actually be diversified. The act may thus impose costs on investors—and on modern corporate governance—without providing countervailing benefits to investors or to the functioning of the market generally.

Research has also brought to light the critical role that the prospect of shareholder intervention in the corporation's affairs can play in disciplining management. This valuable discipline can often be achieved without actual intervention, the necessary condition being that managers recognize the threat of intervention. The Investment Company Act assures managers that the ability of institutions to step in and take direct disciplinary action against any misconduct will be limited. It thereby limits both the direct and the indirect roles of institutions in aligning the actions of corporate managers with the shareholders' interest. (Table 2-2 reviews other legal constraints on the role of institutional investors.)

Boards of Directors: Insiders and Outsiders

One way for managers to commit to a closer alignment between their incentives and the interests of their shareholders is to publicly surround themselves with reputable advisers. They can accomplish this by appointing to their boards of directors persons known for speaking out in the boardroom and, if necessary, taking action to prevent or remedy managerial misconduct. Boards serve two important roles. First, they constitute a panel of knowledgeable people who can offer the CEO timely advice in response to unforeseen developments in the marketplace that the CEO or other managers may be ill equipped to address on their own. Second, they can review the quality of recommendations that the CEO receives from other members of the corporation's management. An important challenge in the ongoing evolution of U.S. corporate governance is to find ways of improving the quality of the commitment that directors themselves make to act diligently in the shareholders' interest.

This challenge had already attracted the attention of researchers even before the events of last year put the issue on the front pages. Because boards of different companies differ in their composition, researchers have been able to evaluate statistically whether corporations with certain kinds of boards tend to perform better or worse than others. The evidence from this research is instructive, although not as consistent in its findings as the evidence on the incentive-aligning role of insider ownership.

One finding of this research is that directors who are not employees of the corporation may be less susceptible to the internal pressures that can undermine managers' incentives to act in the shareholders' interest. Research into what drives CEO turnover, for example, shows that outsider-dominated boards more frequently terminate CEOs following poor corporate performance than do insider-dominated boards (Box 2-3). Other research tells a

TABLE 2-2.—*Legal Rules That Shape the Roles of Institutional Investors*

Institution	Restriction	Source
Insurers		State law (New York example)
Life insurers	• No more than 2 percent of assets may be in the common stock of a single company; no more than 20 percent of assets may be in equity interests.	NY Insurance Law (for insurers doing business in NY)
Property and casualty insurers	• No more than 2 percent of assets may be in a single company's preferred or guaranteed stock; at most, 10 percent of assets may be in common stock.	Same
Mutual funds	• For half of portfolio: no more than 5 percent of fund's assets may go into stock of any one issuer, and fund may not purchase more than 10 percent of voting stock of any company; otherwise tax penalties apply. • Must get SEC approval prior to joint action with affiliate; e.g., a fund needs SEC approval before acting jointly to control a company of which it and its partner own more than 5 percent.	Subchapter M of the Internal Revenue Code Investment Company Act of 1940
Pensions	• Must manage assets prudently, and generally assets must be diversified. (The "prudence rule" has been interpreted to require that a person responsible for a plan retain experts when appropriate, and is a significantly higher standard than the business judgment rule). • Must act for the exclusive purpose of providing benefits to participants and beneficiaries. • Traditional pension plans may not acquire any stock or bonds issued by the company that sponsors the plan if such acquisition would cause the plan to hold more than 10 percent of its assets in such securities. • Must also comply with supplemental rules that specifically prohibit potentially abusive transactions with the plan.	ERISA: 29 U.S.C. § 1104 (a)(1)(B) 29 U.S.C. § 1104 (a)(1)(C) 29 U.S.C. § 1104 (a)(1)(A) 29 U.S.C. § 1107 (a)(2) 29 U.S.C. § 1106 (a); 1106 (b)
Bank holding companies (BHC)	Generally cannot acquire direct or indirect ownership or control of any voting shares of any company that is not a bank. Several important exceptions exist which, for example, permit a BHC to hold shares of a company: • That do not exceed 5 percent of the company's outstanding shares, if the ownership does not constitute "control" • Engaged in activities closely related to banking.	Bank Holding Company Act of 1956 12 U.S.C. § 1843(c)(6) 12 U.S.C. § 1843(c)(8)
Bank trust funds	• For pension accounts, no more than 10 percent of assets may be in employer securities. • Active bank control could trigger liability to controlled company.	ERISA: 29 U.S.C. § 1107 (a)(2) Bankruptcy case law

Sources: United States Code, Department of Labor, Federal Deposit Insurance Corporation, Securities and Exchange Commission, and National Association of Insurance Commissioners.

similar story. Firms facing SEC enforcement actions tend to have fewer outsiders on their boards, according to another study. The appointment of outside directors also has been associated with stock price increases, even among companies whose boards are already outsider-dominated, although companies with more outsiders on their boards appear not to perform significantly better than other companies, on average. Evidence that outside directors affect corporate conduct includes one study's finding that banks with more outside directors during the 1920s provided higher quality underwriting services, and that investors recognized this: banks with more outside directors were found to obtain higher prices than other banks for the securities they underwrote. These findings are consistent with the view that insider-dominated boards face some of the same incentive conflicts that can diminish the incentives of the CEO and other managers to act in the shareholders' interest.

It would be premature, however, to conclude that shareholders always benefit from adding outside directors, or that maintaining an outsider-dominated board is good for shareholders in all corporations. Studies of the benefits to shareholders of having outside directors sit on corporate boards have not consistently demonstrated that their presence improves shareholder wealth. These mixed results may occur because the effects vary from one

Box 2-3. What Incentives Do CEOs Face?

Two important incentives for CEOs to act in shareholders' interests come from the labor market and from the provision of incentive-based compensation. The role of the labor market is apparent in the fact that CEOs often lose their jobs after their corporations perform poorly: one study found that departure rates for CEOs at firms with poor performance relative to their industry exceeded those at firms with good performance in all but 3 of 26 years studied. Actual CEO firings can be difficult to identify, given that underperforming firms tend to quietly encourage their CEO to leave rather than make a public spectacle of the event. Nevertheless, proxies for dismissal—such as measures of departure rates that exclude departures that were likely due to retirement—indicate that job loss is a powerful disciplinary mechanism for CEOs in poorly performing companies. For example, one group of researchers found that executives in poorly performing companies tend to depart at younger ages: 34 percent of CEOs at such companies left before age 60, compared with only 24 percent of CEOs at better performing companies. Finally, one would expect underperforming firms to be more likely to look outside the company in order to break with the poor management practices of the past. Consistent with this, research that used press reports to qualify departures as either forced

Box 2-3.—*continued*

or voluntary found that outsiders replaced 49.6 percent of CEOs who had been forced from their positions, but only 9.9 percent of those who had departed voluntarily.

This practice of terminating CEOs following poor corporate performance appears to have stronger incentive effects on young CEOs than on older CEOs who are nearer retirement. This is not surprising: young CEOs have more future compensation to lose. Corporations appear to compensate for this. Older CEOs receive pay that is more sensitive to corporate performance than do younger CEOs, on average. One study associates a 10 percent change in shareholder wealth with a 1.7 percent change in compensation for CEOs within 3 years of retirement, but only a 1.3 percent change for those more than 3 years from retirement, for example. The threat of job loss and the provision of performance-based pay thus appear to be substitute means of providing CEOs with incentives to act in the shareholders' interest.

Stock ownership also helps align CEO incentives with the shareholders' interest. It enables the CEO to participate in any improvement in shareholder wealth that may arise from his or her performance, and it compels him or her to share in any losses. Options similarly allow the shareholder to participate in the gain, yet with limited exposure to downside risk. Options became an important part of executive pay during the 1990s and thus have received special attention during recent efforts at corporate governance reform. As a form of long-term compensation, options have some attractive features. Unlike traditional bonus packages, which depend on accounting-based measures of profits and corporate performance, the compensation that a CEO or other manager receives from options depends on the market's appraisal of the corporation's performance. This is reflected in the price of the corporation's stock. Specifically, stock options give the holder the right to buy stock at a set price. When the market price of the stock rises above that price, the option's value to the holder also rises. Option-based compensation, like restricted stock grants, can thus allow CEOs and other officers to participate in the growth in shareholder value that occurs during their tenure.

In addition to helping to align the CEO's incentives with the shareholders' interest, incentive-based compensation can be a good way to attract high-quality managers, because it rewards talent and effort. Research on compensation by U.S. banks, for example, reveals that compensation of bank CEOs tends to be both higher and more sensitive to changes in profits in States where deregulation has occurred; managerial discretion is arguably more important in such States, which appears to explain the difference in compensation patterns.

corporation to the next, for example because market conditions are different for different corporations. Moreover, it can be difficult for shareholders to identify the incentives that each outside director brings to the corporation.

To summarize, corporations have sought in several ways to improve the quality of their board's commitment to serving the shareholders' interest. They have added members to their boards who neither are employees nor have other business dealings with the corporation—such relationships can create conflicts of interest and otherwise undermine directors' incentives to oppose an entrenched or ineffective management team. The supply of qualified independent directors is limited, however, and their quality may vary; therefore this strategy is not likely to come without a cost. One way to avoid unduly trading off quality for independence is to change the procedures that the board follows, rather than its membership. Boards have tried various procedural solutions in an effort to improve the quality of their commitment to shareholders. One is to appoint someone other than the CEO to be the chairman of the board. Another is to change directors' committee assignments so that more outside directors are appointed to committees that make such critical decisions as the setting of CEO compensation and the selection of the corporation's outside auditor.

An alternative strategy would be to enlist an outside organization (for example, a stock exchange or a government regulator) to monitor certain specific aspects of the firm's internal governance. This shifts some of the burden of monitoring from the board—and from shareholders generally—onto the outside organization. Yet this strategy, too, has its limitations. Many of the challenges of designing effective internal governance systems arise from the fact that it is costly to monitor managers' actions in a timely manner from outside the corporation. Outside organizations can face many of the same obstacles that boards can face in making and enforcing rules to ensure good management.

Legal and Regulatory Institutions

Strong legal institutions are widely recognized as providing a solid foundation for economic growth, including the emergence of a strong corporate sector. Their contribution is seen as twofold. First, solid legal institutions provide a reliable, impartial means of resolving disputes. Although parties sometimes rely on private means of dispute resolution, such as arbitration, the reliable supply of dispute resolution through the courts remains a valuable, if not critical, input to effective corporate governance. Courts have indeed been called upon to enforce shareholders' voting rights, including the right of individual large shareholders to obtain internal governance reforms, such as changes in board composition, that may benefit shareholders generally at the expense of incumbent management.

The second contribution of legal institutions is regulation. Securities regulation in the United States predates the 1930s. Its evolution accelerated rapidly, however, after the passage of the Securities Act of 1933 and the Securities Exchange Act of 1934, which created the SEC and delegated to it the task of writing and enforcing securities regulations. The Congress similarly authorized the SEC to delegate some, but not all, of this task to specialized institutions. Stock exchanges, such as the New York Stock Exchange (NYSE), operate under SEC oversight as self-regulatory organizations. The SEC has also delegated certain responsibilities for setting and maintaining accounting standards to the Financial Accounting Standards Board. Under the Sarbanes-Oxley Act, the SEC is overseeing the creation of a new organization, the Public Company Accounting Oversight Board, whose task will be to develop, maintain, and enforce the standards that guide auditors in their monitoring and certification of corporate financial reports. An extensive set of laws and regulations has thus arisen to supplement and complement the role of the market in shaping corporate conduct. Like private contracts, these rules are enforceable through the courts (Box 2-4).

Information and Disclosure

The central feature of modern U.S. securities regulation is the series of SEC-enforced rules under which market participants must disclose information to the public. Reflecting this fact, the Securities Act of 1933 is sometimes known as the "truth in securities law." To the extent that investors have good information, they can fine-tune their investment decisions, shifting capital to those corporations that offer more or less risky investment opportunities, depending on their risk preferences. Better availability of information allows corporations whose managers do a good job or that offer low-risk investment opportunities to gain access to capital at a lower price than other, lower quality corporations or those whose offerings are relatively more risky.

In requiring disclosure, securities regulations supplement both the law and the market forces that create incentives for corporations to keep investors informed. Corporate managers have incentives to supply favorable information because, in doing so, they can distinguish themselves from other managers who lack favorable information to report. Enforcement of anti-fraud laws can beneficially strengthen this signal. Managers and corporations that commit fraud also risk costly market sanctions and loss of reputation, in addition to any court-imposed sanctions.

Examples: Does it Matter How Investors Get Information?

Controversy often surrounds regulations that seek to control the production and distribution of information. Regulation of information in securities markets is no exception. For example, the question of whether SEC-enforced

Box 2-4. Markets, Accountability, and the Enforcement of Rules

The announcement of a court-imposed sanction can be a dramatic event, particularly when it is for commission of a white-collar crime such as the intentional and harmful dumping of toxic substances, or fraud against a customer or investor. Yet the most important effects of the court system are hidden. Court-enforced sanctions shape management conduct by creating a credible threat to impose punishment, much as the threat of being pulled over for violating the traffic laws shapes the conduct of drivers on the road. Good managers, like good drivers, follow certain principles of conduct not only because they are good people but also because they know that, if they do otherwise, they risk being detected by enforcement authorities and subjected to sanctions. There are indeed two different ways to discourage—or deter—people from committing offenses, according to economists. One is to step up detection efforts, so that offenders face higher probabilities of sanction. The other is to increase the total sanction that offenders receive upon detection. The level of deterrence depends on the would-be offender's expected sanction—the product of the probability of detection and the size of the total sanction.

The total sanction that corporations—and managers—receive for detected misconduct depends not just on the courts but also on the market's reaction to the news of misconduct. For example, corporations can bear significant market, or reputational, sanctions for fraud against customers or suppliers, as when news of fraud against one or a few customers leads other customers to take their business elsewhere, possibly driving the offending corporation into insolvency. The size of the court sanction necessary to generate a given total sanction—and, thus, the level of deterrence—is of course higher for offenders and offenses where no market sanction is present. Two types of offenses for which market sanctions on the corporation appear not to be good substitutes for court sanctions are environmental offenses that harm third parties and frauds committed by managers against shareholders.

Whatever the source and size of the total sanction, deterrence depends on managers or employees who are in a position to influence corporate conduct believing that they will be held accountable for any harms that arise from misconduct, should it occur, with a high enough probability to deter the offense. Accordingly, recent reforms highlight the importance of clarifying management accountability and putting more resources into enforcement. Accountability and diligent enforcement are necessary for laws and regulations to do their work of promoting good corporate governance. Economic research has drawn attention to the fact that the effectiveness of rules generally depends on the effort put into their enforcement, in addition to the size of the penalty.

disclosure rules actually improve the quality of information that investors receive remains a subject of debate among researchers almost 70 years after the SEC's creation. One study of the effects of disclosure regulations made use of the fact that, although access to information was not as good in 1933 as it is now, investors did have better access in those days to information about corporations whose stock had been traded for many years or was traded over the NYSE than about other firms. If the new disclosure regulations implemented under the 1933 act had any effect, one would expect that effect to be greater for new, unseasoned securities and for securities of corporations that were traded over the smaller, regional exchanges, which lacked the strong listing standards and the following of brokers and investment advisers that the NYSE had by then accumulated. That study, which examined the effects of initial disclosure requirements under the 1933 act, concluded that there was such an effect: the act's passage contributed to a significant decline in the dispersion of securities prices, particularly among unseasoned non-NYSE securities.

A growing number of federally mandated disclosure rules have been issued over the decades since passage of the 1933 act. During the 1970s and 1980s, economists intensively examined the role of information in financial markets. They came to understand that information is a kind of commodity: it is costly to produce and has value to those who possess it. Modern economic research on the effects of disclosure regulation accordingly considers not just the effect of requiring disclosure on whatever information is produced, but also how the requirement to disclose information affects the *incentive* to produce information. Contemporary research on the effects of disclosure regulations thus focuses on how those rules affect the net quality, or value, of information produced.

The Williams Act of 1968. Evidence on the effect of the 1968 Williams Act amendments to the Securities Exchange Act of 1934 provides a good illustration of how disclosure regulations can have unintended, adverse consequences that offset and potentially cancel out the benefit they are designed to confer. During the 1960s, concerns arose that, in corporate takeover attempts, shareholders were being pressured to sell, or tender, their shares without being given enough time or information to make an informed decision. To address these concerns, the Williams Act introduced regulations under which acquirers today must disclose certain information, such as their intention with regard to the target company, within 10 days of obtaining 5 percent of any class of a company's voting securities. This can enable investors to do a better job of selecting the acquirer from among the alternatives, conditional on any acquirer making an offer.

Yet research into the consequences of the Williams Act uncovered a more subtle effect through which the act makes investors worse off. By requiring disclosure and delay, the Williams Act reduces the value of searching for

socially valuable acquisition prospects. It does this by enabling others to free-ride on an innovative acquisition bid, tendering their own offers and thereby raising the price that the innovator must pay and reducing its share of the total value of the acquisition. This is reflected in the increased premium that acquirers paid to the shareholders of target firms after passage of the act: from 32 to 53 percent of the pre-offer stock price, on average, over the ensuing decade. (Related State laws accounted for an additional increase: from 53 to 73 percent of the pre-bid price.) Moreover, these increased premiums appear to have come at the cost of a reduced supply of takeover bids, as some (but clearly not all) prospective bidders shifted their resources to other pursuits. Some shareholders thus appear to have benefited at the expense of others: those who still received bids after the act was passed got larger gains than they would have otherwise, yet those who did not receive bids that would have been offered had the act not been passed got nothing, and a valuable source of market discipline was lost.

Financial Analysts' Reports. Most recently, regulators have confronted the fact that some investors—including small investors—receive information about corporations from financial analysts' reports. Given the extensive disclosure requirements that corporations already face, it might seem surprising that analysts' reports could have anything new and informative to offer. Research into how stock prices respond to the release of those reports, however, suggests that they are informative. Stock prices tend to increase when analysts issue new "buy" recommendations or raise their ratings of corporations, and decline when analysts issue new "sell" recommendations or lower their ratings.

Concerns have been raised that some analysts may face conflicts of interest that could lead to biases in their reports. Conflicts can arise when an analyst is writing a report on a firm that has done a significant amount of business with the analyst's employer or that faces the strong prospect of doing so in the future. Research suggests that investors tend to take analysts' affiliations into account when deciding how to use the information in their reports: investors appear to place less weight on reports of analysts whose employers may present them with these conflicts. How and to what extent investors take into account the potential for conflicts when evaluating analysts' reports—and the corporate governance context in which analysts prepare their reports—is an important area of ongoing research. The findings are expected to shed light on the appropriate direction for corporate governance reform as it affects the supply of information to investors.

Corporate Governance Reform

One of the perennial challenges of running a business is adapting to change. As businesses have grown in size and complexity, this challenge has grown as well. To keep up with changes in the marketplace, corporate participants—including both managers and investors—must confront the demands associated with new technology, changing consumer preferences, and the requirements of the public sector. As technology and changes in the structure of markets in Europe and elsewhere have made it easier to trade across international boundaries, new challenges have emerged. Some of these developments have placed U.S. corporations and the laws and regulations governing them under relatively close scrutiny over the past decade, as other governments have turned to the successful U.S. corporate governance system as a possible template for creating new systems or modifying old ones. The ability of U.S. corporations to adapt readily to change is critical to their profitability and, accordingly, their ability to continue operating as independent enterprises.

The recent reforms of the U.S. corporate governance system are indeed the latest in a history of dramatic changes going back over a century. These include changes arising from five distinct merger waves (including those of the 1980s and 1990s), from the introduction of the SEC in 1934, from the imposition of constraints on institutional stock ownership through the Investment Company Act of 1940 and other legislation, and from the continuing modification of regulations under the securities laws.

The recent reforms were marked by a speech by the President on March 7, 2002. The President announced a "Ten-Point Plan to Improve Corporate Responsibility and Protect America's Shareholders," calling for a concerted response to the emerging news that some of the Nation's largest corporations had not truthfully reported their earnings and that this would harm investors, including employees whose pensions were invested in the company's stock. This plan applies three core principles of effective governance: accuracy and accessibility of information, management accountability, and auditor independence.

The private sector's response was almost immediate. Individual managers and investors undertook a careful reexamination of the governance practices of their corporations; the resulting changes received widespread public attention in many cases. The most visible private sector initiatives were undertaken by the self-regulatory organizations whose rules public corporations must follow as a condition for the public trading of their securities. Table 2-3 shows how some of the specific initiatives undertaken by two such organizations, the NYSE and the Nasdaq, implement the core principles underlying the President's plan for reform. The table reflects proposals that were announced between April and June of 2002 and then updated during

late 2002 and early 2003 to account for SEC-initiated regulatory changes under new Federal legislation passed during July 2002.

As regulators, self-regulatory organizations, corporations, investors, and others responded to this call for action, the President in July signed into law the Sarbanes-Oxley Act of 2002. This legislation provides the courts and Federal agencies with new tools to strengthen the ability of outside investors to verify the quality of managerial decision making. The act applies the core principles underlying the President's plan. It addresses each of the points of

TABLE 2-3.—*Some Corporate Governance Initiatives of NYSE and Nasdaq*

Principle	Initiative
Information accuracy and accessibility	NYSE and Nasdaq proposals require that listed companies publish codes of business conduct and ethics and guidelines for corporate governance. NYSE proposal further requires disclosure of board-approved exemptions.
	Nasdaq proposal requires that a press release immediately disclose a going-concern qualification in an audit opinion.
	NYSE and Nasdaq proposals require disclosure of any permissible exemptions to their corporate governance requirements by non-U.S. issuers.
Management accountability	NYSE and Nasdaq proposals require independent director approval of director nominations and of CEO compensation.
	NYSE and Nasdaq proposals require shareholder approval of all equity-based compensation programs. NYSE further disallows a broker from voting on such plans without customer instruction.
	NYSE and Nasdaq proposals require that a majority of directors be independent (except at "control" companies) and set a more stringent definition of "independence," which excludes persons with *any* financial or personal relationship with the company.
	NYSE proposal requires CEOs of all companies to certify annually that they know of no violation of NYSE governance standards.
	NYSE has ability to issue public reprimand letter for companies in violation of its governance requirements.
	Nasdaq proposal requires independent director approval of all related-party transactions.
	NYSE and Nasdaq proposals require that nonmanagement directors meet regularly without management.
Auditor independence	NYSE and Nasdaq proposals require that the audit committee have responsibility to hire and fire the auditor.
	NYSE and Nasdaq proposals require audit committee approval of all nonaudit services of auditors.
	NYSE and Nasdaq proposals entail heightened standards of independence for audit committee members in that compensation is allowed only for board or committee service.
	NYSE and Nasdaq proposals require financial literacy of all audit committee members and accounting or financial management expertise of at least one.

Sources: New York Stock Exchange (NYSE) and Nasdaq Stock Market (Nasdaq).

that plan, as Table 2-4 illustrates. In doing so, it accompanies the actions that many others have begun to take, and continue to take, to strengthen each of the key elements of a strong U.S. corporate governance system.

TABLE 2-4.— *The President's Ten-Point Plan and the Sarbanes-Oxley Act*

Principle	Ten-Point Plan	Sarbanes-Oxley
Information accuracy and accessibility	1. Each investor should have quarterly access to information needed to judge a firm's financial performance, condition, and risk.	Pro forma accounting statements must be reconciled with generally accepted accounting principles (GAAP) in company reports. Material off-balance-sheet transactions must be disclosed in company reports.
	2. Each investor should have prompt access to critical information.	Filing deadlines are accelerated.
Management accountability	3. CEOs should personally vouch for the veracity, timeliness, and fairness of their companies' public disclosures, including their financial statements.	CEOs and CFOs must verify fairness and accuracy of company reports. Individuals committing "knowing and willful" violations of this requirement are subject to 20 years in prison.
	4. CEOs and other officers should not be allowed to profit from erroneous financial statements.	Following a restatement of earnings, executives must forfeit bonuses, incentive-based compensation, and profits from stock sales for the previous year.
	5. CEOs or other officers who clearly abuse their power should lose their right to serve in any corporate leadership position.	The SEC may bar individuals from serving as officers and directors.
	6. Corporate leaders should be required to tell the public promptly whenever they buy or sell company stock for personal gain.	Management and principal stockholders must report transactions by end of second business day.
Auditor independence	7. Investors should have complete confidence in the independence and integrity of companies' auditors.	The audit committee hires and oversees accounting firms. Companies must disclose whether one member of the audit committee is a "financial expert." Auditors disclose all critical accounting practices to audit committee. Auditors may not provide any of at least eight specified services for audit clients and must obtain prior approval from the audit committee for any services provided.
	8. An independent regulatory board should ensure that the accounting profession is held to the highest ethical standards.	The Public Company Accounting Oversight Board ("the Board") is funded by accounting support fees assessed on public companies. The SEC will appoint five full-time members in consultation with the Federal Reserve Chairman and the Treasury Secretary. Only two members may be or have been certified public accounts (CPAs). The Chair may not have been a CPA for 5 years prior to service. The Board may compel information from registered accounting firms and their clients in some circumstances.
	9. The authors of accounting standards must be responsive to the needs of investors.	The Board shall include in its auditing standards the requirement that firms employ GAAP.
	10. Firms' accounting systems should be compared with best practices, not simply against minimum standards.	The auditor's report to audit committee must compare company's audit practices with the auditor's preferred treatment.

Sources: The White House and the Congress.

Information Accuracy and Accessibility

Virtually all aspects of recent corporate governance reform seek to promote investors' timely access to information about the financial performance and operations of public corporations. Better informed investors can more readily limit their exposure to losses stemming from the agency costs of separating ownership from control and can more quickly act to remove underperforming managers as warranted.

The Sarbanes-Oxley Act promotes the accuracy and timeliness of financial information in several ways. First, the act introduces new disclosure requirements. It requires that directors, officers, and principal investors disclose their transactions in company stock more quickly than before: by the end of the second day after the transaction, rather than 10 days after the close of the calendar month as previously required. This enables investors to react more quickly to the information contained in such disclosures. Indeed, more rapid disclosure strengthens the capacity of outsiders generally to act on news of insider trading. The act also requires that corporations make more information available about the quality of their internal control structures, including whether they have special ethics rules in place to guide the actions of senior financial officers, and whether their board of directors' audit committee includes any financial experts (and, if not, why not).

Financial analysts and auditors are also expressly required to make certain disclosures under the act. Each must publicly disclose to investors whether any conflicts of interest might exist to limit their independence from influences other than the desire to serve the interests of shareholders. This provides an additional check against any conflicts that might remain even after the other provisions of the act, and the other reforms accompanying the act, are taken into account.

Second, the act seeks to improve the effectiveness of the many existing U.S. securities disclosure regulations by dramatically increasing some of the sanctions for violating them. In promoting deterrence, these sanctions complement the higher probability of detection that violators face from stepped-up Federal enforcement under the Corporate Fraud Task Force. The act provides for a fourfold increase in the maximum prison term for criminal fraud—to 20 years rather than 5 years—and an even higher maximum term of 25 years for securities fraud. Both of these increases in prison terms are in addition to fines and other, nonmonetary sanctions. Recognizing that penalties cannot be imposed without evidence that a violation has occurred, the act also increases the maximum sanction for destroying documents, allowing courts to impose fines and terms of imprisonment of up to 20 years for this offense. The most severe penalties, such as imprisonment, tend to apply only to violations found to have occurred knowingly, with the stiffest sentences reserved for violations that are both knowing and willful.

Finally, the act creates new rules and institutions that are designed to shape managers' and auditors' choices concerning the accuracy and timeliness of corporate financial reporting. In doing so, the act promotes compliance with existing disclosure rules, in addition to strengthening managers' and auditors' incentives generally to act in the interests of investors. (These provisions apply the principles of management accountability and auditor independence and will be discussed in greater detail under those headings.)

Management Accountability

The second core principle of the President's plan is the promotion of management accountability. The managers of public corporations initially oversee the preparation of the financial reports that their companies file periodically under existing securities regulations. Holding them accountable for the quality of those reports can thus serve as a further check on their accuracy and completeness. Management accountability has implications beyond the quality of financial reporting, however. Managers who expect the quality of their companies' performance to become known to investors face more powerful incentives to serve the investors' interest.

The Sarbanes-Oxley Act promotes management accountability by clarifying the roles and responsibilities of various corporate officers, by introducing new sanctions for managers who fail to live up to those responsibilities, and by requiring that corporations adjust their internal governance structures so that outside investors can more readily verify the strength of management's incentive to serve the shareholders' interest. For example, the act requires that CEOs and chief financial officers (CFOs) certify the accuracy and completeness of the financial reports that their companies file periodically under existing securities regulations. The act makes it a Federal criminal offense, subject to fines of up to $1 million, to knowingly engage in false certification of these reports. In the extreme case where a CEO or CFO knowingly and intentionally provides false certification, the maximum sanction climbs to $5 million. In case this is not enough to deter false certification, CEOs and CFOs who falsely certify financial reports are also required to forfeit any bonuses, incentive compensation, or other gains that they might have received from the company during the year after the issuance of a false report.

The act also clarifies the roles and responsibilities of other corporate officers besides CEOs and CFOs. It expressly charges corporations' audit committees with responsibility for overseeing the selection and compensation of the company's outside audit firm. As already mentioned, audit committees must reveal whether any of their members are financial experts, and if not, why not. A corporation's attorneys are expressly held responsible for reporting any evidence they might receive of a violation of the act, a breach of duty, or other

violation to the chief legal counsel, to the CEO, or to the audit committee or other independent directors (if other parties appear not to respond to the information in a timely manner). This increased accountability is supported by substantial sanctions for violations of rules under the act.

Auditor Independence

The creation of a special, national board to oversee the auditing of public companies' financial reports is perhaps the most visible corporate governance reform under the Sarbanes-Oxley Act. In creating this new board, the Public Company Accounting Oversight Board, the act introduces a new check on the quality of audit services supplied to public corporations whose securities are listed on U.S. exchanges. The economic role that the board will play in overseeing public accounting companies is to strengthen the auditors' incentives to do their jobs properly and with integrity, even in the face of pressure from managers who might in some instances prefer not to accurately report their companies' performance.

Under the act, the oversight board will promote the independence of auditors in several ways. To increase the chance of detecting any future misconduct by auditors, each public accounting firm must register with the board and submit to periodic reviews of its performance. The board is given the authority to act upon any evidence of auditor misconduct by undertaking investigations. Upon registering with the board, each registered public accounting firm agrees to cooperate with the board's investigations. Such cooperation includes retaining audit work papers and other documents for a minimum of 7 years and providing those records to the board on request.

When the oversight board discovers evidence of misconduct, it has the power under the act to impose sanctions. It can impose fines on individual auditors and the auditing firms that employ them. It can also bar auditors from supplying their services to any U.S.-listed corporation, temporarily or permanently. The combined effect of this new monitoring effort and these newly instituted sanctions is to increase the expected cost of misconduct to any registered accounting firm or employee.

The act goes beyond direct oversight of auditing firms, however, to address the conditions under which external auditors are chosen and employed. First, a corporation's choice of auditor must be made by a committee of independent directors who are not employees of the company and have no relationship with it other than as directors. This provision is designed to limit the influence that managers who prepare financial reports exercise over the choice of auditor. Second, for each of its clients, the accounting firm that does the audit must periodically assign a new person as the lead audit partner on each client's account. Both of these provisions limit the opportunities for collusion between auditor and client. Finally, registered public accounting firms are no longer

permitted to sell certain services other than auditing to their audit customers. This addresses the concern that an auditor might choose to overlook problems in a company's financial reports if it believes that the company might reward it with nonaudit business. Any exceptions to these basic rules must be disclosed to investors, for example through the filing of reports by the audit committee with the SEC.

To summarize, the Sarbanes-Oxley Act applies the principle of auditor independence in two basic ways. It increases the sanctions that auditors can expect to face if they engage in misconduct, thus encouraging them to comply with certain professional standards to be set forth by the new oversight board. The act also recognizes that some forms of compliance rely on the strength of the auditor's incentive to serve the investors' interest. It strengthens this incentive by requiring that public accounting firms and their clients eliminate potential conflicts of interest by making certain fundamental and verifiable changes in their business practices.

The principle of independence is also relevant to the conduct of the oversight board. To serve as an effective monitor and enforcer of the supply of independent audit services, the board must itself be free from conflicts between the interests of investors and those of specific auditors and audit clients. Accordingly, the act requires that a majority of the board's members be drawn from outside the accounting industry: members must not have supplied audit services to any client in recent years. The requirement that exactly two of the board's five members be drawn from the accounting profession reflects a tradeoff between the value of specialized expertise and the value of independence from the possible incentive conflicts that such expertise can represent. This tradeoff is similar to that which public corporations face in selecting members for their boards of directors.

Corporate Governance and the Global Economy

The change currently taking place in U.S. corporate governance is but one wave in a sea of change internationally. This change is shaped in part by globalization, which encourages countries to adopt positive features of other systems while retaining the best features of their own. International competition fosters good corporate governance by favoring the best corporate governance systems. In many respects, private and public sector institutions in other countries are moving toward corporate governance systems that look more like that of the United States—a tribute to the merits of the U.S. system. At the same time, the U.S. Government recently lifted some of the legal rules that had previously restricted bank participation in the underwriting of equity, which has been commonplace in some other countries.

The growing similarity among different countries' systems of corporate governance has captured the attention of researchers interested in how economic and legal systems interact. Their findings illustrate the importance of market forces in shaping the institutions of corporate governance, in addition to their role in guiding the strategic and the day-to-day decisions of investors and managers. Researchers have found, for example, that European and Japanese corporations tend to have relatively concentrated ownership structures, with a relatively few persons or institutions often controlling large blocks of shares. In contrast, corporations in the United States and other common law countries, such as the United Kingdom, tend to have relatively dispersed ownership, an outcome facilitated by strong securities markets, rigorous disclosure standards, transparency, and relatively active markets for corporate control. One study found that, in the United States, only 4 of the 20 largest corporations have a single shareholder who possesses 10 percent or more of the voting rights on the board; in Germany, in contrast, 13 of the 20 largest corporations have such a shareholder. Yet these differences are shrinking. Both the value of outstanding stock as a percentage of GDP and the value of equity raised through initial public offerings as a percentage of GDP rose substantially in European countries during the 1990s. Over this period the market for corporate control became more international. One study reported that, between 1985 and 1999, takeovers involving a European party went from 11 percent to 47 percent of the total market value of all transactions worldwide.

Meanwhile, in the United States, the enactment of the Gramm-Leach-Bliley Act in 1999 relaxed previous prohibitions against bank participation in the ownership of stock. Banks in other developed countries, such as Germany and Japan, appear to use the information they obtain as lenders to play a more effective role as stockholders in monitoring corporate management. Banks' participation in U.S. corporations as both lenders and shareholders may similarly improve corporate efficiency. To the extent investors view increased bank participation in both lending and stock ownership as committing corporations to stronger performance, the effect may be not just more efficient monitoring of management but better investor assurance as well.

Conclusion

Corporate governance systems, by establishing checks and balances that influence the decisions of corporate managers, affect corporate efficiency and, by implication, economic growth. To the extent that these systems are observable—that is, transparent—to outsiders such as households and other prospective investors, they can affect their willingness to do business with the

corporation. Strong managers who seek growth for their corporations thus stand to gain by creating strong corporate governance systems. In doing so, they can distinguish themselves and their corporations from others with less promising prospects.

Major changes in the legal institutions that support U.S. corporate governance occurred last year. These changes and many private sector reform initiatives illustrate the application of three core principles underlying a plan for corporate governance reform that the President set forth in March 2002. These principles are familiar to economists: information accuracy and accessibility, management accountability, and auditor independence. The Sarbanes-Oxley Act of 2002, by strengthening certain legal institutions, promotes greater accuracy and accessibility of information and addresses concerns about the independence of external auditors. The establishment of the Corporate Fraud Task Force in July 2002, along with new enforcement initiatives by the SEC, acts on the principle of management accountability by subjecting offending managers and their organizations to a higher probability of getting caught and greater sanctions when they do get caught. The Sarbanes-Oxley Act further strengthens management accountability by allowing the courts to impose stronger sanctions on white-collar offenders and instructing the U.S. Sentencing Commission to update related sentencing guidelines to ensure their consistency with current information on the seriousness of the offense and with the new statutory increases in maximum sanctions. The act indeed implements each of the 10 points of the plan for reform that the President articulated in his March speech.

Perhaps the most important reforms along the lines of the President's plan, however, have occurred in the private sector. Many managers—and management teams—have instituted improvements in the internal governance of their corporations; their actions are apparent in numerous press releases and in disclosures to the SEC. The appropriate reform for each corporation ultimately depends on the specific market conditions that it faces. Changes specific to individual corporations include replacement of top managers and auditors and adjustments in the compensation of top management and how it is reported. More dramatic and far-ranging are the proposals by the NYSE and the Nasdaq to tighten the standards that public corporations must meet in order for their stock to be listed and traded on those markets. Some of these proposals follow early action taken by the Chairman of the SEC to request that these and other private self-regulatory organizations revisit and revise their standards in early 2002, following the President's call for reform. The SEC and other Federal agencies will implement reforms under the Sarbanes-Oxley Act in phases over the next several years.

U.S. managers, investors, and regulators are thus embarked on making changes to U.S. corporate governance of a scope not seen since the creation of

the SEC itself. The current push for reform will make use of new knowledge gleaned from recent events and will apply this learning toward improving the quality of managers' and board members' commitments to act in shareholders' interest. Despite their scope, however, these changes do not fundamentally depart from the evolutionary process that U.S. corporate governance has followed over the past century. The fundamental building blocks of corporate governance remain unchanged.

Competition will continue to shape the evolution of U.S corporate governance. This competition will affect different corporations differently, depending on the nature of the markets in which they operate. Many of these markets have become more global in recent years, and this globalization will continue to place pressure on managers, investors, and public officials to confront the issues that changing markets and technology can raise. The capacity of individual corporations and of the Nation's markets and public sector institutions to promote increasingly effective resource utilization will depend on their continuing success in committing corporate managers to act in the best interests of shareholders and other investors, so as to limit the agency costs of separating ownership from control. In so doing they will continue to foster the efficient growth that the corporate sector of the economy has enjoyed through its ongoing access to deep and resilient financial markets.

CHAPTER 3

Policies for Dynamic Labor Markets

Although the economy continued to grow in 2002, employment growth did not keep pace. From December 2001 through December 2002, nonfarm payroll employment fell by 181,000, a small figure compared with total employment of almost 131 million. During the same months the unemployment rate hovered between 5.5 and 6.0 percent. The lack of change in these statistics paints a picture of a labor market that is static and stagnant. But this picture is misleading: dynamic change remains the most fundamental characteristic of the U.S. labor market even today. The conventional misperception stems in part from the nature of most labor market statistics, which by necessity show the situation at only a single point in time, and which meld the often very different experiences of individual workers and households into a single aggregate measure.

A closer look suggests ripples—even crosscurrents—beneath the surface. The unemployment rate may have changed little in 2002, but the names and faces of the individual workers who are unemployed do change. What makes the labor market appear stagnant is that the official payroll employment and unemployment statistics that are the most visible indicators of the health of the labor market cannot capture its true dynamism. For example, in December 2002, 67 percent of unemployed workers reported being unemployed for 5 weeks or more; this point-in-time statistic may suggest that people who are unemployed this month will be unemployed next month. Yet a recent study of employment flows found that the majority of workers seeking work in any given month are not the same individuals who will seek work the following month. Similarly, over the same period in 2002 in which payroll employment scarcely grew, between 3.5 million and 5 million workers started new jobs each month, and roughly the same number quit or lost their jobs. This argues that dynamism, not stasis, is the essence of the U.S. labor market.

This dynamism and its implications for the design of economic policy are central themes of this chapter. Within these broad themes, the chapter discusses the rewards to skill and work generated by the U.S. labor market and how government policies can foster long-run job mobility by encouraging skill development and education. The labor market and the economy as a whole today face multiple challenges: in the short run, the challenge is to move past the recent downturn in the business cycle; in the long run, it is to address the risks associated with dynamism: technological change and growth

inevitably lead to the destruction of some jobs and to the decline of certain industries. If the Nation can maintain the dynamism—the flexibility and mobility—of its labor markets, while providing all workers with meaningful insurance against unemployment and loss of income, both the cyclical and the structural economic challenges can be met without impairing those features of the labor market that foster long-run growth.

Economic downturns are a difficult time for many workers and their families, as growth in employment slows and unemployment and layoffs increase. The recent economic slowdown has been no exception. Flexible labor markets, however, can lessen the impact of a downturn on workers, and probably have done so since the recent contraction began. Although the unemployment rate did increase sharply during the contraction of 2001 and persisted at levels near 6.0 percent in 2002, unemployment remains low relative to the experience in previous recessions since World War II. Job creation and destruction continued despite the decline in nonfarm payroll employment.

Workers do not encounter economic difficulties only in recessions: even economic growth, or, more precisely, the structural change that accompanies that growth, makes some workers worse off. Advances in technology and the expansion of free trade provide benefits for consumers and for the vast majority of workers, yet these same changes do real harm to some workers in some areas of the economy. Workers displaced by technology or trade may remain unemployed for long periods or drop out of the labor force altogether. When they again find jobs, they are likely to earn less than at the jobs they lost.

Government has a role in assisting both those who suffer disproportionately during times of economic hardship and those who fail to benefit from, or are harmed by, economic progress. Among other things, government can provide retraining services and relocation assistance to those who would benefit from them, and it can reward reemployment, through appropriate provisions in the tax code, in social programs, and elsewhere, to encourage rapid reentry into the work force. In these and other ways, effectively designed government policies can help make labor markets work better. However, policies that fail to recognize the dynamics inherent in these markets can impair long-term economic mobility and the well-being of workers. Policies will support labor markets and help them work better if they recognize their dynamism and avoid undermining their ability to reward work and skill.

Social insurance, through unemployment benefits and similar programs, is an important mechanism by which government can assist those hurt or threatened by the forces of economic change. Yet policymakers face a tradeoff when seeking to provide social insurance. Such insurance is valuable in sustaining the well-being of workers and their families during periods of

unemployment, but it can also distort both their incentives and their behavior, undermining what the U.S. labor market does best, namely, reward work and skill and match workers to jobs. In a static, unchanging world, policies that simply transfer public resources to those who are temporarily poor would not distort their behavior or lead to dependency on welfare. But in a world of continuous change in employment and unemployment, poorly designed policies can inadvertently inhibit upward mobility. Although this tradeoff cannot be entirely avoided, labor market policies are more effective when, recognizing the dynamism of these markets, they provide social insurance in a manner that least distorts workers' incentives to stay employed and to improve their employment situation.

The objective of social insurance is to guard individuals and households against sharp fluctuations in their standard of living that threaten their well-being. A standard assumption in economics is that most people would prefer their consumption to be certain and steady over their lifetime, rather than uncertain and variable. However, because employment and earnings vary in response to events outside their control, most people find that their incomes are not certain and steady. This creates a mismatch over time between their desired consumption and their actual ability to consume, which they seek to remedy by smoothing their incomes over their lives. They do this in a number of ways. One way is by saving part of their income when income is relatively high and by dissaving (that is, drawing down their savings, or borrowing) when it is relatively low. Another is by purchasing private insurance policies against unexpected and costly events, such as large health expenses, disability, or premature death. A third is by relying on informal private insurance mechanisms, such as support from family members and charities, when times are bad. Finally, the public safety net, of which social insurance is a vital part, acts as a backstop in case these private insurance mechanisms prove insufficient.

For most people, any spells of unemployment that occur during their working years are temporary. Public insurance programs would ideally therefore provide assistance only for a similarly limited duration. However, a well-known problem in insurance markets is that of moral hazard. Moral hazard arises when people who have insurance against a given risk have less of an incentive to take actions to minimize that risk than they would if they lacked insurance. For example, people who have generous health insurance may consume more medical services than they really need, because the additional services cost them little or nothing. Similarly, subsidized flood insurance may encourage building and rebuilding of homes in flood plains, because the insurer or the government, not the homeowner, pays when the house is destroyed in the next flood.

Moral hazard in social insurance can take the form of dependency on welfare. For example, for decades the Aid to Families with Dependent Children (AFDC) program provided income support for the poor but also generated substantial work disincentives that encouraged people to stay in poverty and out of the work force. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) transformed this system into one that acts more like insurance against temporary poverty and less like a permanent transfer program. PRWORA, the most important piece of welfare reform legislation in several decades, replaced AFDC with a new program, Temporary Assistance for Needy Families (TANF), and allowed States to implement innovative provisions in their welfare programs. (Many States had already implemented welfare reforms before 1996 by obtaining waivers from Federal welfare requirements.)

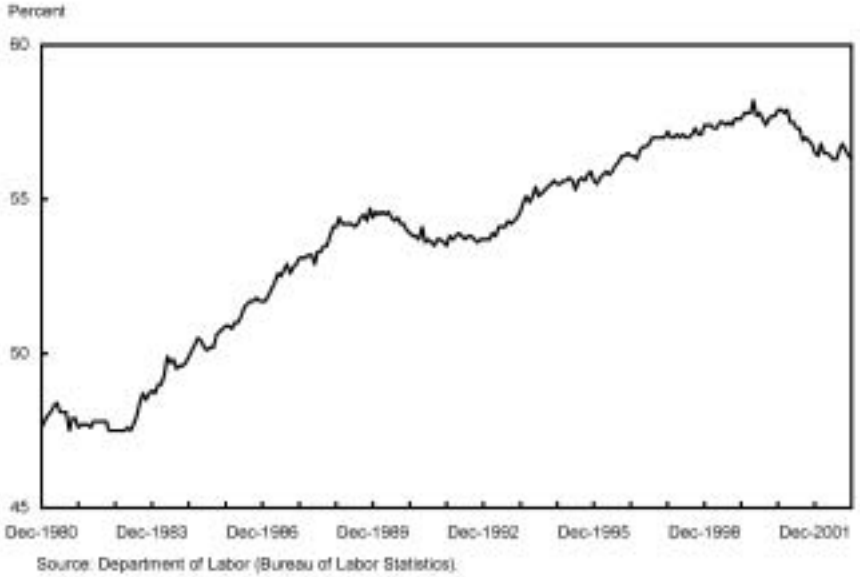
These changes, combined with time limits on welfare receipt and work requirements as a condition for benefits, quickly led to a large decline in caseloads. Research has found that these reforms led to increases in work, earnings, and income and a reduction in poverty. Other effects included an increase in the marriage rate and a reduction in the prevalence of single motherhood among women with little education (many of whom likely would have been welfare recipients had welfare reform not happened). In addition, States that placed a cap on welfare benefits, as opposed to increasing benefits if a mother had an additional child while on welfare, saw a reduction in out-of-wedlock childbirths. Welfare reform under PRWORA thus provides a striking example of how well-designed policies can meet the needs of those struggling in the face of labor market change while maintaining the incentives that underlie long-term economic growth.

The remainder of the chapter proceeds as follows. It first discusses the dynamics of employment and unemployment and provides examples of unemployment policies that are made with a dynamic labor market or with a static labor market in mind. Second, it discusses the dynamics of participation in welfare and other social assistance programs and contrasts those programs that are designed with an understanding of dynamic labor markets with those that are not. Finally, it discusses policies that support mobility and dynamism in labor markets by fostering investments in skill. For example, in January 2003 the President proposed the creation of Personal Reemployment Accounts. These would provide unemployed workers with up to $3,000 to use for training, child care, transportation, moving costs, or other expenses associated with finding a new job. Recipients who take a new job within 13 weeks would be allowed to keep the funds remaining in the account as a reemployment bonus. This would give unemployed workers an incentive to find work faster.

Employment Dynamics and Labor Market Policy

Whether from the perspective of the economy as a whole or from that of the individual worker, labor markets work best when they are fluid and flexible, that is, when workers and employers can change their mutually agreed-upon working arrangements as they see fit, to meet changing needs. Over the long term, the U.S. labor market has indeed been full of change. A vibrant economy created over 40 million new jobs between 1980 and 2002. Even though the population of the United States aged 16 and over grew by more than 46 million over the same period, a greater fraction of Americans are working today than in the past: civilian employment rose from 59 percent of the population aged 16 and over in December 1980 to 62 percent in December 2002. Women enjoyed a particularly large rise in their employment-to-population ratio over this period: for example, in December 1980, 48 percent of the female population were employed, but 56 percent had jobs in December 2002 (Chart 3-1). Meanwhile the proportion of the male population who were employed fell slightly, from 72 percent to 69 percent.

Chart 3-1 **Employment-to-Population Ratio for Women**
A growing share of American women are employed



Source: Department of Labor (Bureau of Labor Statistics)

Blacks and Hispanics also experienced rapid growth in employment since 1975 (Chart 3-2). Indeed, employment-to-population ratios for both these groups rose by more (7.4 and 8.0 percentage points, respectively) than did the ratio for whites (6.3 percentage points). By 2000 the ratios for Hispanics and whites were almost equal. Unfortunately, although employment grew faster during this period among blacks than among Hispanics or whites, the black employment-to-population ratio remains lower than for whites, having started from a much lower level. (Comparisons of employment by race and ethnicity are somewhat clouded because the categories of Hispanic, black, and white are not mutually exclusive: some Hispanics identify themselves as white and others as black. Available data do not allow a comparison of non-Hispanic whites and non-Hispanic blacks with Hispanics.)

The growth in employment in the 1980s and 1990s opened the door to increased economic well-being for many more Americans. Workers with a great deal of education and skill benefit from the greater availability of jobs, but so do workers with less education and fewer skills: one study indicates that, at both low and moderate skill levels, more labor market experience means higher earnings; even entry-level jobs provide real economic opportunities. For both lower skill and higher skill workers, real wages grow roughly 5.5 percent a year during the worker's first 10 years in the labor market.

Chart 3-2 **Employment-to-Population Ratio by Race and Ethnicity**
From December 1975 to December 2002 employment-to-population ratios increased 6.3 percentage points for whites, 7.4 points for blacks, and 8.0 points for Hispanics.



Source: Department of Labor (Bureau of Labor Statistics)

Why does time spent in employment, even in low-skilled jobs, promote wage growth? One reason is that labor market experience fosters skill development. In a modern economy, school is not the only place where skills are learned: family members and employers play a central role alongside formal education in developing skills. One study estimates that job mobility, workplace education, and on-the-job learning account for as much as half of all skill formation.

In the dynamic view of labor markets, job changes are not necessarily events to be minimized at all costs, but rather are often changes for the better; for example, job changes can lead to a better matching of workers to jobs. Job mobility also contributes to skill development and wage growth. Young workers change jobs often: a study shows that the typical young worker holds seven jobs over his or her first 10 years of labor market experience, and one-third of the wage growth that young workers experience occurs when they change one job for another. Indeed, two-thirds of lifetime wage growth occurs within the first 10 years of labor market experience. Together this evidence indicates that this job search and job tryout process—playing the labor market field—is a crucial component in the economic progress of young workers.

Job mobility is not limited to the young, of course. Studies show that one-third of new full-time jobs end within 6 months, and one-half to two-thirds end within 2 years. Not surprisingly, then, a large fraction of the work force—roughly one-fifth—have been at their current job for less than a year. However, once a worker has found a good match—a job in which the worker's skills are valued by the employer and the worker is sufficiently compensated, both monetarily and in nonmonetary benefits and amenities—the job often turns into a long-term employment relationship, to the benefit of both worker and employer. Recent studies indicate that such relationships remain common (Box 3-1). The pattern seems to be that many workers switch jobs several times until they find the right one, ratcheting up their wages along the way.

Job mobility and labor market experience, especially for young workers, are an important component of overall income mobility in the United States. In fact, studies of overall income mobility that include the benefits of job mobility and experience find much more mobility than do studies that implicitly exclude these sources of income growth. Box 3-2 provides a further description of these two contrasting ways of looking at income mobility.

Nonwage benefits are also an important indicator of workers' well-being. For the majority of households, health insurance coverage is linked to employment. But even many households with working members lack health insurance. Data from the Current Population Survey, conducted by the Bureau of the Census and the Bureau of Labor Statistics, show that out of a

Box 3-1. Has There Been a Decline in Long-Term Employment?

The fraction of the work force in long-term employment relationships has been falling over time. In 1979 over 40 percent of the work force were in employment relationships that had lasted over 10 years, and over 25 percent had been in employment relationships that had lasted at least 20 years. In contrast, a 1997 study found that only about 35 percent of employment relationships had lasted at least 10 years, and about 20 percent had lasted more than 20 years. However, this decline in the fraction of long-term jobs is largely the result of the rapid expansion in employment that has occurred since 1980 rather than a decline in the number of long-term relationships. Workers who are new to the labor force have short job tenure by definition. There has been no increase in the incidence of job loss among workers with long-term employment relationships.

U.S. population of almost 285 million, 41.2 million lacked health insurance at any given time during 2001. However, just as the unemployment numbers fail to capture the dynamics of the labor market, so, too, these commonly cited estimates of the population without health insurance fail to tell the whole story. The Census figure probably overestimates the number of people who go without insurance for a full year. Data from the Medical Expenditure Panel Survey (MEPS), conducted by the Agency for Healthcare Research and Quality, show that 23.5 million people were uninsured throughout a recent 2-year period, and that 80.2 million were without insurance at some time during that period. For those who lose coverage, the median spell without insurance is 5 months.

In the extreme, the combination of a high rate of workers changing jobs, short durations of many employment relationships, and short average durations of unemployment could reflect either of two possible scenarios. One is that a large fraction of workers are experiencing frequent but temporary layoffs and recalls, such that a re-sorting of workers is taking place among an unchanging set of existing jobs. The other is that workers are fluidly pursuing job opportunities that are continually being created to replace other jobs that are continually being destroyed. Both scenarios are likely at work, but studies show that a substantial amount—35 to 45 percent—of worker turnover is driven by the destruction and creation of jobs. Each year roughly 10 percent of all existing jobs are destroyed, and a roughly equal number of new jobs take their place.

Data from the Bureau of Labor Statistics' Job Openings and Labor Turnover Survey (JOLTS) document that the common notion of a static labor market does not fit the facts even during periods of slow employment

growth. The JOLTS gathers data on job openings and job turnovers from a nationally representative sample of roughly 16,000 business establishments. Those data reveal that, in October 2002, there were 3.2 million job openings—that is, available but unfilled positions—the equivalent of 2.5 percent of total employment of roughly 131 million. Moreover, in that same month 4.1 million workers—3.1 percent of total employment—were hired into new positions (from other positions or from nonemployment), and a nearly equal number quit or lost their jobs. The majority of these separations were not layoffs, however; 2.2 million of those 4.1 million workers left their jobs voluntarily. Thus, although nonfarm payrolls increased by only 69,000 between September and October, and unemployment increased slightly (from 5.6 percent to 5.7 percent), there was a large amount of movement both into and out of jobs.

What kinds of policies work best to support workers in need of assistance while maintaining the dynamism of a constantly changing labor market? The Earned Income Tax Credit (EITC) is an example of a policy that works

Box 3-2. Two Ways to Look at Income Mobility

Some studies find substantial income mobility among Americans, whereas others find much less. The differences between these studies depend in large part on whether the income mobility that comes with increased labor market experience is included in the analysis. Studies that include all sources of income mobility are sometimes referred to as "absolute" measures of mobility, whereas those that compare incomes over time of cohorts of individuals of the same age and approximately the same level of experience are sometimes called "relative" measures of mobility.

Studies of absolute mobility find that 80 percent of individuals in the bottom quintile of the income distribution were in a different quintile 10 years later. This finding suggests that most people at the bottom of the income distribution move up as they gain labor market experience. Even studies that examine the absolute mobility of men in their prime working years (ages 25 to 44), after many job changes and after much wage growth has already occurred, find a substantial amount of mobility.

Studies of relative mobility find less movement out of the bottom quintile: only about half of workers in that group are no longer there after 10 years. These studies show that much of an individual's upward mobility is shared among all members of the cohort. Changes in the relative ranking of incomes among members of a cohort are a good measure of social mobility, whereas changes in the absolute level of incomes are a good measure of mobility in economic well-being. Taken together, these studies show a substantial amount of both concepts of mobility.

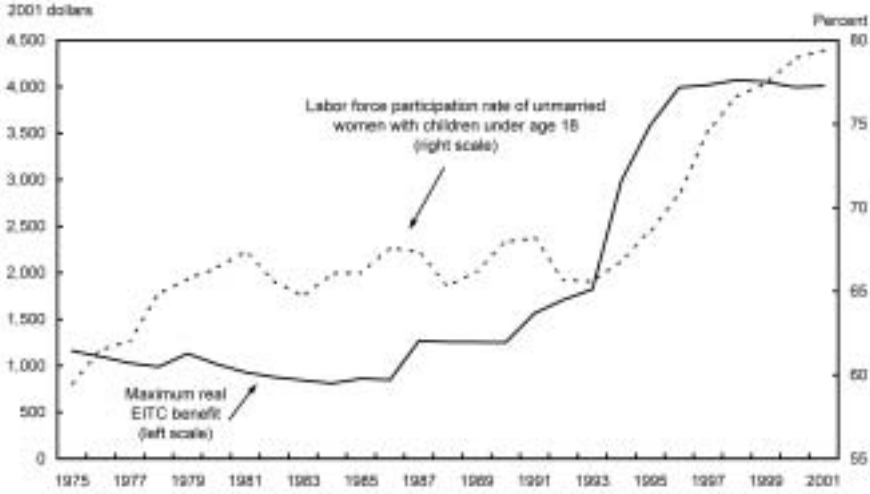
because it encourages rather than discourages mobility in the labor market (Box 3-3). It does so because its implicit subsidy to earnings, which can be as large as 40 percent, increases the rewards associated with work for the low-income individuals to whom it is targeted. The credit thus provides an incentive for those without jobs (including those on public assistance) to enter or reenter the labor force. Indeed, several studies have found that the EITC increases labor force participation among those eligible. The effect is particularly strong for single parents. One study found that, between 1984 and 1996, the EITC accounted for roughly two-thirds of the 4.7-percentage-point rise in labor force participation among single mothers with children. By 2001 the labor force participation rate of these women had risen an additional 8.6 percentage points (Chart 3-3). In addition, studies have found the EITC to be more than twice as effective as the minimum wage at lifting families with children out of poverty, partly because of the program's positive employment incentives.

Box 3-3. The Earned Income Tax Credit

The EITC is a tax credit for the working poor. Benefits are paid only to those who work, and these benefits rise as earnings increase. Because the tax credit is refundable (that is, it can exceed the amount of income tax otherwise due), families who pay little or no income tax can benefit fully from the program.

The program works as follows. Families are eligible for the credit if a member of the family works. The benefit amount depends on the family's labor market earnings, the number of children in the family, and the marital status of the tax filer. In 2003 a family with two or more children receives a subsidy of 40 cents for each dollar of earned income up to $10,510. From that level the credit remains stable at $4,204 until earnings reach $13,730 ($14,730 for a married couple). Single individuals and families without children are also eligible but typically receive less. The credit phases out over a range of income from $13,730 through $33,692 ($14,730 to $34,692 for a married couple). Over this range there is a relatively high implicit marginal tax rate on earnings. For example, for each dollar earned between $13,730 and $33,692, a family with two or more children sees its EITC benefit reduced by roughly 21 cents (Chart 3-4). According to the latest estimate from the Bureau of the Census, the EITC lifted 3.7 million people out of poverty in 2001.

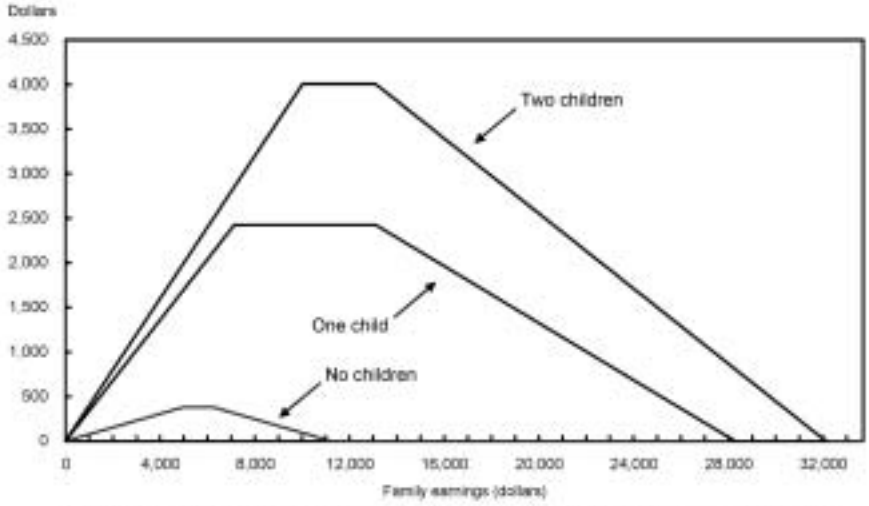
Chart 3-3 **EITC Benefit and Labor Force Participation of Unmarried Women with Children**
The rise in the labor force participation rate of unmarried mothers began shortly following the increases in the maximum EITC benefit and has continued since.



Note: Maximum EITC benefit is that for a family with two or more eligible children. Real benefit is computed by deflating cash benefits using the CPI-U-RS.

Sources: Department of Labor (Bureau of Labor Statistics) and the Congress (Joint Committee on Taxation).

Chart 3-4 **EITC Benefit by Family Earnings and Number of Children for 2003**
The benefit received by working families first increases and then decreases as the family earns more.



Note: Benefit levels are for all households except for married, joint filers. Under EGTRRA, the earnings level at which the benefit phaseout begins for married, joint filers is $1,000 higher than for all other filers.

Source: Department of the Treasury (Internal Revenue Service).

Unfortunately, the EITC can also provide an earnings disincentive for some low-income families who are already working. This disincentive comes about because, over the income range in which the EITC is phased out, recipients face a relatively high implicit marginal tax rate on earnings as the subsidy is withdrawn. For example, for families with two or more children, each additional dollar earned between $13,730 and $33,692 of income reduces the credit by roughly 21 cents. In effect, this places an additional 21 percent tax on these families' work efforts over that range of income. Of course, if the phaseout were steeper and the implicit marginal tax rate higher, fewer families would be affected by the disincentive. A further concern is that a substantial amount of noncompliance or error occurs within the program. The Internal Revenue Service has estimated that, of the roughly $31.3 billion in EITC claims filed in 2000 for tax year 1999, between $8.5 billion and $9.9 billion (27.0 to 31.7 percent) was improperly claimed and should have been disallowed. This raises questions as to whether the resources devoted to the EITC are being targeted in the most effective and efficient way possible.

In stark contrast to the EITC, which recognizes the dynamics of labor market mobility and fosters labor force participation, the quintessential static labor market policy is the minimum wage, or the closely related variant known as the "living wage." Policies such as these, which mandate that employers pay their workers higher wages than they might pay voluntarily, could be justified by the view that most labor market entrants will be stuck in low-wage jobs and will not experience substantial wage growth over their careers. Both the minimum wage and the EITC increase the earnings of those low-income individuals who work. But whereas the EITC increases employment, the minimum wage likely reduces it: the most recent studies have found that significant employment losses are associated with minimum wage policies.

What accounts for this difference in effects on employment? The EITC effectively lowers the wage at which potential low-income workers are willing to work but does not affect the demand of employers for their labor services. A minimum wage, on the other hand, increases the cost to an employer of hiring a low-wage worker and consequently reduces that employer's demand for labor services. Even when the minimum wage does not lead firms to reduce employment, it has been found to reduce the amount of employer-based training young workers receive. Another reason why the EITC is a more effective policy is that it is targeted to those workers who need it most: workers, especially workers with children, from low-income families. The minimum wage, on the other hand, applies to all workers whose wages would otherwise be below the minimum; this includes low-wage workers from families whose other working members earn high wages.

Unemployment Assistance Policy

As noted at the outset, 6.0 percent of the labor force were unemployed in December 2002; many more Americans face the risk of becoming unemployed. On December 14, 2002, the President called on the Congress to extend unemployment benefits for the 750,000 unemployed workers whose benefits would have otherwise expired. He further asked that this benefit extension be retroactive, so that no one who is unemployed would fail to receive any portion of benefits to which he or she is entitled. The Congress responded to the President's call, and on January 8, 2003, the President signed this extension into law.

Unemployment and the risk of unemployment are a reality in a flexible labor market like that of the United States. But this same flexibility also results in higher overall employment than would prevail in an inflexible, static labor market. Recognizing the job uncertainty inherent in a dynamic, flexible labor market, government has long undertaken to provide social insurance against the risk of lower income resulting from job loss. However, the government's unemployment policies should always take into account the substantial and continual movement of workers into and between jobs and into and out of unemployment.

The Federal-State Unemployment Insurance (UI) program provides unemployment benefits to eligible workers who are unemployed through no fault of their own (with fault being determined under each State's law) and who meet other eligibility requirements set by each State individually. Workers who are unemployed because they are new labor market entrants, have recently reentered the labor market, have quit a job, or were fired for cause are not eligible for UI benefits. Although the formula used to determine benefits varies from State to State, the dollar amount always depends on the worker's previous earnings up to a specified maximum. There is also a minimum UI benefit for workers with especially low earnings. Because of this truncated benefit structure, the UI replacement rate (the ratio of the benefit to the recipient's previous earnings) is higher for low-paid than for high-paid workers, making UI relatively more attractive to those who earned low wages while working. In most States workers can receive up to 26 weeks of UI benefits; States with unusually high unemployment may offer an additional 13 weeks of extended UI benefits.

Statistics on the duration of unemployment show that although most unemployment spells are short, their average duration is longer in the period immediately following a recession. (These statistics cover all unemployed workers, not just those receiving UI benefits.) On average over all recessions and expansions since 1970, the median duration of unemployment has been 8.2 weeks in the year following a recession and 6.6 weeks at other times.

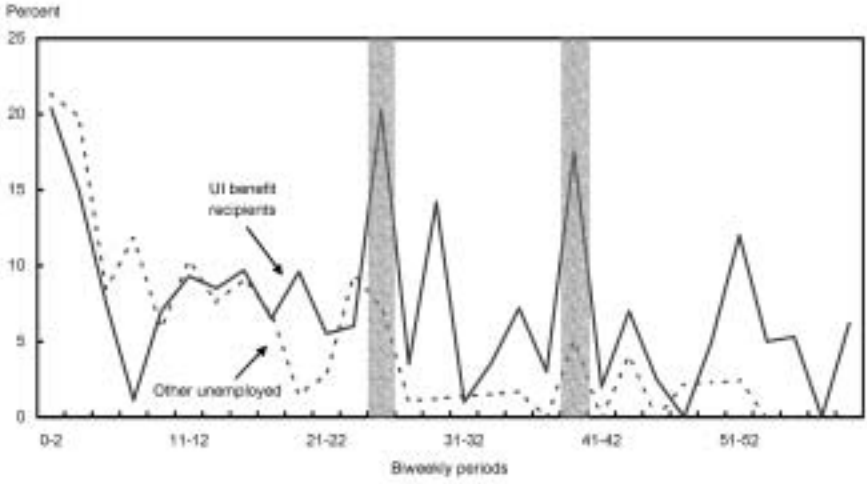
Similarly, 38.2 percent of unemployment spells are of 5 weeks or less immediately after a recession, compared with 44.0 percent at other times. However, the surveys used to generate most labor market statistics may overstate the duration of the typical unemployment spell. In one study that examined completed spells of UI recipients after the unemployed worker had found another job, it was estimated that 35 percent had returned to work within 4 weeks of their job loss.

The most recent recession has followed the pattern of previous recessions: the median duration of unemployment spells rose from 6.4 weeks in March 2001 to 9.6 weeks in December 2002. In March 2002 the President responded to this need by signing the Job Creation and Worker Assistance Act (JCWAA), which provided an additional 13 weeks of temporary extended unemployment benefits to all eligible unemployed workers, and in January 2003, as noted above, the President again extended unemployment benefits.

Any time that policymakers consider offering or extending UI benefits, they face a difficult tradeoff. UI can provide valuable assistance to unemployed workers, but it may also create a disincentive for benefit recipients to return to work. Unemployed workers who rationally evaluate their options may postpone accepting new work until their UI benefits are exhausted or nearly exhausted. The result is higher unemployment and longer average spells of unemployment. In the study cited above, for example, 40 percent of those who had not received UI benefits, but only 35 percent of those who had, returned to employment within 4 weeks of their job loss. This 5-percentage-point difference hints at the disincentives built into UI, since fewer of those receiving it returned to employment quickly. Another study found more direct evidence: each additional week of UI benefits was estimated to increase the duration of the average unemployment spell by about a day. Many other studies have also found an association between the level of weekly UI benefits and the duration of unemployment. Still more evidence comes from Europe, where most countries have more expansive UI policies than the United States and have higher rates of unemployment and longer average unemployment spells. Although these differences in unemployment outcomes may not be due to differences in UI policies alone, the totality of the evidence suggests that they contribute.

Chart 3-5 illustrates another aspect of the relationship between the availability of UI benefits and incentives to find a new job. Unemployed workers who receive UI benefits are more than twice as likely to find a job in the week before their regular benefits expire than in the several weeks immediately preceding. As noted above, UI benefits expire after 26 weeks unless extended, in which case they expire at 39 weeks (for workers receiving either extended UI benefits or temporary extended UI benefits). Perhaps not coincidentally, peaks in the fraction of unemployed workers finding work also

Chart 3-5 **Fraction of Unemployed Workers Finding Work by Number of Weeks Unemployed**
Unemployed workers receiving UI benefits are more likely to find work when benefits are about to expire.



Note: Shaded areas represent periods when UI benefits expire: regular UI (26 weeks); extended UI or temporary UI (39 weeks).

Source: Lawrence F. Katz and Bruce D. Meyer, "The Impact of the Potential Duration of Unemployment Benefits on the Duration of Unemployment," Working Paper No. 241, Industrial Relations Section, Princeton University, 1988.

occur around these expiration dates. Among unemployed workers who do not receive benefits, in contrast, there is no substantial difference in the likelihood of finding a job at these points in their unemployment spell.

Moreover, although in theory workers should benefit from the longer time that UI allows them to search for a new job, evidence of such a benefit is hard to come by. Some States have experimented with giving UI recipients a cash bonus if they start a new job before exhausting their benefits. These reemployment bonuses have been found to reduce the number of weeks of UI receipt, as was hoped. But researchers also found that those unemployed workers who received bonuses—and consequently returned to work sooner—did not, on average, end up taking lower paying jobs upon reemployment than those who did not receive bonuses. These findings suggest that the longer period of time that traditional UI recipients remain unemployed does not necessarily lead them to find jobs better matched to their skills. One possible downside to the reemployment bonuses is that the prospect of the bonus may induce more unemployed workers to claim UI in the first place, especially if they believe they will find work quickly and therefore might not bother to claim UI were it not for the bonus.

The President's Personal Reemployment Accounts proposal, announced on January 7, 2003, builds on the demonstrated potential of reemployment bonuses to speed unemployed workers' reentry into the work force. The

proposed accounts would also add flexibility to the provision of training for unemployed workers while avoiding penalizing those who quickly return to work. Under the proposal, qualifying unemployed workers would each be given an account with a value of $3,000, which the recipient could use for reemployment services, training, or supportive services such as transportation or child care. Recipients who become reemployed within 13 weeks of receiving their first UI payment would be able to retain any balance remaining in the account as a cash reemployment bonus. Those who do not find work within that period would not be able to cash out their account but could continue to use it for services while receiving UI benefits.

The President has proposed that States be granted a total of $3.6 billion to create the new accounts, enough to provide immediate assistance for up to 1.2 million unemployed workers. The accounts would be targeted at those unemployed workers who are very likely to exhaust unemployment benefits before finding a new job. In some circumstances, States would be able to provide the accounts to those unemployed workers who have already exhausted their UI benefits within the last 3 months.

The flexibility that the new accounts would provide in accessing unemployment services and benefits is important, because research has shown that the economic impact of unemployment differs greatly from worker to worker, reflecting differences in their underlying skills and in their circumstances. For those unemployed workers whose skills are no longer valued in the marketplace, extensive retraining may be appropriate. Other unemployed workers may need help relocating or weathering a spell of unemployment but have marketable skills and require little or no retraining. The President's proposal recognizes that the people best suited to evaluate their current skills and match them with market opportunities are the displaced workers themselves.

Personal Reemployment Accounts are not intended as a replacement for UI but rather would be structured as a new component of the UI system. They would be offered as an additional option to those UI recipients who, under current UI rules, are referred to reemployment services. Eligibility for an account would be a one-time event.

Who would be eligible to receive Personal Reemployment Accounts? In October 2002 there were 8.2 million unemployed workers, and in that same month roughly 700,000 workers received first payments from the UI system. Current law requires that States identify those UI applicants who are likely to exhaust their benefits and refer these individuals to reemployment services. Although each State applies different criteria, the factors used to identify these workers include local unemployment rates, level of education, recent job tenure, and prior employment in an industry or occupation in decline or particularly hard hit by economic downturn. From July 2001 through June 2002, 10.4 million individuals began to receive UI benefits, and 1.2 million,

or about 12 percent, were judged to be very likely to exhaust 26 weeks' worth of regular UI benefits and were referred to reemployment services. Personal Reemployment Accounts are targeted to those workers.

In more specific terms, Personal Reemployment Accounts would work in the following way. UI recipients identified by their State as being very likely to exhaust UI benefits under current law already must register with the State's Workforce Investment Act program to become clients of the already-established network of one-stop career centers. These recipients would be given the option of receiving in addition a Personal Reemployment Account as part of the intensive services they receive. The career centers would administer the accounts on the recipients' behalf. The worker would continue to be eligible for and receive UI benefits and would be free to use the core services provided by the one-stop career center. Personal Reemployment Accounts thus represent additional dollars available to the unemployed recipient.

Funds from the accounts could be used for other training and support services (such as transportation and child care) at the recipient's discretion. The career center would use an "advanceable" process such as smart cards or an allowable billing process to permit recipients to make payouts from the account.

If the recipient is reemployed within 13 weeks of starting UI benefits, the career center would pay him or her, in cash, any balance remaining in the account. The account would then be closed. States would have the option of providing the cash balance as a single lump sum or in two installments of 60 percent and 40 percent, the latter after the recipient has been on the new job for 6 months. The one-stop career center would distribute these bonus payouts according to the policy of the State in which it is located. After the cash payout is completed, the recipient could continue to use all of the no-cost automated and staff-assisted basic reemployment services available at the career centers. He or she would not, however, be eligible for intensive services such as counseling, case management, or training under the Workforce Investment Act for a period of 1 year after the cash payout. Recipients who do not find employment within 13 weeks of starting UI benefits would be able to continue to use the resources in the account for intensive, training, or supportive services.

The potential to receive a reemployment bonus would provide eligible workers a greater incentive to find new employment. At various times from 1984 to 1989, four States—Illinois, New Jersey, Pennsylvania, and Washington—conducted controlled social experiments to determine the effectiveness of providing reemployment bonuses to unemployed workers. In these experiments, a random sample of new UI claimants were told they would receive a cash bonus if they became reemployed quickly. The advantage of these experiments is that the effect of offering a reemployment bonus on the duration of unemployment and on earnings upon reemployment can be directly evaluated by comparing the experiences of UI claimants randomly

chosen to be offered a reemployment bonus with those of UI claimants not chosen for the bonus (who received the regular State UI benefit).

An evaluation by the Department of Labor of the reemployment bonus experiments conducted in the States of Washington, New Jersey, and Pennsylvania showed that a bonus of $300 to $1,000 motivated the recipients to become reemployed, reduced the duration of UI by almost a week, and resulted in new jobs that were comparable in earnings to those obtained by workers who were not eligible for the bonus and remained unemployed longer. Similarly, a study of the experiment conducted in Illinois found that a reemployment bonus of $500 reduced the duration of unemployment by more than a week and did not lead to lower earnings at the worker's next job. Therefore it is likely that giving unemployed workers the option of receiving the unspent balance in their Personal Reemployment Accounts will provide them an incentive to find a new job quickly, reducing the time spent unemployed, but will not result in workers taking lower paying jobs than they would get if they searched longer.

A potential problem with Personal Reemployment Accounts is that, like other reemployment bonuses, they may make UI benefits more attractive for unemployed workers who expect to find new employment quickly and thus would be unlikely to apply for traditional benefits. However, the fact that Personal Reemployment Accounts would be targeted to those workers whose characteristics are highly correlated with long-term unemployment makes it much less likely that the accounts would induce entry into the UI system.

Workers adversely affected by international trade are eligible for support from another Federal program separate from the UI program: the Trade Adjustment Assistance program. To further assist these dislocated workers, the President and the Congress extended benefits under the program as part of the Trade Adjustment Assistance Reform Act of 2002. The main features of this part of the legislation include an extension of eligibility and an expansion of benefits. To be eligible for these benefits, laid-off workers must have been working in an industry in which either sales or output has declined, and increased imports must have contributed importantly to their being laid off. (Workers subjected to partial rather than full layoff are also eligible.) Benefits include both cash and training benefits, a tax credit for health care expenses, and eligibility to participate in State-run high-risk insurance pools and other State-based efforts to extend health care coverage. A pilot program for wage insurance has also been launched for these workers. The program offers a wage subsidy for eligible workers over 50 who take a new job at a lower salary. The subsidy pays half of the difference in wages between the old and the new job, up to $10,000. This program is particularly noteworthy because it provides a direct incentive for seeking reemployment quickly.

Dynamics of Program Participation and Social Policy

Government social support is, of course, not limited to the unemployed. Disability and spells of low income resulting from any cause are additional risks against which the government may have a role in providing social insurance. In 2002 approximately 2 million families received TANF cash assistance in any given month; another 5.2 million individuals received Supplemental Security Income (SSI) payments, 6.9 million received Social Security Disability Insurance (SSDI) payments, and some received both.

Most spells of welfare benefit receipt are of short duration: studies of AFDC typically show that half of such spells ended within 1 or 2 years. However, a significant fraction of welfare spells last a long time. In a study conducted before the passage of welfare reform in 1996, 18 percent of spellswere found to last 5 years or longer, and one-quarter of recipients had spent 10 years or more on welfare, although not necessarily all in one spell. Since 1996, substantial progress has been made: welfare caseloads have fallen by 54 percent, and is it likely, although no studies are yet available, that the duration of welfare spells has shortened as well.

SSDI provides benefits to disabled and blind individuals who are insured through workers' payroll tax contributions. The worker must have worked and paid Social Security taxes for a sufficient number of years and must have worked recently to qualify for benefits. SSI, in contrast, is a means-tested program for persons who are 65 or older, or of any age if the recipient is blind or disabled. (A means-tested program is one in which eligibility is determined by income or some other measure of the applicant's means of self-support, as opposed, for example, to a record of past contributions to an insurance fund.) SSI is a program of last resort; its benefit formula takes into account income received from other sources (including other Federal, State, and local programs as well as private efforts). It does not duplicate these sources but rather fills the gap between them and a specified minimum level of income. Both SSDI and SSI define adult disability as the inability to engage in any substantial gainful activity because of a mental or physical impairment that is expected to result in death or that lasts for a continuous period of at least 12 months. As of 2002 "substantial gainful activity" was defined as work paying over $780 a month, when the impairment is other than blindness, and over $1,300 a month for blindness. The average monthly SSDI benefit in 2002 was $817, and the maximum monthly SSI benefit was $545.

In contrast to TANF, participation in the SSDI and SSI programs has not decreased in recent years (Box 3-4). Of course, unlike with TANF, individuals

Box 3-4. The Growth in SSDI and SSI Disability Caseloads

The number of people receiving disability payments through either the SSDI or the SSI program has increased dramatically. From 1990 to 2002, the number of SSDI recipients rose by 3.0 million, and from 1990 to 2001 the number of SSI recipients rose by 2.1 million. The President supports a program that would address this rise in disability caseloads by helping people with disabilities reenter the work force.

In 1999 Congress passed the Ticket-to-Work and Work Incentives Improvement Act, which addresses the disincentives to return to work that many individuals with disabilities face. The act allows recipients of SSDI and SSI to choose their own vocational rehabilitation and support systems, and it extends the Medicare benefits of SSDI recipients so that they do not lose health benefits on returning to work. The act also expands Medicaid eligibility for persons with severe disabilities. The President has promised swift implementation of this initiative, to be completed by the end of 2003.

apply to receive disability payments both because they require income support and because health impairment limits their ability to work and perhaps increases their demand for medical services. Thus one would expect a lower rate of exit from SSDI and SSI than from TANF, even if their incentive structures were identical. Indeed, a low rate of exit has been the norm for these programs: each year only about 1 percent of those who receive SSDI or SSI leave the rolls to go to work.

How should welfare programs be designed for a dynamic labor market? If labor markets were static, the design of social insurance to provide welfare, like the design of UI, would be straightforward: the government would simply provide cash assistance to needy families. In a dynamic labor market, however, needy families typically require welfare benefits only for brief spells. This very dynamism makes the design of welfare programs more difficult, because policymakers again face a tradeoff. Welfare programs that provide cash benefits without work requirements or time limits, such as the former AFDC program, provide eligible families with needed assistance, but they also create a disincentive for the adult members of those families to acquire skills, to enter or reenter the work force, and to escape poverty. (They also create a modest incentive to remain unmarried and to have children out of wedlock, because the presence of a working husband reduces the benefit whereas that of an additional child increases it.) The work disincentives that

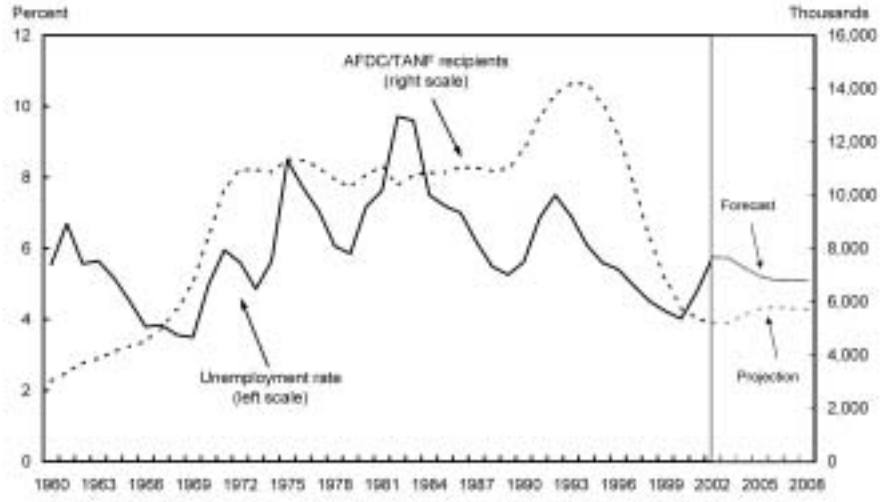
were part of AFDC (which in part remain under TANF) arose because benefits were phased out as family income increased, imposing a high implicit marginal tax rate on income earned by families receiving AFDC. Although any well-designed means-tested public assistance program would include an income phaseout and thus face this problem of high marginal "tax" rates, the AFDC program unintentionally promoted dependency on welfare and induced some families to have longer spells of welfare receipt.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 was motivated by the recognition that a better policy for families requiring welfare assistance was needed. The reform granted greater program authority to State governments and replaced the AFDC program, which was based on Federal provision of matching funds to the States, with TANF, which is a block grant program. These reforms essentially abolished Federal eligibility and payment rules, giving States much greater discretion in designing their own cash public assistance programs, and eliminated the Federal entitlement to cash assistance. TANF not only gave States the freedom to set their own eligibility criteria and benefit levels but also created work requirements for recipients, set a lifetime limit of 60 months of TANF assistance, and rewarded States for strong performance in terms of reduced caseloads.

As noted previously, caseloads have fallen by 54 percent since PRWORA's enactment. However, because the unemployment rate was falling during much of this period, an important question is whether the decline in caseloads was due to welfare reform itself or to the strength of the labor market. A number of studies based on experiences during the period of extensive State experimentation with welfare program waivers have found that economic growth and the consequent decline in unemployment rates likely had a secondary role in the decline in caseloads. As Chart 3-6 shows, the correlation between unemployment and the number of AFDC/TANF recipients that is evident in the 1990s, and particularly after welfare reform, was not evident in earlier periods of declining unemployment rates.

The era of innovation in welfare policy began with the granting of AFDC waivers in the late 1980s: certain restrictions under the AFDC program were waived for States wishing to experiment with alternative welfare program designs. PRWORA continued this process, with the result that the particulars of State programs now vary widely. One important dimension on which they differ is the rate at which welfare benefits are reduced as the recipient's income rises. This benefit reduction rate had been set by Federal law under AFDC. Under PRWORA, many States have chosen a lower implicit rate in an effort to increase the incentive to work and to provide more assistance to low-wage workers. Lower benefit reduction rates, in conjunction with increased work mandates, time limits, and work support programs, do appear to have increased work incentives. By 2000, States reported that, in

Chart 3-6 **Unemployment and AFDC/TANF Recipients, 1960-2008**
The number of welfare recipients and the unemployment rate did not move in tandem until the late 1980s. A projection based on their relationship and on an unemployment forecast suggests that the number of TANF recipients will increase only slightly.



Sources: Department of Health and Human Services (Agency for Children and Families), Department of Labor (Bureau of Labor Statistics), and Administration Forecast, February 2003.

the aggregate, 34.0 percent of the welfare caseload were engaged in work or job-related activities, up from 20.4 percent in 1994. Although States remain subject to a Federal 60-month maximum time limit for individuals receiving TANF funds, they can set shorter time limits or use State funds to extend benefits. PRWORA has also increased expenditure on work support programs such as subsidies for child care; between 1993 and 2000 annual Federal child care subsidies almost doubled, from $9.5 billion to $18 billion.

With the recent economic slowdown and continued weakness in job growth, a critical question is whether the number of TANF recipients will increase to their pre-1996 levels. Analysis based on the relationship between unemployment rates and recipients, combined with current forecasts for unemployment in 2003 and beyond, suggests that the number of recipients will increase only slightly and will not approach prereform levels (Chart 3-6).

Although it is still too soon to reach a final conclusion, welfare reform—both TANF and the innovative policies implemented by States before and since the enactment of PRWORA—seems to have had a remarkable impact on public assistance caseloads. The reductions in caseloads, moreover, have not been concentrated geographically but have been seen across the Nation.

PRWORA has also shown positive, although still preliminary, effects on employment, earnings, marriage rates, and the prevalence of single female-headed families.

At the same time that caseloads began to fall, employment increased dramatically among the population most affected by the caseload declines. Among those who reported receiving public assistance income in the previous year, the share reporting being employed in March of the following year rose from 19.8 percent in 1990 to 44.3 percent in 2000. Even among those who remained on welfare, work effort greatly increased, possibly reflecting both the work requirements and the rates at which benefits were reduced with income. Among women on welfare, those who reported labor earnings rose from 6.7 percent in 1990 to 28.1 percent in 1999. The research literature suggests that approximately two-thirds of welfare leavers are employed at any future point in time. In addition, employers have often rated welfare recipients as performing as well as or better than other employees. One study finds that former welfare recipients have higher rates of wage growth than do other workers.

Poverty and income levels are directly tied to employment and wages. Studies suggest that, just as it has raised employment, welfare reform has also reduced poverty and increased income. For example, poverty among all families headed by a single mother declined from 35.4 percent in 1992 to 26.4 percent in 2001. This finding is consistent with research showing that States that adopted innovative welfare programs under AFDC waivers before 1996 recorded an average 2.4-percentage-point decline in the poverty rate of the entire population of less skilled women. PRWORA itself was associated with a 2.0- to 2.2-percentage-point decline in the poverty rate.

Research shows that, although many lost government assistance, single mothers saw their incomes increase on average during the 1990s. Studies of those who have left welfare reveal that around half remain in poverty, but evidence also points to increases in family income over time. Data on consumer expenditure meanwhile reveal increases in spending by low-income single mothers in the 1990s.

Why has welfare reform been so successful? Studies of the States' experiments with work requirements under AFDC waivers suggest that these requirements led to increases in employment and reductions in welfare payments. The effect of time limits is less well established, because few recipients have yet exhausted their eligibility under PRWORA, and evidence from those States that implemented time limits as part of their AFDC waiver programs is mixed.

Fostering Skill Development

Labor market experience fosters the development of valuable skills. As noted earlier, in addition to formal educational institutions, family members and firms play a central role in skill development in the modern economy. Job mobility, workplace education, and on-the-job learning by doing account for as much as 50 percent of all skill formation. Training on the job, together with simply the experience of being in the labor market, has been found to be more effective at increasing the earnings of young workers than are government training programs. Indeed, evidence from evaluations of formal, publicly provided job training programs for youth demonstrates that they have little or no impact on earnings.

When younger workers change jobs, the switch is usually accompanied by an increase in wages, possibly because they have both increased their skills and moved to jobs that use those accumulated skills more effectively. In contrast, job changes for more experienced workers often result from job loss and may result in lower earnings. Experienced workers who lose their jobs at a given time are more than three times as likely to experience one or more additional spells of unemployment in the following 2 years than similar workers who did not lose their jobs at that time. In addition, more than one-quarter of experienced workers who lose their jobs suffer substantial wage reductions when they do return to work. The reductions in employment are short-lived: within 4 years of the job loss, workers who lost their jobs have a virtually identical likelihood of being employed as workers who did not lose their jobs. But the wage losses are long lasting: 4 years after a job loss, the average weekly earnings of job losers are 10 to 13 percent below those of workers who did not lose their jobs. These permanent declines in wages likely reflect a deterioration in the value of the skills these older workers had previously acquired. This makes fostering the reacquisition of skills among experienced workers who have lost their jobs a policy priority.

Some types of worker retraining have been effective at increasing the earnings of displaced workers. One evaluation of a training program that subsidized community college attendance by displaced workers found that 1 academic year of community college raised these workers' earnings by about 5 percent.

Technically oriented vocational skills and science and math skills are particularly important for displaced workers, because investments in these skills result in much higher returns in the labor market than does non-technically oriented training. One study found that the expected return on earnings from a curriculum that provides an academic year of more technical and applied coursework ranges from 10 to 15 percent.

The labor market rewards skill accumulation and investment in human capital. In particular, it rewards with higher wages those who obtain more schooling. Studies estimate that each additional year of education increases a worker's wages by 6 to 10 percent on average. The Bureau of Labor Statistics reports that, in the fourth quarter of 2002, bachelor's degree holders over the age of 25 had an unemployment rate of 3.0 percent, and those working full-time earned a median weekly income of $944, whereas workers with only a high school degree earned a median weekly income of $545 and had an unemployment rate of 5.1 percent. Americans have responded to the benefits of human capital investment: in 1959 only 2 in 10 jobholders had some college education; today roughly 6 in 10 are college educated.

The benefits of education not only are large but have increased. The difference between the average earnings of college-educated workers and those of high school-educated workers has increased by almost 70 percent since the early 1980s. Education may also generate gains for society at large: it is correlated with better public health, better parenting, lower crime, a better environment, wider political and community participation, and greater social cohesion, all of which may contribute to economic growth.

Earnings increase with age, with increased tenure on a job, and with the accumulation of both general and job-specific human capital. Between 1963 and 1989, men with 30 years of job experience earned 75 to 85 percent more, on average, than men in their first 5 years out of school. Furthermore, one study finds that the past three decades have witnessed an increase in this premium: whereas in 1969 high school-educated men with 30 years of work experience earned 62 percent more than new entrants with the same education, by 1989 they were earning 110 percent more. In addition, workers who have been at the same job a long time tend to stay there: accumulated tenure is negatively related to turnover rates. The rising importance of experience points to the value of employer-provided training. One study finds that on-the-job training accounts for at least two-thirds of the growth in wages in any given year.

The President, recognizing the individual and economy-wide benefits of an educated society, has vowed to make educating every child in America a top priority. On January 8, 2002, he signed into law the No Child Left Behind Act, designed to improve elementary and secondary education. The act requires stronger accountability and high standards of achievement, to be measured through annual testing of third through eighth graders and publicly released report cards of school performance. It gives students who attend low-performing schools, and their parents, greater scope to seek better options. The act gives State and local governments greater control over Federal education funding, which was increased by 49 percent from its 2000 level, to $22.1 billion in 2002. It creates a highly qualified teacher initiative,

supported by investment, research, and training, and it increases Federal money devoted to the teaching of reading. The Administration's commitment to education highlights the importance of investing in the Nation's human capital, benefiting both individuals and the economy as a whole.

Conclusion

Policymakers can help labor markets work better, but they need to remember that labor markets are dynamic, and that the policies that work best for a dynamic labor market are very different from those that work best for a static labor market. Static labor market policies may unintentionally induce workers to accept longer spells of poverty and unemployment and to remain in lower paying jobs. The policies described in this chapter should encourage mobility and help workers smooth over the difficulties they encounter during labor market transitions.

CHAPTER 4

Regulation in a Dynamic Economy

Competition is essential to the vitality of the American economy. Both government and the private sector play important parts in creating markets that are competitive, and thus efficient and equitable. The private sector is the primary source of competition and innovation, whereas the government, often through its regulatory activities, enforces property rights and contracts, the necessary foundations for competitive private enterprise. In addition, the government provides those goods and services that the private sector cannot profitably produce, such as national defense, public safety, a more healthful environment, and social programs to benefit the underprivileged. Together government and the private sector can work to produce a vibrant, dynamic economy that offers its people the greatest possible opportunity to satisfy their wants and needs. To realize these benefits, the government must work to foster flexibility and dynamism in the economy by promoting sound monetary, fiscal, tax, and regulatory policies.

This chapter focuses on the role of Federal regulation in fostering or hindering economic dynamism. By its nature, regulation can be a double-edged sword. Although some demands for regulation reflect a desire to improve the efficiency of intrinsically imperfect markets, other demands for regulation seek to change market outcomes, for reasons that range from the compassionate to the opportunistic. Well-designed regulation can provide society with improved market outcomes and other benefits; poorly designed regulation stifles economic efficiency and dynamism. Regardless of their underlying motivation, many regulations are not well designed and impose both short-run efficiency costs and long-run dynamic costs on the economy that far exceed their benefits to individuals or society. This Administration supports the development of Federal regulation based on sound science, economics, and law—all important facets of a viable regulatory policy.

The definition of regulation encompasses both any authoritative rule dealing with details or procedure, and any rule or order issued by an executive authority or regulatory agency of a government and having the force of law. Regulation can thus be promulgated by government at all levels, or by the private sector, or by private authorities working in conjunction with government agencies. This chapter largely focuses on Federal regulation and the potential of private sector regulatory efforts, but the principles discussed can apply to regulation at all levels of government. Also important to recognize is that regulatory efforts generally consume a large amount of economic resources and that the demand for regulation has been growing over time.

Two basic approaches to government regulation of economic activity can be identified, each with very different implications for the dynamics and efficiency of the economy: command-and-control regulation, and performance- or incentive-based regulation. Command-and-control regulation typically uses the coercive power of the government to intervene in market activity by setting prices, quantities, technological requirements, or barriers to market entry or exit. Performance-based, market-oriented regulation, in contrast, harnesses market forces to achieve the same social goals. Regulation of this type includes taxes, subsidies, and cap-and-trade permit or quota systems. Recent experience, notably in the area of environmental regulation, has demonstrated that these market-based methods of regulation, which regulate results and not processes, achieve dynamic and static efficiencies that command-and-control regulation does not. This Administration's regulatory policy recognizes the importance of making regulation efficient by focusing on the use of performance- and incentive-based approaches.

Regulatory review and regulatory reform, including reductions in the amount and scope of regulation, provide a safety valve when the costs and other burdens of regulation become excessive. Such a safety valve is important because some regulations, even when first introduced, may impose short-run and long-run costs that exceed their economic and social benefits. Moreover, new scientific knowledge, new technologies, other economic changes, demographic changes, and changes in the social consensus can make even well-formulated, flexible regulations obsolete. For example, society should not abandon health and safety regulation that protects people or the environment, but regulatory reform may achieve such protection in ways that are more efficient. This greater efficiency may arise from applying new science and technology, focusing on outcomes rather than processes or technologies, or permitting regulated parties greater flexibility to meet specific performance requirements and providing market incentives for them to do so.

Recent changes from command-and-control to performance-based food safety regulation by the Department of Agriculture illustrate this potential. Until recently, meat and poultry processors were required to adhere to strict regulations that prescribed in detailed fashion how food safety objectives were to be achieved. Inspectors relied heavily on human sight, smell, and touch to determine the safety of raw meat and poultry products. Although the traditional approach has not been totally displaced, the new regulation has supplemented this inspection process with scientific practices for identifying and reducing microbial contamination. This new approach gives the industry a greater incentive to take advantage of new technology and scientific information to identify pathogens, and increased flexibility to take appropriate measures to improve food safety.

Similarly, in some potentially competitive industries, government controls on prices or profits effectively shield certain government-favored companies from competition. Here reductions in regulation can yield benefits for consumers, potential market entrants, and the economy as a whole. Regulatory reform in the airline, railroad, and trucking industries and the lifting of geographical restrictions on bank expansion are all cases in point. The resulting increase in competition in these industries has caused prices to fall, innovation to increase, and resources to be more efficiently allocated.

These issues are of particular importance now, a time of increased demand for regulation to restore the Nation's sense of security and economic well-being. The national effort to enhance homeland security has resulted in the rapid development and implementation of new regulations for a variety of industries and activities. The expected payoff to enhanced homeland security is reductions in the risk of future terrorist events and their consequences. The response to the need for greater security in economic activity—whether, for example, in the form of Federal air marshals on commercial flights or in the form of backup computer systems—raises the overall cost of transacting business. It is in the Nation's economic interest to balance the benefits of new regulations with their costs.

Regulatory review and regulatory reform offer mechanisms to reduce these costs, particularly as more is learned about the effectiveness and efficiency of various types of regulation. Unfortunately, some of the most costly recent episodes of market instability, such as the California energy crisis of 2000-01 and the crisis in the savings and loan industry in the 1980s, have been associated with poorly designed efforts at reduced regulation. The consequent fear of further instability generates resistance to regulatory reform, even when it holds the promise of significant economic benefit.

This chapter continues with a discussion of what causes demand for regulation and how such demand can lead to regulations that may or may not be economically beneficial. The chapter then considers several principles that produce smarter regulation and illustrates those principles with a number of recent case studies. Of course, no matter how beneficial a regulation is when first introduced, some regulations may outlive their usefulness. Thus the discussion also addresses issues of regulatory reform. Because reform can be a complex process, the discussion specifically focuses on some of the potential pitfalls of regulatory reform. The chapter concludes by showcasing how the Administration's regulatory policies regarding the environment embody the principles of sound regulation.

The Demand for Regulation

As already mentioned, some regulations arise from the recognition of market imperfections that hinder economic efficiency or harm public health or safety. Other regulations stem from the desire of individuals, interest groups, or society at large to modify market outcomes because of dissatisfaction with the distributions of production, income, and wealth that can result even when markets function well. Unfortunately, these sources of demand for regulation can come into conflict.

Regulation to correct market imperfections and market failures can enhance the productivity of an economy and the wealth and satisfaction of its people. This motivation also addresses the lack of markets for certain important goods, such as environmental quality. In contrast, the second motivation, whether the result of altruism or economic "rent seeking," inherently involves a net economic cost. This cost arises because resources will be allocated to or captured in less productive uses than would have been the case absent the regulation. It is often difficult to distinguish between these motivations, because the effects of a given regulatory proposal usually have aspects of both. Market-improving regulations do create winners and losers, and although the winners should be able to compensate the losers, in practice this is rarely required. Similarly, regulations whose effects are primarily redistributive may often have aspects consistent with the public good.

Distinguishing between these two types of demand for regulation is an important function of economic analysis and a motivation for requiring such analysis of major Federal regulations. However, even regulations that primarily seek to enhance economic efficiency and whose benefits exceed the associated costs in a static world can unduly harm economic dynamism in the real world and may have unforeseen consequences. This happens because unintended consequences may at times prove important, and in the long run regulation may lead to an inferior, less efficient outcome.

Regulation to Address Market Imperfections

Imperfections in the market cause resources to be misallocated or allocated inefficiently. Unless these imperfect markets are regulated or overseen in some manner, the result can be the inefficient use of resources, waste, and lost economic value. Generally, this occurs for any of four primary reasons. First, external costs and benefits (often called spillovers) may not be taken into consideration when private production or consumption decisions are made. Second, the private sector may either underproduce or fail to produce public goods. Third, firms or consumers may lack information required to allocate their resources efficiently. Fourth, if existing firms have market power, they may underproduce and overprice their goods.

Ensuring Public Health and Safety

Public health and safety issues can arise because of economic spillover effects. (Spillover effects, or externalities, occur when one person's actions unintentionally affect another person for good or ill, and no compensation is made to the person providing the good or suffering the ill.) Depending, among other things, on who holds the relevant legal rights, on the costs of enforcing those rights, or on the costs of negotiating other arrangements, producers or consumers may have little or no incentive to consider the costs borne by, or benefits enjoyed by, other people as a result of their actions. Markets provide an incentive for producers to maximize the profits they earn and to minimize the costs they must bear directly, but not to consider the profits or costs of others. In the absence of regulation, for example, profit-maximizing producers may choose cheaper, more polluting production processes, dispose of hazardous waste with less care for health and environmental consequences, or take greater risks of inadvertently harming the environment than is socially optimal. Although private negotiations may lead to full consideration of these external costs when few parties are involved, this approach quickly becomes unworkable as the number of parties increases. Thus, without government or private regulation, public health and safety may not be adequately protected.

Specific examples of spillover effects on health and safety and of the associated regulatory responses abound. For example, in the past, chlorofluorocarbons (CFCs) were used as propellants in aerosol cans and as coolants in air conditioners. CFCs have been identified as a major cause of atmospheric ozone depletion, which in turn is associated with adverse human health and environmental outcomes. These outcomes are external to private decisions to use CFCs as coolants or propellants. Ultimately, the Environmental Protection Agency (EPA) banned certain specific uses of CFCs as propellants in 1978, and an agreement in early 1990, the Montreal Protocol, banned their use internationally.

The choices of consumers, too, can produce spillover effects that influence health and safety. Cigarette smokers may not fully take into account the displeasure of or the health risks to others who breathe their secondhand smoke. Drivers of automobiles that emit pollutants such as hydrocarbons and nitrogen oxides may choose not to curtail their use on days when tropospheric ozone is above healthful levels, especially if the unhealthful air is blown to another area. In such cases a role may exist for public policy or private collective action to improve or protect the public welfare.

Ensuring Economic Efficiency

Spillover effects are not limited to costs, such as the damage to public health and safety in the examples just given. At other times, markets may not suffice to allow producers to capture the spillover benefits of their activities. For

example, when an attractive real estate development increases surrounding property values, or a successful tourist attraction lures customers to nearby businesses, other property owners and these businesses may benefit without having to compensate their benefactor. It is easy to imagine circumstances that can lead to the underproduction of goods or services that provide these external benefits.

Private producers may also underproduce or fail to produce public goods. These are defined as goods that are both nonrival in consumption and nonexcludable. Goods that are nonrival in consumption are those that can be enjoyed by many people without reducing their availability to others. A simple example is a piece of music: once written, a song or a symphony can be performed and enjoyed over and over without ever being exhausted. For a nonrival good to be a public good, however, it must also be nonexcludable; that is, its use cannot be limited to only those who pay for it. Examples of nonrival, nonexcludable public goods include national defense, police protection, public health, a clean environment, wilderness preservation, and public parks.

Public goods merit the name because although they are desirable to produce, their nonexcludability makes it unprofitable for private businesses to produce them, or at least to produce them in sufficient quantity to maximize economic efficiency. "Free riders" can enjoy these goods without having to pay. Similarly, nonrival goods tend to be underproduced because, individually, consumers may be unwilling to pay a sufficiently high price to warrant their production even though, collectively, their willingness to pay exceeds the cost of their production. This poses the immediate question of who, then, will provide public goods. In certain cases it makes sense for the Federal Government to step in and provide the good or service at an efficient level, because private provision will be insufficient.

Information is also essential to the efficient allocation of resources. Consumers and producers must have sufficient knowledge of the characteristics and quality of products, their prices, and other information to make good economic decisions. The absence of sufficient information can dampen market activity because of distrust between potential buyers and sellers. Alternatively, too many transactions may occur if buyers are too trusting and make purchases they would have avoided given full information. In either case the result is a misallocation of resources and lower economic well-being. Markets as diverse as those for used cars and financial services are subject to informational imperfections, and regulation has often stepped in to address these imperfections. For example, the Food and Drug Administration requires nutrition content labels on many foods so that potential consumers have the information they need to protect their health.

The exercise of market power is a fourth reason why market outcomes may be less than optimal. Market power arises when there are too few producers in a market to ensure adequate competition and significant barriers to entry exist. Firms with market power may choose to underproduce, overprice, or limit consumer choices in terms of quality and service. The exercise of market power hurts consumers while allowing firms to use resources inefficiently or to make extraordinary profits. These issues are the subject of antitrust policy and regulation, which last year's *Report* discussed in detail.

Regulation to Address Specific Interests

A second set of demands for regulation arises from the desire of individuals, interest groups, or society at large to modify the distributions of output, income, and wealth that markets produce, whether or not those markets function well. In contrast to the first set of demands for regulation, which focus on improving economic efficiency, this set focuses directly on distributional issues. For moral or altruistic reasons, members of society might conclude that the distributions determined by the market are not entirely fair. Market economies are efficient at producing wealth, but they distribute income in a way that creates a gap between the well off and the poor. For example, those with rare skills that are highly sought after will, by the laws of supply and demand, receive high incomes, while those with more common skills that are not widely demanded will receive lower incomes.

Through its democratic processes, American society has often demanded regulatory actions that alter these distributions of income and wealth. Many of these actions seek to expand the availability of education, training opportunities, medical care, welfare, nutrition, housing, or other goods and services, especially for lower and middle-income individuals. An example is regulation under the Americans with Disabilities Act, which requires that persons with disabilities be accommodated in public, work, and educational facilities. Another example is the requirement of equality in support for men's and women's athletics under Title IX of the Education Amendments of 1972, which prohibits discrimination based on sex in education programs or activities that receive Federal financial support. Unfortunately, fulfilling these demands often entails a tradeoff between maximizing production and achieving a more equal distribution of that production. Accepting something less than the maximum possible output may be economically desirable if members of society care about each other's well-being.

Sometimes, however, the desire to circumvent market outcomes has motivations that are far from altruistic. "Rent seeking" is the process by which interest groups spend resources to influence legislative and regulatory processes to receive favorable treatment for themselves. This, of course, is a normal and

legitimate exercise of political rights in a democratic society. However, the results have economic consequences that are important to understand.

Regulation can foster industry interests in many ways. Many regulations set prices, allocate marketing quotas, or control the entry and exit of firms in an industry. Such regulations bestow market power on firms in the target industry, raising their profits much as in a private cartel, but with the advantage of government sanctions and enforcement. For example, for years the New York State Department of Agriculture and Markets, which issues licenses to sell milk in New York, blocked the entry of out-of-state producers into New York City's milk market, thus allowing New York milk producers to control the milk supply to the whole city. As a result, New Yorkers paid more for their milk than did consumers in adjacent areas. For example, when milk was imported from New Jersey to Staten Island, declines in the price of milk were experienced as expected. In 1987 a Federal district court ended the regime by ruling that the denial of licenses amounted to economic protectionism and was unconstitutional.

Rent seeking can also result in product quality standards that restrict supply or promote the interests of a dominant, established, or technically advanced firm at the expense of new entrants or firms with less advanced capabilities. For example, a dominant airline promoted the use of uniform size templates for carry-on luggage at airport security checkpoints. Because at least one competing airline had invested in larger overhead cargo bins to attract customers, the dominant airline may have viewed the uniform, restrictive templates as a means of negating this competitive threat.

Principles of Regulation

Although the two basic motivations for regulating described above may be inherently at odds, during periods of political and market volatility both types of demand for regulation increase. For example, since September 2001, the terrorist attacks of that month, the ongoing threat of further terrorism, and the war on terrorism as well as turmoil in financial and energy markets have eroded Americans' sense of security and well-being. As a result, the Federal Government has received myriad proposals for new regulations or regulatory authorities, and it has generated many proposals of its own. Areas of proposed regulation related to homeland security include animal and plant health, trade and immigration, airport security, airline security, port security, chemical facility security, nuclear security, cybersecurity, the maintenance of backup facilities for critical components of the financial system, terrorism risk insurance, airline war risk insurance, and money laundering, among others. Recent corporate misbehavior and the resulting volatility in

financial markets and certain energy markets have also led to a host of new regulatory proposals on issues connected to corporate governance and accounting (see Chapter 2 of this *Report*), trading of energy derivatives, safeguards for workers' retirement savings, the conduct of investment research by investment banking firms, and various issues related to information disclosure and transparency in financial markets, among others.

No matter how pure and public-spirited the motivations for these proposals, each has the potential to impose considerable costs on the economy. Especially during a period of accelerating demand for regulation, understanding and applying basic principles of good regulation will improve the chances of achieving laudable regulatory goals without paying too dearly for the benefits. The following questions can serve as guides when contemplating and designing regulatory intervention to maximize public welfare:

- Can the market achieve the desired outcome without regulation?
- Can private sector regulation achieve the desired outcome instead of government regulation?
- Will government regulation impede or distort market dynamics?
- Is there a less restrictive alternative to the proposed regulation?
- Are the costs justified by the prospective benefits, and how are both distributed?

Imposing new regulation without careful consideration of each of these questions risks inflicting an unnecessary burden on the economy, slowing economic growth, and reducing the well-being of Americans. The significance of each of these questions will next be examined in turn.

Can the Market Achieve the Desired Outcome?

Markets are powerful institutions. They allow an economy to adapt quickly to changes in technology, availability of resources, consumer preferences, external threats, or other aspects of the environment in a way that best meets the needs and desires of consumers and producers. The American economy relies heavily on private initiative, mediated through the marketplace, to respond to change. Through the voluntary interactions of many buyers and many sellers, markets create and reveal information about the scarcity and value of goods and services and reward efficiency. By promoting competition, markets induce producers to reveal the cost of producing additional goods and services, and consumers to reveal their willingness and ability to pay for those goods and services. As consumers and producers respond to market prices, resources are shifted among firms so as to meet consumer demands at the lowest possible prices. By rewarding with profits those firms that meet the desires of customers, and imposing losses on those firms that do not, the market encourages and enables the migration of resources to their most valuable uses.

When markets alone cannot achieve these societal goals, performance-based, market-oriented regulation can be used to harness some of the positive qualities of markets such as efficiency and flexibility. Such an approach is desirable because the contrasting characteristics of markets and government regulation imply that society can achieve greater flexibility and productivity with greater reliance on markets and less on government regulation.

In contrast to the voluntary interactions of markets, government regulation relies on the potentially coercive authority of the state to achieve desired ends. Since government regulation is largely motivated by displeasure with market performance or outcomes, it may ignore market information and may risk directing resources away from their most productive uses. For the same reasons, regulation may obstruct market signals and reduce flexibility in the economy. Interference with market dynamics can reduce the rate of technological innovation and the efficient allocation or reallocation of resources across firms or industries. Ultimately, such interference can reduce the rate of economic growth. (This line of argument as it applies to developing countries is further explored in Chapter 6 of this *Report*.)

Historical evidence on the conduct of commercial and investment banking serves as an example of how markets can respond to challenges that might otherwise be addressed by regulation. The Glass-Steagall Act of 1933 separated commercial and investment banking in order to avoid conflicts of interest. Researchers have shown, however, that market participants react in ways that discourage such conflicts on their own. Thus regulation under Glass-Steagall may have provided little additional benefit while preventing banks from achieving economies of scale and scope.

During the 1920s, commercial banks circumvented existing rules segregating investment and commercial banking services by establishing State-chartered affiliate banks that could underwrite securities. The Glass-Steagall Act was passed in part as a response to the potential conflicts of interest that arise when bankers have superior information relative to both investors and depositors. The primary danger is that when risky investment banking activities are combined with commercial banking, bankers will be tempted to use their superior information to take advantage of less well informed investors or depositors. In the absence of deposit insurance, depositors could be harmed if commercial banks, through their investment banking affiliates, held risky or poorly performing assets without appropriately increasing their equity capital to protect depositors from losses. With deposit insurance, this conflict of interest arises with respect to insurers. It is generally mitigated through the imposition and enforcement of minimum capital requirements, among other measures. Interestingly, historical evidence indicates that banks in the 1920s actually held higher capital-to-asset ratios before safety net regulations were imposed. Recent international experience suggests that banks substitute government deposit

insurance or public capital for private capital. Thus the safety net may induce bankers to exchange one form of prudent behavior for another.

Researchers have also found that investors in that era penalized the "universal banks" that offered both investment and commercial banking services: the securities underwritten by universal banks commanded lower prices and had to pay higher yields when investors perceived a conflict of interest. To avoid being thus penalized in the markets, universal banks tended to create distinct investment banking affiliates, with their own capitalization and boards of directors. Evidence shows that firms that organized investment banking services as a department rather than as a separate affiliate obtained lower prices for securities before Glass-Steagall's enactment. Analysis of the quality of securities sold by integrated banks shows that quality did not suffer from the joining of investment and commercial banking services, and at the same time banks benefited from economies of scale and scope through the use of common resources, assets, and knowledge. Perhaps in recognition of this evidence, the Congress passed the Financial Services Modernization Act (also known as the Gramm-Leach-Bliley Act) in 1999, which repealed many of the provisions of Glass-Steagall relating to the separation of commercial and investment banking services. Chapter 2 of this *Report* further examines the importance of market forces in providing appropriate incentives for socially responsible behavior by corporate managers.

Can Private Regulation Suffice?

A common misconception is that government is the only source of regulation. In fact, trade associations and other private organizations also administer regulation. Private regulation may arise in response to the threat of government regulation or as a spontaneous private solution to a market imperfection. For example, private organizations are often effective at providing regulation to overcome informational problems through standard setting, certification, monitoring, brand approval, warranties, product evaluations, and arbitration. They often act in cooperation with government regulators, certifying or guaranteeing compliance with government-set or government-sanctioned standards, or acting as self-regulating organizations under the purview of a government regulator. Such private regulations may be effective because private regulators have their own independent, reputational capital at risk and can enforce their regulations.

Just as markets and government regulators are imperfect, however, so, too, are private regulators. And just as government regulators may face conflicts of interest, so, too, may private regulators. For example, one form of private regulation is the regulation of professional ethics by professional associations, such as those in the medical and legal professions. Members of such boards may face a conflict between the interests of consumers and the income

potential of their fellow professionals. They may also be reluctant to reveal professional misconduct for fear of reducing public regard for their profession. Private regulators, like government regulators, may also face incentives or pressure to provide incumbent or dominant firms with competitive advantages or barriers to competition.

Despite such imperfections, private regulation offers a variety of benefits over government regulation in some circumstances. Because private regulatory mechanisms cannot be backed up with the use of coercive force, they tend to be more flexible and have lower compliance costs. Private regulators are less able to dictate command-and-control regulations, and therefore the regulated businesses and individuals typically spend less time and other resources complying. To be effective, private regulators need to be open to suggestions from industry members, consumers and consumer groups, universities and other scientific organizations, and government agencies. As a result of these dynamic relationships, private regulators have a market incentive to closely follow changes and technological advances so as to preserve their expert status and protect their reputation.

Private regulators face market pressures to control the burdens they impose on businesses and consumers. These pressures can provide an incentive to minimize their costs and facilitate flexibility. By increasing their own cost-effectiveness, private regulators also lower compliance costs for businesses if they operate in competitive markets. In contrast, although many government regulatory agencies also rely on fees for their services, their budgets are set in the political arena and may rely on general government revenue. Private regulators have an incentive to provide firms with well-formulated guidelines and firm-specific recommendations, helping firms reduce compliance costs while meeting necessary standards. Private regulation may also require less paperwork, which significantly reduces the time cost of regulation.

Although private regulators lack certain powers that governments have, their regulation can nonetheless be effectively enforced through legally enforceable contracts, sanctions (including revoking approvals, assessing fines, and pulling products off the market), and public announcements. Both private regulators and the companies that use their services also put their reputations—often one of their most valuable assets—on the line. Firms choose to comply with voluntary private regulation because they perceive it as an important marketing tool, and the associated compliance costs as a necessary cost of doing business rather than as a burden.

One example of successful and longstanding private regulation involves the establishment by the insurance industry of an independent, not-for-profit organization to test and certify product safety. This organization, founded in 1894, provides voluntary certification for a variety of industries and products including electrical appliances, automotive products, medical appliances, alarm systems, and chemicals. In 2001 alone, 64,482 manufacturers produced

certified products, and 108,296 product evaluations were conducted. Beyond testing and certification, this organization takes an active role in developing industry standards. To protect their reputation for quality, many retailers are reluctant to purchase goods unless they have received the organization's approval, even though Federal law does not mandate certification. Furthermore, the market for safety certification and testing is competitive, with at least 11 other private organizations providing similar services. In a competitive market, all of these organizations face incentives to minimize the cost of their services. Similar organizations exist to certify the environmental soundness of products and services, showing that they meet established standards for reducing pollution and waste, conserving resources and habitats, and minimizing global warming and ozone depletion.

These examples illustrate how independent private regulators can provide a market-based solution to a market failure, namely, imperfect information. In all these cases consumers cannot on their own readily verify production processes or quality characteristics that are important to them. Imperfect information is also important in financial markets, and there, too, the answer has often been third-party verification. For example, several firms specialize in providing risk ratings for firms seeking to issue stocks and bonds or enter into customized derivatives contracts. This service helps firms market their securities at more attractive prices, because third-party certification from the credit rating agencies enhances the transparency of the risks associated with these securities and the credibility of those offering them.

Some of the benefits of private regulation can most efficiently be captured when private regulatory activity operates under government sanction. The United States has a number of self-regulating financial organizations, including stock exchanges and futures markets. These organizations operate as private entities that establish rules, policies, and standards of conduct for their members and member organizations. However, these regulatory activities are overseen and approved by a government agency: the Securities and Exchange Commission in the case of stock markets, the Commodity Futures Trading Commission in the case of futures markets. Government regulators may also choose to work in cooperation with private, third-party certifiers. For example, the Department of Agriculture recently completed the implementation of regulations governing the production and labeling of foods as organic. These new standards rely primarily on independent, private sector firms to certify that producers of foods claiming to be organic meet the government-set standards. The market incentives faced by both the producing firms and the certifying firms should help reduce the cost of meeting and enforcing these standards from what it would be under pure government enforcement.

Private regulation or government-sanctioned self-regulation may also be an option for some aspects of homeland security. The chemical industry faces the

risk of terrorist attack due to the potential to turn common, useful chemicals into weapons of mass destruction. About 15,000 facilities in the United States handle large quantities of dangerous chemicals already regulated under the EPA's Risk Management Program (RMP). These are chemicals that, if released, would pose a significant threat to public health and safety.

Both private and public regulatory approaches could be used to improve chemical site security. As an example of the former, one industry trade association imposed regulation on its members, requiring them to assess and reduce their vulnerability to terrorist attack. However, only about 1,500 facilities, or 10 percent of those handling chemicals covered under the RMP, are owned by members of this association. At least two public sector approaches have been suggested to extend this regulation more broadly. A command-and-control approach would require certain designated actions or technologies to reduce the threat. This approach focuses on reducing the use and storage of chemicals, changing methods and processes, employing safer technology, and generally improving security, all of which might reduce the threat but fail to consider marginal (that is, incremental) risks or costs. An alternative approach is a market-based mechanism, in which a chemical facility would be required to obtain insurance coverage against liability arising from an unanticipated release of chemicals, subject to review by the appropriate government agency. The level of required coverage would depend on an assessment of the facility's vulnerability and the hazard to security, undertaken by the facility itself or its agent, which would include an estimate of the probable range of losses resulting from a terrorist attack. This insurance-based approach to chemical facility security would rely on market flexibility to attain the socially desired level of security at the least cost.

This market-based approach has several advantages over government-mandated standards. First, insurance prices that are adjusted for risk can provide incentives for the owners and operators of chemical facilities to invest in safety and security measures to the extent this is socially optimal. In contrast, government-mandated standards may over- or underspecify investments relative to that optimum. Second, reliance on the insurance market rather than the government to provide regulation gives owners and operators the flexibility to implement the most efficient and cost-effective precautionary measures given their facility's existing technology and situation. Third, under a government-mandated standards regime, chemical facility operators would likely slow or halt the deployment of new security measures until any uncertainty about security requirements was resolved. In contrast, an insurance-based mechanism, with its inherent flexibility, can build on existing security measures, encouraging quicker deployment. However, the insurance-based approach will work only if private insurers are willing and able to provide coverage at an affordable price and if the insurance industry itself is

sufficiently competitive. If these conditions are not met, the appropriate government agency could promulgate regulations mandating compliance with certain safety standards but waive those standards for facilities that obtain a sufficient level of insurance.

Will Government Regulation Impede or Distort Market Dynamics?

Regulating economic behavior in a dynamic economy, especially through traditional command-and-control regulation, is a laborious undertaking, with the potential for unintended and unwanted results. Government regulation can lead to the expenditure of effort and resources inconsistent with the initial regulatory intent. This happens because regulation does not suspend or eliminate market forces but rather suppresses or redirects them. When government promulgates and enforces regulations, it alters the incentives of economic decisionmakers (consumers, managers, and investors) by changing costs, prices, information, or risks. Decisionmakers respond by changing their behavior, often in ways that are unintended or even contrary to the aims of the regulation. If regulation is static in design, failing to anticipate these reactions, the ratio of intended to unintended consequences tends to diminish over time, which in turn may increase the demand for regulatory reform. Dynamic regulation, in contrast, seeks to anticipate the reactions of consumers and firms to regulatory changes, to ensure that the regulation achieves the intended results.

Firms may respond to the regulatory constraints imposed on them by increasing or decreasing production, entering or exiting industries, changing lines of business, or developing new technologies. Consumers may look to unregulated sources to obtain products or services that regulation has made more expensive or rendered unavailable. Investors may shift capital from regulated to unregulated industries or among research and development projects to technologies that are more likely to be profitable under the regulatory regime. For example, when airfares were regulated and airlines competed on the quality of their service, the airlines demanded that manufacturers develop faster, longer range aircraft. After regulatory reform led airlines to adopt the hub-and-spoke system, allowing them to serve many locations at less cost, they largely switched their new purchases to shorter haul aircraft.

Performance-based regulation, too, can impede or distort market dynamics. For example, corporate average fuel efficiency (CAFE) standards distinguish between cars and light trucks, imposing less strict standards on the latter. This provided automobile manufacturers with an incentive to shift production away from cars to light trucks, to meet consumer preferences for

larger vehicles as real fuel prices dropped. This regulation has also affected the relative profitability of production locations for vehicles sold in the United States.

CAFE standards were established under the Energy Policy and Conservation Act of 1975 in an effort to reduce oil consumption after the 1973 Arab oil embargo. At the time, high gasoline prices and long lines at the pump induced a shift in consumer demand to more efficient vehicles. The least expensive way to attain better fuel economy was to downsize passenger cars, but this downsizing had two safety-related consequences: the smaller vehicles were less stable when a driver lost control, and they offered less protection in a collision. The result was an increase in traffic fatalities. Because light trucks were used mostly as commercial and agricultural work vehicles and made up a relatively small part of the market, lower fuel economy standards were instituted for them than for passenger cars.

The effects of the 1970s oil crisis dissipated when gasoline prices declined in the 1980s, and American consumers again demanded larger vehicles. Because the CAFE standard was substantially lower for light trucks than for passenger cars, manufacturers designed their new larger vehicles as minivans and sport utility vehicles (SUVs) to qualify as light trucks rather than passenger cars. Consumer acceptance of these vehicles has sharply increased U.S. sales of light trucks (including minivans and SUVs), raising their share of the vehicle fleet from approximately 20 percent in 1976 to 28 percent in 1985 and nearly 50 percent in 2001 (Chart 4-1). When the CAFE standards are binding, manufacturers must sell smaller, more fuel-efficient vehicles for less but can sell larger, less fuel-efficient vehicles for more than they would in the absence of these standards. The shift in vehicle production from passenger cars to light trucks has thus offset the intended effect of the regulation.

Another market-distorting characteristic of the CAFE standards is the "two-fleet rule," which applies to passenger cars but not light trucks. Under this provision, automobile production is divided into two fleets: vehicles made in North America and those made elsewhere. This encourages the manufacture of small cars in North America, to bring the domestic fleet's average fuel economy up to the CAFE standard, but encourages the manufacture of large vehicles abroad, because overseas manufacturers tend to produce more fuel efficient fleets than CAFE requires. Thus foreign manufacturers can produce higher profit, less fuel efficient cars without facing CAFE penalties. Moreover, there is some evidence that because CAFE standards induce manufacturers to raise the price of less fuel efficient vehicles and lower the price of more fuel efficient vehicles, they tend to shift market shares toward imports at the expense of domestic automakers.

Alternative, market-oriented solutions are available to boost fuel economy while reducing market distortions and regulatory burdens. One option would be to allow manufacturers to trade fuel economy credits. Such a policy

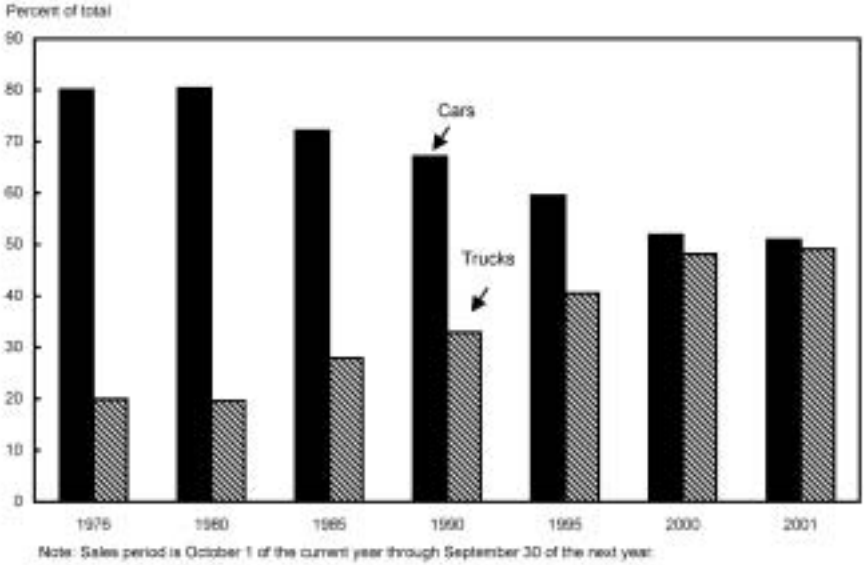
would allow manufacturers to concentrate production in their area of comparative advantage, whether it be small, fuel-efficient vehicles or large, less fuel efficient ones. Trading CAFE credits would also equalize the cost of attaining the standards across manufacturers, a precondition for economic efficiency. Thus, if combined with an overall cap on credits, this approach would reduce the total cost of attaining any particular level of fuel economy that policymakers choose to target. Other options would focus on policies that more directly address fuel consumption rather than vehicle design, because the key to reducing fuel consumption efficiently is to focus on the desired outcome rather than specific technologies or processes.

Is There a Less Restrictive Alternative?

When public regulation is necessary, government agencies should respond to the demand by promulgating regulations that are both statically and dynamically efficient. Measures aimed at static efficiency are those that are the most cost-effective that can be taken today to address the problem at hand. Dynamically efficient regulation, in contrast, gives firms an incentive in the long run to innovate and discover technologies that lower costs and avoid negative spillover effects in the future.

Command-and-control regulation relies on dictating prices or quantities, restrictions on technologies or processes, or who may enter or exit a market. Agriculture in the United States, for example, has long been characterized by

Chart 4-1 **Light Vehicle Sales**
Light vehicle sales have shifted from cars to trucks since CAFE standards were established in 1975



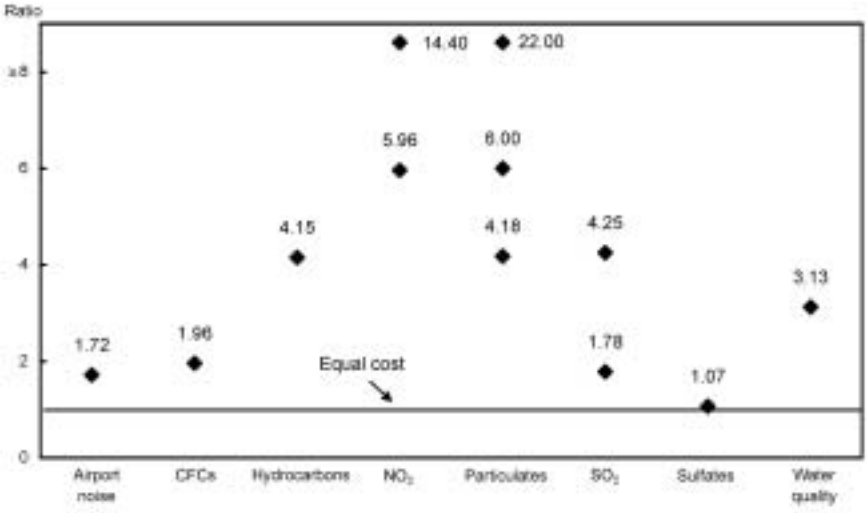
Note: Sales period is October 1 of the current year through September 30 of the next year.
Source: Oak Ridge National Laboratory, Light Vehicle and MPG Market Shares System.

price and quantity restrictions. Government programs effectively guarantee minimum prices to growers of major crops such as cotton, rice, wheat, corn, and soybeans. Sugar and tobacco are marketed subject to government quotas, and many fruits and vegetables are subject to marketing orders that limit the quantity and quality that may be offered for sale. Entry and exit restrictions often apply to government-regulated monopolies such as cable, telephone, electricity, and transportation services. Many early environmental regulations, including the landmark clean water and clean air legislation of the 1970s, include provisions that require polluters to adopt certain pollution-reducing technologies. For example, the Clean Water Act effectively requires pollution sources to adopt the "best practicable technology," and the Clean Air Act Amendments of 1977 require such sources to adopt the "best available control technology" in certain regions of the country.

Performance-based regulations, in contrast, stipulate a performance goal but allow firms flexibility in determining how best to meet that goal. Vehicle emissions standards are one example. An advantage of this kind of regulation is that it uses market forces to encourage firms to find low-cost solutions to meet a given standard. Market-based approaches, which include tradable permit systems, emissions taxes, and compliance subsidies, are similar to performance-based approaches but are even more efficient. The gain in efficiency arises from the equalization of marginal compliance costs across firms. If the regulatory goal is to reduce pollution, for example, the polluter is afforded the flexibility to discover the most efficient techniques to decrease its emission levels. Simultaneously, the market ensures that innovation and creativity are rewarded.

Command-and-control regulations, such as technology standards, may induce polluters to lower their emissions and in some cases may involve lower enforcement costs for the regulator, but they fail to provide the long-term dynamic incentive that induces innovative behavior. Indeed, command-and-control regulation often does not even meet the criterion of static efficiency—achieving the regulatory goal at lowest cost given current technology—because it may fail to provide the greatest benefits per dollar spent on solving problems today. This point is highlighted in Chart 4-2, which compares costs under a command-and-control regime with those under a least-cost program, such as a market-based mechanism, across studies of a variety of regulatory initiatives. For example, one study of sulfur dioxide abatement found that command-and-control regulation imposed costs that were approximately 1.8 times what they would have been under an efficiently designed market-based mechanism; another sulfur dioxide study found that those costs were 4.3 times higher. Other comparisons across a variety of antipollution programs all paint a similar picture: much the same environmental improvement could have been achieved with far fewer resources if market-based policies had been adopted.

Chart 4-2 **Ratio of Costs of Command-and-Control to Least-Cost Regulation**
Studies indicate that market-based methods achieve regulatory goals with fewer resources than command-and-control programs.



Note: NO_2: nitrogen dioxide; SO_2: sulfur dioxide.
Source: Barry C. Field, *Environmental Economics*, 2nd Ed., New York: McGraw-Hill, 1997.

Command-and-control regulation typically provides few incentives for producers or consumers to search for more cost-effective ways to reduce pollution in the future. This happens because regulators have directed attention to the wrong target. Rather than focusing efforts on developing cheaper ways to use mandated technologies, as command-and-control regulations typically do, regulators should target the real problem: finding or developing the most cost-effective way to reduce emissions.

This fact is highlighted when one considers the incentives created under the 1977 and 1990 Clean Air Act Amendments. Before 1990, electric utilities faced command-and-control regulation centered on the adoption of certain specified pollution control technologies. Although the 1970 Clean Air Act had already established national ambient air quality standards for a number of pollutants, including sulfur dioxide, it was the 1977 Clean Air Act Amendments that clarified national standards for sulfur dioxide and added a specific technology requirement for electric utilities. The amendments required that most new coal-burning plants use flue gas desulfurization units, or "scrubbers," to achieve the required maximum emissions rates. To achieve the air quality standards, plants were required to demonstrate the use of "best available control technology" for each pollutant emitted, including sulfur dioxide. Because the legislation mandated the specific means by which the

utilities were to control their pollution, it created no incentive for them to innovate to increase the ability of the scrubbers to reduce pollution. Rather, the utilities faced only an incentive to develop methods to lower the operating costs of scrubbers, to reduce the costs of complying with the regulation.

The 1990 Clean Air Act Amendments, by enacting a market-based trading regime, radically shifted the utilities' approach to complying with the emissions reductions mandate. Utilities were required to hold permits for each ton of sulfur dioxide emitted. These permits were made tradable: a plant that found itself unable to cover its total emissions with the initial allocation of permits could purchase permits from another plant that had more permits than it needed. Plants were no longer required to install scrubbers; instead they could choose the method of reducing emissions that they found to be most cost-effective and thus were given an incentive to engage in research and development that would reduce emissions further.

Indeed, research into patents granted before 1990 in the electric utilities industry shows that innovation in that industry had no effect on how much pollution the scrubbers were removing, but instead sought to lower their operating cost. After the 1990 Clean Air Act Amendments, innovations, again as measured by patents granted, continued to lower operating costs but also increased the removal efficiency of scrubbers. By using a market mechanism, regulators were able to meet the goal of reduced emissions in a much more efficient and environmentally conscious manner: the dynamic market-based approach not only spurred environmentally friendly innovation, but also encouraged firms to control emissions in a more efficient and cost-effective way.

Creating a regulatory environment that enhances economic efficiency is a difficult task. Just as markets are not always perfect, so, too, government agencies are not inherently benevolent, omniscient, or omnipotent (Box 4-1). Unlike market participants, who are motivated primarily by the self-interested goal of maximizing their profits, government regulators often are motivated by several, sometimes conflicting, mandates. Regulators can also make mistakes. They may make assumptions or estimates that result in unintended consequences and increase the burden of regulation by imposing inappropriate standards, penalties, production restrictions, or prices. Further, the government may suffer from persistent problems in retaining sufficient knowledge and staffing expertise in the activity being regulated. Finally, individuals motivated by rent seeking or economically inefficient social goals may unduly influence regulatory decisions. All of these factors may lead regulators to make decisions that impair economic efficiency.

The President's Management Agenda for fiscal year 2002 provides a strategy for addressing inefficiencies in government and government regulation. This strategy aims to refocus government activities in ways that are citizen-centered, results-oriented, and market-based and that actively promote

Box 4-1. The Government Is Not Perfect, Either

There are many ways in which markets may fail, or at least fall short of the "perfect" market described in any elementary economics textbook. A common result of such imperfections is that more or less of a good or service is produced than is optimal from the perspective of society as a whole. Nonetheless, when market failure is diagnosed, it is important to avoid a reflexive leap to the conclusion that the government can necessarily bring about a better outcome. Just as the actual operation of a market may deviate from the idealized model, so, too, government intervention may not always achieve the ideal outcome envisaged by lawmakers or regulators.

Whenever markets are alleged to have failed, policymakers need to consider the following question: Can the government bring about a particular outcome more efficiently than the market? Actual government regulators, unlike their omnipotent theoretical counterparts, face an array of potential complications that may make the answer to that question negative. The following are some examples:

- *Inability to respond effectively to market dynamics.* The bureaucratic environment in which regulators typically operate may impede their ability to act quickly in response to changing technology or market conditions. The result can be a significant drag on the economy.
- *Imperfect information about particular industries.* Government regulators may lack the necessary information or foresight to devise or implement effective regulation for an industry. Regulation that is uninformed can result in unforeseen consequences.
- *Lack of competitive pressure.* Regulators and other government officials do not face the same competitive pressures that firm owners and managers and other private sector actors do. It is precisely this competitive pressure that induces private firms to innovate and enhance their productivity, and its absence may prevent government regulation from being equally innovative and efficient.

Complications such as these may mean that even an imperfect market might achieve a more efficient outcome than government regulation, even if theory suggests that government intervention would improve on the market outcome. Policymakers, therefore, should consider not only market failure but also government failure, and should ask themselves tough questions about the likely efficacy of government intervention in the circumstances at hand.

innovation. By mandating more strenuous review of government costs and performance, the President's agenda seeks to balance the imperfections of government activity against those of the market. As part of this agenda, citizen-oriented government activities are intended to limit rent seeking by bureaucrats and private interests; results-oriented activities will be regularly reviewed and their impacts on overall economic efficiency assessed, to allow a better understanding of program costs and benefits; and market-based activities will be used to reduce informational and incentive discrepancies between the public and the private sectors, to help improve the quality of information available to regulators and the quality of their decisions.

Do the Benefits Justify the Costs, and How Are Both Distributed?

On the one hand, one reason that regulation sometimes has an adverse impact on the general public may be that proponents of the regulation focus on its benefits and disregard its costs. On the other hand, proposed regulations whose benefits would justify the associated costs may be blocked because opponents focus on the costs and downplay the benefits. Whether or not a regulation is adopted may depend on how hard interest groups work to influence the legislative process and the regulatory agencies. As a result, some regulations may be adopted that benefit a particular group to the detriment of overall societal goals, whereas others that could be socially justified are blocked because they would impose significant net costs on particular groups. Appropriate regulation is based on the balancing of marginal costs and marginal benefits to society in general. When both costs and benefits are considered simultaneously, regulations that are particularly beneficial or detrimental can more easily be identified. In this process it is important to consider the regulatory cost to the whole economy, not just the direct budgetary cost to the government. Regulatory costs also include the private sector's direct and indirect compliance costs as well as incentive effects such as reductions in the incentive to innovate. To improve information about the benefits and costs of major Federal regulations (those with annual impacts in excess of $100 million), the Administration is currently reviewing and revising its guidelines on regulatory analysis (Box 4-2).

From an economic perspective, the standard rule of thumb to ensure efficiency is that resources should be allocated across activities in such a way that the marginal benefit is equal to the marginal cost. For example, in the context of homeland security, it may be the case that additional resources devoted to international counterterrorism efforts would reduce the risk of terrorist attack much more than would additional resources spent on border enforcement. If so, resources should be shifted toward counterterrorism up

Box 4-2. Assessing the Economic Impact of Major Regulatory Initiatives

Federal regulatory agencies issue approximately 4,500 new rulemaking notices each year. About 600 of these are projected to have effects of such magnitude as to warrant review by the Office of Management and Budget (OMB). Of those 600, between 50 and 100 each year meet the necessary criteria to be designated "economically significant," that is, creating annual benefits or costs worth more than $100 million. Every "economically significant" proposal must undergo a formal analysis by the agency initiating the proposal of its benefits and its costs. The OMB establishes guidelines for the regulatory agencies on how to perform these economic analyses. In an effort to promote their transparency and maximize the net benefits to society, the OMB and the Council of Economic Advisers are currently revising these guidelines.

Consistent with the principles of good regulation outlined in this chapter, one proposed revision would have agencies complement their benefit-cost analysis of proposed economically significant regulations with a cost-effectiveness analysis. The two types of analysis are conceptually very different: a cost-effectiveness analysis identifies those options for achieving the regulation's objectives that make the most effective use of the resources available, but it does not require quantification in dollar terms of the relevant costs and benefits. This exercise provides the analyst with a transparent means of comparing regulatory outcomes across an array of policy choices while maintaining scientific rigor. Yet it is important to note that although all efficient policies are cost-effective, not all cost-effective policies are efficient. This fact highlights the advantages of properly recognizing the total benefits and the total costs of promulgating new regulations, reviewing existing ones, and developing legislative proposals concerning regulation.

In this spirit, the guidelines highlight several state-of-the-art techniques by which to estimate the benefits of a regulation, and they outline appropriate methods for estimating its costs. On the benefits side, the guidelines endorse the use of stated and revealed behavior in actual markets as signaling economic values. On the costs side, the guidelines urge that all of the costs associated with the regulation—including monitoring and enforcement costs, direct compliance expenditures, and other direct costs such as legal and transactions costs, product substitution, and discouraged investment—be recognized.

This major revision of the conduct of regulatory analysis is consistent with the Administration's goal to establish a greater focus on accomplishment by producing performance-based budgets. Under this new approach, high-performing programs will be reinforced and poorly performing activities reformed or terminated. This paradigm change

Box 4-2. —*continued*

increases accountability and provides the necessary structure to more completely integrate information about costs and program performance in a single oversight process. This is a necessary first step in shifting budgetary resources among programs to ensure that the greatest possible benefits are achieved with the available funds.

to the point where the marginal impact on overall homeland security is unaffected by further resource shifting—that is, when risk mitigation per dollar is equalized across activities. This kind of economic analysis of major regulations generates information that can be used to distribute limited regulatory resources to those areas where they will do the most good.

Because even socially efficient regulation creates winners and losers, firms and other interest groups have an incentive to spend considerable resources trying to capture the benefits of regulation for themselves. Even when the benefits far exceed the costs, regulation rarely affects all participants equally. For example, regulation can create barriers to competition by raising the cost of market entry, or by imposing fixed compliance costs, which put smaller firms at a disadvantage relative to larger ones that can spread those fixed costs over their larger revenue base. Sometimes existing firms may successfully lobby for exemptions from new rules. For these reasons, the Regulatory Flexibility Act, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996, specifically requires a separate analysis of the impact of new regulation on small businesses. Such analyses can limit, or at least shed light on, the rent-seeking activities of dominant firms and other interest groups.

Recent experience with regulation governing the introduction of generic pharmaceuticals illustrates these points. In this case, manufacturers of brand-name pharmaceuticals took advantage of government regulation to shelter their products from competition from lower priced generic substitutes. The brand-name manufacturers circumvented the spirit of the law, but not necessarily its letter, by listing minor variations on their patents in order to extend their protection from competition. Generic drugs represent a cost-effective means of providing Americans low-cost access to important medical technology. The market entrance of generic drugs, typically priced far below their branded counterparts, logically leads to their rapid substitution in place of name-brand drugs. The Hatch-Waxman Amendments to the Federal Food, Drug, and Cosmetic Act, enacted by the Congress in 1984, amounted to a major reform of the approval process for generic drugs and has led to a large

increase in the number of such drugs available to consumers. This profusion of generic drugs, whose use is also encouraged by health insurers, has saved consumers vast sums of money.

However, it has recently come to light that certain provisions of the Hatch-Waxman amendments are subject to potential abuse. Under the amendments, a generic drug maker may seek permission from the Food and Drug Administration to produce a generic equivalent of a brand-name drug whose manufacturer claims patent protection. However, the brand-name manufacturer is given the opportunity to obtain a stay on the marketing of the competing generic, during which time it can defend its patent in court. In recent years brand-name drug manufacturers have increasingly adopted a strategy of listing new patents—often for characteristics such as product packaging—following a generic manufacturer's application to market an equivalent generic. Such a move forces the generic manufacturer to resubmit its application and effectively extends the government-enforced stay on generic competition. The Administration has proposed a new rule that seeks to counter this strategy and balance the need for property rights protection and innovation against the need for competition and greater access to lower cost generics. The new rule does this in two ways. First, it would limit a brand-name manufacturer's ability to forestall generic competition by limiting the government-enforced stay on generic competition. Second, it would tighten the patent listing process to ensure that only appropriate patents are filed. The potential savings to consumers from these changes are estimated at $3 billion annually.

The Demand for Regulatory Reform

The more regulation limits the choices of producers, consumers, or investors, the greater is the possible harm to economic activity, and the greater the demand for regulatory reform. Moreover, the impact and efficacy of regulations can change over time. With time, regulations are more likely to become constraining, or simply irrelevant, because of changes in technology or in the products and services available in the marketplace. Such changes are often a prerequisite for successful regulatory reform, because they weaken resistance to reform from those interest groups that benefit from the status quo.

When government regulation controls prices, profits, or entry into a potentially competitive industry, effectively shielding certain incumbent firms from competition, regulatory reform can yield benefits for consumers, potential market entrants, and the industry as a whole. Reform of regulation in the airline, railroad, and trucking industries and the lifting of geographical restrictions on bank expansion are all cases in point. As a result of the

competition that followed regulatory reform of these industries, prices fell, innovation increased, and resources were more efficiently allocated. Gains may also be available from reform of government regulations that address persistent market imperfections, for example with regard to health, safety, or environmental quality. In these cases, reforming regulation to more closely comply with the principles of regulation outlined earlier in this chapter can reduce the costs of meeting regulatory goals.

Like the demand for regulation itself, the demand for regulatory reform arises for two distinct and conflicting reasons. Sometimes such regulatory harm comes to light when producers or investors perceive potential profit opportunities if the regulation is removed. Some calls for reform arise from the recognition that a regulation is imposing more costs than it is creating benefits, or providing unfair advantages to some at the expense of others. For example, when the restrictions on entry in the New York City dairy market, discussed above, raised milk prices there, New Jersey dairies saw the chance for profit if those restrictions could be jettisoned. The courts agreed, finding that if the New Jersey dairies were allowed to sell milk in New York City, the price of milk there would drop to that in other nearby locales where ample competition existed. In other cases, consumers themselves may discover that regulation is preventing them from finding desired products and services. For example, the regulatory requirement that certain prescription drugs be supplied in child-resistant containers made opening the container difficult for the elderly and the handicapped. Subsequently, the Consumer Product Safety Commission launched an educational awareness program to inform the public and pharmacists about appropriate exemptions from and requirements of safety cap regulations.

Other calls for reform, however, may arise because a firm perceives an opportunity to gain or take advantage of market power. This demand for regulatory reform is a type of rent seeking, as the firm is attempting to influence regulatory outcomes in order to receive favorable treatment for itself.

Regulatory Review and Regulatory Reform

The President recently declared that, "There comes a time when every program must be judged either a success or a failure. Where we find success, we should repeat it, share it, and make it the standard. And, where we find failure, we must call it by its name. Government action that fails in its purpose must be reformed or ended."

Regulation often has unintended consequences or causes changes in economic behavior that make it less desirable or effective than anticipated. This makes it important to revisit from time to time the question of whether the results of a regulatory initiative solve real problems that the American

people care about. In this sense, regulatory review represents an important backstop against policies that are misguided, ineffective, or outdated.

This principle can be illustrated by a simple anecdote in which a specific command-and-control regulation that appeared to offer a straightforward solution to an apparently uncomplicated situation in fact provoked a dynamic reaction that few if any had anticipated. This story shows how, even in the seemingly most innocuous cases, government regulatory failure can greatly complicate matters, reducing consumer choice and economic efficiency.

In 1972, in an effort to reduce the incidence of burns among children, the Federal Government implemented a regulation requiring newly manufactured pajamas for small children to be made flame-resistant. Amended in 1974 to include larger children's sleepwear, this standard required that fabrics used for children's sleepwear self-extinguish when exposed to a small open flame such as from a cigarette lighter, candle, or match. Although the regulation neither prescribed specific fabrics nor required flame-retardant treatments, in order to comply, manufacturers either switched to synthetic materials (mostly polyester) that were inherently flame-resistant or treated fabrics such as cotton with flame-retardant chemicals.

One such chemical, called TRIS, was widely used by industry as a flame retardant to treat acetate, triacetate, and some polyester garments. However, TRIS was subsequently found to be carcinogenic and was therefore banned from use in cotton sleepwear. Polyester then became the fabric of choice for manufacturers, since it did not require the use of a flame-retardant chemical. Parents, however, began to express a demand for natural fibers such as cotton for their children's sleepwear. In response to this demand, retailers began increasing their stocks of cotton and cotton-blend long underwear sets that did not meet the Consumer Product Safety Commission's flammability standard for children's sleepwear, in some cases intermingling them with flame-resistant sleepwear on children's sleepwear racks. Responding to this change in consumer preferences, in 1996 the commission voted to exempt snug-fitting sleepwear (and all infants' clothing up to size 9 months), after concluding that snug-fitting pajamas exhibited a lesser propensity to burn.

Once again, consumers responded to this restriction by altering their choices. They continued to purchase children's long underwear in large quantities, as well as traditional flame-resistant polyester sleepwear that had improved in style and comfort. They did not show a preference for snug-fitting pajamas, which tended to be less comfortable, and comfort was likely the primary concern of parents who preferred cotton sleepwear to synthetic garments in the first place. Unit sales of children's underwear increased from 1993 to 1996 by about 22 percent (98 million pieces). According to a well-known clothing trade publication, this gain in underwear sales was attributable to underwear being used as sleepwear. Unit sales of children's

sleepwear (excluding underwear) increased over the same period by about 28 percent (36 million pieces), reflecting an increase in sales of traditional fire-resistant sleepwear garments. In 2000 the Consumer Product Safety Commission launched an educational program for parents by requiring manufacturers to place hangtags and permanent labels on garments reminding parents to choose either snug-fitting or flame-resistant sleepwear.

This example highlights how even well-intended regulations can have a high cost and unexpected consequences. It also demonstrates that market forces continue to function after regulation is imposed: although the regulation sought to limit the options of producers and consumers, consumers' preferences ultimately determined what was actually manufactured and sold.

Effects of Reform on Prices

When reformed regulation opens an industry to new entrants and frees prices to respond to market forces rather than regulatory fiat, prices typically fall. Deregulation of the airline industry is a prime example. Almost from its inception and through the late 1970s, the airline industry was subject to strict Federal regulation. The Civil Aeronautics Board (CAB), established by the Congress in 1938, exercised nearly complete control over the industry, with authority to establish maximum and minimum fares, control market entry and exit, and govern airlines' route structures. By the mid-1970s, however, pressure for reform of airline regulation was building, motivated in part by research arguing that regulation suppressed competition and resulted in welfare losses to society. The CAB responded to this pressure in the late 1970s by reducing entry restrictions and control over fares. Major cuts in fares soon followed, accompanied by higher industry profits. These initial positive results spurred the Congress to pass the Airline Deregulation Act (ADA) in 1978. From 1977 to 1996, airfares fell approximately 40 percent in inflation-adjusted terms. According to a recent estimate of the welfare gains from this regulatory reform, before September 2001 consumers were saving about $14.8 billion (in 2000 dollars) annually in lower fares compared with what they would be paying if the previous system were still in place. One may reasonably assume that this downward pressure on prices resulted, at least in part, from increased industry competition: as of late 2002, 32 domestic carriers flew scheduled service in the United States, compared with only 15 in 1978.

Regulatory reforms in other industries have had a similarly salutary effect on consumer prices. Until 1980 the Interstate Commerce Commission (ICC) regulated shipping rates for railroads and prevented railroads from abandoning unprofitable lines. After partial regulatory reform in 1980, rates on rail freight fell steadily: by 1999 real rates were roughly half their 1984 level. Regulatory reform in the trucking industry, which took place primarily between the late 1970s and the early 1980s, resulted in similar rate declines.

From the mid-1930s to the beginning of reform in 1980, regulation had effectively controlled shipping rates and given incumbent truckers veto power over the extension of new or expanded authority to transport goods. This stifled competition from potential entrants. Declines in shipping rates by truck and rail, combined with improved flexibility and on-time dependability, also made possible by regulatory reform, are estimated to have saved U.S. industry between $38 billion and $56 billion annually.

Effects of Reform on Innovation and Consumer Satisfaction

Another common effect of the competition fostered by regulatory reform is increased innovation, resulting in greater variety and higher quality for consumers. Before deregulation of the trucking industry, both permitted routes and goods carried were narrowly specified, creating costly inefficiencies. Reform allowed truckers to offer on-time delivery and more flexible service, so that manufacturers could order components to arrive "just in time" at the assembly line, and retailers could have the finished goods "just in time" to be sold. This streamlining resulted in greatly reduced costs of holding and maintaining inventories.

The case of the airline industry is particularly revealing of the potential for innovation unleashed by regulatory reform, and the resulting benefits to consumers. Before reform, airlines competed primarily by attempting to provide better service to customers, since they were essentially prohibited from competing on the basis of price. In the spirit of such nonprice competition, airlines attempted to offer more flights while decreasing the number of passengers on each flight and emphasizing the quality of food and other in-flight services. Following reform, it was expected that fares would fall but that service quality would decline as well, in accord with consumer preferences. In reality, however, the unanticipated development of an entirely new route structure—the hub-and-spoke system—allowed airlines to increase flight frequency, giving customers a wider variety of departure times from which to choose. Under the regulated regime, with its restrictions on entry of existing carriers into currently served markets, such massive route restructuring would have been impossible. Research has shown that consumers valued this innovation, an unexpected benefit of unregulated competition, far more than enough to compensate for other declines in service quality such as longer average travel times. Research has also shown that the benefit to consumers is about $10.3 billion each year from increases in flight frequency, thanks to the hub-and-spoke system, in addition to the billions in gains from lower fares.

The same competition that produced the efficiencies of the hub-and-spoke system continues to inspire innovation and reshape the structure of the airline industry in efficiency-enhancing ways. Following the hub-and-spoke revolution, another wave of innovation resulted in the emergence of carriers offering low-fare, no-frills, point-to-point service as an alternative to the major airlines that dominated the major hubs. This, too, was a direct response to consumer preferences. More recently, the introduction of the "regional jet," a new type of small jetliner, is again changing the face of air travel. The low operating costs of regional jets make it more economical to serve medium-length routes capable of supporting only a modest number of passengers. This innovation opens up the prospect of adding smaller cities, more frequent service to the spokes of hubs, and possibly even a new market for point-to-point service. Without the stimulus of competition associated with regulatory reform in the airline industry, these efficiency-enhancing, cost-saving innovations in air travel would likely not have been conceived, much less brought to fruition.

Effects of Regulatory Reform on Resource Allocation

In general, regulation that stifles entry and competition presents an attractive opportunity for reform to improve the efficiency of resource allocation. A corollary, however, is that, in some instances, reform can result in transitional losses to parties that were protected under the regulatory scheme. For example, truckers who had benefited from entry barriers that kept shipping rates artificially high saw a 10 percent drop in their wages relative to workers in the rest of the economy; before reform, however, ICC-licensed truckers paid their workers about 50 percent more than comparable workers in other industries. Another efficiency-enhancing reallocation of resources can be seen in the airline industry, where some carriers succumbed to competition following reform but were replaced by new, more competitive entrants. By 2001 the total market valuation of the major airlines alone, adjusted for inflation, was more than double that of all carriers in 1976, before regulatory reform.

The lifting of restrictions on the geographic expansion of banks provides yet another example of the efficiency gains and economy-wide benefits that result when regulatory reform induces a reallocation of resources. These reforms involved both State and Federal actions, including the passage of the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. Beginning in the 19th century and continuing through much of the 1970s, States imposed geographic restrictions on the ability of banks to open branches. Such restrictions were motivated in part by a desire to protect bank profitability, since taxes on banking activity were an important source of revenue in some States, as well as by fears that unfettered bank expansion

would lead to a concentration of financial power. The development of large corporations with interstate banking needs ultimately created pressure for a less fragmented banking system, but that need was not fully met until a major episode of reform occurred at the State level, which began in 1978 and was essentially complete by the end of 1992.

Although little evidence is available on the effects of the Federal-level reforms, studies of State-level reforms indicate impressive net benefits. Bank efficiency, and thus the efficiency of economy-wide resource allocation, increased following the introduction of statewide banking, as loan losses, noninterest expenses, and loan rates all fell significantly. With these improvements came more rapid growth of both personal income and State government revenue in States that had embarked on branching reform. These increases in bank efficiency reveal the implicit cost of the old branching regulations and are attributable to a number of factors. First, restrictions on branching and interstate banking may have limited opportunities for the most efficient banks to expand. When those restrictions were lifted, the weaker banks lost some of the protection from competition they had enjoyed and gave up market share to the stronger banks, improving efficiency in the allocation of resources. Second, the lifting of geographic restrictions may have increased pressure on managers concerned about takeovers, resulting in increased managerial discipline; evidence of this is a higher turnover rate for banks' chief executive officers and a tighter relationship between pay and performance. This increased discipline may also have improved banks' performance. Finally, the geographic restrictions had limited banks' ability to expand to their most efficient size; removing these restrictions thus allowed small banks to grow and to take advantage of economies of scale by reducing their average costs and increasing their opportunities to diversify the risks associated with lending.

Pitfalls of Regulatory Reform

The potential benefits from regulatory reform for firms, consumers, and the broader economy are great. Yet reform holds several potential pitfalls if not undertaken with considerable care. Efforts to reform the regulation of thrifts in the 1980s and of electricity markets in California in the 1990s led in both cases to costly debacles, increasing public skepticism about reform. But regulators, advocates of reform, and the general public can learn much from these experiences, and applying those lessons will help ensure the success of future efforts. Although reform in these markets held great promise for efficiency gains, with corresponding benefits to consumers, the precise form that reform took in these instances illustrates the complexity of the issues with which reform must typically contend. The two cases explored here underline the

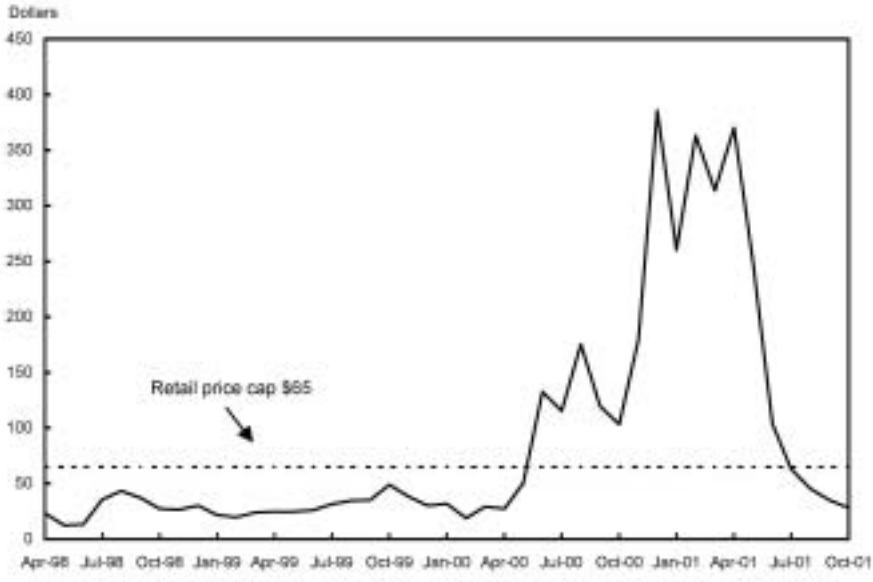
dangers of partial or incomplete reform. They also show the dangers of not considering potential deviations from competitive conditions or the creation of perverse incentives.

Failure to Coordinate Reforms

California's recent attempt to deregulate its electricity markets demonstrates the potentially expensive consequences of regulatory reform that lifts restrictions in one part of an industry without addressing restrictions elsewhere in the same industry. For most of its history, the electricity industry in California was heavily regulated and heavily concentrated: a few privately owned, vertically integrated monopolies owned and operated electricity generation, transmission, and distribution facilities throughout most of the State. Under pressure from consumers, who paid some of the highest electricity prices in the Nation, the California legislature in 1996 passed a restructuring law. Among other things, this law required the traditional monopolies to open their transmission and distribution lines to competing generators and wholesale marketers, and it encouraged utilities to divest their existing generating capacity. Independent power producers were allowed to apply for environmental and siting permits and to sell power to eligible wholesale and retail customers. Retail customers were permitted to choose between purchasing electricity directly on the wholesale electricity market and continuing to pay regulated rates to obtain the "default" service from their local utility distribution company. Utilities serving retail customers were required to obtain electricity at unregulated rates through newly established wholesale market institutions and to charge customers a regulated rate for that electricity.

The restructured wholesale and retail markets for electricity functioned reasonably well as long as demand remained low or moderate and generation remained high. Regulators did not sufficiently anticipate, however, that the excess capacity that prevailed in the industry before restructuring would dissipate as rapidly as it did. Many interdependent factors, including an increase in electricity demand, rising natural gas prices, rising prices for pollution emissions permits, and other problems on the supply side, combined to drive wholesale energy prices higher than regulators had expected. This proved financially disastrous for the utilities, because the fixed price at which they were compelled to sell electricity to retail customers was now far below the wholesale price at which they could purchase electricity. In December 2000 utilities were paying almost $400 a megawatt-hour for electricity in the wholesale market and reselling it to retail customers at $65 a megawatt-hour (Chart 4-3). Their burden was compounded by the fact that regulators refused to allow the utilities to enter into long-term forward contracts to hedge their short positions. Ultimately, the failure to coordinate the reform of wholesale and retail electricity markets in California proved a leading factor in

Chart 4-3 **California Power Exchange Prices per Megawatt-Hour**
During the California electricity crisis wholesale prices exceeded the retail price cap, bankrupting utilities.



Source: Paul L. Joskow, "California's Electricity Crisis," *Oxford Review of Economic Policy*, Vol. 17, No. 3, 2001.

the effective bankruptcy of California's two largest utilities and the collapse of the wholesale markets, which precipitated an expensive effort to guarantee continued electricity availability.

Deviation from Competitive Conditions

Other factors also contributed to the failure of California's experiment in electricity deregulation. Although spot markets worked reasonably well at low and moderate levels of demand relative to supply, the fact that consumers were sheltered from price fluctuations meant that, in situations where demand was high relative to supply, even small producers had considerable market power. Generators quickly found that, under these circumstances, withholding electricity supply led to higher prices that increased their profitability, further roiling markets. From November 2000 until May 2001, about 35 percent of total generating capacity was not in service—roughly double the typical historical outage rate. California government officials have argued that, in some cases, plants were withdrawn from service for strategic reasons, a claim that generators dispute. In any case, regulators had not planned for this extreme situation and had not built adequate flexibility into the regulatory structure to respond effectively. Moreover, by keeping retail prices fixed, regulators short-circuited the pricing mechanism and precluded the possibility that consumers would respond to higher electricity prices by curtailing consumption.

Furthermore, by failing to address problems in the licensing process for new power plants and by creating an atmosphere of uncertainty over their potential profitability, regulators may have diminished the ability and the incentives of market participants to respond to high prices in the longer term by developing new generating capacity.

To prevent widespread blackouts, the State of California itself eventually had to enter into the sort of long-term contracts for electricity production that regulators had previously prevented utilities from entering. However, because these contracts were signed in the spring of 2001 at the height of a spot market crisis, California committed itself to purchase power at prices at least three times those prevailing in futures markets by the end of that summer. Had all of the factors complicating electricity deregulation been carefully considered, had the possibility of deviations from competitive conditions been entertained, or had lessons from successful reform efforts in other jurisdictions been learned, California might have avoided this costly experience.

Creating Perverse Incentives

In any regulatory reform, special care must be taken to ensure that the proposed changes do not inadvertently foster incentives for parties to engage in activities or take risks that are likely to be harmful to the public good or counter to the purpose of the reform. Another telling case of a reform that created perverse incentives is that of the thrift industry, where regulatory reform without appropriate safeguards resulted in imprudent risk taking at the expense of the government.

Until the late 1970s, government regulation set limits on the activities that savings and loan associations, or thrifts, could undertake, essentially constraining them to taking in deposits and making mortgage loans. Because the deposits they accepted were short term and the mortgages they issued long term, the thrifts were exposed to interest rate risk: a sharp increase in short-term interest rates would increase their deposit interest costs while leaving their interest income from mortgages substantially unaffected. In 1966 Regulation Q, which established an interest rate ceiling on bank deposits, was extended to cover thrift deposits as well. This regulation temporarily resolved the interest rate squeeze facing the thrifts, but at the expense of depositors, for whom few alternative instruments offered safety and liquidity comparable to thrift or bank deposits. Other financial firms soon learned to circumvent Regulation Q by creating money market mutual funds. With this innovation, Regulation Q ceased to provide interest rate protection to thrifts, which then began to run substantial losses with the rising inflation and sharply higher interest rates of the late 1970s and early 1980s. In response to the thrifts' pleas for relief, the Congress passed legislation in 1980 and 1982 that significantly expanded the thrifts' lending authority: federally chartered thrifts were now

permitted to make commercial real estate loans, commercial loans, and consumer loans and to take direct ownership positions in investment projects. The reform also allowed thrifts to offer adjustable-rate mortgages and phased out interest rate ceilings on deposits.

In industries throughout the economy, creditors protect their interests by monitoring the management and financial health of the firms they lend to. Owners and managers who enjoy limited liability may face incentives to take excessive risks with the firm's assets or to operate in other ways that conflict with the creditors' interests. This danger is particularly acute when the firm is running losses that put it in danger of imminent bankruptcy. In the case of banks and thrifts, however, Federal deposit insurance short-circuits this usual safeguard. Thus no mechanism existed to induce potential depositors to avoid the riskier thrifts. A thrift's principal creditors—its insured depositors—have little incentive to monitor the institution's financial health or its risk taking, because their deposits are insured by the Federal Government to a maximum of $100,000 per account. Also, thrifts faced flat rates for deposit insurance, instead of rates adjusted for the likelihood of insolvency. Accordingly, no economic disincentive deterred thrift managers from taking excessive risks.

The usual regulatory response to the absence of this normal, market-based protection is "safety and soundness" regulation, in which the government exercises the oversight role normally carried out by a firm's creditors. The Achilles' heel of thrift reform was precisely that it failed to accompany the thrifts' deregulation with enhanced safety and soundness regulation. The effective bankruptcy of the Federal Savings and Loan Insurance Corporation (FSLIC) in the early 1980s constrained the regulatory response as the capital positions of some thrifts eroded. In contrast to the airline industry, where safety regulation was maintained as reform proceeded, the necessary safety and soundness regulation of thrifts was undermined. Minimum net worth requirements for thrifts were actually lowered in both 1980 and 1982. Accounting rules were liberalized, so that thrifts could avoid the consequences of failing to maintain inadequate capital. Also, the number of field-force examiners declined between 1981 and 1984, and the number of examinations per thrift and per billion dollars of thrift assets fell significantly. Moreover, the Congress raised the per-account limit on federally insured deposits from $40,000 to the present $100,000, further discouraging depositors from taking an active oversight role and increasing the exposure of the Federal Government to the risky behavior of thrift managers. These conditions enabled thinly capitalized or insolvent thrifts to act on their incentive to shift risk to the FSLIC, and ultimately the taxpayer, through increases in asset risk and capital distributions to shareholders.

Regulatory reform of the thrift industry could have been just as beneficial as that in other industries. The reforms provided thrifts with new opportunities to improve their financial condition by opening up new investment

and loan markets to them and by increasing their ability to attract new deposits. Without the check of additional safety and soundness regulation, however, those thrifts whose financial condition was deteriorating faced incentives, and were given the means, to engage in excessive risk taking. Ultimately, this combination contributed importantly to an industry-wide crisis, which culminated in 1989 in a Federal bailout whose ultimate cost to taxpayers was $124 billion.

Putting the Principles to Work

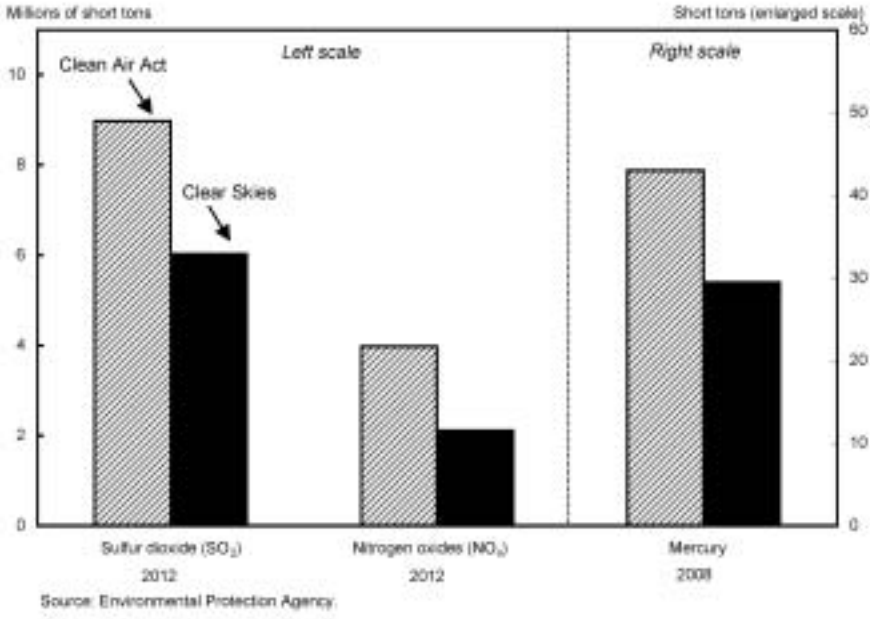
Of course, inventorying and showcasing sound regulatory principles is not enough; good principles that are not acted upon represent lost opportunities and frustrate effective public policymaking. Whether the principles outlined in this chapter become a dead limb on the tree of regulatory policy evolution or a vibrant branch depends on whether policymakers act to put these ideas into practice.

This Administration has pursued the principles of sound regulatory reform while recognizing that sound science drives good policy. It is now undertaking a major revision of the guidelines for conducting regulatory analysis that utilizes these principles to ensure a greater focus on performance and efficiency. The new guidelines emphasize transparency and increased accountability, which together will provide the necessary structure for the sharing of information across regulatory agencies. This will ensure that the funds available for regulatory activity achieve the greatest possible benefits.

Examples from the environmental arena show that the Administration is pursuing these principles in its regulatory initiatives. Efficient policies are a hallmark of the President's strategy. The President's Clear Skies Initiative to improve air quality in the United States uses market-based regulation to tackle a pollution problem on which a scientific consensus has emerged. Announced by the President on February 14, 2002, Clear Skies will reduce emissions by power plants of three noxious air pollutants by well over half—sulfur dioxide by 73 percent, nitrogen oxides by 67 percent, and mercury by 69 percent—over the next 16 years. The reductions will also occur in a timely fashion, as illustrated in Chart 4-4, which compares the near-term reductions under Clear Skies with those under the Clean Air Act Amendments of 1990.

Clear Skies uses a dynamic approach to regulation that provides firms with the flexibility to reduce emissions in the most efficient and least costly manner possible. Through a market-based cap-and-trade program, Federal emissions limits, or caps, are set for each pollutant, and emissions permits are distributed

Chart 4-4 **Emissions of Selected Pollutants Under the Clean Air Act and Clear Skies**
The President's Clear Skies proposal achieves more emissions reductions than the Clean Air Act



Source: Environmental Protection Agency

to electricity generators. The cap is to be reduced over time, first in 2010 and again in 2018, and firms are required to respond by reducing their emissions accordingly. The advantage of this market-based approach lies in its ability to allow individual firms to choose for themselves the most efficient methods to reduce emissions. If they reduce emissions by more than the cap requires, they can sell their unneeded permits on the open market or bank them for later use; if their emissions exceed the cap, they can purchase unused permits from other firms. Within this structure, firms can design an efficient and cost-effective strategy tailored to both their current budgets and their future plans. Further, this approach creates an incentive for firms to innovate to find economical techniques for reducing emissions. This dynamic approach to regulation is in sharp contrast to previous methods of command and control, which were characterized by uncertainty over their enforcement.

The Clear Skies Initiative is modeled on the highly successful acid rain reduction program under the Clean Air Act, which also used a cap-and-trade system. This program accomplished dramatic reductions in sulfur dioxide emissions at two-thirds the compliance cost of a traditional emissions reduction program. It resulted in a decrease in pollution greater than all other Clean Air Act programs combined. Emissions were reduced more quickly than required: annual sulfur dioxide emissions were cut in the first phase by

50 percent below allowed levels. Just as remarkable, the program requires only a handful of EPA employees to administer. By taking this successful program as its model, the Clear Skies Initiative hopes to achieve the same levels of efficient and cost-effective emissions reductions.

The Clear Skies Initiative is an example of a new, original program that enjoys scientific consensus and adheres to the principles of good regulation. The Administration has also aggressively pursued reform of existing regulatory programs in the area of air pollution. An example is the proposed changes to New Source Review (NSR). Established as part of the 1977 Clean Air Act Amendments, NSR is intended to protect public health and welfare as new sources of air pollution are built and when existing sources are modified in a way that significantly increases air pollutant emissions.

When the Congress established NSR, its intent was to maintain and improve air quality while providing for economic growth. Through the issuance of mandatory permits, regulators oversaw the construction and modification of plants by establishing various actions that the sources had to undertake to control emissions. Although this appeared at the time to be a viable approach to emissions regulation, over time NSR has become substantially more complex as industrial practices and regulations have evolved.

In June 2002 the EPA issued a report to the President on NSR, citing several adverse impacts of the regulation. Generally, the report found that NSR impedes or results in the cancellation of projects that would maintain or improve the reliability, efficiency, or safety of existing power plants and refineries. Not only did the regulatory uncertainty and lack of flexibility surrounding NSR hinder investment, the report found, but the added costs and delays imposed by the NSR process had become quite burdensome as well. The NSR permit process can add more than a year to the time needed to review proposed modifications to a plant and can cost over $1 million. Such obstacles might lead firms to delay or forgo plans to modernize their facilities in ways that would benefit the environment.

To take just one example, a manufacturer that operates a process that includes a drying system determined that the system's energy efficiency could be improved if the existing drier nozzles were replaced with Teflon-coated nozzles. The firm found, however, that the replacement would be economical only if the expense of obtaining an NSR permit could be avoided. NSR currently does exclude repairs and maintenance activities that are deemed routine, but it relies on an intricate and lengthy analysis to determine whether a given repair meets the definition of "routine." Since the firm could not readily discern whether the installation of new nozzles would be considered routine maintenance, a repair, or a replacement, it decided not to proceed with the project. In this way, NSR deters firms from conducting needed repairs and often results in unnecessary emissions of pollutants. In this case NSR requirements actually made the environment worse off.

The Administration recognizes that government action that fails in its purpose must be reformed or ended. Recent EPA research points to the conclusion that the NSR program has become outdated and is in need of revision: although NSR was intended to be a method of reducing pollution, it has led to actions by the private sector that were not intended and that do not promote the goals of the regulation. After careful consideration of the detrimental effects of the regulation, this Administration has chosen to undertake reforms that will remove constraints on firms that wish to make plant-level modifications that will have beneficial impacts on the environment.

Conclusion

Administered effectively, government regulation can contribute greatly to the Nation's economic well-being. But regulation is not a silver bullet. Unintended consequences occur and can negate the positive effects of regulation. Although no regulatory agenda is foolproof, this chapter has showcased some fundamental principles of regulation and regulatory reform that can foster competition and correct market failures while maintaining both static and dynamic efficiency. These principles include the encouragement of economic flexibility and dynamism, an increase in market orientation, and a reduction in reliance on command-and-control regimes. In addition, regulatory review is an important safety valve for relieving the regulatory burden.

The two policy initiatives summarized above—the adoption of Clear Skies legislation and the reform of NSR—highlight the shortcomings of a one-size-fits-all regulatory approach. In some cases, when the science dictates it, regulation must be made more stringent. In others, where regulation impedes progress, reforms must be instituted that reduce or change the nature of the regulation. The principles laid out in this chapter, together with the lessons learned from past experience, can lend important insights into efficient ways to tackle such difficult issues as homeland security and corporate reform.

CHAPTER 5

Tax Policy for a Growing Economy

The income tax has been the single largest revenue source for the Federal Government ever since World War II. Today it touches nearly every aspect of our lives. The income tax also fosters economic inefficiency, and its complexity leads to staggering compliance costs. Past efforts at partial reform of the income tax have not succeeded in reducing its complexity, removing its distortions of economic incentives, or making it more fair. Some might think that significant obstacles block the way to making great progress toward achieving these goals, but in fact such reform can be accomplished within the basic framework of the existing tax system.

In 2001 the Internal Revenue Service spent $8.9 billion on processing, enforcement, and information systems, but this direct cost of administering the income tax is just a small fraction of its total cost. It has been estimated that individual taxpayers in the aggregate spend up to 3 billion hours each year to comply with the tax system—about 27 hours per taxpayer. The present tax code, with its myriad exclusions, exemptions, adjustments, deductions, and credits has grown into a labyrinth of complexity. In tax year 2000 nearly 72 million taxpayers (56 percent of all taxpayers) used paid tax preparers to complete their tax forms. Many taxpayers purchase tax-help books and computer software. Compliance costs are also onerous for business taxpayers, especially small businesses, and the typical Fortune 500 company spends almost $4 million a year on tax matters.

The current tax system also causes households and businesses to rearrange their affairs in a number of ways that make poor use of economic resources, leading to substantial economic waste and, ultimately, reducing real incomes. The system affects a number of important economic decisions, such as how much to save and invest, how much risk to take, how much home mortgage debt to carry, how much in tax-exempt bonds to hold, when to realize capital gains, whether to hold assets that produce dividends or capital gains or interest, how much labor to supply and how much to hire, whether to organize business operations in corporate or noncorporate form, and to what extent to comply with the tax system. Perhaps one of the more salient distortions in the income tax today is that caused by the "double tax" on corporate income. As discussed extensively later in this chapter, this double taxation occurs when income distributed to shareholders as dividends or realized as capital gains is subject to individual tax after already being taxed at the corporate level. Double taxation causes too little capital to be allocated

to the corporate sector and a disproportionate share of capital to be allocated to other sectors of the economy. For a discussion of the President's recent proposal to eliminate the double tax on corporate income see Chapter 1.

These distortions and others lower saving rates and inhibit investment, capital accumulation, risk taking, and innovation, thereby lowering the growth potential of the economy, real incomes, and consumption. It has been estimated, for example, that elimination of the double tax on corporate income alone could increase economic well-being by as much as $52 billion each year forever. Tax preferences provided through the array of exclusions, exemptions, adjustments, deductions, and credits represent policy decisions to exclude some income from the tax base, but this poses a tradeoff: a higher overall tax rate is then required to raise a given amount of revenue, and this distorts household and business decisions and imposes a corresponding burden on the economy. Reduction or removal of many of these distortions, through broadening the tax base and lowering tax rates, would, by one estimate, increase accumulated capital by 10 to 15 percent and real GDP by 2 to 6 percent. The economic gains from fundamental reform of the tax system could lead to substantial increases in economic well-being for all Americans.

The major objectives of tax reform are to reduce complexity, improve economic incentives, and address fairness. The central theme that brings these objectives together is that household and business decisions should depend on the tax code as little as possible. Taxing all income, but taxing it only once, is a key ingredient of many reform plans. This would involve broadening the tax base while lowering tax rates. Some efforts have also focused on a shift from taxing income to taxing consumption or consumed income.

A possible argument against reform is the suggestion that the current tax system instead needs to be "ripped out by its roots" and completely replaced. Arguments for such wholesale reform certainly have merit. This chapter, however, illustrates ways in which the current system could be modified to improve incentives and boost real incomes.

An important goal of any tax reform proposal is to reduce complexity. In the current tax system, much of the complexity and thus much of the compliance burden result from the numerous tax preferences, differential taxation, and the taxation of capital income. Aspects of the current system often involve complicated phase-ins and phaseouts designed to target tax benefits to certain groups of individuals or businesses. Replacing these targeted tax preferences with broad exclusions or lower tax rates would reduce this complexity. Differential taxation, or the taxation of different types of income at different rates—such as the double tax on corporate income and the exclusion for many employer-provided fringe benefits—creates incentives for taxpayers to rearrange their affairs to realize income in ways that are taxed more lightly. The use of tax shelters and arrangements that allow taxpayers to defer their tax liability is, to a large extent, the result

of these kinds of differentials. Reducing differential taxation would reduce complexity, reduce the incentives for tax shelters, and improve other economic incentives. Finally, research suggests that compliance costs are substantially higher for taxpayers with significant amounts of financial and business income. Defining such income and allocating it to individual taxpayers involves substantial recordkeeping. Many reform proposals would both reduce the tax on certain types of capital income, to promote saving and investment, and simplify the taxation of such income.

Some opponents of reform argue that taxing consumption rather than income would necessarily place a relatively heavier tax burden on lower income taxpayers. Conventional distributional analysis typically considers a snapshot of taxpayers' economic well-being at a particular point in time. Research has shown that, when a longer view is taken, differences in well-being, whether measured by income or by consumption, tend to be not as great, because of the fluidity of household incomes over time. Also, analyses of the distributional effects of moving to a tax based on consumption rather than income often do not recognize that a substantial portion of capital income, which is earned primarily by higher income taxpayers, is taxed under both income and consumption tax principles. The distributional effect of moving to a consumption tax looks considerably more progressive when the taxation of a substantial portion of capital income under a consumption tax is taken into account. Indeed, both an income tax and a consumption tax levy tax on the extraordinary (or what economists call supernormal or inframarginal) returns to capital.

This chapter revisits these issues, focusing particularly on ways in which the influence of taxes on key economic decisions could be diminished within the framework of the current tax system. First, the key objectives of reducing complexity, improving economic incentives, and achieving fairness are laid out in greater detail. The broad principles that underlie the two main approaches to taxation, that based on income and that based on consumption, are then described. These principles focus on how to raise enough revenue to fund a given level of government services in a way that has the least effect on economic decisions. Next, a framework is outlined against which the current, hybrid tax system can be compared and contrasted. Then two issues important to evaluating the distributional effects of moving to a consumption tax—the fluidity of taxpayer incomes and the taxation of capital income under a consumption tax—are discussed. This is followed by a discussion of how the current tax system taxes neither wholly income nor wholly consumption, highlighting the ways in which the current system departs from these broad principles. Finally, the chapter considers some of the major decisions and tradeoffs involved in proposed changes to the tax system. Modest structural changes are outlined that would move the current tax system toward either an income- or a consumption-based system, improve economic incentives, and reduce complexity.

Objectives of Tax Reform

At the outset, some overriding and fundamental objectives for tax reform can be identified: simplicity, fairness, and the promotion of long-term economic growth through improvements in incentives. These objectives are very much interrelated. Complexity, for example, can undermine one view of fairness if, despite the progressive tax rate schedule and targeted tax preferences, taxpayers perceive that higher income taxpayers pay less tax than they should, through tax avoidance and tax sheltering. Similarly, complexity from the phase-in and phaseout of targeted tax preferences can distort economic decisions, and thus impede long-term growth, by imposing a high effective tax rate on certain taxpayer decisions. But sometimes these objectives come in conflict. For example, addressing fairness through targeted tax preferences may distort economic decisions and undermine long-term growth through differential taxation and a higher overall tax rate.

Simplicity: Freeing up Resources for Productive Use

The current tax system is often viewed as difficult to understand, and the resulting billions of hours and billions of dollars devoted to tax administration and compliance are a drag on the economy. As mentioned above, taxpayers spend as much as 3 billion hours a year on Federal tax matters, and compliance costs associated with the Federal income tax equal about 10 percent of revenue, or about $135 billion in 2001. The numerous tax preferences and the interactions among them, together with differential taxation, give rise to much of the complexity in the current tax system. The taxation of capital income and the complex rules governing depreciation also result in considerable complexity for both households and businesses. The rules used to define business receipts and deductions require recordkeeping and complex calculations, sometimes over many years. Self-employed taxpayers spend an average of 60 hours a year on such tax matters. Studies consistently find that compliance costs are most onerous for smaller businesses. Taxpayers with capital income, such as capital gains, dividends, interest, and rental income, also tend to have high compliance costs.

Compliance costs can be high even for individuals who receive most of their income as wages. The number of tax preferences has risen, often involving multiple definitions, and preferences often give rise to complicated interactions between provisions. For example, the tax code currently defines a "child" in at least five different ways: one way for purposes of qualifying for the child tax credit, another to qualify for the child and dependent care tax credit, another to determine head of household filing status, another for the Earned Income Tax Credit (EITC), and another for the exemption for dependents. Taxpayers with children may need to understand which

definition applies to some or all of these provisions when filling out their tax returns. Multiple definitions also encumber the provisions of the tax code relating to education expenses (such as the Lifetime Learning credit, the Hope credit, the education deduction, Coverdell Savings Accounts, and college savings and prepaid tuition plans), household maintenance tests, and earnings tests. An increasing number of taxpayers are also required to comply with two parallel tax systems: the regular tax and the alternative minimum tax (Box 5-1).

A major source of complexity in the current income tax is its attempt to target tax benefits to meet a variety of social goals. Integration of social goals into the tax system takes the form of altering the definition of ability to pay across a wide set of taxpayer characteristics. In this respect, defining a child five or more different ways is important if it is desirable to vary tax preferences along these dimensions. However, it comes with considerable compliance and economic costs. What is often not appreciated is the extent to which the targeting of these tax preferences subjects taxpayers with the same income to different effective tax rates (Box 5-2). Elimination and consolidation of tax preferences would help simplify the tax system and improve economic incentives.

Fairness: Relating Taxes to Ability to Pay and to Economic Well-Being

The income tax system should relate a taxpayer's tax liability to his or her ability to pay and to his or her economic well-being. This is the rationale behind the current progressive rate structure, whereby tax rates rise with annual income, as well as behind many of the existing tax preferences. However, the link to ability to pay begins to weaken when taxpayers with the same level of income pay different amounts of tax, because of differences in eligibility for some tax preferences, or have different opportunities to avoid paying taxes. Taxpayers fortunate enough to receive good tax advice might, for example, learn of opportunities to shelter income from tax legally; this can erode confidence in the tax system. Faith in the fairness of the tax system can also be undermined when compliant taxpayers see others evading substantial amounts of tax.

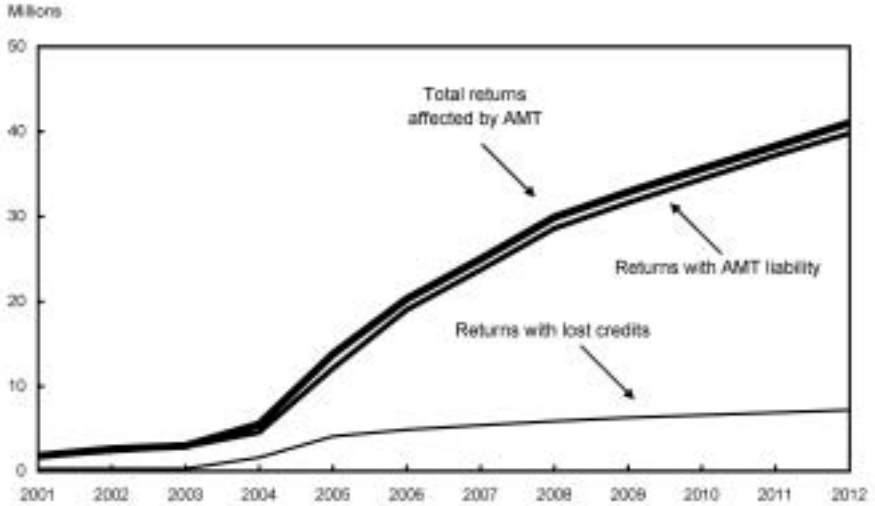
How ability to pay is measured is also crucial to perceptions of fairness. The current income tax system uses annual income as a yardstick for ability to pay. Some have argued, however, that what a taxpayer actually consumes better reflects his or her economic well-being than how much income that taxpayer earns. Consumption patterns are determined by incomes over a time horizon that extends well beyond 1 year. A household's past income and, in particular, its expectations about future income are critical in determining how much the household spends in any given year. Researchers have

Box 5-1. The Toll of Two Taxes: Compliance with the Regular and the Alternative Minimum Tax

An increasing number of taxpayers are required to comply with two parallel income tax systems: the regular tax and the alternative minimum tax (AMT). Although the AMT itself is not very complicated, taxpayers may be surprised to learn that some of the deductions and credits they claim under the regular tax, and even the benefit of the lower rate brackets, are substantially reduced if they become subject to the AMT. Indeed, these factors are exactly what push many taxpayers onto the AMT.

The AMT is, in many respects, an example of a government policy that has had unintended consequences. The minimum tax, the precursor to today's AMT, was enacted in 1969 following a report that 155 very high income individuals had paid no tax. Although its original intent was to ensure that a relatively few high-income individuals pay tax, it is projected that some 40 million taxpayers will pay the AMT by 2012, assuming that the tax reductions enacted in 2001 are permanently extended (Chart 5-1). Moreover, more than two-thirds of married taxpayers with two or more children and 97 percent of taxpayers with incomes between $75,000 and $100,000 will face the AMT by 2010. Some estimates indicate that by 2008 the AMT will raise more revenue than the regular tax.

Chart 5-1 **Projection of Returns Affected by the Alternative Minimum Tax**
An increasing number of taxpayers will be subject to the alternative minimum tax during the next decade



Note: Even if a taxpayer has no AMT liability, the AMT can limit the amount of certain personal credits the taxpayer can claim. Consequently, the number of taxpayers affected by the AMT exceeds the number that have AMT liability.

Source: Leonard E. Burman, William G. Gale, Jeffrey Rohaly, and Benjamin H. Harris, "The Individual AMT: Problems and Potential Solutions," Tax Policy Center, Discussion Paper No. 5, September 2002.

generally concluded that incomes over longer time horizons are a better indicator of differences in economic well-being than income in any one year.

Annual incomes can vary from lifetime incomes for many reasons. One is that income tends to vary in a predictable way over a person's working life. Most individuals' earnings are relatively low when they enter the work force and then rise as they gain job experience. Earnings typically peak after midlife and fall after one enters retirement. Early in their lives, taxpayers might dissave (that is, dip into their savings or, more likely, borrow) to finance college and job training expenses, and then save during their middle years so as to accumulate wealth on which to support themselves in retirement. How much a taxpayer consumes in a given year depends both on that taxpayer's earnings and on how much he or she decides to save. Aggressive savers can support a higher level of consumption in retirement. Incomes can also vary in response to a variety of other events, such as transitions between jobs, unemployment, marriage and divorce, illness, and volatility in business income and income from the sale of assets.

Two conclusions can be drawn from this distinction between lifetime and annual incomes. First, annual consumption rather than annual income might be a better proxy for economic well-being, because consumption is more closely related to income over a longer time horizon than to income in a given year. Second, the use of annual income in analyzing the distributional effects of the current tax system and proposed changes overstates the extent of inequality among taxpayers. Some of the measured inequality will actually reflect comparisons between taxpayers of different ages—for example, comparing a working professional with a retiree who left the work force long ago. Other measured inequality will reflect temporary shocks to income due to changes in employment status, living arrangements, and the uneven manner in which some people earn their income. Distributional analyses that take these factors into account may provide a better measure of ability to pay and of economic well-being.

Long-Term Growth: Boosting Economic Performance by Improving Incentives

A central aspect of tax reform is whether it can improve the economy's overall performance, leading to a rise in real incomes. Reducing the tax system's deleterious impact on incentives to work, save, invest, and innovate would help increase growth and boost real incomes in the long term. The tax system affects these incentives in a number of ways. Differentials in the rate of tax imposed on economic decisions cause households and businesses to shift attention and effort to less taxed activities. These distortions in household and business decisions can result in a misallocation of resources in the economy and reduce real incomes below what could be achieved otherwise.

Box 5-2. What Tax Rate Do Taxpayers Really Face?

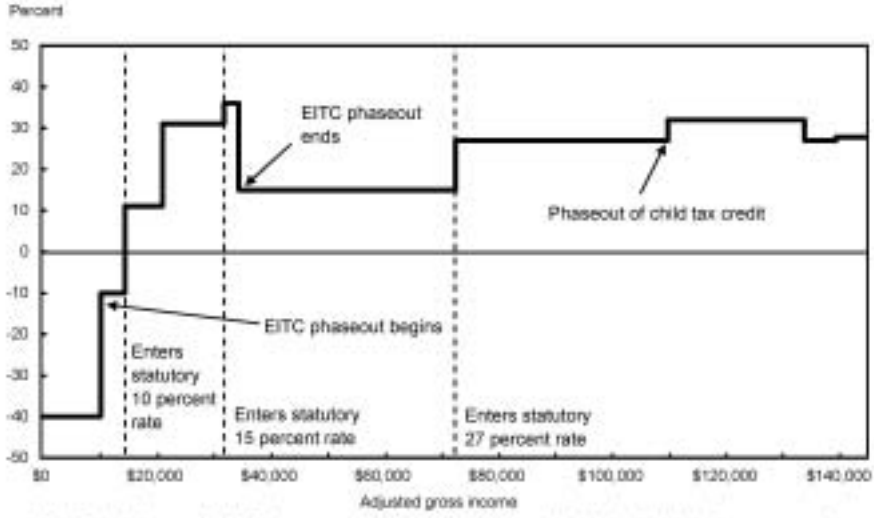
Many taxpayers look to their statutory tax rates—their "tax bracket"—to gauge how large a bite the Federal Government takes from their paycheck. Some might be surprised to learn that their effective marginal tax rate—what they actually pay on their last dollar of income—can differ substantially from their statutory tax rate. Moreover, even though statutory tax rates are relatively low at low levels of income, reflecting the progressivity of the current tax rate schedule, the effective marginal tax rates that low-income taxpayers face can in some situations be unexpectedly high.

Chart 5-2 shows the effective marginal tax rate for a hypothetical family of four at various income levels. What is striking about this chart is that effective rates do not consistently rise with income. Rather, there are numerous spikes and steps that reflect the phase-ins and phaseouts of various deductions, credits, and other provisions. Taxpayers may receive a tax benefit from the child tax credit, for example, but find that the tax on their last dollar of income is pushed up as this credit phases out.

The distribution of effective marginal tax rates for taxpayers at given income levels is shown in Chart 5-3, which documents the extent to which effective marginal tax rates vary at given levels of income. The chart shows marginal tax rates for the 10th, 50th, and 90th percentiles, where taxpayers are ranked at each level of income by their marginal tax rate. At any given income level, 50 percent of taxpayers will have marginal tax rates above the line indicated for the median taxpayer, and 10 percent of taxpayers will have marginal tax rates exceeding the line for the 90th percentile. For example, 10 percent of taxpayers with $50,000 in income have marginal tax rates that are below 15 percent (the tax rate at the 10th percentile); 50 percent have marginal tax rates below, and half above, 15.3 percent; and 10 percent have marginal tax rates above 27.8 percent.

As the chart shows, marginal tax rates diverge considerably even among taxpayers at the same income level, especially at lower incomes. The divergence arises because of the various deductions and credits that phase in and then out at various rates, depending on a host of taxpayer characteristics and choices. Indeed, these phase-ins and phaseouts would cause considerable variation in effective marginal rates even under a flat statutory tax rate schedule.

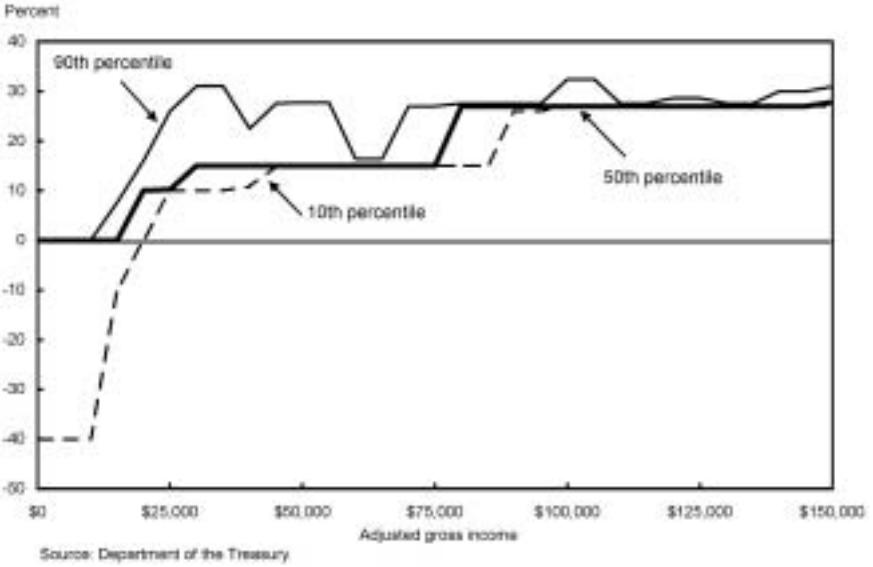
Chart 5-2 **Marginal Federal Income Tax Rates for Hypothetical Couple in 2003**
The effective marginal tax rate schedule for a hypothetical couple is characterized by numerous steps reflecting targeted provisions under the current tax system.



Note: Calculations are for joint-filer, one-earner family with two children under 14. Itemized deductions are assumed to be 18 percent of income.

Source: Council of Economic Advisers.

Chart 5-3 **Distribution of Marginal Federal Income Tax Rates for Joint Filers in 2003**
Taxpayers at the same income level often face different marginal tax rates, particularly at lower incomes.



Source: Department of the Treasury

As described above, reduction of these distortions can have a substantial effect on capital accumulation (and thus wealth), increase long-term growth, and boost real incomes.

Analysis of Alternative Reforms

The two main approaches typically advocated by economists to revamping the current income tax involve moving the current tax base to one that is closer to comprehensive income, or replacing the current income tax with a tax that falls only on consumption. Comprehensive income, which some advocate as the best measure of an individual's overall well-being and ability to pay, is defined as current consumption plus increases to wealth. Taxation based on comprehensive income would include in the tax base all labor income, income from the ownership of capital (such as dividends, interest, rents, and accrued capital gains), and gifts and bequests received. Deductions reflecting the cost of earning income, such as job-related training expenses, would be allowed because they reflect neither purchases for consumption nor any accretion to wealth. One feature of a comprehensive income tax is that it treats individuals with the same accrued purchasing power equally, regardless of the source, thus adhering to the principle of horizontal equity. An individual receiving income primarily from labor, for example, would be treated no differently than a person with the same level of income from capital or a bequest.

This framework, however, has some practical problems related to the taxation of capital gains, inflation, income volatility, and imputed income. Although capital gains reflect additions to wealth, measuring these gains as they accrue is at best problematic: it requires frequent valuation of assets, and accurate market values for some assets cannot easily be established. Another problem is that inflation causes asset appreciation unrelated to changes in purchasing power; a proper accounting would require that the inflationary component of capital gains be removed from the tax base. Dividends and net interest income should likewise be included in taxable income only to the extent they exceed inflationary returns. Yet another problem is that the volatility of taxable income combined with a progressive tax rate schedule could cause two taxpayers who have the same taxable income when cumulated over several years to pay different amounts of tax, thereby violating the principle that taxpayers with equal ability to pay be treated equally.

One of the most vexing problems associated with a comprehensive income tax is the need to include imputed income in the tax base. Imputed income arises from consumption or accretions in wealth that occur outside of normal market mechanisms and therefore are difficult to value. The value

of the services that a homemaker provides is a standard example of imputed income. Another is imputed rent, which accrues to a taxpayer who owns his or her own home, because that taxpayer is just as well off as another who owns a house of equal value but receives rental income from a tenant. Under a comprehensive income tax, imputed rent—the flow of housing services received by owner-occupants who, in effect, rent their house to themselves—would be included in income. Expenses related to producing that income, including depreciation, mortgage interest, and property taxes, would be excluded from income, however. Clearly, taxing such imputed values raises enormous practical difficulties.

A key aspect of analyzing a tax base is taking into account all of the points of collection in the tax system. Income, for example, can be taxed and collected either at the business or at the individual level. If tax on a comprehensive income tax base were collected entirely at the business level, businesses would pay tax on their business receipts, less expenses, but would deduct neither compensation to employees, nor interest payments, nor dividends paid to shareholders. If businesses are not allowed to deduct compensation, they in effect withhold and remit to the government the tax on compensation when paying the business-level tax.

Tax on interest and dividends could also be paid at either the business or the individual level. If paid only at the business level, dividends and interest would not be deductible, and the corresponding income would be excluded from tax at the individual level. If, instead, dividends and interest were taxed only at the individual level, businesses would receive a full deduction for dividends and interest paid.

The current income tax demonstrates the importance of considering all points of collection. Under the current tax system, interest income is not subject to the business-level tax because interest payments are treated as a deductible business expense. Instead, interest payments are included in individuals' taxable income. In contrast, corporate dividends are subject to tax at the business level because dividend payments are not deductible. What is striking, however, is that dividends are also included in individuals' taxable income. Dividends are thus taxed twice.

Consumption, rather than income, has been suggested as another potential tax base. As discussed above, one rationale is the claim that consumption is more closely related to a taxpayer's well-being than annual income. Also, by taxing consumption rather than income, the tax system would not distort taxpayers' decisions about how much income to save. In contrast, because the income tax includes the return to saving in the tax base, it taxes future consumption (that is, current saving) more heavily than current consumption. Under an income tax, current consumption is tax-favored relative to future consumption, thereby discouraging saving.

A hypothetical consumption tax could be implemented in any of several ways. It could, for example, take the form of a national retail sales tax imposed broadly on all consumption goods at the final stage of production. An alternative form of consumption tax, common in Europe, is the credit-invoice method value-added tax (VAT), where a business pays taxes on its total receipts but receives a credit for taxes previously paid by suppliers on goods that the business has purchased from them. This tax builds in a degree of self-enforcement, because businesses can claim a credit against their tax bill only if another business has previously paid tax on the sale. Nevertheless, the experience with State sales taxes and with the European VAT suggests that compliance can be undermined and considerable complexity added when certain final products are fully or partly exempted. Some have suggested that transactions-based national retail sales taxes, where revenue is collected at every point of final sale, raise difficult administrative and compliance issues and may become infeasible at a rate above 10 percent.

Alternatively, a tax on final goods consumed by households could be imposed on businesses' total receipts less payments to other businesses, including purchases of equipment and structures. This type of entity-based consumption tax, called a subtraction-method VAT, imposes tax on final purchases by consumers, which is remitted on the value added by businesses at each stage of production. Because a subtraction-method VAT does not provide a deduction for compensation, nearly 60 percent of the tax base reflects compensation to workers. Under this approach, the tax on housing consumption would essentially appear as a tax on the construction and sale of new homes. This payment of tax on the value added at each stage of the production of new homes is equivalent to "prepaying" the tax on the future stream of annual housing consumption that the home provides; that is, it is equivalent to a tax on annual imputed rental income.

The deduction for purchases from other businesses under a subtraction-method VAT ensures that the tax does not fall on previously taxed business sales. Unlike with an income tax, the deduction for investment expenditure (in other words, expensing rather than depreciation) exempts from tax a portion of the return to a capital investment. In economic terms, the deduction for investment expenditure exactly equals the tax on the cash flow from the expected "normal" return on the investment. Therefore the deduction eliminates the tax on this part of the investment return; that is, the return to capital at the margin is fully exempt from tax. However, to the extent the investment returns an amount in excess of the expected normal return, perhaps because of chance, innovation, or successful risk taking, the tax on these above-normal returns (what economists call supernormal or inframarginal returns) will exceed the tax value of the initial deduction. That is, these supernormal returns will generally be taxed. Treatment of investment

earnings under a consumption tax would thus be similar to that under Individual Retirement Accounts, as Box 5-3 explains.

The subtraction-method VAT has received a lot of attention in discussions of tax reform because, with slight modification, its structure becomes very similar to that of the current income tax. Instead of taxing compensation at the business level as under the subtraction-method VAT, compensation could be taxed at the household level by allowing businesses to deduct employee

Box 5-3. How Are Consumption Taxes and Individual Retirement Accounts Similar?

Individual Retirement Accounts (IRAs) treat investment earnings in the same way that a consumption tax would. They thus provide a framework for describing how a consumption tax would exempt a portion of investment earnings from tax. If taxpayers deduct contributions to an IRA from their taxable income, they are also required to include all distributions from the IRA in their taxable income. For the purpose of discussing the tax treatment of the return to saving under a consumption tax, the IRA contribution limits can be ignored. An investor with unlimited access to capital would invest up to the point where the payoff from an additional dollar invested (the marginal investment) just covers the costs of the investment, including taxes. The value of the upfront deduction for the initial investment, however, will exactly offset (in present value) the tax on the expected normal return when the IRA is distributed. Consequently, with an IRA the decision to invest an additional dollar is unaffected by the tax. Returns above the expected normal return (extraordinary returns), however, will generally be subject to tax.

Consumption taxes treat investment earnings in essentially the same way. Under a national retail sales tax—the most straightforward type of consumption tax—no tax is paid on income that is saved or on investment earnings that are reinvested. Tax is paid only on sales of final goods and services, that is, when the taxpayer consumes. The taxpayer, in effect, receives an upfront deduction on savings. Imposing a tax on final sales is thus effectively the same as taxing a distribution from an IRA. Other types of consumption taxes, such as the subtraction-method value-added tax and the two-tiered value-added tax, where compensation is taxed at the household level, work in essentially the same way.

Roth IRAs provide tax benefits that are similar to those of deductible IRAs but differ in the timing of taxes paid. In contrast to a deductible IRA, contributions to Roth IRAs are not deductible from taxable income. Contributions are made with after-tax dollars, but distributions from Roth IRAs are tax free. An important insight about deductible IRAs and

Box 5-3.—*continued*

Taxation of Investments With and Without Extraordinary Returns: Deductible IRA versus Roth IRA

Item	Investment without extraordinary returns		Investment with extraordinary returns	
	Deductible IRA	Roth IRA	Deductible IRA	Roth IRA
Investment	$1,000	$1,000	$1,000	$1,000
Initial tax payment	0	-270	0	-270
Contribution	1,000	730	1,000	730
Investment earnings	100	73	5,027	5,000
Account balance after 1 year	1,100	803	6,027	5,730
Tax due upon distribution	-297	0	-1,627	0
After-tax distribution/account value	803	803	4,400	5,730

Note.—Calculations are for a hypothetical 1-year investment, assuming no restrictions or penalties on distributions. The taxpayer is assumed to face a 27 percent tax rate when making the contribution and upon distribution. The investment without extraordinary returns is assumed to return 10 percent, which is similar to the historical return to corporate equities. The extraordinary or inframarginal return is assumed to be $5,000 on the first $730 contributed to each IRA and 10 percent on the remaining $270 contributed to the deductible IRA.

Source: Council of Economic Advisers.

Roth IRAs is that an equivalent investment in each type of account will result in the same after-tax account balance and finance the same amount of consumption during retirement.

The table above illustrates the equivalence between deductible and Roth IRAs for an investment without extraordinary returns. In this example, $1,000 is invested in a deductible IRA and $1,000 in a Roth IRA before paying tax. In the case of the deductible IRA, the upfront deduction offsets any tax due. In the case of the Roth IRA, the taxpayer contributes the after-tax amount to the IRA. After 1 year the initial investment plus investment earnings are distributed. Tax is paid on the distribution from the deductible IRA, but not on that from the Roth IRA. The key point is that the after-tax distributions from the two IRAs are identical; that is, both investments finance the same level of consumption. This result will always hold provided the duration and rates of return of the investments are the same and the tax rates at the time of contribution and the time of distribution are equal. Aside from these factors, savers should generally be indifferent between deductible and Roth IRAs.

Box 5-3.—*continued*

What is the significance of this difference in the timing of tax payments between deductible and Roth IRAs? Under a Roth IRA the taxpayer effectively is prepaying tax. Conversely, under a deductible IRA, the government in effect becomes a co-investor in an amount equal to the upfront deduction. The government receives its share of the earnings on the investment in the form of the tax payment due upon distribution. For an investment with expected normal returns, the tax payment due upon distribution under a deductible IRA is equivalent to the prepayment of tax under a Roth IRA. If the government could "reinvest" the tax received from prepayment under a Roth IRA in an equivalent investment, the value of its investment would be exactly equal to the tax payment due upon distribution under the deductible IRA.

However, this equivalency may not hold if the investment yields certain types of extraordinary returns: what economists sometimes call inframarginal returns, such as might result from innovation, discovery, or an idea with an extraordinarily large payoff. If these returns are, at some level, fixed, they preclude reinvestment of the tax prepayment at the same extraordinarily high return. In contrast, risky investments do not necessarily produce inframarginal returns, because additional investments could be made at the same rate of return.

The table compares the after-tax value of investments in deductible and Roth IRAs with such extraordinary returns. With a deductible IRA the extraordinary returns are taxed through the government's role as a co-investor. However, under the Roth IRA, this type of extraordinary return goes untaxed, and the Roth IRA has a correspondingly higher after-tax value than the deductible IRA.

This result has important implications for consumption taxes. A consumption tax that works like a deductible IRA will tax all extraordinary investment returns, including inframarginal returns from innovation and ingenuity. The example of the deductible IRA also illustrates how expensing of investment taxes such extraordinary returns. The different tax treatment of extraordinary returns under a deductible IRA than under a Roth IRA also illuminates the key difference between a destination-based tax, which taxes imports but not exports, and an origin-based tax, which taxes exports but not imports (discussed later in the chapter). The taxation of exports under the origin principle works like a prepayment mechanism that has the effect of exempting extraordinary returns from tax.

compensation and imposing a tax on compensation at the household level. In contrast to a subtraction-method VAT, this structure (sometimes called a two-tiered consumption tax) has several possible advantages. First, its similarity in structure to the current income tax could ease the transition and facilitate acceptance. Second, unlike transactions-based and entity-based consumption taxes, a two-tiered consumption tax would permit progressivity to be introduced directly through the household-level tax by allowing generous exemptions to individuals or by retaining tax preferences available under current law. Of course, targeting of tax preferences for social policy objectives introduces complexity and may have the unintended consequence of distorting taxpayer behavior by implicitly imposing high effective marginal tax rates.

Switching to a consumption tax without the necessary transition provisions might impose a one-time levy on existing capital. In the context of a cash flow tax, such as a subtraction-method VAT, that allows expensing of investment, this one-time levy occurs because full expensing makes new investment cheaper. The one-time levy would not distort economic decisions, however, because it is imposed on existing capital, for which the decision to invest has already been made, not on new capital. Taxing existing but not new capital may transfer income from the old, who have accumulated assets over their lifetimes, to the young, who have just begun to do so. This raises important issues of fairness. The one-time tax on existing capital would mean a reduction in the tax burden of the young, reflected through lower tax rates, which itself would offset the decline in value of existing assets and improve incentives to work and save and allow a higher rate of capital accumulation.

Consumption tax reform could offer some type of transition relief to reduce the one-time tax on existing capital. Partial transition relief could take the form of allowing businesses to retain their basis in existing capital. The extent of transition relief would determine the size of the tax on existing capital. The more generous the transition relief, the smaller the benefits of a shift to a consumption tax base.

What Does the Current System Tax?

The current tax system deviates from both a comprehensive income tax base and a comprehensive consumption tax base in important ways. First, a substantial share of income is removed from the tax base through the exclusions, exemptions, deductions, and credits available under current law. As Chart 5-4 shows, tax preferences under current law reduce the income tax base from what it would be under a comprehensive income tax by over 40 percent. A few major preferences, such as the personal exemption, the standard deduction, and itemized deductions, including the home mortgage

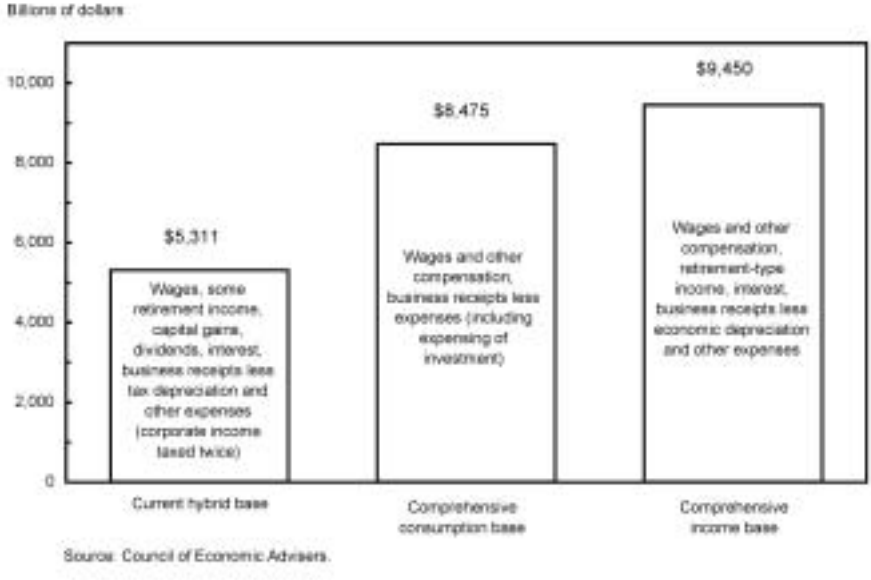
interest deduction, account for 40 percent of income excluded from the comprehensive income tax base. Exclusions, primarily for tax-preferred savings and employer-provided health insurance, remove another 30 percent, with other tax preferences accounting for the rest of the gap.

Tax preferences can distort economic decisions by creating tax differentials between different types of income and consumption. These preferences are similar to government transfers, or to subsidies that have the same effect as direct government expenditures. As already noted, these preferences pose a tradeoff against the higher marginal and average tax rates needed to raise a given amount of revenue, which then distort household and business decisions. Preferences that apply unequally to taxpayers with similar resources also violate the principle of horizontal equity.

Many of these preferences, however, serve useful social purposes. Some of the preferences listed in Chart 5-5, for example, such as that for employer-provided health insurance, subsidize health care expenditure. The personal exemption, the child tax credit, and the EITC adjust taxable income to reflect ability to pay.

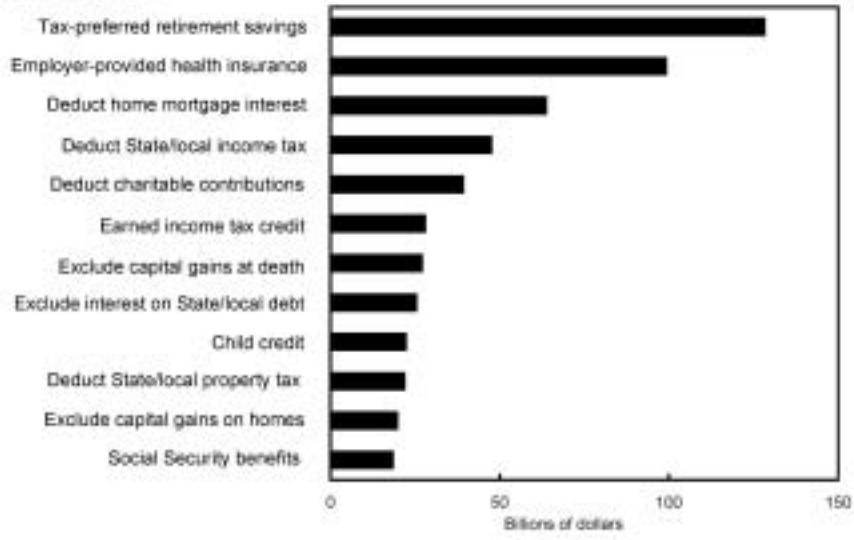
An important difference between a comprehensive income tax and the current income tax is the high degree of differential taxation present in the latter. The double tax on newly equity-financed corporate investment, as described later in the chapter, is one of the most important examples, but others abound. There is considerable variation across asset types in the acceleration of

Chart 5-4 **Alternative Tax Bases, 2000**
Exclusions, deductions, exemptions, and credits reduce the comprehensive income base by over 40 percent.



Source: Council of Economic Advisers.

Chart 5-5 **The 12 Largest Tax Expenditures, FY2002**
Targeted tax preferences, including deductions and exemptions, entail large revenue costs under the current tax system.



Source: Office of Management and Budget, *Budget of the United States of Government, Fiscal Year 2004*

depreciation allowances, implying different tax rates for different investments. The current tax system also taxes capital gains and dividends differently, excludes from tax the implicit returns from consumer durables, and exempts from tax the interest paid on State and local government bonds.

Like a comprehensive consumption tax, the current income tax also exempts a substantial amount of income generated from returns to savings through a variety of tax-preferred retirement plans and accounts. (Together these amount to the largest item listed in Chart 5-5.) In 1998 roughly 99 million individuals participated, as either active workers, separated but vested workers, survivors, or retirees, in the current system of employer-managed pensions. About 29 million workers were active participants in defined-contribution plans (plans in which benefits vary with the return on the invested funds). Contributions to these plans are tax deductible, with employers often providing matching contributions. Another 23 million workers participated in defined-benefit plans, to which employers make tax-deductible contributions on behalf of employees, with benefits typically based on past pay and years of service. The investment income earned within these accounts accrues tax-free, but distributions are included in taxable income.

Individual Retirement Accounts (IRAs) and similar arrangements such as Medical Savings Accounts, Coverdell Savings Accounts, and college savings and prepaid tuition (Section 529) plans provide similar tax advantages. The

TABLE 5-1.—*Household Saving in Tax-Preferred and Taxable Accounts, 1999*

Item	Billions of dollars	Percent of gross household saving	Percent of expanded disposable income
Expanded disposable personal income	6,911		
Gross household saving	853	100.0	12.3
Saving in tax-preferred plans/accounts	249	29.1	3.6
Employer pension plans	164	19.2	2.4
Individual Retirement Accounts	43	5.0	.6
Life insurance and other tax-preferred accounts	43	5.0	.6
Investment in owner-occupied housing	258	30.2	3.7
Net acquisition of taxable financial assets (less accrued taxes)	347	40.7	5.0
Less: Household borrowing	579		8.4
Home mortgage borrowing	374		5.4
Consumer and other borrowing	206		3.0
Equals: Net household saving	274		4.0

Note.—Expanded disposable personal income is equal to disposable personal income plus net investment in government retirement accounts and corporate retained earnings less the accrued tax liability of saving.
Detail may not add to totals because of rounding.

Source: Council of Economic Advisers, using methodology described in William G. Gale and John Sabelhaus, "Perspectives on the Household Saving Rate," *Brookings Papers on Economic Activity,* 1999, and updated data from Department of Commerce (Bureau of Economic Analysis), Board of Governors of the Federal Reserve System, and Investment Company Institute.

combined effect of the upfront deduction for contributions and the tax deferral on earnings is a zero tax (in present value terms) on the returns to assets held within these accounts, although, as discussed below (and in Box 5-3), so-called extraordinary returns are still taxed in all but the Roth IRA and other types of accounts where tax is "prepaid." In 2001 about $10.9 trillion in assets was held within these tax-preferred retirement accounts. An additional $22 billion was held within State-sponsored prepaid tuition and college savings plans.

Because saving is the difference between income and consumption, the exclusion of significant amounts of investment income from the tax base has the effect of transforming the current tax system into a system that is partly based on consumption. Table 5-1 puts this point in perspective by comparing various categories of saving in the United States for 1999 (the latest date for which consistent data are available). Gross household saving was about $853 billion in that year. Saving net of borrowing was about $274 billion, implying a household saving rate of about 4.0 percent of income. Saving in tax-preferred accounts—defined-benefit plans, defined-contribution plans, IRAs, and life insurance accounts—accounted for nearly 30 percent of gross household saving in 1999.

Saving in owner-occupied housing accounted for another 30 percent of gross household saving. As previously noted, imputed rental income is not

taxed under the current system. Most of the appreciation in the value of owner-occupied housing is likewise not taxed through the current exclusion from capital gains taxation ($500,000 for taxpayers filing jointly, $250,000 for single taxpayers). This treatment exempts from tax most investment income from owner-occupied housing. Interest and dividends are taxed when received, but tax on the appreciation of financial assets is paid only upon disposition of the asset (that is, tax is deferred), and then at preferential capital gains rates, although the amount subject to tax includes inflationary as well as real gains.

Although tax-preferred retirement saving and housing thus face effective tax rates on the expected normal return that are close to zero (in present value), taxpayers do not, in many cases, face a zero tax rate on their last dollar of investment income. There are two explanations for this. First, an individual's saving may exceed his or her eligible contributions to these accounts. Second, taxpayers may be investing outside of these accounts because their purposes are other than the prescribed goals of these accounts. Moreover, only about 50 percent of employees had access to or were covered by an employer-managed pension plan in 1999. However, virtually all individuals with earnings have access to some type of tax-preferred savings program, including IRAs, because taxpayers without access to an employer-managed pension plan are generally eligible to deduct contributions to an IRA from taxable income. Thus the set of taxpayers who do not receive consumption tax treatment on their last dollar of retirement savings consists of those without access to a pension plan and who make the maximum IRA contribution, plus those (very few) with access to a pension plan who make the maximum contribution. Data for the mid-1990s indicate that only about two-thirds of taxpayers reporting deductible IRA contributions (2.5 million in 1996) contributed the maximum amount allowed, and some of these taxpayers also contributed to 401(k)-type plans. Most other taxpayers received consumption tax treatment on their last dollar of saving for retirement, and even more will do so as the higher contribution limits for both 401(k)-type plans and IRAs, enacted under the Economic Growth and Tax Relief Reconciliation Act of 2001, are phased in over the next several years.

A number of special considerations arise when one contrasts the current tax system with either the comprehensive income or the consumption tax model. These considerations affect important productive resources or sectors of the economy, such as human capital, housing, and the nonprofit sector, and are discussed below.

Taxation of Human Capital

Because human capital is the most important component of national wealth, it is also important to consider the tax treatment of this capital under

a comprehensive income or consumption tax. Investment in human capital through education can be thought of as creating an intermediate input to be used in the production of a final good and that pays a return: the educated worker's future stream of wages. Under the consumption tax model, only final goods, not intermediate goods, should be subject to tax. Under the current tax system, the tax treatment of human capital investment is mixed. Costs of human capital accumulation include forgone earnings as well as direct costs such as books, tuition, and supplies. Presently, of course, the implicit cost of education represented by earnings forgone while receiving education is not subject to tax but, consistent with a consumption tax, is immediately expensed. Direct costs, including books, tuition, and supplies, however, are currently subject to varying degrees of taxation.

Under current law a variety of tax provisions affect the tax treatment of education expenditure. The Hope and Lifetime Learning tax credits and the temporary deduction for higher education expenses (scheduled to expire after 2004) all provide varying degrees of relief, but they may not provide relief at the margin or for the last dollar of postsecondary education expenditure for many taxpayers. There are also several types of education savings vehicles, such as Coverdell Savings Accounts and State college savings and prepaid tuition plans, which exclude investment earnings on education-related savings from tax. The college savings plans in particular, because of their very high contribution limits, tend to provide consumption tax treatment at the margin on the return to saving for higher education. The potential costs of the residual bias against human capital formation can be significant. Research has indicated that a 1-percentage-point increase in the income tax rate may cause the long-run stock of human capital to decline by almost 1 percent—an effect with significant implications for national wealth. Nevertheless, in addition to the various types of household saving listed in Table 5-1, the expensing of forgone earnings and the various tax preferences for education move the current system toward consumption tax treatment of human capital.

Taxation of Housing

As discussed above, investment in owner-occupied housing is tax-favored relative to other investment under the current tax system. The primary source of this tax preference is the exclusion of the annual value of housing services—imputed rental income—from income taxation. Although the owner of a rental property is taxed on his or her rental income, no tax is paid on the annual flow of housing services received by owner-occupants. Owner-occupied housing enjoys other tax advantages. Certain expenses related to homeownership, such as mortgage interest and State and local property tax

payments, are allowed as itemized deductions. The deductibility of local property taxes lowers the price of local public services. As noted above, the first $500,000 of capital gains is excluded from income upon sale of a primary residence. These advantages result in greater consumption of housing services, and services provided by local governments are tax-favored relative to similar, privately provided services.

Taxation of Nonprofits

The nonprofit sector—religious groups, private educational institutions, government-sponsored enterprises, hospitals, and various associations and foundations—is excluded from the current income tax to the extent that the organizations themselves are generally not subject to tax. The wages of nonprofits' employees are, of course, subject to tax. There are also substantial tax incentives in the tax system for individuals and businesses to contribute to nonprofit organizations. Whether this relative tax advantage would be retained if the current income tax were replaced by a consumption tax depends on how the tax is structured. Under a two-tiered consumption tax similar in structure to the current income tax, the current relative tax advantage of nonprofits could be retained. The wages of their employees would remain subject to tax under this type of consumption tax. However, under a transactions-based consumption tax, such as a national retail sales tax, there would be greater difficulty in exempting nonprofit organizations from tax. In the case of a national retail sales tax, a system of exemptions for purchases made by nonprofits would be needed, and this could add complexity. The cost of charitable giving to nonprofits, however, might change substantially under a consumption tax, for two reasons. First, there is the issue of whether the individual and business deductions for charitable giving would be retained. Second, incentives to give would be affected by any change in the tax rate schedule. To the extent tax rates fall as a consequence of fundamental tax reform, the tax incentive for individuals and businesses to give to nonprofits would decline as well.

Distributional Consequences of Tax Reform

It is sometimes argued that a consumption tax base is less fair than an income tax base because the benefit of not taxing capital income accrues largely to those with higher incomes. However, this claim depends critically on the time frame used to analyze the distributional effects of the two tax bases. Consumption taxes are generally less regressive when viewed from a lifetime perspective than when viewed from an annual perspective. It might be expected that, for many individuals, lifetime consumption should be

roughly equal to lifetime income. If this is the case, the lifetime incidence of a consumption tax and of an income tax should be close to proportional.

Also, as discussed above, a one-year snapshot of the distributional effects of many tax changes can be misleading, because this type of distributional analysis fails to take into account the fluidity of taxpayer incomes and other characteristics (Box 5-4). Younger taxpayers entering the work force are likely to have relatively low incomes as they continue to acquire human capital through education and job experience. As their human capital develops, their incomes tend to rise, peaking shortly before retirement. Saving and consumption patterns follow this cycle, with a period of accumulation accelerating in midlife and peaking before retirement, when dissaving begins. These patterns have been well documented, and distributional analyses that do not take them into account may be misleading.

Consumption taxes may also be less regressive than often thought because the bases of both a consumption tax and an income tax include key elements of what is commonly called capital income. Capital income can be broken down into four components: the return to waiting (that is, the opportunity cost of capital), the return to risk taking (the risk premium), economic profit (that is, the inframarginal return to investing), and the difference between expected and actual returns. The key to analyzing the difference in distributional effects between a consumption tax and an income tax is that a consumption tax exempts the first component of capital income from tax, whereas an income tax includes it. The remaining three components are generally taxed under both systems.

To understand how some forms of a consumption tax subject some capital income to tax, it is useful to consider how the tax treats investment expenditure. Under a cash flow consumption tax, a firm expenses its capital purchases. A successful investment will generate a series of future cash flows to the firm. These future cash flows will be subject to tax, but the present value of the expected future series of tax liabilities, as valued by the market, will be exactly equal to the tax value of expensing the capital expenditure. Because deductions have the same impact as other Federal Government capital market transactions, they are valued the same as a risk-free investment, often assumed to be represented by the interest rate on Treasury bills.

The key point is that, to the extent that future cash flows from the investment exceed (in present value) the initial investment, the excess will generally be taxed. Future cash flows resulting from extraordinary profits, due to innovation or the return to risk taking, are all generally subject to tax. That is, to the extent the actual return exceeds the yield on a risk-free investment, as reflected by the Treasury bill rate, the difference will generally be subject to tax under both a consumption tax and an income tax. The general public is thus, in a sense, a proportional shareholder in all enterprises—a co-investor—under an income or a consumption tax. Thus the general

public shares in the rewards to the extent the returns are unexpectedly high, and shares in the losses in the case of a shortfall. Only the return to waiting is generally exempt from tax under a consumption tax. As noted above (Box 5-3), certain types of extraordinary returns, such as inframarginal returns, may also be free from tax if tax is "prepaid," because the government no longer acts as a co-investor and does not share in these inframarginal returns. However, under a consumption tax, prepayment may be limited to difficult-to-tax activities, such as housing services and investment in intangibles.

How important is it that only the opportunity cost of capital—the expected normal return—generally goes untaxed under a consumption tax? The answer depends critically on how large this opportunity cost is relative to total capital income, and on who tends to receive this component of capital income. If this component is large and received primarily by higher income taxpayers, shifting to a consumption tax would have the immediate effect of benefiting these taxpayers. It is important to note that the real risk-free rate of return available to a tax-exempt investor has historically been below 1 percent a year.

Box 5-4. Taxpayers Exhibit Substantial Fluidity Across Tax Rate Brackets

Do taxpayers tend to face the same marginal tax rate over time, or do they change tax rate brackets as predictable and unpredictable life events occur and their circumstances change? The table on the next page considers the dynamics of statutory tax rate brackets over a 10-year period: the statutory tax rate brackets of taxpayers in 1987 are compared with their statutory tax rate brackets in 1996 (these were the years for which these data are available). In each year the statutory tax rates the taxpayer would have faced had the Economic Growth and Tax Relief Reconciliation Act of 2001 been in place in 1987 and 1996 (with appropriate inflation adjustments) are compared. If most taxpayers face the same tax rate at the beginning and the end of this 10-year period, it might be concluded that a static, one-year snapshot is a good indicator of a taxpayer's lifetime average tax rate.

The tabulations, however, show a substantial amount of dynamics. Taxpayers who remained subject to the same statutory tax rate in both year 1 and year 10 are on the diagonal of the table (shown in bold). About 53 percent of taxpayers (the proportion of taxpayers not on the diagonal) were in a different tax rate bracket at the end of the period than at the beginning. There was significant movement toward higher tax brackets, reflecting upward mobility. In all, about 28 percent of taxpayers had moved to a higher tax rate bracket at the end of the

Box 5-4.—*continued*

Taxpayers by EGTRRA Rate Bracket Using Panel of Taxpayers from 1987 through 1996

Year 1 tax bracket (percent)	Year 10 tax bracket (percent)							Returns in year 1 (thousands)
	0	10	15	25	28	33	35	
	Taxpayers by rate bracket (percent distribution)							
0	**33.8**	24.7	32.1	7.7	0.8	0.5	0.3	10,360
10	20.1	**29.3**	40.8	8.8	.6	.3	.1	15,370
15	8.6	13.3	**53.4**	22.9	1.2	.4	.2	50,059
25	3.9	5.1	29.9	**51.4**	6.7	2.2	.8	31,427
28	3.3	2.8	11.6	35.9	**24.0**	14.7	7.5	2,682
33	4.7	2.6	9.1	21.0	18.9	**23.9**	19.8	1,096
35	5.1	1.9	5.7	10.4	8.8	19.0	**49.1**	633

Note.—Tabulations from 1987-1996 panel of taxpayers. Tabulations include only non-dependent taxpayers present in all years of the panel data set. Each cell entry indicates the percent of taxpayers in a rate bracket in the last year of the panel (i.e., column entry) relative to the number of all taxpayers in that rate bracket in the first year of the panel (i.e., row sum).

Source: Council of Economic Advisers, based on tabulations provided by Department of the Treasury, Office of Tax Analysis.

10 years. About 66 percent of the taxpayers in the bottom (zero tax rate) bracket in year 1 had moved to a higher bracket after 10 years, the vast majority moving to either the 10 percent or the 15 percent bracket. About 47 percent of taxpayers in the bottom two brackets combined (the zero and 10 percent brackets) had moved to a higher bracket by the end of the period, although relatively few moved beyond the 15 percent bracket. There is also substantial movement down the tax rate schedule. In all, about 26 percent of taxpayers moved to a lower tax bracket. About 51 percent of the taxpayers in the top bracket in the first year were in a lower tax bracket after 10 years. Forty-seven percent of taxpayers in the top two brackets in year 1 had moved down to at least the 28 percent tax bracket by year 10.

Although relatively few taxpayers moved from the lowest tax rate brackets to the highest, a considerable fraction moved from the highest brackets to the lowest. Of those starting in the 15 percent tax bracket or below, only 1 percent reached the top two brackets. In contrast, of those starting in the 33 percent bracket or above, 15 percent had moved to the 15 percent bracket or below after 10 years. Of course, taxpayers in the lower brackets may also be more likely to become nonfilers, a possibility not accounted for here.

A considerably larger percentage of taxpayers were subject to any particular tax rate at some time over the 10-year period than in just the initial period. For example, more than twice as many taxpayers

Box 5-4.—*continued*

were subject to one of the top two rates in either year 1 or year 10 (3.3 percent of returns) than in just the first year (1.5 percent of returns). Moreover, this calculation excludes those taxpayers who may have faced the top two rates during the intervening years but not in year 1 or year 10, and the possibility that some taxpayers may not have filed a tax return in some years. An analysis of all taxpayers who filed a return in year 1 and were still alive in year 10 shows that nearly four times (5.8 percent) as many taxpayers were subject to one of the top two rates in at least 1 of the 10 years.

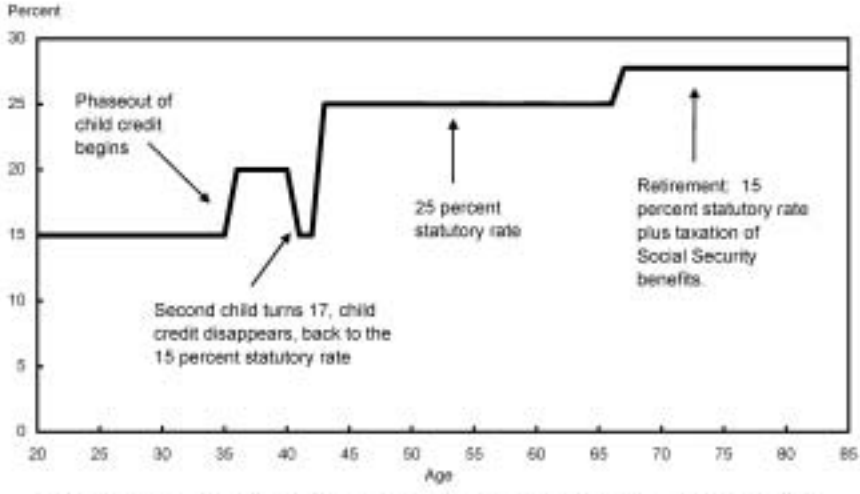
A number of factors explain the fluidity of taxpayers across tax rate brackets over time. One piece of the puzzle is that most taxpayers' incomes grow as they gain job experience and education, but then decline in retirement as they leave the work force and rely on their Social Security benefits, pensions, and savings, which may be nontaxable. Chart 5-6 shows the change in a hypothetical couple's marginal tax rate as that couple's income follows this life cycle pattern of growth followed by decline. In this example, a two-earner couple with two children earn about $65,000 at age 30 and pay income and Social Security taxes. They buy a home and save for life's uncertainties, their children's education, and their own retirement, using taxable accounts plus a 401(k). When they retire, they collect Social Security and live to the age of 85. For simplicity, it is assumed that they neither receive an inheritance nor leave a bequest. The couple's marginal tax rate, the rate paid on the last dollar of earnings, varies greatly over the life cycle, reflecting the couple's passage through the various tax rate brackets and the phase-in and phaseout of various tax deductions and credits as their earnings and other characteristics change. The couple at first faces a 15 percent marginal tax rate, then briefly faces a marginal tax rate of 20 percent because of the phaseout of the child tax credit, and then faces a 25 percent marginal tax rate in midlife during the peak earnings years. Toward the end of life the couple is in the 15 percent statutory rate bracket, reflecting the decline in income in retirement, but pays 27.75 cents on the last dollar of income because the couple is in the phase-in range of the tax on Social Security benefits.

Many taxpayers also have short-term fluctuations in their income as they move in and out of the labor force or between jobs, or as their business and investment income is hit by the ebbs and flows of the business cycle. Finally, factors other than income, such as having children, going through marriage and divorce, or facing unusually high medical expenses, as well as charity or home mortgage interest, can all affect which tax bracket a taxpayer falls into.

Box 5-4.—*continued*

The substantial movement of taxpayers across rate brackets suggests that tax burdens in a given year may tell a very different story of the distribution of the tax burden than do measures of tax burdens over longer horizons. These differences are important for evaluating the distributional effects of changes in tax rates. Analyses that rely on annual snapshots of taxpayer incomes are likely to suggest that a small fraction of taxpayers benefit from rate cuts, when in fact a larger fraction of taxpayers are likely to benefit because of the substantial movement of taxpayers up and down the tax rate schedule over time.

Chart 5-6 **Effective Marginal Tax Rates by Age for Hypothetical Couple**
A hypothetical couple with a typical lifetime earnings profile will face a variety of different tax rates over the course of their lives.



Note: Calculations are for joint-filer, two-earner family with moderate lifetime income and assumes taxpayers not subject to the alternative minimum tax.

Source: Council of Economic Advisers

Decisions on the Path to Reform

A number of choices would be involved in any effort to reform the tax system. Some of these choices represent substantial shifts in tax policy but could be made without major structural changes to the current tax. Also, some of these changes do not involve a choice between the income and the consumption tax frameworks but must be addressed within either framework.

Integration and the Double Tax on Corporate Income

The current tax system imposes a heavy tax burden on equity-financed corporate investment through the double tax on corporate income. Eliminating the high degree of differential taxation is the rationale behind the President's proposal to abolish this double taxation. Corporate income from a newly equity-financed project is subject to two layers of tax. First, the corporate tax is paid on earnings at the firm level at a maximum rate of 35 percent. For income distributed as a dividend, the second layer of tax is paid by individual shareholders at a maximum rate of 38.6 percent (plus any State or local income tax). Alternatively, for assets held for more than 5 years, shareholders pay tax at a statutory rate of 18 percent on the appreciation in stock value that arises from corporate earnings retained and reinvested in the firm. The total effective tax on corporate income is calculated by combining the two layers of tax. As Table 5-2 shows, the effective tax rate (for Federal tax alone) on corporate income distributed to shareholders as dividends can be as high as 60.1 percent. For corporate income that is retained by the firm and realized by a shareholder as a capital gain, the effective tax rate can be as high as 40.9 percent after accounting for substantial deferral. The effective tax rate on capital gains is lower than the effective rate on dividends because of the preferential tax rate on long-term capital gains realizations and the ability to defer taxes until gains are realized.

The double taxation of corporate income affects economic decisions in a number of important ways that may reduce corporate investment, encourage artificially high debt-to-equity ratios, discourage the payment of dividends, and favor noncorporate organizational forms. The high tax on capital may also discourage risk taking and innovation through its effect on entrepreneurship. New firms innovate by developing new products and technologies and are a testing ground for new forms of internal organization. Other firms can imitate successful new approaches, leading to economy-wide improvements in productivity and faster economic growth.

TABLE 5-2.— *Tax Rates on Capital Income for a Hypothetical Investor in 2003*

Capital income	Individual tax rate	
	27.0 percent	38.6 percent
	Percent	
Dividends	52.6	60.1
Retained earnings	40.9	40.9
Debt	27.0	38.6
Pass-through income	27.0	38.6

Note.—Calculations are for a new equity-financed project and assume a 35 percent corporate tax rate and the indicated individual tax rate on ordinary income in 2003. An effective 9 percent rate is assumed for capital gains realizations (i.e., 18 percent rate for assets held for more than 5 years multiplied by 0.5 to approximate the benefit of deferring tax on accrued gains until the asset is sold.

Source: Council of Economic Advisers.

Debt Versus Equity Financing

Equity financing is tax disadvantaged relative to debt financing because interest income, unlike dividends, is generally subject to only one layer of tax, at the individual tax rate. As already mentioned, interest payments are deductible as a business expense and thereby excluded from the corporate tax base. Table 5-2 shows that the maximum effective tax rate on interest earnings is 38.6 percent, the maximum tax rate on ordinary income. The encouragement of debt financing through the tax system results in an increased risk of bankruptcy and financial distress. A heavier debt burden leaves firms particularly vulnerable to capital market risk during a downturn or weakness in the economy. Business failures and financial distress can result in losses to shareholders, debtholders, and employees alike.

Dividend Payout Policy

The double taxation of dividends may also distort corporate dividend payout policy and the investment decisions of firms. The economics literature has generally found that, for new equity-financed investments, corporate income paid out as dividends is tax-disadvantaged relative to corporate income that is retained. This has important economic consequences. The heavier tax burden on dividends can encourage investment in established businesses with internally generated earnings, because these businesses will tend to have more retained earnings because of the tax distortion. The distortion also favors stock repurchases over dividends.

Dividends may also provide a number of important benefits to investors that have a direct bearing on corporate governance. Payment of dividends may provide a signal to investors of a company's underlying financial health.

Indeed, it may be a particularly potent signal given the current backdrop of shaken confidence in corporate financial reporting. A firm cannot continue to pay dividends for very long unless it has the earnings to support such payments. Corporate managers and directors may have better information about the firm's future cash flows than do persons outside the company, and dividend payments may reflect this information. Dividend payments may also be one way for shareholders to impose discipline on corporate managers: reducing the amount of cash at the discretion of management may focus management's attention on the most productive investments rather than on purchases that may not increase shareholder value.

Choice of Organizational Form

The high tax on corporate income affects the allocation of capital, shifting it from the corporate sector to owner-occupied housing and the noncorporate business sector (which includes sole proprietorships, partnerships, S corporations, and nonprofit organizations). This entails an inefficient use of resources and reduces real output and incomes. The higher tax on corporate income discourages the use of the corporate form of organization despite the nontax benefits of incorporation such as limited liability and more centralized management. The corporate and the noncorporate forms may also offer different advantages with respect to scale economies and the development of entrepreneurial skill, which may not be fully exploited because of the tax distortion.

Table 5-3 shows the extent to which the current system taxes capital in the corporate sector at a higher rate than capital in other sectors, particularly the noncorporate business and housing sectors. The economy-wide effective tax rate is roughly 20 percent. However, the overall effective tax rate of between 32.2 percent and 34.5 percent in the corporate sector (depending on the treatment of intangibles) is well over half again as high as the 20.0 to 21.2 percent effective tax rate (again depending on intangibles) in the noncorporate business sector. The effective tax rate on owner-occupied housing, in contrast, is 3.9 percent. The tax penalty on income from capital in the corporate sector relative to other sectors is thus substantial.

The President's proposal to eliminate the double tax on corporate income would encourage a more productive allocation of capital. A study by the Treasury Department estimates that, even in the absence of increased investment, the long-run economic benefit of eliminating the double tax ranges from about 0.11 to 0.74 percent of consumption, or between $8 billion and $52 billion in 2001. Moreover, the repeal of the double tax would be expected to lead to increased investment and thus further economic gains from stronger growth and job creation.

TABLE 5-3.—*Effective Tax Rates by Asset and Sector Under Current Law and Various Reforms*

[Percent]

Asset and sector	Current law	Economic depreciation	Expensing
Corporate sector			
Equipment	30.5	37.9	4.4
Structures	38.8	37.9	4.4
Public utilities	29.9	37.9	4.4
Inventories	37.9	37.9	4.4
Land	37.9	37.9	4.4
Intangibles	4.4	4.4	4.4
Total without intangibles	34.5		
Total with intangibles	32.2	35.4	4.4
Noncorporate sector			
Without intangibles	21.2		
With intangibles	20.0	22.5	-8.8
Owner-occupied housing	3.9	3.9	3.9
Economy-wide average			
Without intangibles	20.7		
With intangibles	19.8	22.1	1.7

Note.—Calculations include Federal taxes only and assume a 3 percent inflation rate and a 4 percent real after-tax rate of return. Investments are assumed to be financed using 35 percent debt and 65 percent equity. Effective tax rates are capital stock-weighted averages. Calculations do not reflect the temporary 30 percent expensing provision included in the Job Creation and Worker Assistance Act of 2002.

Source: James B. Mackie III, "Unfinished Business of the 1986 Tax Reform Act: An Effective Tax Rate Analysis of Current Issues in the Taxation of Capital Income," *National Tax Journal*, June 2002.

Uniform Taxation of Investment

Another key aspect of the current tax system is that the provisions for depreciation do not provide deductions that mirror the economic lives of assets, nor do they adequately account for inflation. This divergence between depreciation as provided in the current tax code and economic depreciation is a departure from the framework of a comprehensive income tax. Table 5-3 shows how a move to economic depreciation would change effective tax rates in the corporate sector.

Revamping the current system of depreciation to more closely reflect economic depreciation would be a fundamental reform that would level the playing field across different types of business investment. However, as shown in Table 5-3, such a change would actually raise the effective tax rate on overall business investment, because it does not include the accelerated depreciation and expensing available for some investments under current law. Although

greater neutrality between types of business investments would be achieved, particularly within the corporate sector, the distortion between business investments and owner-occupied housing would be increased. Also, a system based on economic depreciation is complicated by the difficulty of frequently updating asset classes and lives to keep pace with innovation and changes in technology. Moreover, true economic depreciation would require indexing of depreciation allowances for inflation, which may contribute to complexity.

As described above, under the consumption tax model, businesses would deduct from their receipts all business expenses, including purchases of equipment and structures. Consequently, a shift to a consumption tax would involve replacing the system of depreciating investment under current law and the income tax model with complete expensing. Expensing of investment in the year it is placed in service is more generous than either current or economic depreciation for most investment, and it exempts from tax the expected cash flow from a marginal investment. With expensing, there is no tax on investment at the margin, because expensing exactly offsets (in present value) the tax on the expected future cash flow from the investment. Cash flow that arises from risk taking, inframarginal returns, and unexpected losses or gains would continue to be taxed, because it exceeds the present value of expensing. (See Box 5-3 above for a discussion of the tax treatment of these types of extraordinary returns in the case of deductible and Roth IRAs.) Expensing is needed under the consumption tax model to exclude purchases of intermediate goods from the tax base, so that only final sales to consumers, and hence consumption, are taxed.

Expensing of investment would dramatically lower the taxation of capital income. As Table 5-3 shows, it would lower the economy-wide effective tax rate on investment to near zero and virtually eliminate the tax-based disincentive to save and invest. Expensing also improves neutrality by removing tax differences between investments in the corporate and investments in the noncorporate sector.

The relative tax advantage of housing would be greatly altered under either the income or the consumption tax model. A comprehensive income tax would subject housing services to taxation, eliminating the relative tax advantage of housing and improving economic incentives, but introducing considerable complexity. Under a consumption tax, housing consumption would be taxed either by taxing the sale of newly constructed housing (that is, prepayment) or by taxing the annual flow of housing services. Housing would lose its tax advantage relative to other capital. The effect of these changes on housing prices and the housing stock is the subject of extensive debate.

Broadening the Tax Base and Lowering Tax Rates

Broadening the tax base usually means eliminating the various tax preferences under the current tax system. These preferences represent a policy decision to reduce the effective tax rate for some, but they pose a tradeoff in that a higher overall tax rate is needed under both the income and the consumption tax models to raise an equivalent amount of revenue. Eliminating preferences would improve incentives in two ways. First, as illustrated above, many of the preferences carry with them high implicit tax rates as the benefits are phased out. Eliminating these preferences repeals these high implicit rates and the associated kinks in the effective tax rate schedule. Second, once the preferences are eliminated, the same amount of revenue can be raised with lower overall tax rates. Chart 5-4 earlier in the chapter showed that the current tax base is considerably smaller than either the income or the consumption tax base.

Chart 5-4 also indicated that the existing tax preferences are just as important, if not more important, in determining the size of the tax base when saving is included as when it is excluded (that is, the difference between the comprehensive income and comprehensive consumption tax bases). The broader tax base under either reform would allow tax rates to be lowered. Lower rates improve economic incentives, spurring private activity by making more productive use of resources.

There are many avenues by which marginal tax rates can affect individual and business decisions. Individuals can shift compensation toward less taxed sources; they can adjust labor supply, saving, investment, and portfolio allocation decisions; and they can alter their compliance behavior. The economic benefits of lower tax rates were precisely the rationale behind the reduction in tax rates enacted in the Economic Growth and Tax Relief Reconciliation Act of 2001. Some estimates suggest that the reduction in the top statutory tax rate from 39.6 percent to 35 percent will raise the affected taxpayers' taxable incomes by as much as 3 percent when fully effective in 2006. This rise in taxable incomes reflects individuals' decisions to work, save, and invest more, to increase tax compliance, to reduce evasion, and otherwise to shift efforts to activities that become more lightly taxed as a result of the lower tax rates. The extent to which taxes distort these decisions is, to some extent, diminished by lower tax rates. Moreover, the rise in taxable incomes means that individuals' behavioral response to the lower tax rates works to offset the direct cost of rate reduction to the government.

Some estimates indicate that repeal of the double tax on corporate income, combined with the uniform treatment of investment and general base broadening, would increase capital accumulation by over 10 percent and output by

perhaps as much as 4 percent in the long run. A shift to a consumption tax would go even further by excluding income from saving from the tax base. Most estimates suggest that a shift to a consumption tax base would generally increase the size of the capital stock in the long run, with some estimates suggesting an increase of as much as 20 percent. Although estimates of the impact on output vary, some models indicate that real output might rise in the long run by as much as 6 percent.

Income Versus Consumption as the Base

The major difference between the consumption and income models is that a consumption tax does not distort the choice between current and future consumption (that is, saving); in other words, it is intertemporally efficient. In contrast, an income tax distorts the relative prices of current and future consumption by reducing the after-tax return to saving. Under an income tax, current consumption is tax-favored, and saving disfavored, relative to future consumption.Taxing consumption rather than income would eliminate this distortion. Because the tax base under the comprehensive consumption tax model is smaller than under the comprehensive income tax model, however (Chart 5-4), a higher tax rate would be required to raise a given amount of revenue, which may involve some degree of additional distortion. Nevertheless, as discussed above, studies indicate that elimination of the tax on income from saving can have important salutary effects on economic growth and real incomes by encouraging saving.

International Tax Considerations

The U.S. economy is increasingly linked to the world economy through trade and investment. Domestically based multinational businesses and their foreign investment help bring the benefits of global markets back to the United States by providing jobs and income. Like all firms, multinationals face a number of business decisions, including how much to invest and where. Because multinationals by definition operate in a number of countries, they also have to decide in which country to locate their headquarters, and their decisions in turn affect which countries reap the majority of benefits from the multinationals' operations.

In the context of tax reform, it is important to consider how changes in the international taxation of income would change the incentives for companies to locate production, intangible assets, and research and development in one country rather than another. Reform can have important effects on these business decisions and on the efficient use of the Nation's economic resources, affecting employment and the competitiveness of workers in the United States.

Two alternative approaches to taxing international flows of income are the territorial system and the worldwide system. Under the territorial system, individuals and businesses pay tax on income only where it is earned, regardless of where they themselves reside. (Certain passive or financial income from abroad, such as royalties, also is subject to tax in the country of residence.) Under the worldwide system, all income is subject to tax in the taxpayer's country of residence, regardless of where it is earned. Income earned abroad may also be subject to tax by the country where it is earned. On the principle that the same income should not be taxed by more than one country, foreign taxes are generally creditable against domestic tax on foreign income up to the domestic tax rate.

The United States uses a hybrid of these two systems. Resident individuals and businesses are subject to tax based on their worldwide income. For foreign subsidiaries of U.S. multinational companies, tax is usually paid only when income is distributed to the domestic parent company as a dividend; that is, tax is deferred until repatriation, at which time a credit can be claimed for foreign taxes paid. It is primarily the opportunity of tax deferral of certain active income that distinguishes the tax treatment of international income by the United States from a pure worldwide system. Deferral has the effect of relieving a substantial portion of the U.S. tax, in present value terms, on the income of foreign subsidiaries of U.S. companies. However, because tax is imposed upon repatriation, there is a disincentive to repatriate foreign income; this disincentive is absent under a territorial system.

The rules surrounding deferral are the source of considerable complexity, involving a bewildering assortment of definitions and rules. Deferral is extended to income from active business operations abroad in order to provide an equal footing with other operating businesses in the same foreign country. Deferral of U.S. tax is not extended to income from portfolio investments and other income viewed as highly mobile. Consequently, certain income from portfolio-type foreign investments (for example, interest, dividends, and royalties) is "deemed distributed" and is subject to current U.S. tax. However, such income also includes various categories that are more active than passive, such as foreign base company sales and services income, income from shipping, and certain income from oil activities.

The foreign tax credit requires companies to make complex calculations in order to claim the credit against the U.S. tax on repatriated dividends. The foreign tax credit is calculated by "basket" or type of income (for example, passive, financial services, and general active income) so that excess credits generated on highly taxed active foreign business income cannot be used to reduce the U.S. tax on lower taxed foreign income such as passive interest. Over the past 30 years, U.S. companies have repatriated roughly half of the after-tax income earned by their foreign subsidiaries.

The U.S. system of taxing international income dates back to the 1960s, when the United States was the source of half of all multinational investment worldwide, produced 40 percent of the world's output, and was the world's largest capital exporter. From this perspective it was appealing to construct a tax system that was viewed as neutral with respect to the location of foreign investment by taxing all income and taxing it all at the same rate. However, this system is based on the idea that investment abroad is a substitute for domestic investment and on the assumption of perfectly competitive markets in a world with aggressive pricing and ease of entry, and with no brand-name loyalty, economies of scale, or other sources of extraordinary profits.

The underpinnings of the worldwide system have shifted, however. It is now recognized that most multinational corporations produce differentiated products and compete in industries characterized by economies of scale, thereby undermining the perfect competition model of the past. There is some evidence that returns on foreign investment surpass those on domestic investment and exhibit above-normal returns because of factors such as intangibles (brands, patents, and the like). Moreover, the United States is now the world's largest importer of capital and no longer dominates foreign markets. For example, in 1960, 18 of the world's 20 largest companies (ranked by sales) were located in the United States, but by the mid-1990s that number had fallen to 8. Companies can choose where to locate, and, under the worldwide system of taxation, unless the domestic tax rate is the same in all countries in which a company operates, the decision where to locate the company's headquarters will be affected by the countries' tax systems.

There is some concern that the United States has become a less attractive location for the headquarters of multinational corporations. Although multinationals operate in a number of countries, the Department of Commerce reports that the bulk of the revenue, investment, and employment of domestic multinational companies is located in the United States. In 1999 U.S. parent companies accounted for about three-fourths of U.S.-based multinationals' sales, capital expenditure, and employment. Therefore, where a firm chooses to place its headquarters will have a large influence on how much that country benefits from its domestic and international operations.

The United States is also one of only a few industrialized countries (Switzerland and the Netherlands are other prominent examples) that do not provide some form of integration of the corporate and individual income tax systems. The resulting double taxation of corporate income makes it more difficult for U.S. companies to compete against foreign imports at home, or in foreign markets through exports from the United States, or through foreign direct investment.

Another major choice in international taxation, and one that is particularly important under the consumption tax model, is that between the so-called destination and origin principles. Under the destination principle, imports are

taxed by making them nondeductible or by levying an import tax, and exports are tax-exempt. The tax base then includes all domestic consumption, whether goods and services are produced at home or abroad. Under the origin principle, the opposite rule applies: exports are taxed, but imports are not, and the tax base becomes consumption plus net exports. Either the origin or the destination principle can be applied under a consumption tax, but the destination principle has the intuitive appeal of promoting economic growth domestically by exempting, and thereby promoting, exports.

Nevertheless, under a flat-rate consumption tax, the origin and the destination principle are equivalent at the margin. Under the destination principle, again, foreign investment is essentially expensed, and the cash flow from the investment is taxed as imports. The tax benefit of expensing will exactly equal in present value the tax on the expected normal return of the investment as it returns through imports. Under the origin principle, taxes are essentially prepaid by taxing exports, and no tax is due on the returning cash flow. Returning profits would thus be taxed under the destination principle, but not under the origin principle. The timing of the tax payment will be different, but in present value terms the taxes paid under the destination principle and under the origin principle will be the same for an equivalent level of exports. This is similar to the equivalency between deductible IRAs and Roth IRAs discussed in Box 5-3. The equivalency does not necessarily hold, however, in the presence of extraordinary returns (returns to innovation, inventions, ideas, and risk taking). The returning extraordinary profits would be taxed under the destination principle, but not necessarily under the origin principle. It is also important to note, however, that the tax on the returning cash flow under the destination principle could be avoided if a taxpayer is able to relocate abroad. Such a taxpayer would receive the benefit of the export exemption (expensing) and might avoid the tax on the returning cash flow (imports) through relocation. Under the origin principle, in contrast, the tax cannot be avoided because it is, in effect, prepaid.

Conclusion

Changes in tax policy involve many different objectives and can take many different forms. This chapter has focused on the primary choices involved in tax reform and the major differences among taxing consumption, taxing income, and maintaining the current hybrid tax. Proposals for tax reform pose the difficult question of how best to balance the sometimes competing objectives of simplicity, fairness, and faster long-term growth. Policy changes can improve efficiency and boost real incomes, but it also matters enormously that all Americans have the opportunity to achieve economic success.

CHAPTER 6

A Pro-Growth Agenda for the Global Economy

Many developing countries throughout the world have taken important steps in recent years to promote the growth of their economies. Their actions have lifted millions out of poverty, improved the health of their populations, and contributed to progress in addressing environmental challenges. Other countries, including some of the world's poorest, have had less success in achieving and sustaining strong economic growth. Developed and developing countries alike face the challenge of improving economic performance around the globe, so that more people can share in the benefits that come with growth. The United States stands ready to address that challenge.

This chapter lays out some key factors that have been found to promote and sustain faster economic growth. Although these factors are important in all countries, the chapter's primary focus will be on growth and development in low- and middle-income economies. Three broad principles—securing economic freedom, governing justly, and investing in people—underlie these key growth-promoting factors and provide the organizing structure for the discussion. Adoption of these principles creates an environment where market signals lead to better economic performance.

Economic freedom promotes growth by encouraging competition and entrepreneurship. Securing this freedom requires creating a stable domestic macroeconomic environment with low inflation, regulating appropriately, encouraging entrepreneurial initiative, and opening to the global economy. Governing justly means establishing the rule of law, controlling corruption, and guaranteeing political freedoms; all of these help develop trust in the accountability and reliability of the government, which in turn encourages entrepreneurship. Investing in people means devoting resources to enhancing the productive capacity and well-being of the general population, in particular through improvements in education and health. Countries that ignore this task will see their economic growth suffer, because people who are in poor health or poorly educated are less productive.

No one of these principles suffices to guarantee strong growth; all three are mutually reinforcing aspects of a pro-growth agenda. Actions by the United States, the broader international community, and the international financial institutions can help developing countries improve their economic performance. But creating the proper incentives for domestic growth ultimately depends on decisions by those countries' own citizens and governments.

The Administration has undertaken three important international economic policy initiatives that are consistent with these pro-growth principles. First, it has sought and obtained from the Congress authority for the President to negotiate and conclude trade liberalization agreements with other countries in a streamlined fashion; the agreements reached under Trade Promotion Authority will increase the integration of the world's economies, especially those of developing countries. Second, the Administration has launched the Millennium Challenge Account program, which will extend additional developmental aid to the world's poorest countries provided they have adopted pro-growth policies. Third, the Administration has called for reform of the multilateral development banks, including both the World Bank and the regional development banks, to increase their effectiveness in spurring economic growth through greater emphasis on measurable results and activities that increase productivity, including private sector development.

In August of last year, the Congress granted the President Trade Promotion Authority (TPA) through the Trade Act of 2002. This legislation authorizes the President to negotiate trade liberalization agreements with other countries and commits the Congress to a yes-or-no vote, without amendments, on any agreements reached under this authority. The President's enhanced ability to engage in international trade negotiations under TPA will help the United States conclude agreements that will increase competition, boost productivity, and promote growth in both the United States and its trading partners. TPA will enhance U.S. influence and effectiveness at the trade negotiating table and will bring economic benefits to American families, workers, farmers, and firms. Current U.S. proposals for trade liberalization of nonagricultural goods alone could save Americans about $18 billion a year in import taxes, resulting in $1,600 worth of benefits annually for an average family of four. This renewed negotiating authority will also promote prosperity in our trading partners, including developing countries. Indeed, those countries that are now the least integrated into the world economy—including many of the world's poorest—stand to gain the most in proportion to their current incomes from the increased openness that TPA makes more likely.

The Administration is already engaged in negotiating trade agreements in a variety of contexts, including the multilateral negotiations organized under the auspices of the World Trade Organization as well as regional negotiations, such as those toward a Free Trade Area of the Americas, and various bilateral free trade negotiations. All of these initiatives seek to promote economic growth by decreasing barriers to trade in goods and services and establishing effective procedures for settlement of international disputes involving trade. Moreover, the rules-based trade agreements that are the object of these

negotiations will provide incentives for developing countries to improve their own domestic institutions to provide greater transparency, strengthen the rule of law, and improve the protection of property rights.

The second major Administration initiative, the Millennium Challenge Account (MCA), will provide grants in aid to those developing countries that qualify by fostering and maintaining an environment conducive to economic growth. Funding for the MCA will increase over 3 years to a total of $5 billion in 2006, an almost 50 percent increase over current U.S. bilateral development assistance. Recipients of MCA grants will be chosen by their demonstrated commitment to the three principles mentioned at the outset: securing economic freedom, governing justly, and investing in people. The specific MCA criteria associated with each of these principles are described in more detail later in this chapter.

The Administration's third pro-growth initiative involves reform of the multilateral development banks (MDBs). Meaningful reform of these institutions will raise economic growth and prosperity in poor countries around the world by encouraging the MDBs to focus on increasing productivity growth in those countries. The MDBs can do this by fostering innovation to support private sector development, insisting on measurable results as a condition for continued aid, and delivering an increased share of total assistance in the form of grants rather than loans.

The Administration believes that pursuing the pro-growth policies outlined in this chapter will help restore the flow of investment to low- and middle-income countries. This flow was interrupted by frequent and severe economic and financial crises in some of these countries during the 1990s. Net international private capital flows, which averaged more than $150 billion a year from 1992 to 1997, fell to less than $50 billion a year in 1998-2000. Restoring strong private investment flows into low- and middle-income countries will help create higher productivity jobs and raise living standards.

The chapter begins by laying out some basic facts about economic performance and social indicators in the developing world. It then discusses the three principles enunciated above and how they have been shown to lead to faster economic growth. Finally, the chapter discusses the Administration's three major initiatives and how they embody pro-growth principles.

The Importance of Growth

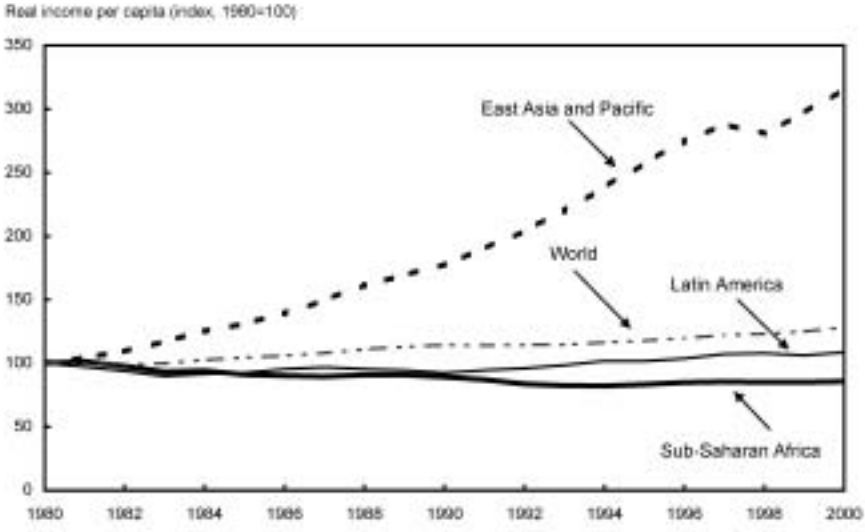
The term "economic growth" can be understood both in narrow, quantitative terms and in a broader, more qualitative sense. Economists often measure growth as the annual percentage change in a country's real gross domestic product (GDP) per capita, that is, the 1-year change in the country's income, adjusted for inflation and divided by the number of people residing in the country. By this definition, growth simply indicates how the income of the average resident of the country has changed from one year to the next. In qualitative terms, however, sustained strong growth over time means prosperity instead of poverty, job creation in place of economic stagnation, and children who are strong and healthy rather than malnourished and facing death from illness. Helping countries boost their economic growth, in other words, is not just a matter of statistics; it is about improving the lives of human beings.

The Global Growth Experience

Chart 6-1 illustrates the wide divergence in growth paths for several major world regions from 1980 to 2000 (all of the growth rates that follow are in terms of real GDP per capita). World income per capita grew at an annual rate of 1.3 percent, increasing a total of 28 percent over the period. Performance in the East Asia and Pacific region (East and Southeast Asia plus Australia, New Zealand, and the Pacific island nations) far exceeded this benchmark: average income per capita in these countries more than tripled, from $396 in 1980 to $1,252 in 2000, with growth of more than 6.2 percent a year. In contrast, incomes per capita in Latin America rose only from $3,548 in 1980 to $3,856 in 2000, which translates to an annual average growth rate of less than 0.5 percent. Average annual income per capita in the countries of Sub-Saharan Africa actually fell by 14 percent during the period, from $658 in 1980 to $564 in 2000, or by 0.8 percent a year. (Unless otherwise noted, all income levels in this chapter are reported in constant 1995 dollars.)

Measures of countries' adherence to the pro-growth principles introduced above, and described in more detail below, suggest possible reasons for this huge variation. One is the presence or absence of macroeconomic stability: inflation varied substantially among the three regions, in a pattern that mirrors their growth outcomes. Annual inflation in Latin America as a whole remained relatively high during the 1980s and 1990s, averaging about 25 percent. In contrast, inflation in the fast-growing East Asia and Pacific region averaged only about 12 percent during these two decades but fell sharply in many countries over the period. Inflation in slow-growing Sub-Saharan Africa also averaged only about 12 percent. However, unlike in East Asia and the Pacific, inflation in Sub-Saharan Africa rose over the period, from 10 percent in the 1980s to 16 percent in the 1990s.

Chart 6-1 **Regional Economic Performance**
Countries in East Asia and the Pacific grew more quickly than those in Latin America and Sub-Saharan Africa from 1980 to 2000.



Source: World Bank, *World Development Indicators*, 2002.

There were also important regional differences in the degree of countries' openness to the global economy. The ratio of total international trade in goods (imports plus exports) to GDP is a common measure of this openness. In East Asia and the Pacific this measure rose from 39 percent in 1980 to 66 percent in 2000; it rose more modestly in Latin America over that period, from 26 percent to 38 percent. Sub-Saharan African trade as a fraction of GDP rose only from 55 percent in 1980 to 57 percent in 2000. In short, the different regions' growth performances are mirrored in the changing role of trade in their economies.

Investment in people also varied considerably across regions. Only about half of all children in Sub-Saharan Africa complete primary school, according to surveys conducted from 1992 to 2000; the completion rate in East Asia and the Pacific was almost twice as high. Information for the period from 1995 to 1999 indicates that average child immunization rates for measles, a key indicator of health care for children, were 53 percent for Sub-Saharan Africa versus 85 percent for East Asia and the Pacific.

Pro-growth policies have yielded important success stories in individual countries as well, with a number of developing countries in Asia, Latin America, and Africa significantly outperforming their neighbors in achieving higher standards of living. The growth experiences of China and India, both of which have undertaken far-ranging economic reform in recent years, have

been especially impressive. (Box 6-2 later in the chapter discusses China's reforms.) China's income per capita grew from $167 in 1980 to $824 in 2000, for an average annual growth rate of 8.7 percent. India's GDP per capita grew on average by 3.8 percent a year over the same period, from $226 in 1980 to $459 in 2000. Both countries were among the world's poorest at the start of the period. Their growth rates are even more noteworthy given that the average growth rate for this period for the poorest countries as a group (those with incomes per capita of less than $800 in 1980) was only 0.5 percent. Economic growth in China and India has helped reduce their combined poverty rate (the percentage of the population with incomes below $1 a day) from 62 percent in 1977-78 to 29 percent in 1997-98. (Incomes here are evaluated at purchasing power parity, that is, adjusted such that $1 purchases the same amount of goods and services in all countries.) The enormous size of the population in both China and India (21 and 16 percent of world population in 1998, respectively) means that economic progress in these two countries alone has contributed significantly to reducing global poverty.

Chile and Botswana are examples of countries in other regions that have also instituted pro-growth polices with impressive results. Chile has undertaken major tax reform, opened its economy to international trade and investment, privatized important sectors of the economy, and reintroduced democratic governance. Botswana has protected private property, discouraged corruption, invested heavily in education and health, and maintained sound fiscal and monetary policies. Neither country would seem to be particularly well situated geographically to benefit from an integrating global economy. Botswana is landlocked and is located in a region with some of the worst economic performance in the world; Chile is located thousands of miles from major markets in the United States, Europe, and Asia, and some of its larger neighbors have suffered recurrent economic crises. Yet Botswana and Chile recorded average annual per capita growth rates of 4.6 and 3.7 percent, respectively, from 1980 to 2000—far better than either the world average of 1.3 percent or the 1.9 percent average for middle-income countries (defined by the World Bank as those with incomes per capita between $755 and $9,266, in 2000 dollars). Part of the explanation for their impressive growth is the relatively stability of their macroeconomic environments: annual inflation during 1980-2000 averaged 15 percent in Chile and 11 percent in Botswana. Moreover, Chile's inflation rate fell dramatically over the period, from 29 percent to only 4 percent; the Latin American average for inflation, as noted above, was 26 percent over the same period.

Despite the successes of Chile and Botswana, there are numerous stories of countries that have experienced economic stagnation or even contraction. In 28 countries out of 134 for which consistent and complete data are available, annual average growth in GDP per capita ranged between 0 and 1 percent

from 1980 to 2000. GDP per capita fell during that period for another 41 countries in the sample—in several cases by more than 30 percent over the period as a whole.

The most troubling data are those that show a number of the world's poorest countries becoming even poorer over the past two decades. For example, Sierra Leone (with annual income per capita of $293 in 1980), Zambia ($584), and Nicaragua ($671) experienced average annual per capita growth rates of –3.6, –2.1, and –1.9 percent, respectively, over 1980-2000. Real income per capita in Niger plunged 38 percent over the same period, to only $203. In countries such as these, life has become much more difficult for millions of people, many of whom were already living at the edge of destitution.

The growth experiences of these desperately poor countries reflect their failure to promote economic freedom, govern justly, and invest in their people. Macroeconomic instability has been a serious problem for most of these countries: in Nicaragua, annual inflation during the 1980s and 1990s averaged a staggering 1,453 percent; the figures for Zambia and Sierra Leone, at 53 percent and 47 percent, respectively, are modest only by comparison. Measures of openness have been scarcely any better. Sierra Leone's trade as a ratio to its GDP fell from 56 percent in 1980 to only 25 percent in 2000. Zambia's involvement in the global economy also declined: its trade was equivalent to 68 percent of its domestic economic activity in 1980 and fell to 54 percent in 2000.

The Benefits of Growth

Statistics on GDP per capita and its growth fail to capture the full human tragedy now playing out in the poorest countries. Already-poor countries experiencing stagnant, or even negative, growth have difficulty coping with the basic problems of human existence. Table 6-1 shows that, in 2000, the world's low-income countries suffered from higher rates of malnourishment, shorter life expectancies, and dramatically higher infant mortality rates than did countries with higher incomes. About one-quarter of the population of the low-income countries was undernourished, according to a sample taken over 1996-98, compared with only 11 percent of the population in the middle-income countries. In 2000, mortality among children under 5 years old reached 115 per 1,000 in the low-income countries, compared with only 7 per 1,000 in high-income countries. Life expectancy in low-income countries was 19 years shorter than in high-income countries (59 years versus 78 years), a difference that in part reflects the prevalence of epidemics like HIV/AIDS (Box 6-1).

The positive association between higher levels of income and improved social indicators highlights the importance of economic growth for improving the human condition. This relationship was demonstrated in a

TABLE 6-1.—*Income per Capita and Social Indicators*

Indicator	Low-income countries	Middle-income countries	High-income countries
Prevalence of undernourishment (percent of population)	24	11	([1])
Under-5 mortality rate (per 1,000 children)	115	39	7
Life expectancy at birth (years)	59	70	78
DPT immunization (percent of children under 12 months) [2]	57	90	89
Measles immunization (percent of children under 12 months)	57	89	92
Public expenditure on health (percent of GDP)	0.9	2.9	6.0
Public expenditure on education (percent of GDP)	3.4	4.5	5.6
Addendum: Number of countries in each income category	*63*	*92*	*52*

[1] Not available.
[2] Immunization for diphtheria, pertussis, and tetanus.

Note.—Income is defined as gross national income per capita in 2000: low income, $755 or less; middle income, $756-$9,265; high income, $9,266 or more.
Data are for 1996-1998 for undernourishment; 2000 for mortality rate and life expectancy; 1995-1999 for immunization; 1994-1999 for expenditure on health; and 1998 for expenditure on education.

Source: World Bank, *World Development Indicators,* 2002.

study of 58 developing countries from 1960 to 1985, which found that a 1 percent increase in income per capita is associated with a decline in infant mortality of as much as 0.4 percent. This estimate implies that a 1 percent increase in income per capita across the developing world could have averted 33,000 infant and 53,000 child deaths annually. Other broad measures of social outcomes reflect similar patterns. The fast-growing region of East Asia and the Pacific recorded a 45 percent decline in the rate of under-5 mortality over the period 1980-2000, compared with only a 13 percent decline in Sub-Saharan Africa. Undernourishment fell by 30 percent in East Asia and the Pacific, but rose by 3 percent in Sub-Saharan Africa, during the 1990s.

Economic growth does not just lead to higher average incomes for poor countries; it also offers hope for those at the margins of society. A study of 92 developing and developed countries over 1950-99 found that the incomes of the poor (defined as the poorest fifth of each country's population) rose one for one, on average, with national income per capita (Chart 6-2). This means that economic growth did not just benefit societies' richest but helped the poorest strata as well. Data show, moreover, that worldwide economic growth over the past 20 years has been accompanied by the lifting of 200 million people out of poverty (where the poor are defined as those with incomes of less than $1 a day, in 1985 dollars). Nonetheless, the economic benefits of growth have not reached to every corner of the world. The World

Box 6-1. Combating the HIV/AIDS Epidemic in Africa

The impact of the worldwide HIV/AIDS epidemic is perhaps most dramatic in Sub-Saharan Africa. By the end of 2002 an estimated 29.4 million Africans were HIV-positive, about 70 percent of the global total. In the previous year, 9 percent of all adults in Sub-Saharan Africa were living with HIV/AIDS, compared with 1.2 percent globally. AIDS is now the leading cause of death in the region. The epidemic has dramatically reduced life spans: estimates suggest that the region's average life expectancy of 47 years would now be 62 years if the epidemic had never occurred.

Although the greatest tragedy of AIDS is the misery and loss of life it inflicts, the disease has also brought severe economic consequences to a region already suffering from extremely low incomes per capita and often-negative growth rates. Estimates suggest that AIDS has cut annual economic growth in the region by 2 to 4 percentage points. South Africa, one of the region's most important economies, could suffer a drop in its economic growth by as much as 2.6 percentage points as a result of the disease.

The economic consequences arise from a number of sources. Infection rates are highest among young people, so that the illness is most prevalent in individuals in their most productive years. Workers are at risk of having to leave their jobs as they cope with the effects of AIDS, either their own illness or as a caretaker for a sick relative. This can be particularly disruptive to growth when skilled workers are affected. For example, one estimate suggests that up to 30 percent of teachers in Malawi and Zambia are HIV-positive. The direct and indirect costs of the disease also put strains on governments struggling with other social needs such as improving education. Societies will face pressures for increased expenditure on health care. Public and private investment could decline, both because of lower expected profits and because of increased economic uncertainty. One striking indicator of the implications for health care is that an estimated 50 to 80 percent of urban hospital beds in Côte d'Ivoire, Zambia, and Zimbabwe are occupied by HIV-infected patients. This means that these beds are not available for patients with other illnesses. The impact on important social needs is shown by an estimate that treating one AIDS patient costs as much as educating 10 primary school pupils for 1 year.

A few countries have had some success in combating the spread of AIDS. The government of Uganda was one of the first to recognize and respond to the epidemic. It invested heavily in an education and outreach program involving HIV testing, counseling, and treatment. These programs helped reduce Ugandan infection rates by more than 50 percent from 1992 to 1999. Senegal acknowledged the need to

Box 6-1. —*continued*

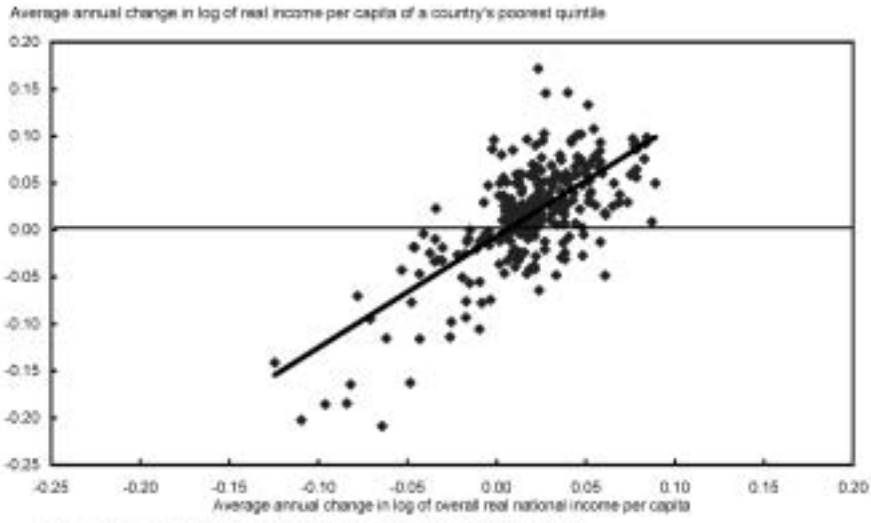
address the AIDS problem as early as 1986 and instituted education and outreach prevention programs. These efforts helped keep the infection rate low (below 1.8 percent), even as infection rates rose dramatically in the country's neighbors. At the end of 2001, only about 0.5 percent of Senegalese adults were HIV-positive.

The scope of the epidemic requires a global response, and the United States has played a major role in this effort. For example, in May 2001 the United States took a leadership position on the Global Fund to Fight AIDS, Malaria and Tuberculosis. The United States now leads the world with the largest pledge, $500 million, to the Global Fund. In 2001 the United States and other WTO members agreed to help developing countries that lack pharmaceutical manufacturing capacity by improving their access to drugs that combat the disease. This access will be increased by ensuring appropriate flexibility in the WTO rules that allow countries to compel licensing of patented medicines in the event of a domestic health emergency. Although final agreement on implementing this commitment has not yet been reached among WTO members, the United States has unilaterally pledged not to challenge any member that breaks multilateral rules to export drugs produced under compulsory licenses to poor countries in need. In June 2002 the President announced a $500 million International Mother and Child HIV Prevention Initiative which will help reduce transmission of HIV from infected pregnant women to their children in 12 African and Caribbean nations. In the 2003 State of the Union address, the President announced the Emergency Plan for AIDS Relief, a five-year, $15 billion initiative to turn the tide in the global effort to combat the HIV/AIDS pandemic. This proposal nearly triples the current U.S. commitment to fighting AIDS internationally.

Bank estimates that 1.2 billion people, or 20 percent of the world's population, still lived on less than $1 a day in 1998. Evidence that economic growth can benefit the poor makes the pursuit of growth-improving policies and institutions all the more vital.

Of course, the relationship between economic growth and measures of the human condition can be complicated. For example, evidence suggests that some measures of environmental quality show consistent improvement as countries become richer. This appears to be the case, for example, with such indicators as the availability of potable water and concentrations of arsenic in water supplies. However, there is also evidence that other measures of environmental quality initially deteriorate, on average, as countries go through

Chart 6-2 **Growth Rates of National Income and Income of the Poorest**
On average, income per capita of the poor (defined as the poorest 20 percent within each country) has risen one-for-one with overall national income per capita.



Note: Data are for 92 developing and developed countries for 1950 to 1999.

Source: David Dollar and Aart Kraay, "Growth is Good for the Poor," *Journal of Economic Growth*, Sept. 2002.

the early stages of development, but then improve once these countries become sufficiently rich. For example, one study finds that the concentration of sulfur dioxide in the atmosphere rises as poor countries begin to industrialize, but then falls as income per capita continues to rise beyond a certain point. Similar results have been found for deforestation and for atmospheric concentrations of particulate matter.

This inverted U-shaped relationship between economic growth and environmental quality could reflect changes in the composition of output. This could happen if countries undergoing industrialization initially specialize in goods-producing industries with relatively high emissions and then eventually shift to services industries, which typically generate lower emissions. The relationship could also reflect the greater ability of richer countries to devote resources to environmental measures, perhaps combined with increased demand for such measures as average incomes rise and people's basic material wants become satisfied.

Promoting Growth

The evidence just laid out suggests that economic growth is critical for improving the lives of millions in the developing world. This leads to some natural questions for policymakers: What can be done to improve growth

rates? Why have some countries grown while others remain in poverty? The answers to these questions are critically important for governments of low- and middle-income countries as they try to improve the lives of their people. The answers also have helped the Administration in the design of its three major international economic initiatives, as will be detailed below.

For some countries, economic success may simply reflect their endowment with valuable natural resources such as oil or diamonds. But even countries with large supplies of such commodities can suffer poor economic performance. For example, Nigeria was the fifth-largest petroleum exporter among the OPEC countries over the 1980-2000 period, with average annual oil revenue of $18 billion, yet its average annual per capita growth rate over this period was –1.1 percent. Similarly, Saudi Arabia experienced a growth rate of –2.8 percent over this period despite its immense oil wealth.

Geographic location also influences economic outcomes—the good fortunes of Chile and Botswana notwithstanding. A country's location affects the costs of transporting its goods to major markets, the productivity of its agricultural resources, and the likelihood of major natural catastrophes such as droughts, earthquakes, or hurricanes. For example, one benefit of a coastal location is that it allows access to international sea routes, making transportation of goods far more efficient. One study suggests that, all else equal, landlocked countries have growth rates 1.2 percentage points lower on average than countries with outlets to the sea. Countries in tropical regions apparently face a similar disadvantage: the same study finds that their growth rates average 1.1 percentage points lower than those of countries outside the tropics. The poor average performance of tropical countries is due at least in part to endemic diseases, which can create serious health problems that often have a measurable impact on growth. In Sub-Saharan Africa, for example, health problems associated with malaria alone have been estimated to reduce average annual growth by as much as 0.6 percentage point.

Geography also affects growth indirectly through its effect on institutions, for example through the legacy of European colonization. In those parts of the world where conditions were relatively hospitable to Europeans—for example, where settler mortality rates were low—the settlements that the European countries established tended to have better institutions, such as effective judicial systems and strong property rights protections. Conversely, in regions with high settler mortality rates, such as the tropics, European colonizers tended to invest less in building these pro-growth institutions. The weakness of these institutions continues to inhibit economic performance decades and centuries later.

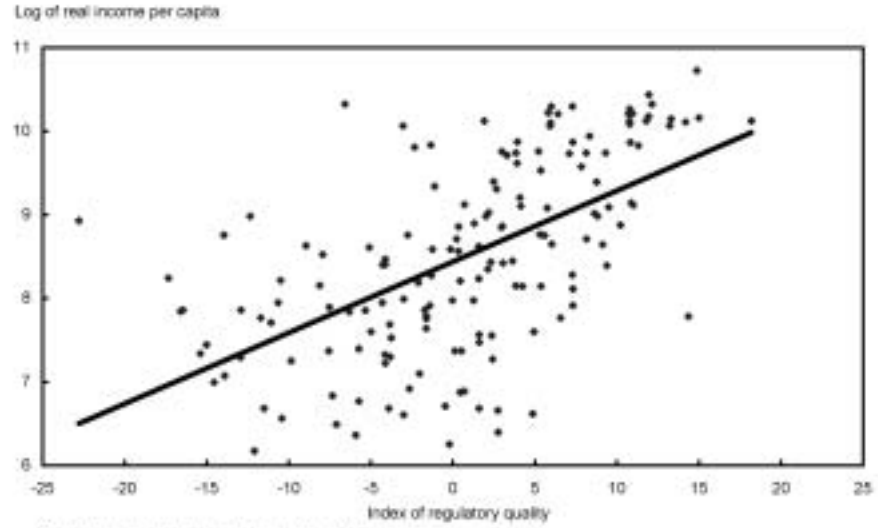
Clearly, natural resources and geography make a difference for economic outcomes, but they are not the sole determinants. Sound policies and institutions, both of which are shaped by the deliberate decisions of individuals

and governments, are also important. In particular, decisions involving the role of government in the economy (economic freedom), the development of political and legal institutions (governing justly), and the health and well-being of the population (investing in people) are all critical in shaping the environment in which people work and invest.

Charts 6-3 and 6-4 show that higher incomes are associated with less burdensome regulation and better protection under the rule of law. Chart 6-3 shows the relationship between income per capita and an index of regulatory quality; the latter is a composite measure, developed by the World Bank, of levels of regulation, government intervention, and price controls within a country, and thus an indicator of economic freedom. Chart 6-4 shows the relationship between income per capita and a similarly constructed measure of the rule of law, which assesses the strength of property rights and the prevalence of crime and corruption; this measure captures aspects of governing justly. Higher positive values of these two measures correspond to a less onerous regulatory burden or stronger rule of law, respectively. The solid line in each chart shows a fitted relationship between the indicated measure and income per capita. Both charts show a clear positive relationship. Of course, a positive correlation between measures of good policies and institutions, on the one hand, and income on the other does not necessarily demonstrate that the former causes the latter—it could be that countries with higher average incomes are better able to afford or demand effective government. But other evidence suggests that, to an important degree, higher income is driven by good policies and institutions, not the reverse. In other words, explicit government decisions, like the decision to enforce the rule of law and to protect property rights, improve economic performance.

Table 6-1 above lists some selected indicators of investment in people and shows their relationship with income per capita. Expenditure on health and education, measured as a percentage of GDP, rises as income increases. The increases in public expenditure on health are particularly dramatic: low-income countries spend less than 1 percent of their GDP on health, compared with 2.9 percent and 6.0 percent for middle- and high-income countries, respectively. Immunization rates for certain major childhood diseases in high-income countries are over 30 percentage points higher than in low-income countries. Public expenditure on education also rises with income, but less dramatically than the health variables. As with the variables discussed above, these figures do not indicate the reason for this positive relationship: whether it is that richer countries can afford to spend more on education and health, or that more investment in education and health leads to higher incomes. But the relationships are suggestive that private and public investment in health and education can be important for growth.

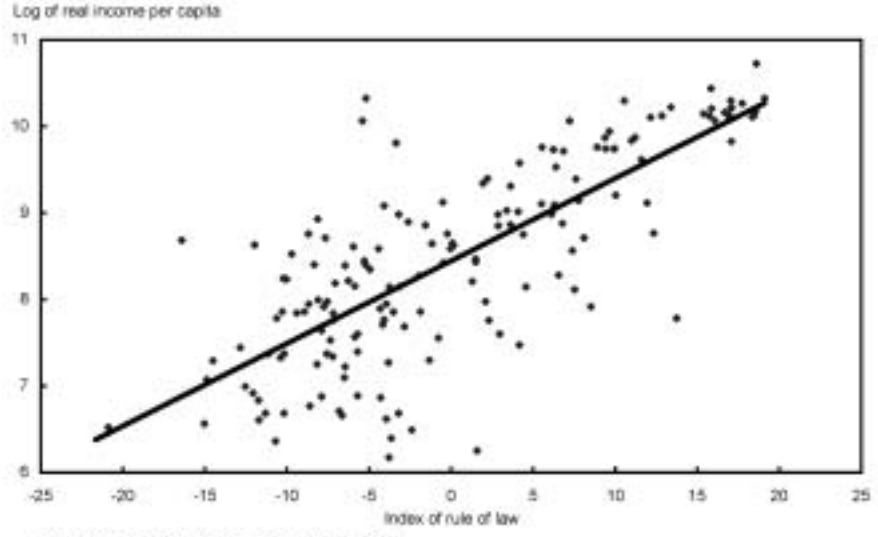
Chart 6-3 **Regulatory Quality and Income per Capita**
Incomes are higher in countries with higher regulatory quality.



Note: Income adjusted for purchasing power parity.

Source: Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobatón, "Governance Matters," World Bank Policy Research Department, Working Paper No. 2196, 1999, using updated data for 2000-2001.

Chart 6-4 **Rule of Law and Income per Capita**
Income levels are higher in countries with stronger rule of law.



Note: Income adjusted for purchasing power parity.

Source: Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobatón, "Governance Matters," World Bank Policy Research Department, Working Paper No. 2196, 1999, using updated data for 2000-2001.

Pro-Growth Principles

This section lays out three critical areas where countries can improve economic performance. Promoting economic freedom helps firms, workers, and consumers respond to market signals. Governing justly helps create an environment in which entrepreneurs, investors, and ordinary people can make economic plans with confidence that the government will not undercut those plans with arbitrary decisions. Investing in people is important for growth because an educated and healthy population is critical for taking full advantage of a society's economic potential.

Economic Freedom: Competition and Entrepreneurship

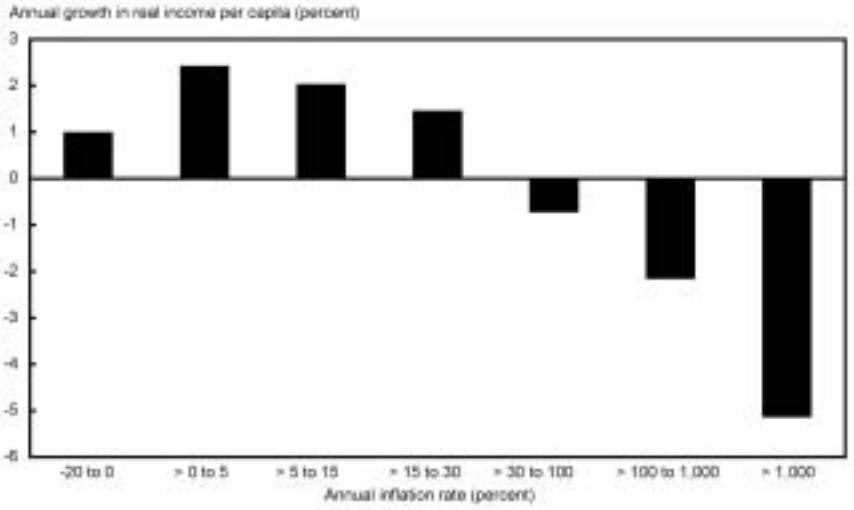
Economic freedom is fundamental to growth. One of the primary responsibilities of a government pursuing pro-growth policies is to nurture a stable, open economic environment in which market signals direct the allocation of resources. Reliance on the market provides incentives for entrepreneurs to take risks by starting new firms and investing capital in existing ones. Competition from both domestic and foreign sources will require firms to use resources efficiently. Market signals encourage workers to raise their productivity, not because a government instructed them to do so, but because they see it in their own interest. A pro-growth environment is supported by a stable macroeconomic environment, appropriate government regulation, and openness to competition from both domestic and foreign sources, as well as acceptance of foreign direct investment and financial market liberalization.

Macroeconomic Stability

A stable macroeconomic environment, characterized by low and stable inflation and responsible fiscal policy, is an important component of a pro-growth framework. Also important is an exchange rate for the country's currency that is not set arbitrarily by the government but reflects market conditions and is sustainable given the country's economic conditions. Macroeconomic stability also facilitates access to international capital markets. Foreign lenders will demand a higher interest rate on loans to an unstable economy, if they lend at all, and foreign equity investors will avoid countries with chronic macroeconomic problems that result in poor returns.

High and variable inflation makes it difficult for individuals and firms to plan for the future; the resulting uncertainty leads to lower consumption and investment and thus slower growth. This connection has been found in many studies, even after taking into account other economic factors such as income, education, investment, and openness to trade, and social factors

Chart 6-5 **Inflation and Growth in Income per Capita**
Higher inflation is generally associated with slower growth, with the strongest effect for inflation rates over 30 percent.



Note: Data are for 136 developing and developed countries for 1960 to 1994.

Source: Michael Bruno and William Easterly, "Inflation Crises and Long-Run Growth," World Bank Policy Research Department, Working Paper No. 1517, 1997.

such as life expectancy, fertility, and inequality. One study suggests that the adverse effects of inflation on growth in developing countries are greatest when inflation is high. Chart 6-5 illustrates this point by comparing inflation and growth for 136 developing and developed countries from 1960 to 1994. Although higher inflation is associated with slower growth, the effect is most apparent when inflation exceeds 30 percent a year.

Fiscal deficits have been linked to inflation in developing countries, because governments may be tempted to print money to finance large budget deficits. This tendency is particularly problematic in countries with fixed exchange rates. Under a fixed exchange rate regime, the monetary authority must buy or sell domestic currency as economic conditions change, to maintain the official exchange rate peg. If budget deficits lead to excessive domestic money creation through central bank purchases of government bonds, there will be pressure for the domestic currency to depreciate. The monetary authority will then be forced to buy domestic currency with foreign currency to maintain the peg. Because its foreign exchange reserves are necessarily limited, persistent fiscal deficits and the consequent exchange market intervention increase the likelihood of a balance of payments crisis and undercut foreign investor confidence.

Economic growth has been shown to be slower in countries with larger governments, as measured by government purchases of goods and services as a percentage of GDP. Maintenance of an appropriate size and scope of

government, with efficient mechanisms for both expenditure control and revenue collection, is vital for economic performance. It is crucially important to give a high priority to strengthening public expenditure management. Improved transparency and accountability, including public expenditure tracking and fiduciary management, are needed to ensure more effective use of domestic and external resources and thus make progress in increasing growth and reducing poverty.

Increased government spending can require higher taxes for its financing, and this has adverse effects on growth, since taxes distort incentives in a well-functioning economy. In particular, taxes alter relative prices, leading to efficiency-reducing economic distortions and slower growth, by interfering with the market's ability to allocate resources.

When governments must finance large expenditures through high taxes, those on whom the taxes are imposed will have an incentive to avoid them. Faced with widespread tax avoidance or evasion, governments might be tempted to turn to schemes that promise to secure revenue but are inefficient and particularly costly to the economy. One such measure now in place in a number of developing countries is the financial transactions tax, a tax levied on bank account withdrawals or deposits (or both). Such a tax creates an incentive for financial transactions to take place outside of the formal financial sector. This reduces financial intermediation, thus shrinking the base from which the tax was designed to garner revenue. Indeed, research on the effects of such taxes in several countries in Latin America has found that the economic efficiency loss has ranged from 30 percent of the revenue collected in Venezuela to 45 percent in Ecuador. Moreover, effective financial intermediation is important for growth for its own sake, so that the adverse effects of taxes on financial transactions extend beyond the direct impact on the efficiency of revenue generation.

Taxes on international trade can be similarly attractive to governments, because the activity to be taxed is localized at a relatively small number of border crossings, ports, and freight yards, making collection relatively easy. But such policies also shield domestic industries from competition while raising costs for domestic firms that rely on imported components. When taxes on imports and exports are high, they create increased incentives for smuggling, which both reduces government revenue and undercuts the rule of law.

As already mentioned, fear of macroeconomic instability decreases the attractiveness of a country to foreign investors. One measure of the private sector's assessment of the macroeconomic situation in a country is the country risk ratings developed by credit analysts. These measures are designed to help investors predict future investment returns. They are based on various measures of macroeconomic stability, including government debt and inflation as discussed above. They also take into account other factors

important to growth, including the country's political situation, the level of corruption, the quality of the bureaucracy, the balance of the current account in goods and services, and experience with government expropriation of private investments. These are discussed below.

Regulation, Privatization, and Entry

Government interventions that lower growth rates include onerous or inefficient regulation, government subsidies that distort market signals, direct intervention in production through government-owned enterprises, and government-directed lending. A large body of research has documented the damaging effects of excessive government involvement in the economy in developed and developing countries alike. For example, evidence from 85 countries over the period 1960-85 suggests that, holding constant other factors including the initial level of income, a one-time 10-percentage-point increase in government consumption as a share of GDP is associated with a one-time 1-percentage-point decrease in the growth of GDP per capita.

Privatization of state-owned enterprises has been found to improve growth. In one study of 23 international airlines over 1973-83, privately owned airlines were found to be more productive than their state-owned counterparts: a change from complete state ownership to private ownership increased an airline's rate of productivity growth by 1.6 to 2.0 percentage points a year. Similar results have been found for privatization of public utilities. In Chile, for example, privatization of electric utilities led to more widespread access to electricity among the poor. Before the reform, which began during the mid-1980s, 25 percent of the poorest fifth of the population lacked access to electricity; 10 years later this figure had fallen to about 6 percent.

An important caveat, however, is that privatization alone is not sufficient to guarantee benefits to consumers; competition must increase as well. Otherwise the effect might be simply to replace a public monopoly with a private one, with continued restraints on trade and continued high prices. This problem was highlighted in a study of telecommunications reform in 30 Latin American and African countries from 1984 to 1997: the study found that the benefits to consumers, including lower prices and better service, resulted from increased competition rather than privatization per se.

Governments can enhance competition by reducing regulation on domestic firms that hinders their growth. Often, small producers in an industry, unable to meet the burden imposed by the official business registration process, choose instead to operate informally, that is, without official sanction. A drawback to operating in this way, however, is that these informal producers find it more difficult to raise capital from financial intermediaries within the formal sector, such as banks. This prevents them from growing and competing with

the larger, established firms in their industry. In addition, informal producers are less likely to participate in international markets, because they have difficulty obtaining the letters of credit necessary for trade.

In Peru, for example, a study found that about half of all workers were employed outside the formal sector, in part because of the onerous registration fees and other entry requirements faced by their employers. Subsequent research has shown that undue entry restrictions continue to limit business formation in a number of countries, and not only developing ones. One study of 85 countries reports that, in the late 1990s, an entrepreneur starting a new business in Austria needed to complete nine separate procedures, which took at least 37 business days and cost the equivalent of $7,085 in government fees. Bolivian entrepreneurs were required to complete 20 different procedures, pay $2,682 in fees, and wait at least 88 business days to acquire the necessary permits. By contrast, in Canada an entrepreneur could finish the same process in roughly 2 days, paying $280 in government fees and completing only two procedures.

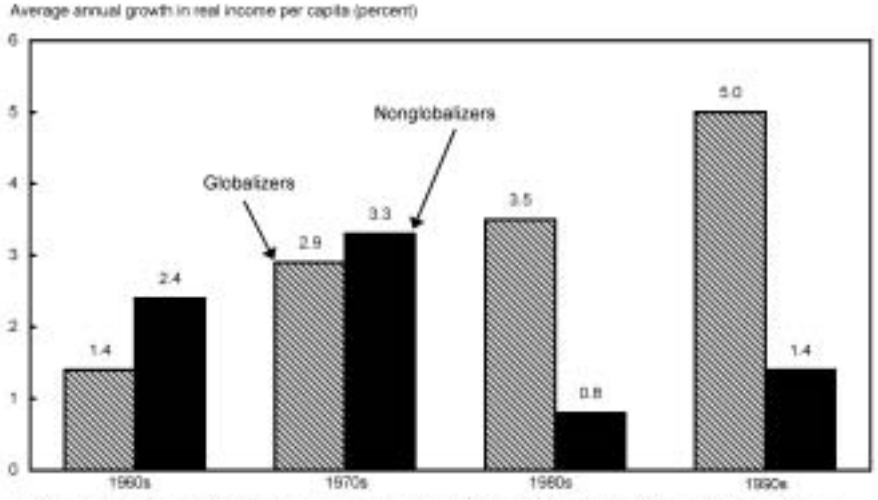
Clearly there are many ways in which government involvement in the economy through regulation can affect economic outcomes. The measure of regulatory quality introduced in Chart 6-3 incorporates the impact of a number of domestic government interventions, including the incidence of price controls, poor bank supervision, and excessive regulation. The World Bank estimates that a 1-standard-deviation improvement in this regulatory quality measure is associated with a threefold increase in growth of GDP per capita.

Openness to International Trade

International trade increases competition and productivity growth. It also brings greater specialization according to comparative advantage, lower prices, and a wider selection of products and services for both consumers and firms. Openness to trade allows exporters to sell their output in a larger market; workers in export industries benefit as the resulting higher prices for the goods they make translate into higher wages and incomes.

Chart 6-6 illustrates the relationship between growth and a measure of openness as estimated in a recent study of developing countries. A sample of 72 developing countries was split into “globalizers” and “nonglobalizers,” with the former defined as the 24 countries in the sample that achieved the largest increases in their trade-to-GDP ratio from 1975 to 1995. In the 1960s and 1970s, the nonglobalizers experienced somewhat faster growth of real income per capita on average than the globalizers. During the 1980s, however, globalizers experienced much higher growth rates: real income per capita grew an average (weighted by population) of 3.5 percent a year in these countries, compared with 0.8 percent for the nonglobalizers. The divergence was even greater during the 1990s, with 5.0 percent annual

Chart 6-6 **Openness and Growth**
In the 1980s and 1990s, developing countries that were more open to the international economy grew faster than those remaining more closed.



Note: Data are for a sample of 72 developing countries split into "globalizers" and "nonglobalizers," with the former defined as the 24 countries that achieved the largest increases in their trade-to-GDP ratio from 1975 to 1995.

Source: David Dollar and Aart Kraay, "Trade, Growth, and Poverty," World Bank Development Research Group, 2001.

growth for the globalizers versus 1.4 percent for the rest. To put these differences into perspective, had the average globalizer and the average nonglobalizer each begun with an income per capita of $1,000 in 1980, by 2000 the globalizer's income per capita would have grown to $2,300, and the nonglobalizer's only to $1,240.

The fact that the latter figure is an average for fully two-thirds of a large sample of developing countries suggests that enormous benefits remain to be reaped from further removal of trade barriers and other distortions that affect trade. These gains are particularly important for developing countries, which are typically too small to affect the world prices of the goods they import or export. If the government of such a country imposes a trade tax, foreigners will continue to buy and sell at the unchanged world price, since they have alternative markets. Consequently, the impact of any trade tax in a small country ultimately is borne by domestic consumers and firms. The tax will lead to lower productivity, lower standards of living, and higher costs of producing goods. Higher barriers in developing countries will also reduce trade with other developing countries, many of which would be natural trading partners under free trade. According to an estimate by the World Bank, developing countries would gain over three times as much from tariff elimination by other developing countries as they would from tariff elimination by developed countries.

An important part of these gains stems from improvements in productivity resulting from lower trade barriers and increased trade. Efficient firms will have an incentive to expand production and increase exports. Increased export production, in turn, results in lower average costs for firms that can exploit economies of scale. Inefficient firms, unable to export to the international market, or under increased competitive pressure from imports, will reduce output or close. A parallel analysis applies to import-competing firms: those that can continue to produce will have an incentive to become more efficient, while less efficient firms will leave the industry. In short, international competition provides incentives to increase efficiency and productivity, leading in turn to higher income per capita. (Chapter 1 further explores the links between productivity and growth.)

Trade liberalization has in fact increased productivity in a number of developing countries. A study of India for the 1986-93 period shows that the trade liberalization that began there in 1991 led to increases in the growth rate of productivity ranging from 3 to 6 percentage points in three out of four industries considered: electronics, electrical machinery, and nonelectrical machinery, but not transport equipment, all recorded gains. Similarly, evidence suggests that productivity growth in Côte d'Ivoire tripled after trade liberalization took place there in 1985. Chilean firms also increased productivity in the wake of trade liberalization in the 1970s and 1980s: industries facing competition from imports experienced productivity gains 3 to 10 percentage points higher than those of industries not engaged in trade. Plants that closed down were on average 8 percent less productive than those that continued to operate.

A further advantage of international competition, in developed and developing countries alike, is that it can reduce the ability of firms to exploit market power, which can reduce productivity and thus growth. Firms insulated from competition, whether domestic or international, not only are free to increase prices to consumers, but also can become inefficient if they restrict output and fail to take full advantage of economies of scale. Studies of India, South Korea, and Côte d'Ivoire suggest as well that domestic monopoly power fell after trade reform, as shown by a drop in price-cost markups and an increase in productivity in many industries. Evidence from India and South Korea indicates that international competition has increased the benefits from more fully exploiting scale economies. Opening to the world market increased production runs and lowered average costs in firms in these two countries.

Barriers to trade can have unintended consequences for the adoption of new, potentially growth-enhancing technologies. In 2000, Brazilian tariffs on data processing and information systems exceeded 20 percent, raising the cost of personal computers and contributing to a rate of computer ownership of only 4 percent of the population. That same year, Costa Rica had a far higher

rate of computer ownership (15 percent of the population) than Brazil, in part because of zero tariffs on computers, despite similar income per capita in the two countries ($4,600 in Brazil versus $3,900 in Costa Rica). Brazilian trade policies clearly add to the cost of realizing the productivity gains widely associated with computers.

Although increased trade leads to higher incomes and faster growth for the economy as a whole, it can also mean economic dislocation for some workers. Some firms will shut down, and some workers will lose their jobs or face lower wages as international competition increases. Such dislocation can pose a hardship for those who lack alternative employment near where they live, or whose specialized skills are not easily transferred to other employment. Because such job turnover is an unavoidable part of a growing and dynamic economy, countries must address the social consequences of dislocation, including dislocation due to trade, domestic competition, or technological change. Nor should they do so only for altruistic reasons: countries that have adequate private and governmental institutions to deal with such transition costs will experience fewer pressures to avoid further trade liberalization or other economic reform. (See Chapter 3 for a discussion of new approaches to Trade Adjustment Assistance in the United States.)

This is important, because societies that pursue pro-growth policies such as openness to trade will become richer as a result, and therefore will have the resources they need to deal more effectively with these changes. Countries that instead avoid trade liberalization will face the opposite problem: a fortunate few will see their jobs protected, but many more will have lost real opportunities for improving their lives, perhaps without ever knowing it. The economy as a whole, meanwhile, will experience slower growth and have fewer resources with which to deal with broad social problems.

Foreign Direct Investment and Financial Flow Liberalization

Economic freedom is also enhanced by openness to the flow of capital across international borders. Access to global capital flows provides countries with a means to finance investment projects and the acquisition of new technologies. At the same time, the ability to invest capital abroad helps investors spread their risks and aids in the establishment of new industries. Capital account liberalization, especially in the context of sound banking supervision and financial regulation, leads to improved economic growth, especially in developing countries. One study found that the benefits of capital account liberalization may be twice as great in non-OECD countries as in OECD countries. (The Organization for Economic Cooperation and Development, or OECD, is an association of industrialized market economies.)

Openness to financial flows, low trade barriers, and a good regulatory regime can encourage foreign direct investment (FDI, defined as cross-border

flows of capital for the purpose of control of an enterprise). In particular, if foreign firms are able to freely move financial assets and profits into and out of a country, and if tariffs are low on imported inputs, they will be more inclined to set up plants in that country, thus contributing to its growth. A lack of burdensome regulation can also encourage foreign investors to make the commitment to establishing a long-term presence in a country. On the other hand, FDI may be attracted by high tariffs on final goods entering the country; this provides an artificial incentive for foreign companies to avoid the duties by establishing a domestic presence.

Besides bringing in valuable capital, FDI also spurs growth through the management skills, know-how, and new technologies that foreign investors bring into the host country. These advantages have been shown, in both developed and developing countries, generally to result in higher productivity in foreign establishments than in domestic firms, which in turn leads to higher wages in the foreign-owned plants. Mexican manufacturing data for 1970 suggest that both value added and gross output per employee were more than twice as high in plants owned by multinational corporations as in private domestic plants. Estimates from a study of Uruguay in 1988 found that productivity, measured by value added per worker, was twice as high on average in foreign firms as in domestic firms. One study of Indonesian manufacturing found that, in 1996, foreign-owned firms paid wages as much as 20 percent higher for white-collar workers and 12 percent higher for blue-collar workers than did domestic firms.

Financial sector openness coupled with domestic financial liberalization spurs competition among domestic financial firms and between them and foreign participants in the financial sector. This openness exposes the domestic firms to the best practices of world-class financial institutions and exerts pressure on them to adapt quickly. Developed countries, including the United States, have gained from financial market liberalization. In a similar way, developing countries "import" not only the latest bank management technology, but also the best risk management practices, the best work force training, and the newest financial products. Developing countries that are open to the establishment of a foreign financial presence in their economies reap especially important benefits: those with open and competitive financial services markets have growth rates up to 2.3 percentage points faster than those with closed markets.

For many developing countries, reform of the financial sector will require liberalization of domestic laws and regulations to allow foreign firms to provide services in the domestic market on the same terms as domestic financial firms. Transparency will require a mechanism by which firms can review and comment on proposed regulations and obtain easy access to information on existing laws, regulations and licensing, and other requirements in the financial

sector. In such a highly regulated area, it is critical that all participants be aware of any changes in the rules or their administration. In addition, effective planning by firms and workers requires that government regulations not change arbitrarily or too frequently. Otherwise investment can be expected to be lower, because the returns will be more risky. Once again, regulatory quality can play an important part in creating an environment in which economic growth can occur.

Efficient financial markets can also help elicit the best results from FDI. In particular, one argument in support of FDI is that it enables residents of the host country to acquire knowledge and learn new techniques while working in foreign-owned plants, and then go to work for (or start) a domestic firm and apply that knowledge there. However, empirical studies have found mixed evidence on whether such technological spillovers systematically occur. If the country's financial system is not well developed (for example, if credit extended by financial intermediaries to the private sector is small in relation to GDP), entrepreneurs may not be able to obtain financing to apply the new knowledge and technology in a new plant. One study of developed and developing countries from 1975 to 1995 suggests that a country's annual growth rate increases by 0.6 percentage point when FDI is undertaken in the presence of well-developed financial markets.

Governing Justly: Rule of Law and Government Accountability

A growing body of research shows that the quality of institutions is critical in explaining differences in growth rates across countries. For example, if domestic legal institutions cannot or do not enforce contracts, businesses and individuals will be less likely to commit to long-term commercial relations, absent informal ties such as family relationships. Government regulation or bureaucratic indifference that makes it difficult to acquire and retain rights to property can slow capital formation. Governments that are unresponsive to their citizens, or that act arbitrarily when making economic decisions, will lose the trust both of the domestic population and of potential foreign investors.

Consequently, countries seeking to accelerate their economic growth must promote institutions that allow individuals and firms to respond to market incentives. The rule of law is one of the most important of these institutions, because it directly affects the willingness of individuals to save and of entrepreneurs to undertake commercial activities.

If the rule of law is to provide an environment supportive of growth, it must encompass not just what is commonly thought of as "law and order," but also, more broadly, the protection of property rights, the ability to make and enforce contracts, and the ability to settle private disputes fairly and effectively. People must also have reason to expect that the government will

not intervene in legitimate private transactions by expropriating property, systematically favoring either debtors or creditors, or supporting one sector of the economy over another in legal proceedings. Returns on investment have been found to be higher in countries with strong rule-of-law protections. For example, one study concluded that rates of return on World Bank-financed projects over the last several decades were 8 to 22 percentage points higher in countries where the rule of law was well established than in countries where it was not. Another study of 115 countries from 1960 to 1980 found that, on average, income growth was nearly three times as rapid in countries with greater civil liberties and political freedoms as in countries that were less free.

Enforcement of property rights is an important aspect of the rule of law, regardless of a country's income. Legally held assets, legitimate investments, and profits from legal commercial transactions must be protected against seizure by criminals—or by governments without compensation. Countries whose governments do not enforce property rights can be expected to suffer from slower growth. To see this, consider the economic effects of a government that routinely seizes private resources without legal justification or adequate compensation. Investors, assessing the risk of expropriation of their assets, will then require a higher rate of return on any projects they undertake, and some investment that would otherwise bring economic benefits to the country—higher income, higher productivity, higher wages—will be forgone.

The poor may be especially hurt by the absence of property rights. Many of the poor in the developing world lack formal title to what property they have, which means they cannot use it as collateral to borrow to expand their informal businesses or establish a new enterprise. In addition, they often must rely on extralegal means to insure against appropriation of their investment by others, because they cannot rely on the formal legal system to protect their property.

Institutions that protect property rights are crucial for economic growth. One study links the successful development outcomes in East Asia over the past several decades to the quality of institutions and property rights there. Examining eight countries in the region over the period 1960-94, researchers found important contributions from just three variables: institutional quality, initial income, and initial education. Those countries with the weakest institutions—Indonesia and the Philippines—had the slowest growth.

Inadequate legal protections for passive or minority investors also affect investment and growth. One reason is that, in countries with weak investor protection, managers may be able to exploit inside information about their firms, to the disadvantage of outside investors. Knowing this, investors will be less willing to commit funds in the first place. A study of individual firms in 38 developing and developed countries over the period 1988-98 found that countries with weak protection for outside investors had capital stocks only half as large as countries with strong investor protections.

The rule of law is particularly important for the development and efficiency of the financial sector. For example, banks cannot function effectively without strong institutions that support the rule of law. Modern banking depends on the confidence of depositors that banks will safeguard the monies in their trust and that the government will provide supervision and regulation to ensure the banks' soundness. Reforms that strengthen creditor rights, contract enforcement, and accounting practices boost financial development, and with it economic growth. One study shows that if countries improve the legal protection of creditors, they will have much stronger financial development, which in turn accelerates long-term growth. Another study found evidence that the positive impact of capital account liberalization on growth (as described above) is enhanced through institutions that promote the rule of law.

Of course, the nature of laws and institutions matters—the laws must be appropriate and the institutions effective. The laws and institutions governing bankruptcy proceedings provide an example. In a number of developing countries, the lack of sound bankruptcy law, effective bankruptcy courts, and other institutions effectively prevents creditors from enforcing their claims on bankrupt debtors, even when their loans are collateralized. Without the ability to collect on collateral, financial institutions will require higher interest rates on any loans they offer, effectively hampering access to credit for firms throughout the economy. The greatest impact may well be on smaller firms seeking to grow but unable to finance investment projects solely from internal cash flow. The importance of bankruptcy institutions is confirmed in a recent study of 43 countries: researchers found that differences in laws related to investor protection were attributable to the historical origin of countries' legal systems (for example, English, French, German, or Scandinavian), and that these differences had lasting effects. In those countries whose legal systems make it difficult for creditors to seize collateral secured against bankruptcy, credit extended to private firms was lower as a share of GDP than in other countries. Reduced availability of credit can be expected to translate into higher real interest rates in these countries, and thus lower rates of investment and growth.

When the rule of law is weak, corruption can flourish, and this, too, leads to slower growth. Corruption affects growth through a number of channels, including tax evasion, distorted investment decisions, and suppression of legitimate business. Corrupt officials add to the damage of inefficient regulations, because bribes then determine what economic activity is approved. Corruption represents a tax on economic efficiency and social progress and is an enormous barrier to both domestic and foreign investment.

Corrupt individuals in the private sector may conspire with corrupt officials to avoid taxes, depriving the government of needed revenue. The result is likely to be higher tax rates on a smaller base, which can cause economic

distortions. For example, a study of 39 Sub-Saharan African countries covering the period 1985-96 found that a 25 percent increase in corruption led to a decrease in tax revenue of 2.1 to 2.8 percent of GDP.

Corruption can harm growth more directly by limiting investment and entrepreneurial activity. Corruption increases risk and uncertainty, which reduce the incentives to invest. A further channel for corruption is the diversion of resources intended for public infrastructure to the private consumption of corrupt officials. This leads to less investment and slower growth. One study of 57 developing and developed countries found that a one-third decrease in corruption was associated with an increase in the investment share of GDP of 2.9 percentage points, and an increase in annual growth in income per capita of 0.8 percentage point. Corruption can also retard the development of legitimate business. A study of Ugandan firms using data from 1995 to 1997 found that a 1-percentage-point decline in the rate of bribery was associated with an increase in firm growth of about 3.5 percentage points.

The quality of political institutions can also play a role in economic outcomes. In particular, increasing citizens' voice in determining political decisions and ensuring the accountability of public officials fosters a more responsive government and strengthens the rule of law. A responsive and responsible government will gain the public's trust and create more incentives for private investment. One study that attempted to assess the economic impact of these factors estimated that an increase in a measure of "voice and accountability" was associated with a marked increase in GDP per capita. Studies using broader measures of government effectiveness that incorporate individual freedoms, regulatory quality, and the amount of bureaucracy in a country have yielded similar results: an increase in a measure of government effectiveness corresponded to a marked increase in GDP per capita. Strong civil liberties and overall government effectiveness also have an impact on other social indicators: countries that score higher on voice and accountability and on government effectiveness tend to have lower infant mortality and higher literacy rates.

Investing in People: Health and Education

Investment in human capital is also important for economic growth. Well-trained and healthy workers are more likely to make the greatest possible use of the physical stock of capital in any country.

Formal education is a direct way to invest in human capital, and there is some evidence of a positive relationship between national income and educational attainment. In 2000 the average duration of schooling in low-income countries was 4.4 years (3.3 years for females), compared with 10 years in high-income countries (9.8 years for females). In a cross-country analysis of

98 developing and developed countries covering 1960-85, a 1-percentage-point increase in the primary school enrollment rate was associated with a 2.5-percentage-point increase in growth in income per capita.

Education is most effective in an environment in which the investment in time, effort, and money devoted to education leads to higher returns from increased labor productivity. If a society's high-paying jobs are awarded based on political connections or family and ethnic ties, those excluded from such jobs will have less incentive to pursue their education, which in turn will lead to slower economic growth. Similarly, if a country's best-educated young people find employment in inefficient state-owned enterprises or bureaucracies (as was the case in the centrally planned Soviet Union, for example), the impact of education on labor productivity will diminish. Empirical results from research on 12 Asian and Latin American countries over 1970-94 are consistent with this hypothesis. In particular, the effect of education on growth was found to be negligible in closed and highly regulated economies; in countries that had undertaken free market reforms, however, a 5 percent increase in educational attainment was associated with a 0.9-percentage-point increase in the annual growth rate.

There are important caveats to the conclusion that higher educational achievement necessarily leads to faster growth. One difficulty is that the links between formal education and growth are complex. For example, some evidence suggests that the positive relationship between education and growth arises in part because growth leads to increased schooling. This could happen if the expectation of strong growth in the future leads to an increase in the demand for schooling today, as individuals sacrifice current earnings for higher wages in the future.

Education and the development of good institutions can be mutually reinforcing. Good institutions and policies can lead to higher returns on education and faster growth, and in turn, a well-educated population is an important element in developing good institutions. An illiterate population, for example, may be less likely to hold political leaders accountable, because it is hard to acquire information about poor policies and outcomes if one cannot read. An educated population is likely to be a well-informed population, and one that can exert pressure for sound policies and institutions.

Effective health care is also important for improving the quality of the work force and increasing economic growth. Healthy employees are absent from work less often, and the resulting higher utilization of capital leads to lower average costs and faster growth. Healthy workers also tend to earn higher wages, indeed more so in developing countries, where manual labor plays a larger role in the economy, than in industrialized and services-intensive developed countries. One study of 104 countries found direct evidence linking health and growth, suggesting that increasing average life expectancy (a standard indicator of a population's general health) by 1 year

can lead to a 4 percent increase in national income. This result suggests that countries with severe health problems and lowered life expectancy will have slower growth than they could otherwise achieve. The problem is particularly acute in low-income countries that face challenges associated with infectious diseases such as malaria and HIV/AIDS. (See Box 6-1 above.)

It is well established that countries with higher incomes have longer life expectancies, lower maternal mortality rates, and higher average birth weights. Determining the causal link between income and health is difficult, however, for reasons similar to those for income and education: on the one hand, countries with higher incomes can devote more resources to health care, but on the other, better health outcomes improve productivity and raise growth rates.

Health and education outcomes, of course, can be interlinked. Sick children are more likely to be absent from school, and this can lead to lower educational achievement and lower income later in life. For example, school-age children are especially susceptible to infestation by parasitic worms. Recent estimates suggest that as many as one in four people worldwide are afflicted with various types of worms; severe infestations can lead to anemia, malnutrition, and listlessness. A study of a joint public and private project in Kenya found that treatment with de-worming drugs led to a 25 percent reduction in primary school absenteeism and was cost-effective: the net present value of increased wages from increased school participation far outweighed the cost of treating the children. This suggests that effective programs to invest in people can lead not only to healthier children, but also to improved participation in schooling and ultimately to higher wages.

The Administration's Policies to Enhance Growth

The discussion thus far has made it clear that creating the right environment for growth in developing countries requires, above all, actions by those countries themselves. To complement and reward their efforts, the Administration has put forward three initiatives that will spur growth in developing countries and elsewhere by helping to create an environment in which incentives can improve economic opportunities. Trade Promotion Authority will help the President conclude trade agreements that will further integrate developing countries into the global marketplace and increase growth. The Millennium Challenge Account will increase development aid to countries that are pursuing policies and building institutions that adhere to the principles of good governance. The Administration's proposals to redirect the funds and priorities of the multilateral development banks will also help developing countries improve their growth prospects.

All three initiatives are consistent with the pro-growth principles that this chapter has laid out. The Administration's focus, under TPA, on trade liberalization within a rules-based system is based on the principle of openness to goods and capital flows, as well as the promotion of legal institutions and the rule of law. The MCA incorporates all of the principles described above by integrating them into the criteria used to determine the awarding of grants to developing countries. Reform of the MDBs will encourage private sector growth and effective economic management in the countries they serve.

Trade Promotion Authority

The significance of TPA is that it enhances the President's ability to negotiate trade agreements, by assuring foreign governments with which the United States negotiates that the Congress will vote yes or no on those agreements without amendment. The Congress retains its primary constitutional authority to regulate foreign commerce, and the Administration will continue to consult Members of the Congress frequently on matters relating to the course of trade negotiations.

The agreements made possible by TPA will benefit the United States by creating new export opportunities and lowering prices for imported goods and services. But TPA will also foster growth in developing countries by increasing competition. The rules-based agreements will also promote institutions in developing countries that will help them take full advantage of trading opportunities.

The increased integration of developing countries into the global marketplace has already brought those countries enormous benefits. Research suggests that a 1 percent increase in a country's trade relative to its GDP is associated with an increase in its income per capita of 3 percent. Moreover, evidence suggests that it is increased trade that leads to increased income rather than the reverse. A recent study suggests that the full implementation of trade liberalization under the Uruguay Round of multilateral trade negotiations, completed in 1994, increased developing countries' income by 0.8 percent, double the percentage increase accruing to the developed world. India's GDP is estimated to have risen an even greater 1.1 percent of GDP as a consequence of the same liberalization commitments.

Further trade liberalization will continue to raise world income. A recent World Bank study suggests that the elimination of all tariffs, export subsidies, and domestic production subsidies on goods would raise annual world income by $355 billion by 2015, with middle- and low-income countries receiving 52 percent of that increase. Another study suggests that if world barriers to trade in agricultural and industrial products and to trade in services were reduced by one-third, the gains to the United States alone

would translate into additional annual income of $2,500 for the average American family of four.

The President's new trade negotiating authority has already resulted in the successful completion on the substance of free trade agreement (FTA) negotiations with Singapore and Chile. These agreements cover a wide range of issues, including, among others, the eventual elimination of tariffs, increased openness to trade in telecommunications and other services, transparency requirements, protections for foreign investors, and provisions for enforcement of labor and environmental standards. One study suggests that although the net benefits to the United States from these two FTAs will be relatively modest (0.05 percent and 0.18 percent of GDP, respectively), the benefits to Chile and Singapore will be proportionately greater (0.6 percent and 2.7 percent of GDP, respectively).

TPA will provide an impetus to conclude a number of other trade agreements currently under negotiation, most of which are with developing countries. These negotiations include the ongoing discussions with countries in the Western Hemisphere toward a Free Trade Agreement of the Americas (FTAA) and the recently inaugurated talks with Australia, Morocco, the countries of Central America (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua), and the countries of the South African Customs Union (Botswana, Lesotho, Namibia, South Africa, and Swaziland). The commitment of the United States to conclude these talks under TPA reflects the Administration's determination to advance pro-growth trade liberalization, especially in the developing world.

The FTAA, in which 34 countries in North, Central, and South America will participate, is the most complicated and far-reaching of the regional trade agreements toward which the United States is currently negotiating. One study suggests that, when the FTAA is in place, the United States could experience a 0.6 percent increase in GDP, and the combined GDPs of the Latin American participants (excluding Mexico and Chile) could increase by 1.1 percent. The same study suggests that Mexican and Chilean GDP would rise by 0.8 percent and 2.5 percent of GDP, respectively, as a result of the FTAA.

As with the FTAs with Chile and Singapore, the benefits of these bilateral and regional agreements are proportionately larger for other countries than for the United States, although smaller in absolute dollar terms. The reason for the asymmetric effects is straightforward: the U.S. economy is so large relative to these trading partners that the economic benefits of FTAs with them will be small as a share of U.S. economic activity. In addition, U.S. trade barriers are already low on average, so that the impact at home of further trade liberalization will be modest. For example, the U.S. economy in 2001 was 151 times larger than the Chilean economy, and trade in goods with Chile (exports plus imports) amounted to only 0.4 percent of total U.S. trade. U.S.

tariffs in 2001 averaged 1.6 percent, compared with average Chilean tariffs of 8 percent; thus the costs of current trade barriers fall more heavily on Chile. However, U.S. exporters of goods and services and U.S. investors will be able to operate more freely in a fully liberalized Chilean market.

Despite their modest effects in relation to total U.S. output, these agreements are important to the United States as part of the broader U.S. effort toward multilateral reduction in trade barriers under the auspices of the World Trade Organization (WTO). TPA will be especially important for the United States and developing countries by helping bring the current WTO negotiations to fruition. The importance of further integrating developing countries into the world trading system is reflected in the name given to these negotiations: the Doha Development Agenda. (Doha, the capital city of Qatar, is the site of the WTO ministers' meeting where the agenda was launched.)

The United States has offered bold proposals in the Doha negotiations for the reduction of trade barriers on agricultural and nonagricultural goods. The agricultural initiative proposes to reduce agricultural tariffs, limit governments' support of agriculture to 5 percent of the domestic value of production, and eliminate agricultural export subsidies. The Administration has also proposed that, by 2010, WTO members eliminate all tariffs on nonagricultural goods that are currently below 5 percent and sharply reduce the rest, including those on textiles and apparel. Going further, the Administration has proposed that all nonagricultural tariffs be eliminated in all WTO member countries by 2015.

The reduction and eventual elimination of tariffs on goods is but one aspect of the U.S. trade liberalization agenda in the WTO negotiations. The United States has put forth over a dozen proposals to reduce barriers to trade in an array of services industries. In addition, the United States has advocated greater regulatory transparency, both through general disciplines and through rules applicable to specific industries, such as financial services. This initiative reflects the assessment, discussed above, that regulatory quality is key to economic outcomes.

These liberalization initiatives will bring important benefits to U.S. firms, workers, consumers, and farmers, both from increased exports and from lower priced imports. The U.S. agricultural and nonagricultural market access proposals are of particular importance to developing countries, since many expect to increase their exports of agricultural goods as well as textiles and apparel to developed countries if barriers are reduced. However, developing countries can also expect important efficiency gains and faster growth as they remove their own barriers.

The economic effects of the current WTO negotiations cannot be examined in detail until the outlines of the final agreement become clearer. One study provides some sense of the possible outcome, however, by

analyzing a hypothetical 33 percent reduction of trade barriers across all sectors. In this scenario U.S. GDP rises by 2 percent, that of Europe (the countries of the current European Union and the European Free Trade Area combined) by 1.5 percent, and that of Japan by 1.9 percent. The same study also predicts large increases in GDP in developing countries, including the Philippines (5.4 percent), South Korea (2.5 percent), Mexico (1.8 percent), Chile (2.4 percent), the rest of Latin America (1.4 percent), and the Middle Eastern and North African countries (1.9 percent).

These estimated effects of trade liberalization take into account only its static impacts, such as a reallocation of resources to more efficient uses and the benefits accruing to consumers from lower prices. The estimates do not capture the dynamic effects on growth, such as those arising from greater economies of scale, productivity gains, and access to improved technologies, that increased openness would bring. Including these effects could substantially boost the impact of trade liberalization. For example, the World Bank study previously cited found that, by 2015, world income would increase by another 134 percent, with 65 percent of that increase going to developing countries, in response to the multilateral elimination of all trade barriers. Thus, including dynamic effects increases the impact of liberalization but also increases the potential benefits accruing to developing countries.

The conventional estimates also typically fail to capture gains in services trade, in large part because quantifying barriers to such trade can be difficult. Nonetheless, services are becoming more important to developing countries, with their average share in GDP rising from an estimated 40 percent in 1965 to 50 percent in 1999. Removing barriers to services leads to lower costs and greater efficiency in such important sectors as telecommunications, e-commerce, transport services, professional services, and financial services. A World Bank study suggests that multilateral liberalization in the services sector alone would increase combined developing-country GDP by nearly $900 billion, a gain nearly five times greater than the anticipated benefits of merchandise trade liberalization.

Of all the trade liberalization initiatives currently on the agenda, the United States and its developing-country partners stand to gain the most from completion of the WTO negotiations, but the bilateral and regional agreements will also bring benefits. For example, a 33 percent cut in all global tariffs could lead to gains in U.S. and Chilean GDP of $177 billion and $1.9 billion, respectively, and an increase in world GDP of $612 billion. The U.S.-Chile FTA would increase U.S. and Chilean GDP by $4.2 billion and $479 million, respectively.

Some have argued that a focus on regional and bilateral trade liberalization could undermine the broader process of multilateral trade liberalization and the WTO as an institution. However, the Administration sees these bilateral

and regional agreements as part of a strategy of "competitive liberalization," that is, as steppingstones to worldwide trade liberalization rather than as a stumbling block. In other words, the bilateral, regional, and multilateral prongs of the Administration's strategy for trade negotiations are intended to work in concert, to help achieve the broadest possible degree of trade liberalization in the United States itself and among the greatest possible number of its trading partners.

Trade agreements negotiated by the United States have had, and will continue to have, other indirect benefits to economic performance. The rules-based nature of modern trade agreements helps encourage the development of institutions consistent with the pro-growth principles enunciated in this chapter. In particular, transparency, rule of law, contract enforcement, and property rights are all part of recent U.S. rules-based trade agreements. The introduction of bilateral and multilateral trade and investment commitments can help transform economies in ways that foster these pro-growth policies. For example, rules-based trade agreements enhance the transparency of government actions. Trade commitments must be cataloged, organized, and made public, not only to trading partners but also, ultimately, to domestic constituencies. As citizens become accustomed to public transparency and accountability in trade policy, they may be more likely to demand similar transparency in other aspects of their country's public policy. Such accountability limits government's ability to make arbitrary decisions and thus ultimately creates better conditions for strong growth. In some respects, domestic reforms reinforced by the rules-based trading system have already taken hold in China (Box 6-2).

Trade agreements also encourage the rule of law and the enforcement of contracts. All such agreements require that governments write down their rules governing trade, and in most agreements, governments agree to submit trade disputes to external review by third-party panels. Governments that know that their actions can be reviewed by external and impartial dispute settlement bodies may be less likely to enforce laws arbitrarily. Similarly, foreign firms can resort to a dispute settlement panel if a trading partner fails to enforce legally binding contracts. As domestic firms and individuals become more familiar with the legal procedures available to foreigners within the country, they may pressure their government for similar nonarbitrary decisions and legal protections in internal matters. Once again, the external commitment may help with internal reform.

A rules-based system also fosters the development of protection for property rights, especially through agreements that cover FDI. Many trade agreements, including the North American Free Trade Agreement and the bilateral FTAs between the United States and Israel and Jordan, and now Chile and Singapore, contain protections against uncompensated expropriation by

Box 6-2. China, the WTO, and the Rule of Law

The accession of the People's Republic of China to the World Trade Organization in December 2001 should strengthen and accelerate the economic reforms launched by the Chinese government over 20 years ago. These reforms not only have increased trade and investment dramatically but also have enhanced transparency and decreased state control over the economy. The benefits of economic liberalization and reform can be seen in the huge reduction in poverty and dramatically increased income per capita in China since 1980.

China's integration into the world economy has been one of the most dramatic events in the recent wave of globalization. In 1980 China's total goods exports and imports amounted to only $37.8 billion. Exports were tightly controlled by the various state bureaucracies. Foreign direct investment was essentially nonexistent. Beginning in the early 1980s, China began to move away from formal trade planning and toward market-based trade incentives. Tariffs and nontariff barriers replaced quantitative planning, foreign direct investment was welcomed in many sectors, and encouraging exports became a prime motivating factor in Chinese economic policies. Although China's policies remained far from textbook free trade during the early years of integration (China's average tariff rate in 1982 was 56 percent), the dramatic shift in economic policy created far-reaching new economic opportunities.

By 2001 these reforms had brought enormous changes to the Chinese economy. Exports of goods had grown to $266 billion, a 14-fold increase since 1980. Imports of goods expanded from less than $20 billion to $244 billion over the same period. Average tariffs had fallen to 15 percent by the time of WTO accession. Annual foreign direct investment flows had risen from $430 million in 1982 to over $38 billion in 2000. Income per capita had risen from $167 in 1980 to $824 in 2000.

China's efforts to gain WTO membership led to external pressure for extension of the rule of law and more transparent decisionmaking in the country. For example, during the 1990s the United States informed the Chinese government that failure to protect copyrighted materials such as software, films, and other recordings would undercut U.S. support for China's membership. China finally agreed to begin to enforce intellectual property rights laws in 1996, but its enforcement efforts still need to be strengthened.

China's formal accession to the WTO will lead to further reform. By mid-2002 approximately 830 existing laws and regulations had been repealed, 325 amended, and 118 new laws and legislation adopted in order to bring China into conformity with WTO rules. With its new WTO

Box 6-2.—*continued*

obligations, China has now made a formal external commitment to a whole range of trade-related reforms. Failure to live up to these commitments will put Chinese exports at risk in other WTO members' markets, because members may enforce China's commitments through WTO dispute settlement proceedings and may retaliate if China refuses to cease its actions deemed WTO-inconsistent. For example, China is adopting regulations for controlling injurious dumping of imports, as WTO rules allow. Whereas in the past bureaucrats could restrict imports arbitrarily, however, Chinese antidumping procedures henceforth will be carefully scrutinized by other WTO members for inconsistency with WTO rules.

China has undergone enormous changes in its economic orientation over the last 20 years. Membership in the WTO brings with it an external commitment to this process of reform and makes a return to a centrally planned economy even more difficult.

governments. As these commitments to U.S. firms become widely known, domestic firms in those countries may expect similar guarantees.

The United States also extends special benefits to certain low-income countries through various programs including trade capacity building assistance, the Generalized System of Preferences, the Andean Trade Preference Act, and the African Growth and Opportunity Act (AGOA). AGOA, which was signed into law in May 2000, reduces trade barriers for Sub-Saharan African countries' products entering the United States below those required under the multilateral trade commitments negotiated under the WTO. However, countries in this region do not automatically qualify for lower U.S. tariffs. To be eligible, a country must have a market-based economy, and its government must be making efforts to limit its interference in the economy and must protect property rights. In addition, the government must undertake economic policies that aim to reduce poverty, improve health, and promote private enterprise. Finally, eligible countries must be taking steps to combat official bribery and improve labor rights. In short, through AGOA the United States offers lower trade barriers to poor countries in Sub-Saharan Africa that are making efforts to pursue good policies and promote good institutions. The principles behind AGOA are thus very similar to those of the second major new Administration initiative, the Millennium Challenge Account, which is discussed next.

The Millennium Challenge Account

In March 2002 the President proposed a new program designed to promote growth in developing countries. Over the next 3 years, the Millennium Challenge Account will increase annual U.S. bilateral development assistance by $5 billion, a 50 percent increase over current levels. MCA funds will be used to support activities that directly contribute to economic growth and poverty alleviation. MCA programs will be implemented by the private sector, nongovernmental organizations, and public sector agencies. The MCA will strive to achieve within recipient countries a broad coalition around development investments. Because MCA aid will be in the form of grants, not loans, in accordance with the policy set forth by the President at the Group of Eight summit in 2001, this development assistance will not increase the debt burden of recipient countries.

The MCA is based on the fact that development assistance is most effective when funds flow to countries that have already adopted policies and created institutions that promote growth. In other words, only those countries that have taken concrete steps themselves to improve their condition will be potential MCA recipients. The MCA approach has the added advantage that, as countries strive to qualify for U.S. grants, they will be implementing policies that also encourage inflows of private capital and increased trade, the real engines of sustained economic growth.

Countries receiving MCA assistance must be active partners in the development programs funded by the MCA. Each country selected for aid will negotiate and sign a contract with the MCA, which will specify the following: a limited number of clear, quantifiable goals; concrete benchmarks that specify the time needed to accomplish the tasks; commitments to financial accountability; and conditions under which the contract would be terminated. MCA resources are meant to complement and enhance specific efforts and policies undertaken in the participating countries; indeed, the MCA program will not impose a development plan designed by others, but rather recognizes that the countries themselves are in the best position to evaluate their own needs. In short, MCA recipients must take responsibility for their own development programs.

Monitoring and evaluation to ensure accountability for results will be an integral part of every activity for which MCA funds are used. Monitoring and evaluation will be conducted by the MCA administrative structure or by third-party contractors, or both. To facilitate such monitoring, all contracts will include baseline data against which progress can be measured. The U.S. Government will provide technical assistance to help countries establish these credible baseline data. Every contract will specify regular benchmarks for evaluating progress and provide for the corrective actions necessary to

keep the program on track. All evaluations and all terms of the contract will be made public in the United States and in the host country.

MCA contracts will fund projects for a limited term and include provisions for a midterm review. Programs will continue to receive funding under the terms of the country's MCA contract unless the country fails to meet the contract's conditions for performance. Funding for all or part of a particular MCA contract may be scaled back or ended for failure to meet financial standards or specific benchmarks. In addition, a country's participation in the MCA may be terminated for failure to adhere to the three fundamental principles laid out earlier in this chapter—economic freedom, governing justly, and investing in people—as indicated by an absolute decline in the policy environment. Participation may also be terminated in the event of material change such as a military coup.

Allocation of MCA resources will be based primarily on quantitative benchmarks in order to ensure procedural accountability and transparency. These criteria will focus on the three broad principles just mentioned. Use of published, quantitative measures will also help countries understand why they did or did not qualify to receive MCA funds. This knowledge will enable countries to identify where they need to improve their policies in order to qualify for future grants. Table 6-2 lists the 16 specific indicators (and the initial public sources for the data) for the three MCA principles. These indicators were chosen because of their quality and objectivity, country coverage, and public availability.

TABLE 6-2.— *Millennium Challenge Account Indicators*

Principle	Indicator	Source
Economic freedom	Country credit rating	*Institutional Investor* magazine
	Inflation	International Monetary Fund
	Budget deficit	International Monetary Fund, national sources
	Trade policy	Heritage Foundation
	Regulatory quality	World Bank
	Days needed to start a business	World Bank
Governing justly	Control of corruption	World Bank
	Rule of law	World Bank
	Civil liberties	Freedom House
	Political rights	Freedom House
	Voice and accountability	World Bank
	Government effectiveness	World Bank
Investing in people.....	Public primary education spending as percent of GDP	World Bank, national sources
	Primary education completion rate	World Bank, national sources
	Public expenditure on health as percent of GDP	World Bank, national sources
	Immunization rates: DPT and measles [1]	World Bank, national sources

[1] Immunization for diphtheria, pertussis, and tetanus and for measles.

Source: Millennium Challenge Account fact sheet, The White House.

As described previously, economic freedom broadly encompasses the freedom to start a business, hire workers, invest, and make other business and personal decisions without undue government interference. In the MCA process, economic freedom will be measured by six publicly available criteria: country credit ratings, inflation rates, budget deficits, measures of openness to trade, measures of regulatory quality, and the number of days it takes to start a business. Country credit ratings are included because they contain useful summary evaluations by private sector sources of the country's macroeconomic situation. Inflation rates and budget deficits are included to capture those aspects of macroeconomic stability so important to growth. Trade policies, including the degree to which imports are subject to tariffs and nontariff barriers, as well as the extent of corruption in the national customs service, will measure the extent to which a country's policy environment allows it to take advantage of global markets. Finally, regulatory quality and the time it takes to start a new business provide quantitative measures of the environment for entrepreneurial activity.

The second principle—governing justly—involves various facets of good governance and good institutions that help sustain a pro-growth environment. The inclusion of criteria that embody this principle reflects the important complementary role of the quality of institutions in improving economic performance. The criteria will measure the extent to which citizens of a country are able to participate in the selection of governments, the freedom to develop views and institutions independent of the state, the role of elected representatives in policy formation, the control of corruption, and the rule of law. These are important indicators of whether there is political accountability in the country.

Measures of governing justly will be based on surveys by the World Bank and Freedom House, a nonprofit, nonpartisan organization. Rankings will be based on the following criteria: civil liberties, political rights, voice and accountability, government effectiveness, rule of law, and control of corruption. Assessment of the rule of law, which, as discussed above, is important to investor and entrepreneurial confidence, will cover such factors as the effectiveness of the judiciary and the enforceability of contracts. Ratings of political rights and civil liberties will be determined through a compilation of foreign and domestic news reports, publications by nongovernmental organizations, policy center research, and academic and professional analysis.

The third principle—investing in people—involves public commitment to developing human capital through education and improved health. Here the quantitative criteria include public spending on primary education as a percentage of GDP, the share of children who have completed primary school by the national graduation age, public expenditure on health as a percentage of GDP, and immunization rates of children under 12 months for DPT (diphtheria, pertussis, and tetanus) and measles. The importance of

education in maintaining and improving worker productivity is reflected in the inclusion of both a public education input (public spending on primary education) and an education output (the share of children completing primary school). As noted in the earlier discussion of pro-growth principles, improved health care is also important to better economic outcomes. Consequently, public expenditure on health care is included as an MCA criterion, along with immunization rates for some of the most common serious childhood diseases worldwide.

Countries must demonstrate commitment to and performance on all three principles to be deemed a "better performer" and thereby qualify for possible MCA assistance. Eligibility will be limited to those countries that score above the median on at least half of the indicators in each of the three areas. However, countries must score above the median on the corruption indicator to be considered for grants, regardless of their scores on other criteria. This requirement reflects the importance that corruption plays in whether or not development assistance achieves its aims. As noted above, reducing corruption supports the benefits of other good policies and of development assistance by building public trust in institutions, encouraging investment, and helping ensure that aid is put to pro-growth uses.

Candidate countries will be evaluated within one of two income categories. Initially, only countries with gross national income per capita below $1,435 (in 2001 dollars) will be eligible for grants. This level was chosen because it is the historical income threshold for assistance to the world's poorest countries from the International Development Association (IDA), the World Bank affiliate that specializes in assistance to the poorest countries. In subsequent years, the income threshold for eligibility will be raised to $2,975, the projected cutoff for the World Bank's designation for lower-middle-income countries. However, the two income groups (those with incomes per capita below $1,435 and those with incomes between $1,435 and $2,975) will continue to be evaluated separately. This separation is important because, as discussed above, higher income is associated with better social and economic indicators. Grouping the countries in this way will ensure that countries of similar income and economic development compete with each other. Countries prohibited by current statutory restrictions from receiving U.S. assistance will not be eligible. Qualifying as a better performer does not guarantee receipt of MCA funds. The MCA Board of Directors, composed of Cabinet-level officials and chaired by the Secretary of State, will make final recommendations to the President.

As already noted, the provision of grants rather than loans will ensure that the MCA program will not add to countries' debt burdens. The resources provided can then be allocated as intended, to development rather than debt service. Aid in the form of loans causes many heavily indebted poor countries to accrue even greater debt, which can hinder their growth. One study of

93 developing countries from 1969 to 1998 found that, for a country with average indebtedness, doubling the debt ratio (either the debt-to-exports ratio or the debt-to-GDP ratio) reduces annual growth of GDP per capita by between 0.5 and 1 percentage point.

Reforming the Multilateral Development Banks

The Administration believes that the World Bank and other multilateral development banks will be more effective in helping countries improve their living standards if, when distributing aid, they place greater emphasis on factors that improve productivity. The Administration's agenda for reform of the MDBs seeks progress toward better measurement, monitoring, and management of development assistance. The Administration also has pushed for an increase in the proportion of MDB assistance to the poorest countries that is delivered in the form of grants rather than loans.

MDBs will be more effective in reducing poverty if they address the basic causes of slow growth, including poor business environments and inadequate education and health care. This means that MDBs should help countries reduce the impediments that constrain the creation of high-productivity jobs in the private sector. To this end, the United States has secured agreement on a change in assistance strategies by the IDA. IDA funds will now include the distribution of resources to private sector development, in addition to the public sector uses that have been its traditional focus. This agreement creates the basis for expanded collaboration between the IDA and the International Finance Corporation, the World Bank Group's private sector finance arm. Such collaboration will help remove the obstacles to private sector-led growth in the world's poorest countries.

The Administration also believes that a major priority for the MDBs should be greater attention to measuring development results. Donor and recipient countries both benefit from quantifying the outcomes of assistance programs and understanding the reasons for success or failure. The recent IDA replenishment agreement calls for a fundamental shift of focus within the MDBs toward measurable results. IDA will also establish a system that tracks specific results in education, health, and private sector development. These innovations will allow donors to link their contributions to IDA to observable outcomes. This approach will help direct scarce donor dollars toward those activities and projects that are demonstrably improving people's lives. Furthermore, the Administration's position is that MDBs should expand similar results-based operational plans into all of its grant and loan programs.

Consistent with the MCA approach, U.S. leadership has resulted in a significant expansion of MDB grants for the world's poorest countries. In July 2001 the President called upon the World Bank and other MDBs to increase the proportion of their assistance to the poorest recipient countries that is

provided as grants rather than loans. One year later, the United States finalized an agreement with other international donors on a substantial increase in grants. As a result of this agreement, IDA grant assistance for programs targeting education, HIV/AIDS, health, nutrition, potable water, and sanitation will be increased. U.S. leadership was also crucial in obtaining agreement on an increase in grants for the recently concluded replenishment of the African Development Fund. These agreements significantly advance the Administration's policy objective of helping poor countries make productive investments without saddling them with ever-larger debt burdens.

The Administration recognizes that countries may sometimes face economic crises that can lead to sharp net outflows of capital. Countries will be well served if these crises can be managed effectively. Consequently, in parallel with MDB reform, the Administration believes that clarifying the size of official financing packages from the international financial institutions is essential to increasing predictability in the market, curbing excessive risk taking, and providing the right incentives for countries to pursue good policies. The Administration has worked to create a more orderly and predictable process for restructuring sovereign debt, so that the long-term growth of developing economies is not subverted by short-term crises. In particular, the Administration has proposed the incorporation of collective action clauses into sovereign debt contracts to facilitate a more predictable and transparent resolution of sovereign debt defaults when they do occur.

Conclusion

Economic growth has the potential to improve the lives of millions of people around the globe, both through higher incomes and through improvements in social indicators such as health outcomes. This chapter has laid out three broad principles for promoting growth.

Economic freedom is a critical prerequisite for the harnessing of entrepreneurial energy to improve productivity and increase growth. Macroeconomic stability, including low inflation and small fiscal deficits, helps create an economic environment in which people can plan and invest. Governments should avoid burdensome regulation, distortionary taxes, and nationalization of industries, because all of these lead to inefficiency and slow growth. Openness to international goods, services, and capital brings with it exposure to world best practices and generates the competition that leads domestic firms and workers to enhance their productivity.

Poor institutions, especially those that fail to enforce property rights, promote the rule of law, and discourage corruption, can subvert good economic policy decisions. Entrepreneurs will be less willing to commit resources for the long

term if they believe that arbitrary decisions by governments may rob them of the anticipated returns. Workers will be more reluctant to work hard if they believe the fruits of their labor will be seized by corrupt officials or criminals. Ultimately, promoting growth depends on appropriate policies, aimed at both macroeconomic stability and creating a supportive economic environment.

Investment in people, through improvements in both education and health, will support a work force that can fully utilize the opportunities created by sound policies and good institutions. Well-trained workers will be better able to make productive use of the capital available to them, both the existing capital stock and new investment. This will lead to higher productivity and enhanced growth. A healthy work force will be less prone to absenteeism, allowing a higher rate of utilization of capital, and this, too, will improve the country's economic prospects.

The Administration's initiatives—the promotion of openness to the world economy through trade liberalization, and the new approaches to bilateral and multilateral development assistance—are intended to complement developing countries' own efforts to improve their economic performance. TPA will help the United States reach agreements that increase trade and thus foster growth in developing countries. The MCA will provide both financial assistance to the least developed countries and incentives for them to implement pro-growth policies. Reform of the MDBs will complement the MCA initiative by focusing these institutions' funds on pro-growth efforts, especially in the private sector, and assisting the world's least developed countries through grants in aid. Through all these programs, the United States will stimulate worldwide economic development, raising incomes in developing countries and spreading prosperity both at home and abroad.

Appendix A
REPORT TO THE PRESIDENT ON THE ACTIVITIES OF THE COUNCIL OF ECONOMIC ADVISERS DURING 2002

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., December 31, 2002.

MR. PRESIDENT:

The Council of Economic Advisers submits this report on its activities during the calendar year 2002 in accordance with the requirements of the Congress, as set forth in section 10(d) of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Robert Glenn Hubbard, *Chairman*
Randall S. Kroszner, *Member*

Council Members and Their Dates of Service

Name	Position	Oath of office date	Separation date
Edwin G. Nourse	Chairman	August 9, 1946	November 1, 1949.
Leon H. Keyserling	Vice Chairman	August 9, 1946	
	Acting Chairman	November 2, 1949	
	Chairman	May 10, 1950	January 20, 1953.
John D. Clark	Member	August 9, 1946	
	Vice Chairman	May 10, 1950	February 11, 1953.
Roy Blough	Member	June 29, 1950	August 20, 1952.
Robert C. Turner	Member	September 8, 1952	January 20, 1953.
Arthur F. Burns	Chairman	March 19, 1953	December 1, 1956.
Neil H. Jacoby	Member	September 15, 1953	February 9, 1955.
Walter W. Stewart	Member	December 2, 1953	April 29, 1955.
Raymond J. Saulnier	Member	April 4, 1955	
	Chairman	December 3, 1956	January 20, 1961.
Joseph S. Davis	Member	May 2, 1955	October 31, 1958.
Paul W. McCracken	Member	December 3, 1956	January 31, 1959.
Karl Brandt	Member	November 1, 1958	January 20, 1961.
Henry C. Wallich	Member	May 7, 1959	January 20, 1961.
Walter W. Heller	Chairman	January 29, 1961	November 15, 1964.
James Tobin	Member	January 29, 1961	July 31, 1962.
Kermit Gordon	Member	January 29, 1961	December 27, 1962.
Gardner Ackley	Member	August 3, 1962	
	Chairman	November 16, 1964	February 15, 1968.
John P. Lewis	Member	May 17, 1963	August 31, 1964.
Otto Eckstein	Member	September 2, 1964	February 1, 1966.
Arthur M. Okun	Member	November 16, 1964	
	Chairman	February 15, 1968	January 20, 1969.
James S. Duesenberry	Member	February 2, 1966	June 30, 1968.
Merton J. Peck	Member	February 15, 1968	January 20, 1969.
Warren L. Smith	Member	July 1, 1968	January 20, 1969.
Paul W. McCracken	Chairman	February 4, 1969	December 31, 1971.
Hendrik S. Houthakker	Member	February 4, 1969	July 15, 1971.
Herbert Stein	Member	February 4, 1969	
	Chairman	January 1, 1972	August 31, 1974.
Ezra Solomon	Member	September 9, 1971	March 26, 1973.
Marina v.N. Whitman	Member	March 13, 1972	August 15, 1973.
Gary L. Seevers	Member	July 23, 1973	April 15, 1975.
William J. Fellner	Member	October 31, 1973	February 25, 1975.
Alan Greenspan	Chairman	September 4, 1974	January 20, 1977.
Paul W. MacAvoy	Member	June 13, 1975	November 15, 1976.
Burton G. Malkiel	Member	July 22, 1975	January 20, 1977.
Charles L. Schultze	Chairman	January 22, 1977	January 20, 1981.
William D. Nordhaus	Member	March 18, 1977	February 4, 1979.
Lyle E. Gramley	Member	March 18, 1977	May 27, 1980.
George C. Eads	Member	June 6, 1979	January 20, 1981.
Stephen M. Goldfeld	Member	August 20, 1980	January 20, 1981.
Murray L. Weidenbaum	Chairman	February 27, 1981	August 25, 1982.
William A. Niskanen	Member	June 12, 1981	March 30, 1985.
Jerry L. Jordan	Member	July 14, 1981	July 31, 1982.
Martin Feldstein	Chairman	October 14, 1982	July 10, 1984.
William Poole	Member	December 10, 1982	January 20, 1985.
Beryl W. Sprinkel	Chairman	April 18, 1985	January 20, 1989.
Thomas Gale Moore	Member	July 1, 1985	May 1, 1989.
Michael L. Mussa	Member	August 18, 1986	September 19, 1988.
Michael J. Boskin	Chairman	February 2, 1989	January 12, 1993.
John B. Taylor	Member	June 9, 1989	August 2, 1991.
Richard L. Schmalensee	Member	October 3, 1989	June 21, 1991.
David F. Bradford	Member	November 13, 1991	January 20, 1993.
Paul Wonnacott	Member	November 13, 1991	January 20, 1993.
Laura D'Andrea Tyson	Chair	February 5, 1993	April 22, 1995.
Alan S. Blinder	Member	July 27, 1993	June 26, 1994.
Joseph E. Stiglitz	Member	July 27, 1993	
	Chairman	June 28, 1995	February 10, 1997.
Martin N. Baily	Member	June 30, 1995	August 30, 1996.
Alicia H. Munnell	Member	January 29, 1996	August 1, 1997.
Janet L. Yellen	Chair	February 18, 1997	August 3, 1999.
Jeffrey A. Frankel	Member	April 23, 1997	March 2, 1999.
Rebecca M. Blank	Member	October 22, 1998	July 9, 1999.
Martin N. Baily	Chairman	August 12, 1999	January 19, 2001
Robert Z. Lawrence	Member	August 12, 1999	January 12, 2001
Kathryn L. Shaw	Member	May 31, 2000	January 19, 2001
R. Glenn Hubbard	Chairman	May 11, 2001	
Mark B. McClellan	Member	July 25, 2001	November 13, 2002
Randall S. Kroszner	Member	November 30, 2001	

Report to the President on the Activities of the Council of Economic Advisers During 2002

The Council of Economic Advisers was established by the Employment Act of 1946 to provide the President with objective economic analysis and advice on the development and implementation of a wide range of domestic and international economic policy issues.

The Chairman of the Council

R. Glenn Hubbard continued to chair the Council during 2002. Dr. Hubbard is on a leave of absence from Columbia University, where he is the Russell L. Carson Professor of Economics and Finance and Co-Director of the Entrepreneurship Program in the Graduate School of Business and Professor of Economics in the Faculty of Arts and Sciences. He is a Research Associate at the National Bureau of Economic Research. He also served as Senior Vice Dean of the Graduate School of Business at Columbia University.

Dr. Hubbard is responsible for communicating the Council's views on economic matters directly to the President through personal discussions and written reports. He represents the Council at Cabinet meetings, meetings of the National Economic Council, daily White House senior staff meetings, budget team meetings with the President, and other formal and informal meetings with the President. He also travels within the United States and overseas to present the Administration's views on the economy. Dr. Hubbard is the Council's chief public spokesperson. He directs the work of the Council and exercises ultimate responsibility for the work of the professional staff.

The Members of the Council

Randall S. Kroszner is the other current Member of the Council of Economic Advisers. Dr. Kroszner is on leave from the University of Chicago's Graduate School of Business, where he is Professor of Economics. He is also on leave from his positions as Editor of the *Journal of Law & Economics* and Associate Director of the George J. Stigler Center for the Study of the Economy and the State at the University of Chicago. Dr. Kroszner is also a Faculty Research Fellow at the National Bureau of Economic Research. He

represents the Administration at a variety of international and domestic meetings. The Council's third Member, Mark B. McClellan, left the Council in November 2002 upon his appointment by the President to be Commissioner of the Food and Drug Administration.

The Chairman and the Members work as a team on most economic policy issues. Dr. Hubbard was primarily responsible for the Administration's economic forecast, macroeconomic analysis, budget and taxation policy, and retirement security. Dr. Kroszner's responsibilities included international finance and trade issues for both emerging markets and developed economies, macroeconomic forecasting, and a number of microeconomic issues, including those relating to corporate governance, financial markets, energy, environment, transportation, and the costs of regulation.

Macroeconomic Policies

As is its tradition, the Council devoted much time during 2002 to assisting the President in formulating economic policy objectives and designing programs to implement them. In this regard the Chairman kept the President informed, on a continuing basis, of important macroeconomic developments and other major policy issues through regular briefings. The Council prepares for the President, the Vice President, and the White House senior staff almost daily memoranda that report key economic data and analyze current economic events. In addition, they prepare weekly discussion and data memoranda for the Vice President and senior White House staff.

The Council, the Department of the Treasury, and the Office of Management and Budget—the Administration's economic "troika"—are responsible for producing the economic forecasts that underlie the Administration's budget proposals. The Council, under the leadership of the Chairman and the Members, initiates the forecasting process twice each year. In preparing these forecasts, the Council consults with a variety of outside sources, including leading private sector forecasters.

In 2002 the Council took part in discussions on a range of macroeconomic issues, with a particular focus on issues relating to tax policy. The Council provided analytical support for major fiscal initiatives such as the Job Creation and Worker Assistance Act of 2002 and the President's January 2003 proposal to strengthen the economy. The Council worked closely with the Office of Management and Budget, the Treasury, the Federal Reserve, and the National Economic Council, as well as other government agencies, in providing analyses to the rest of the Administration.

The Council continued its efforts to improve the public's understanding of economic issues and of the Administration's economic agenda through regular

briefings with the economic and financial press, frequent discussions with outside economists, and presentations to outside organizations. The Chairman and Members also regularly exchanged views on the economy with the Chairman of the Board of Governors of the Federal Reserve System.

International Economic Policies

The Council was involved in a range of international economic issues. Discussions on trade policy matters involved a number of industries as well as broader trade liberalization initiatives in various multilateral, regional, and bilateral forums. The Council participated in the development of U.S. positions during the concluding stages of free trade agreements with Chile and Singapore as well as in ongoing negotiations under the auspices of the World Trade Organization and with regard to the proposed Free Trade Agreement of the Americas. The Council participated in international finance discussions involving a number of emerging market economies. A particular focus of the Council was in developing an analytical framework for a pro-growth agenda for emerging markets. The Council participated in the development of the President's Millennium Challenge Account, which will increase aid to low- and middle-income countries that have a demonstrated commitment to pro-growth policies and institutions.

The Council is a leading participant in the Organization for Economic Cooperation and Development (OECD), the principal forum for economic cooperation among the high-income industrial countries. The Chairman heads the U.S. delegation to the semiannual meetings of the OECD's Economic Policy Committee (EPC) and serves as the EPC Chairman as well as Chairman of the Ad Hoc Group on Sustainable Development. In 2002 Dr. Kroszner participated in the OECD's Working Party 3 meeting on macroeconomic policy and coordination, and Council staff participated in the OECD's Working Party 1 meeting on microeconomic policies. Dr. Kroszner also participated in the annual OECD review of U.S. economic policy.

Members regularly met with representatives of the Council's counterpart agencies in foreign countries, as well as with foreign trade ministers, other government officials, and members of the private sector. The Council represented the United States at other international forums as well, including meetings of the Asia-Pacific Economic Cooperation (APEC) forum. The Council played a key role in organizing an APEC-led initiative focused on corporate restructuring, initial results of which were presented at a conference in Singapore.

Microeconomic Policies

A wide variety of microeconomic issues received the Council's attention during 2002. The Council actively participated in the Cabinet-level National Economic Council, dealing with issues related to energy, the environment, homeland security and cybersecurity, technology, telecommunications, and transportation, among others. Dr. McClellan was extensively involved in formulating policy concerning health care and various aspects of welfare policy. Dr. Kroszner participated in a series of discussions on energy and environmental policies, financial market issues, corporate governance reform, regulation, and numerous issues relating to specific industries including lumber, steel, and transportation.

The Council participated in discussion on a range of environmental issues in 2002. A particular focus was on climate change initiatives, including partnerships with other countries and negotiations associated with the Kyoto Protocol. The Council also played an integral role in regulatory discussions, including the revision of the OMB Guidelines for the Conduct of Regulatory Analysis and the Format of Accounting Statements; Dr. Kroszner co-chaired this process with the Director of the Office of Information and Regulatory Affairs. This document establishes guidelines for Federal government agencies on how to undertake economic analysis of proposed regulations.

Corporate governance reform was an important focus of the Council's efforts in 2002. Members and staff analyzed various underlying problems in corporate governance and engaged in discussions within the Administration and with outside organizations in the United States and other countries about policies to enhance accountability, disclosure, and enforcement. The Council was also involved in discussions relating to the Postal Service, Amtrak, the airlines, government-sponsored enterprises, bankruptcy reform, and a host of technology-related issues such as cybersecurity, fusion energy initiatives, computer reservation systems, and issues related to broadband.

The Council participated extensively in discussions related to labor market and social policies. Issues included prescription drug benefits, reform of the Medicare system, medical malpractice liability, unemployment insurance, and the President's proposal to offer reemployment accounts to certain unemployed individuals. The Council was also involved in discussions relating to financial institutions, agriculture, and the economic effects of ports disputes.

The Staff of the Council of Economic Advisers

The professional staff of the Council consists of the Chief of Staff, the Chief Economist, the Director of Macroeconomic Forecasting, the Senior Statistician, eight senior economists, five staff economists, and five research assistants. The professional staff and their areas of concentration at the end of 2002 were:

Chief of Staff
Phillip L. Swagel

Chief Economist
Douglas J. Holtz-Eakin

Director of Macroeconomic Forecasting
Steven N. Braun

Senior Statistician
Catherine H. Furlong

Senior Economists

Cindy R. Alexander	Industrial Organization, Corporate Finance, and Regulation
S. Brock Blomberg	International Finance
Robert J. Carroll	Public Finance
Robert N. Collender	Regulation, Energy, Finance, and Agriculture
Christopher L. Foote.	Macroeconomics
Thomas C. DeLeire	Labor, Health, and Education
John A. List	Environment and Regulation
Michael O. Moore	International Trade

Staff Economists

D. Clay Ackerly	Health Care and Labor
Anne L. Berry	Regulation and Industrial Organization
Catherine L. Downard	International Finance
Brian H. Jenn	Labor, Regulation, and Public Finance
Peter H. Woodward	International Finance and Financial Markets

Research Assistants

Shelley D. de Alth	International Trade
Leandra T. DeSilva	Environment and Regulation
Christine L. Dobridge	Macroeconomics
Paul S. Landefeld	Macroeconomics and Public Finance
Adam R. Saunders	Macroeconomics, Public Finance, and Regulation

Statistical Office

Mrs. Furlong directs the Statistical Office. The Statistical Office maintains and updates the Council's statistical information, oversees the publication of the monthly *Economic Indicators* and the statistical appendix to the *Economic Report of the President*, and verifies statistics in Presidential and Council memoranda, testimony, and speeches.

Linda A. Reilly	Statistician
Brian A. Amorosi	Statistical Assistant
Dagmara A. Mocala	Research Assistant

Administrative Office

The Administrative Office provides general support for the Council's activities. This includes financial management, human resource management, and travel, facility, security, information, and telecommunications management support.

Catherine Fibich	Administrative Officer
Rosemary M. Rogers	Administrative Assistant
John W. Arnold	Information Management Assistant

Office of the Chairman

Alice H. Williams	Executive Assistant to the Chairman
Sandra F. Daigle	Executive Assistant to the Chairman and Assistant to the Chief of Staff
Lisa D. Branch	Executive Assistant to Dr. Kroszner
Stephen M. Lineberry.	Executive Assistant to Dr. McClellan

Staff Support

Mary E. Jones	Executive Assistant for International Economics, Labor, Health, Environment, and Regulation
Mary A. Thomas-Parker	Program Assistant for Macroeconomics, Industrial Organization, and Agriculture

Diana E. Furchtgott-Roth served as Chief of Staff for the first half of 2002 and subsequently as Special Advisor to the Council.

Michael Treadway provided editorial assistance in the preparation of the 2003 *Economic Report of the President*.

Katherine Baicker, Rex W. Cowdry, John G. Matsusaka, and William B. Vogt provided consulting services to the Council during 2002.

Student interns during the year were M. Caroline Beasley, Jason P. Brinton, Alexander Chan, Carol L. Cohen, Brian C. Grech, Laura C. Hanlon, Clarette S. Kim, David Y. Lin, Matthew Nestorick, Samuel C. Roddenberry, Douglas A. Smith, Kevin P. Sweeney, Thomas B. Valuk, Peter H. Woodward, and Aimee C. Zullo. Sarah R. Darley, Evan M. Newman, and Adam R. Sorkin joined the staff of the Council in January as student interns.

Departures

Diana E. Furchtgott-Roth accepted a position as Chief Economist at the Department of Labor in early 2003. Douglas J. Holtz-Eakin left the Council at the end of January 2003 to become the Director of the Congressional Budget Office.

The Council's senior economists, in most cases, are on leave of absence from faculty positions at academic institutions or from other government agencies or research institutions. Their tenure with the Council is usually limited to 1 or 2 years. Some of the senior economists who resigned during the year returned to their previous affiliations. They are Katherine Baicker (Dartmouth College), Peter M. Feather (U.S. Department of Agriculture, Economic Research Service), William R. Melick (Kenyon College), and William A. Pizer (Resources for the Future). Others went on to new positions. They are Jeffrey R. Brown (University of Illinois at Urbana-Champaign), Carolyn L. Evans (Board of Governors of the Federal Reserve System), Andrew J. Filardo (Bank for International Settlements), and Wallace P. Mullin (George Washington University).

Staff economists are generally graduate students who spend 1 year with the Council and then return to complete their dissertations. Those who returned to their graduate studies in 2002 are Irena I. Asmundson (Stanford University) and Katherine R. Baylis (University of California, Berkeley). Judson L. Jaffe accepted a position at Analysis Group/Economics. Those who served as research assistants at the Council and resigned during 2002 are M. Marit Rehavi (London School of Economics), Heather C. McNaught (Department of Justice), and Jason M. Zhao. Mary A. Thomas-Parker, Program Assistant, retired after nearly 26 years of Federal service, the last 13 years of which were with the Council.

During 2002 the Council lost a valued colleague. Susan P. Clements, who served as a Statistician in the Statistical Office, passed away in August 2002; she had retired in June 2002 for health reasons.

Public Information

The Council's annual *Economic Report of the President* is an important vehicle for presenting the Administration's domestic and international economic policies. It is now available for distribution both as a bound volume and on the Internet, where it is accessible at www.access.gpo.gov/eop. The Council also has primary responsibility for compiling the monthly *Economic Indicators*, which is issued by the Joint Economic Committee of the Congress. The Internet address for the *Economic Indicators* is www.access.gpo.gov/congress/cong002.html. The Council's home page is located at www.whitehouse.gov/cea/index.html.

Appendix B
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General Notes

Detail in these tables may not add to totals because of rounding.

Because of the formula used for calculating real gross domestic product (GDP), the chained (1996) dollar estimates for the detailed components do not add to the chained-dollar value of GDP or to any intermediate aggregates. The Department of Commerce (Bureau of Economic Analysis) no longer publishes chained-dollar estimates prior to 1987, except for selected series.

Unless otherwise noted, all dollar figures are in current dollars.

Symbols used:

^{p} Preliminary.

... Not available (also, not applicable).

Data in these tables reflect revisions made by the source agencies through January 28, 2003. In particular, tables containing national income and product accounts (NIPA) estimates reflect revisions released by the Department of Commerce in July 2002.

TABLE B–1.—*Gross domestic product, 1959–2002*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Personal consumption expenditures				Gross private domestic investment						
		Total	Durable goods	Non-durable goods	Services	Total	Fixed investment					Change in private inventories
							Total	Nonresidential			Residential	
								Total	Structures	Equipment and software		
1959	507.4	318.1	42.7	148.5	127.0	78.5	74.6	46.5	18.1	28.4	28.1	3.9
1960	527.4	332.3	43.3	152.9	136.1	78.9	75.7	49.4	19.6	29.8	26.3	3.2
1961	545.7	342.7	41.8	156.6	144.3	78.2	75.2	48.8	19.7	29.1	26.4	3.0
1962	586.5	363.8	46.9	162.8	154.1	88.1	82.0	53.1	20.8	32.3	29.0	6.1
1963	618.7	383.1	51.6	168.2	163.4	93.8	88.1	56.0	21.2	34.8	32.1	5.6
1964	664.4	411.7	56.7	178.7	176.4	102.1	97.2	63.0	23.7	39.2	34.3	4.8
1965	720.1	444.3	63.3	191.6	189.5	118.2	109.0	74.8	28.3	46.5	34.2	9.2
1966	789.3	481.8	68.3	208.8	204.7	131.3	117.7	85.4	31.3	54.0	32.3	13.6
1967	834.1	508.7	70.4	217.1	221.2	128.6	118.7	86.4	31.5	54.9	32.4	9.9
1968	911.5	558.7	80.8	235.7	242.3	141.2	132.1	93.4	33.6	59.9	38.7	9.1
1969	985.3	605.5	85.9	253.2	266.4	156.4	147.3	104.7	37.7	67.0	42.6	9.2
1970	1,039.7	648.9	85.0	272.0	292.0	152.4	150.4	109.0	40.3	68.7	41.4	2.0
1971	1,128.6	702.4	96.9	285.5	320.0	178.2	169.9	114.1	42.7	71.5	55.8	8.3
1972	1,240.4	770.7	110.4	308.0	352.3	207.6	198.5	128.8	47.2	81.7	69.7	9.1
1973	1,385.5	852.5	123.5	343.1	385.9	244.5	228.6	153.3	55.0	98.3	75.3	15.9
1974	1,501.0	932.4	122.3	384.5	425.5	249.4	235.4	169.5	61.2	108.2	66.0	14.0
1975	1,635.2	1,030.3	133.5	420.7	476.1	230.2	236.5	173.7	61.4	112.4	62.7	–6.3
1976	1,823.9	1,149.8	158.9	458.3	532.6	292.0	274.8	192.4	65.9	126.4	82.5	17.1
1977	2,031.4	1,278.4	181.2	497.2	600.0	361.3	339.0	228.7	74.6	154.1	110.3	22.3
1978	2,295.9	1,430.4	201.7	550.2	678.4	436.0	410.2	278.6	91.4	187.2	131.6	25.8
1979	2,566.4	1,596.3	214.4	624.4	757.4	490.6	472.7	331.6	114.9	216.7	141.0	18.0
1980	2,795.6	1,762.9	214.2	696.1	852.7	477.9	484.2	360.9	133.9	227.0	123.2	–6.3
1981	3,131.3	1,944.2	231.3	758.9	954.0	570.8	541.0	418.4	164.6	253.8	122.6	29.8
1982	3,259.2	2,079.3	240.2	787.6	1,051.5	516.1	531.0	425.3	175.0	250.3	105.7	–14.9
1983	3,534.9	2,286.4	281.2	831.2	1,174.0	564.2	570.0	417.4	152.7	264.7	152.5	–5.8
1984	3,932.7	2,498.4	326.9	884.7	1,286.9	735.5	670.1	490.3	176.0	314.3	179.8	65.4
1985	4,213.0	2,712.6	363.3	928.8	1,420.6	736.3	714.5	527.6	193.3	334.3	186.9	21.8
1986	4,452.9	2,895.2	401.3	958.5	1,535.4	747.2	740.7	522.5	175.8	346.8	218.1	6.6
1987	4,742.5	3,105.3	419.7	1,015.3	1,670.3	781.5	754.3	526.7	172.1	354.7	227.6	27.1
1988	5,108.3	3,356.6	450.2	1,082.9	1,823.5	821.1	802.7	568.4	181.6	386.8	234.2	18.5
1989	5,489.1	3,596.7	467.8	1,165.4	1,963.5	872.9	845.2	613.4	193.4	420.0	231.8	27.7
1990	5,803.2	3,831.5	467.6	1,246.1	2,117.8	861.7	847.2	630.3	202.5	427.8	216.8	14.5
1991	5,986.2	3,971.2	443.0	1,278.8	2,249.4	800.2	800.4	608.9	183.4	425.4	191.5	–.2
1992	6,318.9	4,209.7	470.8	1,322.9	2,415.9	866.6	851.6	626.1	172.2	453.9	225.5	15.0
1993	6,642.3	4,454.7	513.4	1,375.2	2,566.1	955.1	934.0	682.2	179.4	502.8	251.8	21.1
1994	7,054.3	4,716.4	560.8	1,438.0	2,717.6	1,097.1	1,034.6	748.6	187.5	561.1	286.0	62.6
1995	7,400.5	4,969.0	589.7	1,497.3	2,882.0	1,143.8	1,110.7	825.1	204.6	620.5	285.6	33.0
1996	7,813.2	5,237.5	616.5	1,574.1	3,047.0	1,242.7	1,212.7	899.4	225.0	674.4	313.3	30.0
1997	8,318.4	5,529.3	642.5	1,641.6	3,245.2	1,390.5	1,327.7	999.4	255.8	743.6	328.2	62.9
1998	8,781.5	5,856.0	693.2	1,708.5	3,454.3	1,538.7	1,465.6	1,101.2	282.4	818.9	364.4	73.1
1999	9,274.3	6,246.5	755.9	1,830.1	3,660.5	1,636.7	1,577.2	1,173.5	283.7	889.8	403.7	59.5
2000	9,824.6	6,683.7	803.9	1,972.9	3,906.9	1,755.4	1,691.8	1,265.8	314.2	951.6	426.0	63.6
2001	10,082.2	6,987.0	835.9	2,041.3	4,109.9	1,586.0	1,646.3	1,201.6	324.5	877.1	444.8	–60.3
1998: I	8,627.8	5,719.9	666.8	1,675.8	3,377.3	1,528.7	1,422.0	1,074.8	273.2	801.6	347.2	106.7
II	8,697.3	5,820.0	689.3	1,697.2	3,433.5	1,498.4	1,457.5	1,099.9	284.9	815.0	357.6	40.9
III	8,816.5	5,895.1	691.7	1,716.7	3,486.7	1,538.6	1,469.1	1,098.6	283.9	814.7	370.5	69.5
IV	8,984.5	5,989.1	725.1	1,744.4	3,519.6	1,589.3	1,513.9	1,131.7	287.5	844.2	382.2	75.4
1999: I	9,092.7	6,076.6	728.7	1,773.1	3,574.8	1,618.0	1,543.3	1,150.0	285.5	864.5	393.3	74.7
II	9,171.7	6,195.6	749.9	1,814.4	3,631.3	1,597.8	1,570.1	1,167.7	283.0	884.7	402.4	27.7
III	9,316.5	6,299.4	765.1	1,841.3	3,693.1	1,637.9	1,591.1	1,184.5	279.9	904.6	406.5	46.8
IV	9,516.4	6,414.5	779.9	1,891.7	3,742.9	1,693.2	1,604.3	1,191.9	286.3	905.5	412.5	88.9
2000: I	9,649.5	6,552.2	808.4	1,926.9	3,816.9	1,711.4	1,664.6	1,236.6	299.5	937.1	428.0	46.8
II	9,820.7	6,638.7	799.3	1,964.9	3,874.5	1,786.3	1,697.1	1,268.3	308.5	959.8	428.8	89.2
III	9,874.8	6,736.1	810.6	1,988.9	3,936.6	1,766.4	1,705.2	1,283.4	320.9	962.5	421.8	61.1
IV	9,953.6	6,808.0	797.2	2,011.1	3,999.7	1,757.4	1,700.4	1,274.8	328.0	946.8	425.6	57.1
2001: I	10,028.1	6,904.7	816.8	2,031.5	4,109.9	1,671.1	1,698.3	1,258.3	333.7	924.6	440.0	–27.2
II	10,049.9	6,959.8	820.3	2,044.8	4,094.7	1,597.2	1,654.3	1,210.0	329.9	880.2	444.2	–57.1
III	10,097.7	6,983.7	824.0	2,044.3	4,115.4	1,574.9	1,635.5	1,188.1	332.0	856.1	447.4	–60.6
IV	10,152.9	7,099.9	882.6	2,044.4	4,172.9	1,500.7	1,597.2	1,149.8	302.3	847.4	447.4	–96.5
2002: I	10,313.1	7,174.2	859.0	2,085.1	4,230.1	1,559.4	1,589.4	1,126.8	288.3	838.5	462.6	–29.9
II	10,376.9	7,254.7	856.9	2,108.2	4,289.5	1,588.0	1,584.6	1,115.8	275.2	840.7	468.7	3.4
III	10,506.2	7,360.7	897.8	2,116.9	4,346.0	1,597.3	1,579.7	1,109.8	259.4	850.4	469.9	17.6

See next page for continuation of table.

TABLE B–1.—*Gross domestic product, 1959–2002*—Continued

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services			Government consumption expenditures and gross investment					Final sales of domestic product	Gross domestic purchases [1]	Addendum: Gross national product [2]	Percent change from preceding period	
	Net exports	Exports	Imports	Total	Federal			State and local				Gross domestic product	Gross domestic purchases [1]
					Total	National defense	Nondefense						
1959	–1.7	20.6	22.3	112.5	67.4	56.0	11.4	45.1	503.5	509.1	510.3	8.4	8.9
1960	2.4	25.3	22.8	113.8	65.9	55.2	10.7	47.9	524.1	525.0	530.6	3.9	3.1
1961	3.4	26.0	22.7	121.5	69.5	58.1	11.3	52.0	542.7	542.3	549.3	3.5	3.3
1962	2.4	27.4	25.0	132.2	76.9	62.8	14.1	55.3	580.4	584.1	590.7	7.5	7.7
1963	3.3	29.4	26.1	138.5	78.5	62.7	15.8	59.9	613.1	615.4	623.2	5.5	5.4
1964	5.5	33.6	28.1	145.1	79.8	61.8	18.0	65.3	659.6	658.9	669.4	7.4	7.1
1965	3.9	35.4	31.5	153.7	82.1	62.4	19.7	71.6	710.9	716.2	725.5	8.4	8.7
1966	1.9	38.9	37.1	174.3	94.4	73.8	20.7	79.9	775.7	787.4	794.5	9.6	9.9
1967	1.4	41.4	39.9	195.3	106.8	85.8	21.0	88.6	824.2	832.6	839.5	5.7	5.7
1968	–1.3	45.3	46.6	212.8	114.0	92.2	21.8	98.8	902.4	912.7	917.6	9.3	9.6
1969	–1.2	49.3	50.5	224.6	116.1	92.6	23.5	108.5	976.2	986.5	991.5	8.1	8.1
1970	1.2	57.0	55.8	237.1	116.4	90.9	25.5	120.7	1,037.7	1,038.5	1,046.1	5.5	5.3
1971	–3.0	59.3	62.3	251.0	117.6	89.0	28.6	133.5	1,120.3	1,131.6	1,136.2	8.6	9.0
1972	–8.0	66.2	74.2	270.1	125.6	93.5	32.2	144.4	1,231.3	1,248.4	1,249.1	9.9	10.3
1973	.6	91.8	91.2	287.9	127.8	93.9	33.9	160.1	1,369.7	1,384.9	1,398.2	11.7	10.9
1974	–3.1	124.3	127.5	322.4	138.2	99.7	38.5	184.2	1,487.0	1,504.2	1,516.7	8.3	8.6
1975	13.6	136.3	122.7	361.1	152.1	107.9	44.2	209.0	1,641.4	1,621.6	1,648.4	8.9	7.8
1976	–2.3	148.9	151.1	384.5	160.6	113.2	47.4	223.9	1,806.8	1,826.2	1,841.0	11.5	12.6
1977	–23.7	158.8	182.4	415.3	176.0	122.6	53.5	239.3	2,009.1	2,055.1	2,052.1	11.4	12.5
1978	–26.1	186.1	212.3	455.6	191.9	132.0	59.8	263.8	2,270.1	2,322.0	2,318.0	13.0	13.0
1979	–24.0	228.7	252.7	503.5	211.6	146.7	65.0	291.8	2,548.4	2,590.4	2,599.3	11.8	11.6
1980	–14.9	278.9	293.8	569.7	245.3	169.6	75.6	324.4	2,801.9	2,810.5	2,830.8	8.9	8.5
1981	–15.0	302.8	317.8	631.4	281.8	197.8	84.0	349.6	3,101.5	3,146.3	3,166.1	12.0	12.0
1982	–20.5	282.6	303.2	684.4	312.8	228.3	84.5	371.6	3,274.1	3,279.8	3,295.7	4.1	4.2
1983	–51.7	277.0	328.6	735.9	344.4	252.5	92.0	391.5	3,540.7	3,586.6	3,571.8	8.5	9.4
1984	–102.0	303.1	405.1	800.8	376.4	283.5	92.8	424.4	3,867.3	4,034.7	3,968.1	11.3	12.5
1985	–114.2	303.0	417.2	878.3	413.4	312.4	101.0	464.9	4,191.2	4,327.2	4,238.4	7.1	7.2
1986	–131.9	320.3	452.2	942.3	438.7	332.2	106.5	503.6	4,446.3	4,584.7	4,468.3	5.7	6.0
1987	–142.3	365.6	507.9	997.9	460.4	351.2	109.3	537.5	4,715.3	4,884.7	4,756.2	6.5	6.5
1988	–106.3	446.9	553.2	1,036.9	462.6	355.9	106.8	574.3	5,089.8	5,214.6	5,126.8	7.7	6.8
1989	–80.7	509.0	589.7	1,100.2	482.6	363.2	119.3	617.7	5,461.4	5,569.8	5,509.4	7.5	6.8
1990	–71.4	557.2	628.6	1,181.4	508.4	374.9	133.6	673.0	5,788.7	5,874.7	5,832.2	5.7	5.5
1991	–20.7	601.6	622.3	1,235.5	527.4	384.5	142.9	708.1	5,986.4	6,006.9	6,010.9	3.2	2.3
1992	–27.9	636.8	664.6	1,270.5	534.5	378.5	156.0	736.0	6,303.9	6,346.8	6,342.3	5.6	5.7
1993	–60.5	658.0	718.5	1,293.0	527.3	364.9	162.4	765.7	6,621.2	6,702.8	6,666.7	5.1	5.6
1994	–87.1	725.1	812.1	1,327.9	521.1	355.1	165.9	806.8	6,991.8	7,141.4	7,071.1	6.2	6.5
1995	–84.3	818.6	902.8	1,372.0	521.5	350.6	170.9	850.5	7,367.5	7,484.8	7,420.9	4.9	4.8
1996	–89.0	874.2	963.1	1,421.9	531.6	357.0	174.6	890.4	7,783.2	7,902.1	7,831.2	5.6	5.6
1997	–89.3	966.4	1,055.8	1,487.9	538.2	352.6	185.6	949.7	8,255.5	8,407.7	8,325.4	6.5	6.4
1998	–151.7	964.9	1,116.7	1,538.5	539.2	349.1	190.1	999.3	8,708.4	8,933.3	8,778.1	5.6	6.3
1999	–249.9	989.3	1,239.2	1,641.0	565.0	364.3	200.7	1,076.0	9,214.8	9,524.2	9,297.1	5.6	6.6
2000	–365.5	1,101.1	1,466.6	1,751.0	589.2	374.9	214.3	1,161.8	9,761.1	10,190.1	9,848.0	5.9	7.0
2001	–348.9	1,034.1	1,383.0	1,858.0	628.1	399.9	228.2	1,229.9	10,142.5	10,431.0	10,104.1	2.6	2.4
1998: I	–122.6	974.1	1,096.7	1,501.8	526.1	338.4	187.7	975.8	8,521.1	8,750.4	8,634.5	7.2	8.0
II	–154.9	959.2	1,114.1	1,533.8	542.9	348.8	194.2	990.9	8,656.4	8,852.2	8,700.3	3.3	4.7
III	–165.3	946.7	1,112.0	1,548.1	539.5	354.7	184.8	1,008.6	8,747.0	8,981.8	8,802.1	5.6	6.0
IV	–164.1	979.7	1,143.8	1,570.3	548.4	354.7	193.7	1,021.9	8,909.1	9,148.6	8,975.4	7.8	7.6
1999: I	–196.4	959.2	1,155.6	1,594.6	550.0	354.0	196.0	1,044.5	9,018.0	9,289.1	9,112.7	4.9	6.3
II	–241.8	970.2	1,212.0	1,620.1	556.1	355.1	201.0	1,064.0	9,144.0	9,413.5	9,195.9	3.5	5.5
III	–274.6	996.8	1,271.4	1,653.9	569.0	368.7	200.3	1,084.8	9,269.7	9,591.2	9,333.6	6.5	7.8
IV	–286.7	1,031.2	1,317.9	1,695.4	584.9	379.5	205.5	1,110.5	9,427.5	9,803.1	9,546.0	8.9	9.1
2000: I	–330.6	1,055.9	1,386.5	1,716.5	575.7	365.5	210.2	1,140.8	9,602.6	9,980.1	9,670.5	5.7	7.4
II	–353.2	1,098.0	1,451.1	1,748.8	598.5	379.1	219.4	1,150.3	9,731.5	10,173.9	9,846.4	7.3	8.0
III	–384.9	1,130.9	1,515.8	1,757.2	589.7	375.0	214.7	1,167.4	9,813.6	10,259.7	9,892.5	2.2	3.4
IV	–393.2	1,119.8	1,513.0	1,781.4	592.9	380.0	213.0	1,188.5	9,896.6	10,346.8	9,982.8	3.2	3.4
2001: I	–372.7	1,100.0	1,472.8	1,825.0	613.3	391.4	221.9	1,211.7	10,055.3	10,400.8	10,038.0	3.0	2.1
II	–365.7	1,059.7	1,425.3	1,858.5	624.8	395.2	229.6	1,233.7	10,107.0	10,415.5	10,081.0	.9	.6
III	–312.6	1,005.8	1,318.4	1,851.7	627.4	400.3	227.2	1,224.3	10,158.3	10,410.4	10,109.3	1.9	–.2
IV	–344.5	971.1	1,315.6	1,896.8	646.9	412.8	234.1	1,249.8	10,249.4	10,497.4	10,188.1	2.2	3.4
2002: I	–360.1	977.5	1,337.5	1,939.5	672.0	431.7	240.3	1,267.5	10,343.0	10,673.1	10,314.9	6.5	6.9
II	–425.6	1,018.1	1,443.7	1,959.8	688.2	442.1	246.1	1,271.6	10,373.5	10,802.4	10,356.8	2.5	4.9
III	–432.9	1,038.6	1,471.5	1,981.1	697.7	451.2	246.5	1,283.3	10,488.7	10,939.1	10,495.3	5.1	5.2

[1] Gross domestic product (GDP) less exports of goods and services plus imports of goods and services.

[2] GDP plus net income receipts from rest of the world.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–2.—*Real gross domestic product, 1959–2002*

[Billions of chained (1996) dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Personal consumption expenditures				Gross private domestic investment						
							Fixed investment					Change in private inventories
								Nonresidential			Residential	
		Total	Durable goods	Nondurable goods	Services	Total	Total	Total	Structures	Equipment and software		
1959	2,319.0	1,470.7				272.9						
1960	2,376.7	1,510.8				272.8						
1961	2,432.0	1,541.2				271.0						
1962	2,578.9	1,617.3				305.3						
1963	2,690.4	1,684.0				325.7						
1964	2,846.5	1,784.8				352.6						
1965	3,028.5	1,897.6				402.0						
1966	3,227.5	2,006.1				437.3						
1967	3,308.3	2,066.2				417.2						
1968	3,466.1	2,184.2				441.3						
1969	3,571.4	2,264.8				466.9						
1970	3,578.0	2,317.5				436.2						
1971	3,697.7	2,405.2				485.8						
1972	3,898.4	2,550.5				543.0						
1973	4,123.4	2,675.9				606.5						
1974	4,099.0	2,653.7				561.7						
1975	4,084.4	2,710.9				462.2						
1976	4,311.7	2,868.9				555.5						
1977	4,511.8	2,992.1				639.4						
1978	4,760.6	3,124.7				713.0						
1979	4,912.1	3,203.2				735.4						
1980	4,900.9	3,193.0				655.3						
1981	5,021.0	3,236.0				715.6						
1982	4,919.3	3,275.5				615.2						
1983	5,132.3	3,454.3				673.7						
1984	5,505.2	3,640.6				871.5						
1985	5,717.1	3,820.9				863.4						
1986	5,912.4	3,981.2				857.7						
1987	6,113.3	4,113.4	455.2	1,274.5	2,379.3	879.3	856.0	572.5	224.3	360.0	290.7	29.6
1988	6,368.4	4,279.5	481.5	1,315.1	2,477.2	902.8	887.1	603.6	227.1	386.9	289.2	18.4
1989	6,591.8	4,393.7	491.7	1,351.0	2,546.0	936.5	911.2	637.0	232.7	414.0	277.3	29.6
1990	6,707.9	4,474.5	487.1	1,369.6	2,616.2	907.3	894.6	641.7	236.1	415.7	253.5	16.5
1991	6,676.4	4,466.6	454.9	1,364.0	2,651.8	829.5	832.5	610.1	210.1	407.2	221.1	–1.0
1992	6,880.0	4,594.5	479.0	1,389.7	2,729.7	899.8	886.5	630.6	197.3	437.5	257.2	17.1
1993	7,062.6	4,748.9	518.3	1,430.3	2,802.5	977.9	958.4	683.6	198.9	487.1	276.0	20.0
1994	7,347.7	4,928.1	557.7	1,485.1	2,886.2	1,107.0	1,045.9	744.6	200.5	544.9	302.7	66.8
1995	7,543.8	5,075.6	583.5	1,529.0	2,963.4	1,140.6	1,109.2	817.5	210.1	607.6	291.7	30.4
1996	7,813.2	5,237.5	616.5	1,574.1	3,047.0	1,242.7	1,212.7	899.4	225.0	674.4	313.3	30.0
1997	8,159.5	5,423.9	657.3	1,619.9	3,147.0	1,393.3	1,328.6	1,009.3	245.4	764.2	319.7	63.8
1998	8,508.9	5,683.7	726.7	1,686.4	3,273.4	1,558.0	1,480.0	1,135.9	262.2	875.4	345.1	76.7
1999	8,859.0	5,964.5	812.5	1,765.1	3,395.4	1,660.5	1,595.2	1,228.4	258.6	975.9	368.3	62.8
2000	9,191.4	6,223.9	878.9	1,833.8	3,524.5	1,762.9	1,691.9	1,324.2	275.5	1,056.0	372.4	65.0
2001	9,214.5	6,377.2	931.9	1,869.8	3,594.9	1,574.6	1,627.4	1,255.1	270.9	988.2	373.5	–61.4
1998:I	8,396.3	5,576.3	692.5	1,656.3	3,228.4	1,543.3	1,431.4	1,099.5	255.7	845.0	333.0	113.1
II	8,442.9	5,660.2	719.7	1,680.5	3,262.3	1,516.8	1,471.4	1,132.3	264.8	868.6	340.5	42.0
III	8,528.5	5,713.7	727.1	1,693.6	3,295.2	1,559.7	1,485.4	1,136.6	263.0	875.1	349.5	71.8
IV	8,667.9	5,784.7	767.3	1,715.3	3,307.6	1,612.1	1,531.7	1,175.4	265.1	912.9	357.4	80.0
1999:I	8,733.2	5,851.4	777.6	1,736.1	3,343.6	1,640.3	1,560.5	1,197.5	262.4	939.1	364.1	80.0
II	8,775.5	5,932.8	804.2	1,756.7	3,379.7	1,620.5	1,587.6	1,220.4	258.9	967.1	368.4	31.2
III	8,886.9	6,000.1	824.1	1,767.7	3,417.4	1,663.4	1,610.6	1,243.3	254.7	996.1	369.2	47.6
IV	9,040.1	6,073.6	844.2	1,799.9	3,440.7	1,717.8	1,622.2	1,252.4	258.5	1,001.2	371.7	92.2
2000:I	9,097.4	6,151.9	879.5	1,809.7	3,477.7	1,727.8	1,673.6	1,297.1	267.0	1,038.0	379.1	45.3
II	9,205.7	6,198.2	871.3	1,831.6	3,508.2	1,798.1	1,700.9	1,329.1	272.3	1,065.3	376.2	91.5
III	9,218.7	6,256.8	888.5	1,840.9	3,541.7	1,770.3	1,701.7	1,340.7	280.2	1,067.7	367.2	63.1
IV	9,243.8	6,288.8	876.5	1,853.1	3,570.6	1,755.2	1,691.3	1,329.9	282.7	1,053.1	367.2	59.9
2001:I	9,229.9	6,326.0	900.6	1,863.7	3,576.3	1,661.8	1,682.1	1,311.4	280.4	1,036.1	374.5	–26.9
II	9,193.1	6,348.0	912.4	1,862.3	3,589.3	1,583.5	1,633.5	1,261.0	274.4	989.9	374.0	–58.3
III	9,186.4	6,370.9	922.6	1,868.3	3,597.5	1,562.7	1,615.7	1,241.7	276.3	966.4	374.3	–61.8
IV	9,248.8	6,464.0	992.0	1,885.0	3,616.6	1,490.3	1,578.4	1,206.4	252.7	960.3	371.0	–98.4
2002:I	9,363.2	6,513.8	975.9	1,921.4	3,642.2	1,554.0	1,576.4	1,188.4	243.2	953.7	383.6	–28.9
II	9,392.4	6,542.4	980.7	1,920.9	3,666.2	1,583.9	1,572.6	1,181.1	231.7	961.4	386.1	4.9
III	9,485.6	6,609.9	1,032.4	1,925.8	3,687.0	1,598.0	1,571.6	1,178.7	218.2	977.2	387.1	18.8

See next page for continuation of table.

TABLE B–2.—*Real gross domestic product, 1959–2002*—Continued

[Billions of chained (1996) dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services			Government consumption expenditures and gross investment					Final sales of domestic product	Gross domestic purchases [1]	Addendum: Gross national product [2]	Percent change from preceding period	
					Federal								
	Net exports	Exports	Imports	Total	Total	National defense	Nondefense	State and local				Gross domestic product	Gross domestic purchases [1]
1959		72.4	106.6	661.4					2,317.4	2,377.2	2,332.8	7.2	7.6
1960		87.5	108.0	661.3					2,378.5	2,417.5	2,391.9	2.5	1.7
1961		88.9	107.3	693.2					2,435.5	2,471.5	2,448.8	2.3	2.2
1962		93.7	119.5	735.0					2,569.5	2,626.9	2,598.0	6.0	6.3
1963		100.7	122.7	752.4					2,683.6	2,734.7	2,710.8	4.3	4.1
1964		114.2	129.2	767.1					2,844.1	2,883.0	2,868.5	5.8	5.4
1965		116.5	142.9	791.1					3,008.5	3,079.1	3,051.7	6.4	6.8
1966		124.3	164.2	862.1					3,191.1	3,292.3	3,248.9	6.6	6.9
1967		127.0	176.2	927.1					3,288.2	3,382.6	3,330.4	2.5	2.7
1968		136.3	202.4	956.6					3,450.0	3,555.9	3,489.8	4.8	5.1
1969		143.7	213.9	952.5					3,555.9	3,664.5	3,594.1	3.0	3.1
1970		159.3	223.1	931.1					3,588.6	3,659.6	3,600.6	.2	–.1
1971		160.4	235.0	913.8					3,688.1	3,791.1	3,722.9	3.3	3.6
1972		173.5	261.3	914.9					3,887.7	4,003.8	3,925.7	5.4	5.6
1973		211.4	273.4	908.3					4,094.3	4,196.6	4,161.0	5.8	4.8
1974		231.6	267.2	924.8					4,080.7	4,136.5	4,142.3	–.6	–1.4
1975		230.0	237.5	942.5					4,118.5	4,085.2	4,117.7	–.4	–1.2
1976		243.6	284.0	943.3					4,288.8	4,354.2	4,351.4	5.6	6.6
1977		249.7	315.0	952.7					4,478.8	4,586.4	4,556.6	4.6	5.3
1978		275.9	342.3	982.2					4,722.9	4,834.8	4,805.3	5.5	5.4
1979		302.4	347.9	1,001.1					4,894.4	4,956.3	4,973.9	3.2	2.5
1980		334.8	324.8	1,020.9					4,928.1	4,863.8	4,962.3	–.2	–1.9
1981		338.6	333.4	1,030.0					4,989.5	4,990.0	5,075.4	2.5	2.6
1982		314.6	329.2	1,046.0					4,954.9	4,916.6	4,973.6	–2.0	–1.5
1983		306.9	370.7	1,081.0					5,154.5	5,194.1	5,184.9	4.3	5.6
1984		332.6	461.0	1,118.4					5,427.9	5,646.6	5,553.8	7.3	8.7
1985		341.6	490.7	1,190.5					5,698.8	5,883.1	5,750.9	3.8	4.2
1986		366.8	531.9	1,255.2					5,912.6	6,096.2	5,932.5	3.4	3.6
1987	–156.2	408.0	564.2	1,292.5	597.8	450.2	146.5	695.6	6,088.8	6,286.2	6,130.8	3.4	3.1
1988	–112.1	473.5	585.6	1,307.5	586.9	446.8	138.9	721.4	6,352.6	6,489.5	6,391.1	4.2	3.2
1989	–79.4	529.4	608.8	1,343.5	594.7	443.3	150.5	749.5	6,565.4	6,674.6	6,615.5	3.5	2.9
1990	–56.5	575.7	632.2	1,387.3	606.8	443.2	163.0	781.1	6,695.6	6,764.9	6,740.0	1.8	1.4
1991	–15.8	613.2	629.0	1,403.4	604.9	438.4	166.0	798.9	6,681.5	6,688.4	6,703.4	–.5	–1.1
1992	–19.8	651.0	670.8	1,410.0	595.1	417.1	177.9	815.3	6,867.7	6,896.4	6,905.8	3.0	3.1
1993	–59.1	672.7	731.8	1,398.8	572.0	394.7	177.3	827.0	7,043.8	7,120.6	7,087.8	2.7	3.3
1994	–86.5	732.8	819.4	1,400.1	551.3	375.9	175.5	848.9	7,285.8	7,434.2	7,364.3	4.0	4.4
1995	–78.4	808.2	886.6	1,406.4	536.5	361.9	174.6	869.9	7,512.2	7,621.8	7,564.0	2.7	2.5
1996	–89.0	874.2	963.1	1,421.9	531.6	357.0	174.6	890.4	7,783.2	7,902.1	7,831.2	3.6	3.7
1997	–113.3	981.5	1,094.8	1,455.4	529.6	347.7	181.8	925.8	8,095.2	8,271.7	8,168.1	4.4	4.7
1998	–221.1	1,002.4	1,223.5	1,483.3	525.4	341.6	183.8	957.7	8,431.8	8,721.3	8,508.4	4.3	5.4
1999	–320.5	1,036.3	1,356.8	1,540.6	537.7	348.8	188.8	1,002.4	8,793.9	9,160.2	8,883.7	4.1	5.0
2000	–398.8	1,137.2	1,536.0	1,582.5	544.4	348.7	195.6	1,037.4	9,121.1	9,561.2	9,216.2	3.8	4.4
2001	–415.9	1,076.1	1,492.0	1,640.4	570.6	366.0	204.4	1,069.4	9,258.4	9,600.7	9,237.3	.3	.4
1998: I	–180.8	1,003.4	1,184.2	1,456.1	515.0	332.0	183.0	940.8	8,286.6	8,571.6	8,405.4	6.1	7.9
II	–223.1	993.1	1,216.2	1,482.6	530.1	342.0	188.0	952.4	8,397.2	8,657.0	8,448.7	2.2	4.0
III	–241.2	987.6	1,228.9	1,489.9	524.9	346.5	178.4	964.7	8,454.9	8,759.7	8,517.6	4.1	4.8
IV	–239.2	1,025.6	1,264.8	1,504.8	531.7	345.8	185.8	972.8	8,588.5	8,896.6	8,662.0	6.7	6.4
1999: I	–283.2	1,007.5	1,290.7	1,515.9	527.2	341.2	185.9	988.3	8,654.3	9,002.1	8,755.5	3.0	4.8
II	–319.6	1,018.1	1,337.7	1,526.7	530.6	341.0	189.5	995.7	8,741.0	9,076.2	8,801.8	2.0	3.3
III	–339.6	1,044.1	1,383.7	1,546.5	540.1	352.4	187.7	1,006.0	8,833.6	9,204.9	8,906.4	5.2	5.8
IV	–339.5	1,075.6	1,415.2	1,573.2	553.0	360.8	192.1	1,019.8	8,946.6	9,357.7	9,071.1	7.1	6.8
2000: I	–368.8	1,095.8	1,464.6	1,568.3	533.8	341.3	192.3	1,033.8	9,042.9	9,440.8	9,119.7	2.6	3.6
II	–394.6	1,133.9	1,528.5	1,586.1	554.0	353.4	200.3	1,031.8	9,111.1	9,571.9	9,233.0	4.8	5.7
III	–413.1	1,165.5	1,578.6	1,582.2	543.7	347.9	195.6	1,037.8	9,150.4	9,600.9	9,238.2	.6	1.2
IV	–418.5	1,153.7	1,572.2	1,593.4	546.4	351.9	194.3	1,046.3	9,179.8	9,631.0	9,274.0	1.1	1.3
2001: I	–404.5	1,135.8	1,540.3	1,615.7	559.0	359.0	199.8	1,056.2	9,243.8	9,604.6	9,241.7	–.6	–1.1
II	–414.8	1,098.8	1,513.6	1,638.0	567.2	361.4	205.6	1,070.2	9,234.3	9,577.1	9,224.3	–1.6	–1.1
III	–419.0	1,048.0	1,467.0	1,633.3	568.9	365.5	203.2	1,064.1	9,230.5	9,575.8	9,199.8	–.3	–.1
IV	–425.3	1,021.8	1,447.2	1,674.5	587.2	378.0	209.1	1,087.1	9,324.9	9,645.3	9,283.5	2.7	2.9
2002: I	–446.6	1,030.6	1,477.1	1,697.3	597.8	388.5	209.3	1,099.3	9,379.4	9,778.2	9,367.5	5.0	5.6
II	–487.4	1,065.5	1,552.9	1,703.3	608.7	395.8	212.9	1,094.7	9,377.9	9,840.8	9,376.7	1.3	2.6
III	–488.0	1,077.7	1,565.7	1,715.6	615.1	402.5	212.7	1,100.6	9,457.2	9,934.7	9,477.9	4.0	3.9

[1] Gross domestic product (GDP) less exports of goods and services plus imports of goods and services.
[2] GDP plus net income receipts from rest of the world.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–3.—*Quantity and price indexes for gross domestic product, and percent changes, 1959–2002*

[Quarterly data are seasonally adjusted]

Year or quarter	Gross domestic product (GDP)							
	Index numbers, 1996=100				Percent change from preceding period [1]			
	GDP (current dollars)	Real GDP (chain-type quantity index)	GDP chain-type price index	GDP implicit price deflator	GDP (current dollars)	Real GDP (chain-type quantity index)	GDP chain-type price index	GDP implicit price deflator
1959	6.49	29.68	21.88	21.88	8.4	7.2	1.1	1.1
1960	6.75	30.42	22.19	22.19	3.9	2.5	1.4	1.4
1961	6.98	31.13	22.43	22.44	3.5	2.3	1.1	1.1
1962	7.51	33.01	22.74	22.74	7.5	6.0	1.4	1.4
1963	7.92	34.43	22.99	23.00	5.5	4.3	1.1	1.1
1964	8.50	36.43	23.34	23.34	7.4	5.8	1.5	1.5
1965	9.22	38.76	23.77	23.78	8.4	6.4	1.9	1.9
1966	10.10	41.31	24.45	24.46	9.6	6.6	2.8	2.9
1967	10.68	42.34	25.21	25.21	5.7	2.5	3.1	3.1
1968	11.67	44.36	26.29	26.30	9.3	4.8	4.3	4.3
1969	12.61	45.71	27.59	27.59	8.1	3.0	4.9	4.9
1970	13.31	45.80	29.05	29.06	5.5	.2	5.3	5.3
1971	14.44	47.33	30.52	30.52	8.6	3.3	5.0	5.0
1972	15.88	49.90	31.81	31.82	9.9	5.4	4.2	4.3
1973	17.73	52.78	33.60	33.60	11.7	5.8	5.6	5.6
1974	19.21	52.46	36.60	36.62	8.3	–.6	9.0	9.0
1975	20.93	52.28	40.03	40.03	8.9	–.4	9.4	9.3
1976	23.34	55.19	42.29	42.30	11.5	5.6	5.7	5.7
1977	26.00	57.75	45.02	45.02	11.4	4.6	6.4	6.4
1978	29.38	60.93	48.22	48.23	13.0	5.5	7.1	7.1
1979	32.85	62.87	52.24	52.25	11.8	3.2	8.3	8.3
1980	35.78	62.73	57.05	57.04	8.9	–.2	9.2	9.2
1981	40.08	64.26	62.37	62.37	12.0	2.5	9.3	9.3
1982	41.71	62.96	66.26	66.25	4.1	–2.0	6.2	6.2
1983	45.24	65.69	68.87	68.88	8.5	4.3	3.9	4.0
1984	50.33	70.46	71.44	71.44	11.3	7.3	3.7	3.7
1985	53.92	73.17	73.69	73.69	7.1	3.8	3.2	3.2
1986	56.99	75.67	75.32	75.31	5.7	3.4	2.2	2.2
1987	60.70	78.24	77.58	77.58	6.5	3.4	3.0	3.0
1988	65.38	81.51	80.22	80.21	7.7	4.2	3.4	3.4
1989	70.25	84.37	83.27	83.27	7.5	3.5	3.8	3.8
1990	74.28	85.85	86.53	86.51	5.7	1.8	3.9	3.9
1991	76.62	85.45	89.66	89.66	3.2	–.5	3.6	3.6
1992	80.88	88.06	91.85	91.84	5.6	3.0	2.4	2.4
1993	85.01	90.39	94.05	94.05	5.1	2.7	2.4	2.4
1994	90.29	94.04	96.01	96.01	6.2	4.0	2.1	2.1
1995	94.72	96.55	98.10	98.10	4.9	2.7	2.2	2.2
1996	100.00	100.00	100.00	100.00	5.6	3.6	1.9	1.9
1997	106.47	104.43	101.95	101.95	6.5	4.4	1.9	1.9
1998	112.39	108.91	103.20	103.20	5.6	4.3	1.2	1.2
1999	118.70	113.39	104.69	104.69	5.6	4.1	1.4	1.4
2000	125.74	117.64	106.89	106.89	5.9	3.8	2.1	2.1
2001	129.04	117.94	109.42	109.42	2.6	.3	2.4	2.4
1998: I	110.43	107.46	102.76	102.76	7.2	6.1	1.1	1.1
II	111.32	108.06	103.02	103.01	3.3	2.2	1.0	1.0
III	112.84	109.16	103.38	103.38	5.6	4.1	1.4	1.4
IV	114.99	110.94	103.66	103.65	7.8	6.7	1.1	1.1
1999: I	116.38	111.78	104.12	104.12	4.9	3.0	1.8	1.8
II	117.39	112.32	104.52	104.51	3.5	2.0	1.5	1.5
III	119.24	113.74	104.84	104.83	6.5	5.2	1.2	1.2
IV	121.80	115.70	105.28	105.27	8.9	7.1	1.7	1.7
2000: I	123.50	116.44	106.08	106.07	5.7	2.6	3.1	3.1
II	125.69	117.82	106.69	106.68	7.3	4.8	2.3	2.3
III	126.39	117.99	107.13	107.12	2.2	.6	1.6	1.6
IV	127.40	118.31	107.68	107.68	3.2	1.1	2.1	2.1
2001: I	128.35	118.13	108.66	108.65	3.0	–.6	3.7	3.7
II	128.63	117.66	109.32	109.32	.9	–1.6	2.5	2.5
III	129.24	117.58	109.92	109.92	1.9	–.3	2.2	2.2
IV	129.95	118.37	109.78	109.78	2.2	2.7	–.5	–.5
2002: I	132.00	119.84	110.14	110.14	6.5	5.0	1.3	1.3
II	132.81	120.21	110.48	110.48	2.5	1.3	1.2	1.2
III	134.47	121.41	110.76	110.76	5.1	4.0	1.0	1.0

[1] Percent changes based on unrounded data. Quarterly percent changes are at annual rates.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–4.—*Percent changes in real gross domestic product, 1959–2002*

[Percent change from preceding period; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Personal consumption expenditures				Gross private domestic investment				Exports and imports of goods and services		Government consumption expenditures and gross investment		
						Nonresidential fixed								
		Total	Durable goods	Nondurable goods	Services	Total	Structures	Equipment and software	Residential fixed	Exports	Imports	Total	Federal	State and local
1959	7.2	5.6	12.1	4.1	5.2	8.0	2.4	11.9	25.5	0.9	10.5	5.6	7.1	3.5
1960	2.5	2.7	2.0	1.5	4.4	5.7	7.9	4.2	–7.1	20.8	1.3	.0	–3.0	4.4
1961	2.3	2.0	–3.8	1.8	4.1	–.6	1.3	–1.9	.3	1.7	–.7	4.8	3.9	6.1
1962	6.0	4.9	11.7	3.1	4.9	8.7	4.5	11.5	9.6	5.4	11.3	6.0	8.3	3.0
1963	4.3	4.1	9.7	2.1	4.5	5.5	1.1	8.4	11.8	7.5	2.7	2.4	–.3	6.1
1964	5.8	6.0	9.3	4.9	6.1	11.9	10.4	12.7	5.8	13.3	5.3	2.0	–1.7	6.8
1965	6.4	6.3	12.6	5.3	5.3	17.4	15.9	18.3	–2.9	2.0	10.6	3.1	.2	6.7
1966	6.6	5.7	8.5	5.5	5.1	12.5	6.8	15.9	–8.9	6.7	14.9	9.0	11.3	6.3
1967	2.5	3.0	1.6	1.6	4.9	–1.4	–2.5	–.7	–3.1	2.2	7.3	7.5	9.7	5.0
1968	4.8	5.7	11.0	4.6	5.2	4.4	1.4	6.2	13.6	7.3	14.9	3.2	.9	5.9
1969	3.0	3.7	3.6	2.7	4.7	7.6	5.4	8.8	3.0	5.4	5.7	–.4	–3.3	2.9
1970	.2	2.3	–3.2	2.4	4.0	–.5	.3	–1.0	–6.0	10.8	4.3	–2.3	–7.0	2.8
1971	3.3	3.8	10.0	1.8	3.8	–.1	–1.6	.9	27.4	.7	5.3	–1.9	–7.1	3.2
1972	5.4	6.0	12.7	4.4	5.5	9.1	3.1	12.8	17.8	8.1	11.2	.1	–2.2	2.2
1973	5.8	4.9	10.3	3.3	4.7	14.5	8.1	18.3	–.6	21.9	4.6	–.7	–4.9	2.9
1974	–.6	–.8	–6.9	–2.0	2.2	.8	–2.1	2.5	–20.6	9.5	–2.3	1.8	–.4	3.6
1975	–.4	2.2	.0	1.5	3.4	–9.9	–10.5	–9.6	–13.0	–.7	–11.1	1.9	.0	3.3
1976	5.6	5.8	12.8	4.9	4.7	4.9	2.5	6.2	23.5	5.9	19.6	.1	–1.2	1.0
1977	4.6	4.3	9.3	2.4	4.4	11.3	4.1	15.0	21.5	2.5	10.9	1.0	1.8	.4
1978	5.5	4.4	5.3	3.7	4.7	14.1	11.8	15.2	6.3	10.5	8.7	3.1	2.6	3.4
1979	3.2	2.5	–.3	2.7	3.2	10.0	12.6	8.7	–3.7	9.6	1.7	1.9	2.4	1.6
1980	–.2	–.3	–7.9	–.2	1.7	–.1	6.6	–3.6	–21.1	10.7	–6.6	2.0	4.8	–.1
1981	2.5	1.3	1.3	1.2	1.5	5.6	7.9	4.2	–8.0	1.1	2.6	.9	4.7	–2.0
1982	–2.0	1.2	.0	1.0	1.7	–3.7	–1.5	–5.2	–18.2	–7.1	–1.3	1.5	3.6	–.1
1983	4.3	5.5	14.9	3.3	4.9	–1.0	–10.4	5.4	41.1	–2.4	12.6	3.3	6.3	.9
1984	7.3	5.4	14.6	4.0	4.2	17.6	14.3	19.5	14.6	8.4	24.3	3.5	3.1	3.8
1985	3.8	5.0	9.9	2.7	5.2	6.7	7.3	6.4	1.4	2.7	6.5	6.5	7.6	5.4
1986	3.4	4.2	9.1	3.6	3.3	–2.7	–10.8	2.0	12.0	7.4	8.4	5.4	5.5	5.4
1987	3.4	3.3	1.7	2.4	4.3	–.1	–3.6	1.7	.2	11.2	6.1	3.0	3.7	2.3
1988	4.2	4.0	5.8	3.2	4.1	5.4	1.3	7.5	–.5	16.1	3.8	1.2	–1.8	3.7
1989	3.5	2.7	2.1	2.7	2.8	5.5	2.5	7.0	–4.1	11.8	3.9	2.8	1.3	3.9
1990	1.8	1.8	–.9	1.4	2.8	.7	1.5	.4	–8.6	8.7	3.8	3.3	2.0	4.2
1991	–.5	–.2	–6.6	–.4	1.4	–4.9	–11.0	–2.0	–12.8	6.5	–.5	1.2	–.3	2.3
1992	3.0	2.9	5.3	1.9	2.9	3.4	–6.1	7.4	16.3	6.2	6.6	.5	–1.6	2.0
1993	2.7	3.4	8.2	2.9	2.7	8.4	.8	11.3	7.3	3.3	9.1	–.8	–3.9	1.4
1994	4.0	3.8	7.6	3.8	3.0	8.9	.8	11.9	9.7	8.9	12.0	.1	–3.6	2.6
1995	2.7	3.0	4.6	3.0	2.7	9.8	4.8	11.5	–3.6	10.3	8.2	.5	–2.7	2.5
1996	3.6	3.2	5.6	2.9	2.8	10.0	7.1	11.0	7.4	8.2	8.6	1.1	–.9	2.3
1997	4.4	3.6	6.6	2.9	3.3	12.2	9.1	13.3	2.0	12.3	13.7	2.4	–.4	4.0
1998	4.3	4.8	10.5	4.1	4.0	12.5	6.8	14.6	8.0	2.1	11.8	1.9	–.8	3.4
1999	4.1	4.9	11.8	4.7	3.7	8.1	–1.3	11.5	6.7	3.4	10.9	3.9	2.3	4.7
2000	3.8	4.4	8.2	3.9	3.8	7.8	6.5	8.2	1.1	9.7	13.2	2.7	1.3	3.5
2001	.3	2.5	6.0	2.0	2.0	–5.2	–1.7	–6.4	.3	–5.4	–2.9	3.7	4.8	3.1
1998: I	6.1	5.1	7.0	5.6	4.5	21.6	4.9	28.0	10.4	.5	15.9	–2.5	–9.7	1.7
II	2.2	6.2	16.6	6.0	4.3	12.5	14.9	11.6	9.2	–4.0	11.3	7.5	12.2	5.0
III	4.1	3.8	4.2	3.2	4.1	1.5	–2.7	3.0	11.1	–2.2	4.2	2.0	–3.9	5.3
IV	6.7	5.1	24.0	5.2	1.5	14.4	3.3	18.4	9.3	16.3	12.2	4.1	5.3	3.4
1999: I	3.0	4.7	5.5	4.9	4.4	7.7	–4.1	12.0	7.6	–6.9	8.4	3.0	–3.3	6.5
II	2.0	5.7	14.4	4.8	4.4	7.9	–5.1	12.5	4.9	4.3	15.4	2.9	2.6	3.0
III	5.2	4.6	10.3	2.5	4.5	7.7	–6.3	12.5	.9	10.6	14.5	5.3	7.4	4.2
IV	7.1	5.0	10.1	7.5	2.8	3.0	6.1	2.1	2.7	12.6	9.4	7.1	9.9	5.6
2000: I	2.6	5.3	17.8	2.2	4.4	15.0	13.8	15.5	8.3	7.7	14.7	–1.2	–13.2	5.6
II	4.8	3.0	–3.7	4.9	3.6	10.2	8.2	10.9	–3.0	14.6	18.6	4.6	16.0	–.8
III	.6	3.8	8.1	2.0	3.9	3.5	12.1	.9	–9.3	11.6	13.8	–1.0	–7.2	2.4
IV	1.1	2.1	–5.3	2.7	3.3	–3.2	3.6	–5.4	.0	–4.0	–1.6	2.9	2.0	3.3
2001: I	–.6	2.4	11.5	2.3	.6	–5.4	–3.1	–6.3	8.2	–6.0	–7.9	5.7	9.5	3.8
II	–1.6	1.4	5.3	–.3	1.5	–14.5	–8.4	–16.7	–.5	–12.4	–6.8	5.6	6.0	5.4
III	–.3	1.5	4.6	1.3	.9	–6.0	2.9	–9.2	.4	–17.3	–11.8	–1.1	1.2	–2.3
IV	2.7	6.0	33.6	3.6	2.1	–10.9	–30.1	–2.5	–3.5	–9.6	–5.3	10.5	13.5	8.9
2002: I	5.0	3.1	–6.3	7.9	2.9	–5.8	–14.2	–2.7	14.2	3.5	8.5	5.6	7.4	4.6
II	1.3	1.8	2.0	–.1	2.7	–2.4	–17.6	3.3	2.7	14.3	22.2	1.4	7.5	–1.7
III	4.0	4.2	22.8	1.0	2.3	–.8	–21.4	6.7	1.1	4.6	3.3	2.9	4.3	2.2

Note.—Percent changes based on unrounded data.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–5.—*Contributions to percent change in real gross domestic product, 1959–2002*

[Percentage points, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product (percent change)	Personal consumption expenditures				Gross private domestic investment						
		Total	Durable goods	Nondurable goods	Services	Total	Fixed investment					Change in private inventories
							Total	Nonresidential			Residential	
								Total	Structures	Equipment and software		
1959	7.2	3.55	0.97	1.25	1.33	2.82	1.94	0.73	0.09	0.64	1.21	0.88
1960	2.5	1.71	.17	.44	1.10	.00	.13	.52	.28	.24	–.39	–.13
1961	2.3	1.27	–.31	.53	1.05	–.10	–.05	–.06	.05	–.11	.01	–.05
1962	6.0	3.10	.89	.90	1.31	1.80	1.23	.77	.16	.61	.46	.57
1963	4.3	2.55	.77	.59	1.20	1.00	1.07	.50	.04	.46	.58	–.08
1964	5.8	3.71	.77	1.33	1.61	1.25	1.37	1.07	.36	.71	.30	–.12
1965	6.4	3.91	1.06	1.43	1.42	2.15	1.49	1.64	.57	1.07	–.15	.66
1966	6.6	3.52	.73	1.46	1.33	1.44	.86	1.29	.27	1.02	–.43	.58
1967	2.5	1.83	.13	.42	1.28	–.76	–.28	–.15	–.10	–.05	–.13	–.48
1968	4.8	3.48	.92	1.18	1.37	.89	.99	.46	.05	.40	.53	–.10
1969	3.0	2.26	.31	.69	1.26	.90	.90	.77	.20	.57	.13	.00
1970	.2	1.43	–.28	.61	1.09	–1.04	–.31	–.06	.01	–.07	–.26	–.72
1971	3.3	2.35	.81	.47	1.07	1.66	1.09	–.01	–.06	.06	1.10	.58
1972	5.4	3.74	1.07	1.11	1.56	1.86	1.80	.92	.12	.80	.89	.06
1973	5.8	3.05	.90	.82	1.33	1.96	1.46	1.50	.31	1.18	–.04	.50
1974	–.6	–.51	–.61	–.51	.60	–1.31	–1.04	.09	–.08	.17	–1.13	–.27
1975	–.4	1.33	.00	.37	.96	–2.98	–1.71	–1.14	–.43	–.71	–.57	–1.27
1976	5.6	3.67	1.04	1.25	1.38	2.84	1.42	.52	.09	.42	.91	1.42
1977	4.6	2.71	.80	.60	1.30	2.43	2.18	1.19	.15	1.04	.99	.25
1978	5.5	2.79	.47	.91	1.41	2.06	1.94	1.59	.44	1.15	.35	.12
1979	3.2	1.57	–.03	.65	.95	.60	1.01	1.22	.51	.71	–.21	–.41
1980	–.2	–.20	–.66	–.04	.49	–2.09	–1.18	–.01	.30	–.30	–1.17	–.91
1981	2.5	.85	.10	.29	.46	1.58	.38	.73	.39	.34	–.35	1.20
1982	–2.0	.76	.00	.23	.53	–2.54	–1.21	–.50	–.08	–.42	–.71	–1.34
1983	4.3	3.49	1.09	.80	1.61	1.48	1.19	–.13	–.54	.41	1.32	.29
1984	7.3	3.49	1.15	.93	1.41	4.62	2.67	2.04	.61	1.43	.63	1.95
1985	3.8	3.15	.81	.61	1.73	–.17	.89	.83	.33	.50	.06	–1.06
1986	3.4	2.71	.78	.78	1.14	–.11	.20	–.34	–.49	.16	.54	–.32
1987	3.4	2.17	.16	.52	1.49	.42	.00	–.01	–.14	.13	.01	.42
1988	4.2	2.65	.51	.68	1.46	.44	.58	.60	.05	.56	–.02	–.14
1989	3.5	1.76	.18	.58	1.00	.60	.42	.61	.09	.52	–.19	.17
1990	1.8	1.21	–.08	.30	.99	–.49	–.28	.08	.05	.03	–.36	–.21
1991	–.5	–.12	–.53	–.09	.50	–1.26	–1.00	–.53	–.38	–.15	–.47	–.26
1992	3.0	1.90	.39	.40	1.11	1.12	.86	.34	–.18	.52	.52	.26
1993	2.7	2.24	.61	.61	1.02	1.18	1.09	.83	.02	.80	.26	.10
1994	4.0	2.53	.59	.79	1.16	1.89	1.28	.91	.02	.89	.37	.61
1995	2.7	2.00	.37	.60	1.04	.47	.88	1.03	.13	.90	–.15	–.41
1996	3.6	2.14	.44	.60	1.10	1.37	1.39	1.10	.20	.91	.28	–.02
1997	4.4	2.39	.51	.58	1.29	1.91	1.47	1.39	.26	1.13	.08	.44
1998	4.3	3.18	.80	.81	1.57	1.96	1.80	1.49	.21	1.27	.32	.15
1999	4.1	3.30	.92	.91	1.47	1.15	1.29	1.01	–.04	1.05	.28	–.15
2000	3.8	2.94	.65	.77	1.51	1.08	1.03	.98	.20	.78	.05	.06
2001	.3	1.67	.48	.39	.80	–1.90	–.65	–.66	–.05	–.61	.01	–1.24
1998:I	6.1	3.39	.53	1.08	1.77	4.99	2.85	2.45	.15	2.29	.40	2.14
II	2.2	3.99	1.21	1.13	1.64	–1.18	1.84	1.49	.45	1.04	.36	–3.02
III	4.1	2.56	.33	.62	1.62	1.98	.64	.20	–.09	.29	.44	1.34
IV	6.7	3.42	1.74	1.03	.66	2.38	2.10	1.71	.11	1.61	.39	.28
1999:I	3.0	3.06	.43	.94	1.70	1.25	1.26	.95	–.14	1.08	.32	–.01
II	2.0	3.72	1.09	.93	1.70	–.86	1.18	.97	–.17	1.14	.21	–2.04
III	5.2	3.14	.81	.51	1.81	1.85	1.01	.97	–.20	1.17	.04	.84
IV	7.1	3.45	.81	1.48	1.16	2.32	.53	.41	.18	.22	.12	1.80
2000:I	2.6	3.54	1.36	.45	1.73	.39	2.15	1.80	.40	1.41	.35	–1.77
II	4.8	2.11	–.30	.99	1.43	2.92	1.15	1.28	.25	1.03	–.13	1.77
III	.6	2.54	.63	.40	1.51	–1.09	.04	.46	.37	.09	–.42	–1.12
IV	1.1	1.37	–.44	.52	1.29	–.55	–.41	–.41	.12	–.53	.00	–.14
2001:I	–.6	1.53	.87	.45	.21	–3.65	–.38	–.71	–.10	–.61	.34	–3.27
II	–1.6	.92	.42	–.07	.57	–3.09	–1.95	–1.93	–.29	–1.64	–.02	–1.14
III	–.3	.97	.36	.25	.35	–.81	–.72	–.73	.10	–.83	.02	–.09
IV	2.7	4.05	2.45	.73	.87	–2.88	–1.49	–1.33	–1.12	–.21	–.16	–1.39
2002:I	5.0	2.22	–.55	1.57	1.20	2.53	–.07	–.66	–.44	–.22	.60	2.60
II	1.3	1.22	.16	–.02	1.08	1.16	–.15	–.27	–.53	.26	.12	1.31
III	4.0	2.93	1.74	.22	.97	.55	–.03	–.08	–.62	.53	.05	.58

See next page for continuation of table.

TABLE B–5.—*Contributions to percent change in real gross domestic product, 1959–2002*—Continued

[Percentage points, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services							Government consumption expenditures and gross investment				
	Net exports	Exports			Imports			Total	Federal			State and local
		Total	Goods	Services	Total	Goods	Services		Total	National defense	Nondefense	
1959	–0.41	0.04	–0.02	0.06	–0.45	–0.48	0.03	1.27	0.95	0.29	0.65	0.33
1960	.79	.85	.76	.09	–.06	.05	–.11	.00	–.39	–.21	–.18	.39
1961	.11	.08	.02	.06	.03	.00	.02	1.04	.48	.43	.06	.56
1962	–.21	.25	.17	.08	–.47	–.40	–.07	1.35	1.06	.63	.43	.29
1963	.24	.35	.29	.06	–.12	–.12	.00	.53	–.04	–.27	.23	.57
1964	.41	.63	.51	.12	–.23	–.19	–.03	.44	–.22	–.44	.23	.66
1965	–.35	.10	.02	.08	–.45	–.41	–.04	.69	.02	–.17	.19	.66
1966	–.32	.33	.27	.06	–.65	–.49	–.16	1.93	1.29	1.25	.04	.64
1967	–.23	.11	.02	.09	–.34	–.17	–.16	1.67	1.16	1.19	–.03	.51
1968	–.35	.36	.30	.06	–.70	–.68	–.03	.75	.12	.18	–.07	.63
1969	–.02	.27	.20	.07	–.29	–.20	–.09	–.10	–.42	–.48	.06	.32
1970	.32	.54	.44	.10	–.22	–.15	–.07	–.52	–.84	–.80	–.04	.32
1971	–.25	.04	–.02	.06	–.29	–.33	.04	–.43	–.81	–.90	.10	.38
1972	–.20	.43	.43	.00	–.63	–.57	–.06	.03	–.23	–.40	.17	.26
1973	.92	1.21	1.01	.21	–.29	–.34	.05	–.16	–.50	–.49	–.01	.34
1974	.85	.67	.46	.22	.18	.17	.00	.38	–.04	–.17	.13	.42
1975	.89	–.06	–.16	.10	.94	.87	.07	.41	.00	–.08	.08	.41
1976	–.96	.49	.31	.17	–1.45	–1.35	–.10	.02	–.11	–.14	.03	.13
1977	–.71	.20	.08	.12	–.91	–.84	–.07	.21	.16	.05	.11	.05
1978	.04	.81	.68	.14	–.78	–.67	–.11	.63	.23	.05	.18	.40
1979	.63	.79	.77	.03	–.16	–.14	–.02	.38	.20	.16	.04	.18
1980	1.67	.96	.86	.10	.71	.67	.04	.39	.40	.24	.16	–.01
1981	–.16	.11	–.09	.20	–.27	–.18	–.09	.18	.41	.37	.04	–.23
1982	–.55	–.67	–.67	.00	.12	.20	–.08	.31	.33	.47	–.15	–.02
1983	–1.34	–.21	–.19	–.02	–1.13	–1.00	–.13	.70	.60	.47	.13	.10
1984	–1.57	.65	.46	.19	–2.22	–1.83	–.39	.72	.31	.35	–.04	.42
1985	–.44	.20	.19	.02	–.65	–.51	–.13	1.31	.73	.60	.13	.59
1986	–.31	.52	.26	.26	–.83	–.82	–.01	1.13	.54	.46	.07	.60
1987	.18	.81	.56	.25	–.62	–.39	–.23	.63	.36	.35	.01	.27
1988	.84	1.25	1.04	.21	–.41	–.36	–.05	.24	–.18	–.06	–.12	.42
1989	.60	1.02	.80	.23	–.43	–.37	–.05	.56	.12	–.05	.17	.44
1990	.39	.80	.55	.25	–.41	–.26	–.15	.65	.18	.00	.18	.48
1991	.67	.62	.48	.14	.05	.00	.05	.24	–.03	–.07	.04	.26
1992	–.07	.61	.48	.13	–.68	–.76	.08	.10	–.14	–.31	.17	.24
1993	–.61	.33	.21	.12	–.94	–.85	–.09	–.16	–.33	–.32	–.01	.17
1994	–.41	.88	.67	.22	–1.29	–1.18	–.11	.02	–.29	–.26	–.02	.31
1995	.11	1.06	.86	.20	–.95	–.87	–.08	.09	–.20	–.19	–.01	.28
1996	–.15	.89	.68	.22	–1.04	–.94	–.09	.21	–.06	–.06	.00	.27
1997	–.29	1.35	1.12	.23	–1.64	–1.43	–.21	.43	–.03	–.12	.09	.45
1998	–1.20	.24	.17	.07	–1.44	–1.20	–.24	.34	–.05	–.07	.02	.39
1999	–1.01	.37	.29	.08	–1.38	–1.29	–.09	.68	.14	.09	.06	.54
2000	–.75	1.04	.85	.19	–1.79	–1.54	–.24	.49	.08	.00	.08	.41
2001	–.18	–.59	–.47	–.13	.42	.40	.01	.65	.29	.19	.10	.36
1998: I	–1.85	.07	–.02	.09	–1.92	–1.51	–.41	–.43	–.64	–.79	.15	.21
II	–1.83	–.46	–.72	.25	–1.36	–1.23	–.14	1.27	.71	.47	.24	.56
III	–.78	–.24	.04	–.28	–.53	–.39	–.15	.35	–.24	.21	–.45	.60
IV	.17	1.66	1.33	.32	–1.49	–1.48	.00	.73	.32	–.03	.35	.40
1999: I	–1.77	–.78	–.72	–.06	–.99	–1.01	.02	.51	–.21	–.21	.00	.72
II	–1.41	.43	.33	.10	–1.84	–1.72	–.12	.50	.15	–.01	.16	.34
III	–.75	1.08	.94	.14	–1.83	–1.64	–.19	.93	.44	.52	–.08	.49
IV	.04	1.31	1.11	.20	–1.27	–1.12	–.15	1.26	.60	.39	.21	.67
2000: I	–1.17	.82	.51	.31	–1.99	–1.56	–.43	–.20	–.85	–.86	.01	.65
II	–1.00	1.53	1.18	.35	–2.54	–2.32	–.21	.83	.91	.54	.37	–.08
III	–.72	1.25	1.44	–.19	–1.97	–1.64	–.32	–.18	–.45	–.24	–.21	.28
IV	–.23	–.46	–.60	.14	.23	.22	.01	.51	.12	.17	–.06	.39
2001: I	.53	–.69	–.49	–.20	1.22	1.21	.01	.99	.54	.30	.24	.45
II	–.42	–1.42	–1.34	–.08	1.00	1.18	–.18	1.00	.36	.10	.25	.64
III	–.24	–1.94	–1.49	–.45	1.70	1.17	.53	–.21	.07	.18	–.11	–.28
IV	–.28	–.99	–.56	–.42	.70	.37	.33	1.85	.80	.54	.26	1.05
2002: I	–.75	.33	–.23	.56	–1.08	–.40	–.68	1.04	.47	.46	.01	.56
II	–1.40	1.29	.99	.30	–2.69	–2.74	.05	.27	.47	.32	.16	–.21
III	–.01	.45	.28	.17	–.47	–.40	–.07	.56	.29	.29	–.01	.27

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–6.—*Chain-type quantity indexes for gross domestic product, 1959–2002*

[Index numbers, 1996=100; quarterly data seasonally adjusted]

Year or quarter	Gross domestic product	Personal consumption expenditures				Gross private domestic investment					
							Fixed investment				
								Nonresidential			
		Total	Durable goods	Nondurable goods	Services	Total	Total	Total	Structures	Equipment and software	Residential
1959	29.68	28.08	16.49	38.35	24.90	21.96	22.20	15.94	43.65	9.74	47.26
1960	30.42	28.85	16.82	38.93	25.99	21.95	22.39	16.84	47.12	10.16	43.89
1961	31.13	29.43	16.19	39.64	27.04	21.81	22.32	16.74	47.76	9.96	44.02
1962	33.01	30.88	18.08	40.89	28.38	24.57	24.33	18.19	49.91	11.11	48.24
1963	34.43	32.15	19.84	41.75	29.67	26.21	26.21	19.20	50.46	12.04	53.92
1964	36.43	34.08	21.67	43.80	31.47	28.37	28.74	21.47	55.71	13.58	57.05
1965	38.76	36.23	24.42	46.12	33.15	32.35	31.66	25.20	64.59	16.06	55.39
1966	41.31	38.30	26.48	48.65	34.83	35.19	33.47	28.35	69.02	18.61	50.43
1967	42.34	39.45	26.90	49.42	36.54	33.57	32.84	27.95	67.26	18.48	48.84
1968	44.36	41.70	29.85	51.67	38.42	35.51	35.12	29.19	68.21	19.62	55.50
1969	45.71	43.24	30.92	53.05	40.24	37.58	37.30	31.39	71.89	21.34	57.14
1970	45.80	44.25	29.91	54.32	41.87	35.10	36.51	31.22	72.12	21.12	53.73
1971	47.33	45.92	32.91	55.30	43.46	39.09	39.26	31.21	70.94	21.31	68.46
1972	49.90	48.70	37.08	57.73	45.86	43.70	43.96	34.04	73.12	24.04	80.63
1973	52.78	51.09	40.91	59.62	48.02	48.81	47.97	38.99	79.08	28.44	80.11
1974	52.46	50.67	38.10	58.42	49.07	45.20	44.96	39.30	77.43	29.13	63.57
1975	52.28	51.76	38.09	59.28	50.73	37.20	40.13	35.41	69.32	26.35	55.32
1976	55.19	54.78	42.95	62.17	53.13	44.70	44.08	37.14	71.02	27.98	68.34
1977	57.75	57.13	46.95	63.67	55.48	51.45	50.41	41.32	73.97	32.18	83.02
1978	60.93	59.66	49.43	66.05	58.12	57.38	56.22	47.15	82.66	37.09	88.26
1979	62.87	61.16	49.26	67.81	59.99	59.18	59.37	51.88	93.08	40.33	85.03
1980	62.73	60.96	45.39	67.71	60.99	52.73	55.58	51.85	99.23	38.88	67.05
1981	64.26	61.79	45.98	68.51	61.90	57.59	56.79	54.77	107.09	40.52	61.68
1982	62.96	62.54	45.98	69.17	62.96	49.51	52.81	52.72	105.47	38.42	50.45
1983	65.69	65.95	52.81	71.47	66.06	54.22	56.76	52.19	94.53	40.50	71.19
1984	70.46	69.51	60.54	74.31	68.84	70.13	66.28	61.37	108.03	48.40	81.56
1985	73.17	72.95	66.52	76.33	72.44	69.48	69.77	65.49	115.92	51.48	82.67
1986	75.67	76.01	72.58	79.07	74.86	69.02	70.60	63.73	103.43	52.51	92.58
1987	78.24	78.54	73.84	80.97	78.09	70.76	70.58	63.65	99.69	53.37	92.79
1988	81.51	81.71	78.11	83.55	81.30	72.65	73.15	67.11	100.95	57.37	92.32
1989	84.37	83.89	79.75	85.83	83.56	75.36	75.14	70.83	103.42	61.39	88.53
1990	85.85	85.43	79.01	87.01	85.86	73.01	73.77	71.35	104.95	61.63	80.92
1991	85.45	85.28	73.79	86.65	87.03	66.75	68.65	67.83	93.38	60.38	70.57
1992	88.06	87.72	77.70	88.29	89.59	72.41	73.10	70.11	87.70	64.86	82.09
1993	90.39	90.67	84.08	90.87	91.98	78.69	79.03	76.00	88.39	72.22	88.09
1994	94.04	94.09	90.46	94.35	94.72	89.08	86.25	82.78	89.14	80.79	96.64
1995	96.55	96.91	94.66	97.14	97.26	91.79	91.46	90.89	93.39	90.08	93.13
1996	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1997	104.43	103.56	106.63	102.91	103.28	112.12	109.56	112.22	109.07	113.30	102.04
1998	108.91	108.52	117.87	107.14	107.43	125.37	122.04	126.29	116.53	129.80	110.17
1999	113.39	113.88	131.80	112.14	111.43	133.62	131.54	136.57	114.96	144.69	117.58
2000	117.64	118.83	142.58	116.50	115.67	141.86	139.52	147.23	122.47	156.58	118.88
2001	117.94	121.76	151.16	118.79	117.98	126.71	134.20	139.55	120.43	146.51	119.22
1998: I	107.46	106.47	112.34	105.23	105.95	124.19	118.04	122.24	113.67	125.29	106.32
II	108.06	108.07	116.75	106.76	107.07	122.06	121.34	125.89	117.70	128.79	108.68
III	109.16	109.09	117.95	107.60	108.15	125.51	122.48	126.37	116.89	129.76	111.58
IV	110.94	110.45	124.46	108.98	108.55	129.73	126.31	130.68	117.83	135.36	114.10
1999: I	111.78	111.72	126.14	110.29	109.73	132.00	128.68	133.13	116.61	139.24	116.22
II	112.32	113.28	130.45	111.60	110.92	130.40	130.91	135.69	115.09	143.40	117.60
III	113.74	114.56	133.68	112.30	112.16	133.86	132.81	138.23	113.22	147.69	117.86
IV	115.70	115.96	136.94	114.35	112.92	138.23	133.77	139.25	114.91	148.45	118.64
2000: I	116.44	117.46	142.67	114.97	114.14	139.04	138.01	144.21	118.68	153.91	121.02
II	117.82	118.34	141.34	116.36	115.14	144.70	140.26	147.77	121.03	157.95	120.09
III	117.99	119.46	144.12	116.96	116.24	142.46	140.32	149.06	124.52	158.31	117.21
IV	118.31	120.07	142.18	117.73	117.19	141.25	139.47	147.86	125.63	156.14	117.21
2001: I	118.13	120.78	146.09	118.40	117.37	133.72	138.71	145.81	124.64	153.63	119.55
II	117.66	121.20	148.00	118.31	117.80	127.43	134.70	140.20	121.95	146.77	119.39
III	117.58	121.64	149.66	118.69	118.07	125.75	133.23	138.06	122.82	143.28	119.50
IV	118.37	123.42	160.91	119.76	118.69	119.93	130.16	134.13	112.30	142.39	118.44
2002: I	119.84	124.37	158.30	122.07	119.54	125.05	129.99	132.13	108.09	141.41	122.44
II	120.21	124.92	159.08	122.03	120.32	127.46	129.68	131.32	102.97	142.55	123.25
III	121.41	126.20	167.47	122.35	121.01	128.59	129.60	131.05	96.97	144.88	123.59

See next page for continuation of table.

TABLE B–6.—*Chain-type quantity indexes for gross domestic product, 1959–2002*—Continued

[Index numbers, 1996=100; quarterly data seasonally adjusted]

Year or quarter	Exports of goods and services			Imports of goods and services			Government consumption expenditures and gross investment				
	Total	Goods	Services	Total	Goods	Services	Total	Federal			State and local
								Total	National defense	Non-defense	
1959	8.28	8.41	7.35	11.07	8.82	22.61	46.52	70.91	88.19	37.04	31.42
1960	10.00	10.38	8.13	11.21	8.67	24.38	46.51	68.81	86.49	34.05	32.79
1961	10.17	10.43	8.67	11.14	8.66	23.96	48.75	71.46	90.02	34.98	34.81
1962	10.72	10.89	9.46	12.40	9.94	25.08	51.69	77.38	95.29	42.21	35.87
1963	11.52	11.75	10.06	12.74	10.34	25.06	52.91	77.16	92.88	46.30	38.04
1964	13.06	13.36	11.26	13.41	11.03	25.71	53.95	75.85	88.86	50.33	40.61
1965	13.33	13.43	12.15	14.84	12.59	26.47	55.64	76.00	87.28	53.82	43.34
1966	14.22	14.36	12.85	17.05	14.57	29.83	60.63	84.59	99.90	54.54	46.08
1967	14.53	14.43	13.97	18.29	15.34	33.47	65.20	92.84	112.64	53.98	48.37
1968	15.59	15.57	14.69	21.02	18.51	34.08	67.27	93.69	114.65	52.60	51.22
1969	16.44	16.39	15.59	22.21	19.52	36.22	66.99	90.57	109.24	53.92	52.71
1970	18.22	18.26	16.97	23.16	20.29	38.11	65.48	84.21	100.03	53.09	54.21
1971	18.35	18.18	17.77	24.40	21.99	37.03	64.26	78.24	89.85	55.19	55.96
1972	19.84	20.14	17.70	27.13	24.98	38.54	64.34	76.53	85.39	58.89	57.18
1973	24.19	24.77	20.85	28.39	26.74	37.24	63.87	72.77	79.86	58.70	58.84
1974	26.49	26.73	24.29	27.75	26.00	37.20	65.04	72.47	77.91	61.78	60.96
1975	26.32	26.11	25.91	24.66	22.72	35.59	66.28	72.47	76.96	63.71	62.99
1976	27.87	27.35	28.65	29.49	27.86	38.04	66.34	71.63	75.35	64.45	63.62
1977	28.57	27.71	30.67	32.70	31.25	39.94	67.00	72.89	75.92	67.14	63.90
1978	31.56	30.81	33.10	35.54	34.05	42.78	69.07	74.82	76.51	71.83	66.08
1979	34.59	34.45	33.64	36.13	34.64	43.37	70.40	76.63	78.69	72.89	67.12
1980	38.30	38.55	35.59	33.73	32.06	42.40	71.80	80.31	81.99	77.39	67.08
1981	38.74	38.14	39.32	34.61	32.72	44.85	72.44	84.08	86.98	78.60	65.75
1982	35.99	34.70	39.29	34.18	31.90	47.24	73.56	87.13	93.46	74.35	65.66
1983	35.11	33.70	38.86	38.49	36.24	51.06	76.02	92.61	99.79	78.03	66.24
1984	38.05	36.36	42.62	47.86	45.00	63.86	78.65	95.50	104.57	76.81	68.73
1985	39.08	37.58	43.01	50.95	47.80	68.71	83.72	102.79	113.32	80.97	72.44
1986	41.96	39.51	48.73	55.23	52.70	68.94	88.28	108.45	120.44	83.47	76.34
1987	46.67	43.89	54.38	58.58	55.15	77.64	90.89	112.45	126.10	83.93	78.13
1988	54.17	52.16	59.45	60.81	57.38	79.75	91.95	110.41	125.15	79.57	81.02
1989	60.56	58.74	65.18	63.21	59.80	81.98	94.48	111.88	124.18	86.22	84.18
1990	65.85	63.58	71.73	65.64	61.60	88.23	97.56	114.16	124.15	93.38	87.73
1991	70.15	68.09	75.40	65.31	61.56	86.18	98.69	113.80	122.80	95.10	89.73
1992	74.47	72.73	78.86	69.64	67.26	82.69	99.16	111.95	116.83	101.89	91.56
1993	76.95	74.93	82.07	75.98	74.03	86.60	98.37	107.60	110.57	101.55	92.88
1994	83.83	82.18	88.01	85.08	83.86	91.65	98.46	103.71	105.28	100.52	95.34
1995	92.45	91.97	93.65	92.05	91.43	95.40	98.91	100.92	101.37	100.02	97.71
1996	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1997	112.27	114.51	106.98	113.67	114.20	110.94	102.35	99.62	97.40	104.15	103.98
1998	114.67	116.90	109.39	127.03	127.59	124.16	104.32	98.84	95.67	105.29	107.56
1999	118.55	121.29	112.13	140.88	143.19	129.42	108.34	101.16	97.71	108.15	112.59
2000	130.09	134.98	118.91	159.48	162.51	144.47	111.29	102.42	97.66	112.06	116.52
2001	123.10	126.97	114.18	154.91	157.18	143.71	115.36	107.33	102.51	117.10	120.11
1998: I	114.78	117.52	108.32	122.95	123.20	121.62	102.40	96.89	92.99	104.81	105.67
II	113.61	114.90	110.43	126.27	126.79	123.59	104.27	99.72	95.80	107.68	106.96
III	112.98	115.06	108.04	127.59	127.94	125.70	104.78	98.74	97.05	102.21	108.35
IV	117.32	120.12	110.78	131.32	132.44	125.73	105.83	100.02	96.85	106.45	109.26
1999: I	115.25	117.30	110.36	134.01	135.67	125.79	106.61	99.17	95.57	106.50	111.00
II	116.46	118.64	111.28	138.89	141.12	127.88	107.37	99.81	95.51	108.53	111.83
III	119.44	122.38	112.56	143.67	146.26	130.86	108.76	101.60	98.70	107.53	112.98
IV	123.05	126.82	114.33	146.93	149.72	133.14	110.64	104.03	101.07	110.06	114.54
2000: I	125.35	128.89	117.13	152.07	154.59	139.53	110.29	100.41	95.61	110.14	116.11
II	129.71	133.80	120.28	158.70	161.91	142.76	111.55	104.21	99.00	114.76	115.88
III	133.32	139.88	118.47	163.91	167.15	147.87	111.27	102.27	97.46	112.04	116.56
IV	131.97	137.33	119.76	163.23	166.40	147.70	112.06	102.78	98.58	111.31	117.52
2001: I	129.93	135.19	117.91	159.93	162.44	147.81	113.63	105.15	100.56	114.47	118.63
II	125.70	129.39	117.17	157.15	158.49	150.84	115.19	106.70	101.23	117.76	120.20
III	119.89	122.89	112.87	152.32	154.54	141.21	114.87	107.01	102.38	116.40	119.51
IV	116.89	120.40	108.77	150.26	153.24	134.98	117.76	110.46	105.87	119.78	122.09
2002: I	117.89	119.36	114.24	153.37	154.63	145.69	119.37	112.46	108.82	119.91	123.47
II	121.89	123.84	117.18	161.24	164.44	144.92	119.79	114.50	110.87	121.93	122.95
III	123.28	125.08	118.87	162.56	165.81	146.02	120.65	115.71	112.74	121.83	123.62

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–7.—*Chain-type price indexes for gross domestic product, 1959–2002*

[Index numbers, 1996=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Gross domestic product	Personal consumption expenditures				Gross private domestic investment					
							Fixed investment				
								Nonresidential			
		Total	Durable goods	Nondurable goods	Services	Total	Total	Total	Structures	Equipment and software	Residential
1959	21.88	21.63	41.97	24.60	16.74	28.78	27.72	32.44	18.48	43.15	18.99
1960	22.19	22.00	41.77	24.95	17.19	28.92	27.87	32.59	18.46	43.51	19.12
1961	22.43	22.23	41.86	25.10	17.51	28.84	27.78	32.41	18.35	43.28	19.15
1962	22.74	22.49	42.05	25.30	17.82	28.87	27.81	32.42	18.50	43.08	19.18
1963	22.99	22.75	42.20	25.59	18.07	28.78	27.73	32.43	18.67	42.86	19.02
1964	23.34	23.07	42.40	25.92	18.40	28.95	27.90	32.60	18.94	42.84	19.18
1965	23.77	23.41	42.03	26.39	18.76	29.42	28.39	32.99	19.49	42.91	19.72
1966	24.45	24.02	41.83	27.26	19.29	30.03	28.99	33.49	20.19	43.05	20.44
1967	25.21	24.62	42.48	27.91	19.86	30.83	29.81	34.36	20.82	44.03	21.15
1968	26.29	25.58	43.89	28.98	20.69	31.99	31.02	35.58	21.87	45.24	22.27
1969	27.59	26.74	45.10	30.32	21.73	33.51	32.56	37.07	23.31	46.52	23.81
1970	29.05	28.00	46.09	31.82	22.89	34.93	33.96	38.82	24.83	48.25	24.58
1971	30.52	29.20	47.77	32.80	24.17	36.69	35.69	40.67	26.74	49.73	26.00
1972	31.81	30.22	48.28	33.90	25.22	38.24	37.23	42.08	28.68	50.37	27.58
1973	33.60	31.86	48.98	36.56	26.37	40.31	39.30	43.71	30.91	51.25	30.03
1974	36.60	35.14	52.08	41.82	28.46	44.33	43.18	47.95	35.15	55.08	33.12
1975	40.03	38.01	56.84	45.09	30.80	49.80	48.59	54.55	39.34	63.24	36.20
1976	42.29	40.08	59.99	46.83	32.90	52.57	51.42	57.59	41.25	67.02	38.53
1977	45.02	42.73	62.61	49.61	35.49	56.51	55.46	61.54	44.81	71.02	42.41
1978	48.22	45.78	66.20	52.93	38.31	61.15	60.17	65.69	49.15	74.84	47.61
1979	52.24	49.83	70.60	58.50	41.43	66.71	65.65	71.07	54.87	79.67	52.95
1980	57.05	55.21	76.54	65.31	45.88	73.01	71.83	77.39	59.97	86.58	58.68
1981	62.37	60.08	81.62	70.37	50.58	79.77	78.55	84.93	68.31	92.86	63.47
1982	66.26	63.48	84.76	72.34	54.81	83.91	82.91	89.69	73.76	96.60	66.87
1983	68.87	66.19	86.38	73.89	58.33	83.73	82.81	88.93	71.82	96.91	68.40
1984	71.44	68.63	87.58	75.64	61.35	84.40	83.37	88.83	72.42	96.29	70.37
1985	73.69	70.99	88.59	77.30	64.36	85.30	84.45	89.57	74.11	96.28	72.18
1986	75.32	72.72	89.69	77.01	67.31	87.19	86.51	91.17	75.54	97.92	75.21
1987	77.58	75.49	92.21	79.66	70.20	88.86	88.12	92.01	76.72	98.53	78.29
1988	80.22	78.44	93.49	82.34	73.61	90.96	90.48	94.17	79.98	99.95	80.99
1989	83.27	81.86	95.14	86.26	77.12	93.22	92.76	96.29	83.10	101.45	83.59
1990	86.53	85.63	96.00	90.98	80.95	95.08	94.70	98.23	85.77	102.93	85.54
1991	89.66	88.91	97.39	93.76	84.82	96.46	96.14	99.80	87.32	104.48	86.64
1992	91.85	91.62	98.28	95.20	88.50	96.32	96.07	99.29	87.29	103.75	87.69
1993	94.05	93.81	99.06	96.15	91.57	97.70	97.46	99.81	90.22	103.24	91.24
1994	96.01	95.70	100.56	96.83	94.16	99.11	98.92	100.54	93.50	102.98	94.48
1995	98.10	97.90	101.06	97.93	97.25	100.29	100.14	100.93	97.39	102.12	97.91
1996	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1997	101.95	101.94	97.75	101.34	103.12	99.80	99.93	99.02	104.23	97.32	102.68
1998	103.20	103.03	95.40	101.31	105.53	98.77	99.03	96.95	107.72	93.54	105.58
1999	104.69	104.73	93.03	103.69	107.81	98.56	98.87	95.53	109.69	91.18	109.59
2000	106.89	107.39	91.46	107.59	110.85	99.60	100.00	95.59	114.04	90.11	114.40
2001	109.42	109.56	89.70	109.17	114.32	100.76	101.16	95.73	119.76	88.76	119.09
1998: I	102.76	102.58	96.27	101.17	104.62	99.07	99.34	97.75	106.84	94.84	104.28
II	103.02	102.83	95.75	100.99	105.26	98.79	99.05	97.13	107.61	93.80	105.06
III	103.38	103.18	95.11	101.36	105.82	98.64	98.90	96.65	107.97	93.07	106.02
IV	103.66	103.54	94.49	101.70	106.41	98.57	98.83	96.27	108.45	92.44	106.95
1999: I	104.12	103.86	93.69	102.15	106.92	98.63	98.90	96.03	108.82	92.04	108.04
II	104.52	104.44	93.23	103.30	107.45	98.59	98.90	95.67	109.30	91.46	109.23
III	104.84	105.00	92.83	104.18	108.08	98.46	98.79	95.27	109.89	90.80	110.11
IV	105.28	105.62	92.37	105.12	108.79	98.58	98.90	95.16	110.76	90.44	110.98
2000: I	106.08	106.52	91.91	106.49	109.76	99.09	99.46	95.33	112.20	90.27	112.88
II	106.69	107.11	91.74	107.28	110.45	99.38	99.78	95.43	113.31	90.10	113.97
III	107.13	107.67	91.24	108.04	111.16	99.81	100.21	95.73	114.58	90.15	114.85
IV	107.68	108.26	90.95	108.53	112.03	100.11	100.54	95.86	116.07	89.91	115.90
2001: I	108.66	109.15	90.68	109.00	113.43	100.62	100.97	95.96	119.01	89.25	117.49
II	109.32	109.64	89.89	109.80	114.08	100.88	101.27	95.97	120.23	88.93	118.78
III	109.92	109.62	89.29	109.42	114.40	100.79	101.22	95.69	120.14	88.60	119.50
IV	109.78	109.84	88.95	108.45	115.39	100.73	101.19	95.31	119.66	88.26	120.60
2002: I	110.14	110.14	88.00	108.52	116.15	100.35	100.82	94.82	118.56	87.93	120.61
II	110.48	110.89	87.36	109.75	117.00	100.24	100.76	94.48	118.77	87.46	121.40
III	110.76	111.36	86.94	109.92	117.88	99.96	100.52	94.17	118.89	87.04	121.38

See next page for continuation of table.

TABLE B–7.—*Chain-type price indexes for gross domestic product, 1959–2002*—Continued

[Index numbers, 1996=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Exports and imports of goods and services		Government consumption expenditures and gross investment					Final sales of domestic product	Gross domestic purchases [1]		Gross national product	Percent change [2]		
				Federal								Gross domestic product	Gross domestic purchases [1]	
	Exports	Imports	Total	Total	National defense	Non-defense	State and local		Total	Less food and energy			Total	Less food and energy
1959	28.53	20.95	16.99	17.85	17.76	17.64	16.11	21.72	21.41	.....	21.87	1.1	1.1	.....
1960	28.88	21.15	17.19	17.98	17.86	17.90	16.41	22.03	21.71	.....	22.18	1.4	1.4	.....
1961	29.29	21.15	17.51	18.25	18.07	18.48	16.79	22.28	21.94	.....	22.43	1.1	1.1	.....
1962	29.27	20.90	17.97	18.66	18.44	19.05	17.32	22.59	22.23	.....	22.73	1.4	1.3	.....
1963	29.22	21.30	18.39	19.12	18.90	19.51	17.70	22.84	22.50	.....	22.99	1.1	1.2	.....
1964	29.42	21.75	18.90	19.75	19.45	20.45	18.06	23.19	22.85	.....	23.33	1.5	1.6	.....
1965	30.38	22.06	19.41	20.28	20.01	20.85	18.56	23.62	23.26	.....	23.77	1.9	1.8	.....
1966	31.32	22.57	20.20	20.96	20.66	21.62	19.48	24.30	23.91	.....	24.45	2.8	2.8	.....
1967	32.56	22.66	21.05	21.60	21.31	22.22	20.56	25.06	24.61	.....	25.20	3.1	2.9	.....
1968	33.23	23.00	22.23	22.85	22.50	23.67	21.66	26.15	25.66	.....	26.29	4.3	4.3	.....
1969	34.29	23.60	23.56	24.08	23.72	24.88	23.11	27.45	26.92	.....	27.58	4.9	4.9	.....
1970	35.77	25.00	25.44	25.95	25.43	27.36	25.01	28.91	28.37	.....	29.05	5.3	5.4	.....
1971	36.98	26.53	27.44	28.20	27.69	29.56	26.79	30.37	29.84	.....	30.52	5.0	5.2	.....
1972	38.17	28.40	29.49	30.81	30.61	31.17	28.38	31.67	31.17	.....	31.81	4.2	4.5	.....
1973	43.40	33.34	31.67	32.98	32.91	32.94	30.56	33.45	32.99	.....	33.60	5.6	5.8	.....
1974	53.68	47.70	34.83	35.80	35.82	35.50	33.94	36.43	36.35	.....	36.60	9.0	10.2	.....
1975	59.24	51.67	38.28	39.41	39.24	39.57	37.26	39.85	39.69	.....	40.03	9.4	9.2	.....
1976	61.11	53.22	40.72	42.07	42.02	41.88	39.53	42.12	41.93	.....	42.30	5.7	5.7	.....
1977	63.58	57.92	43.55	45.33	45.15	45.44	42.05	44.85	44.80	.....	45.03	6.4	6.8	.....
1978	67.48	62.01	46.37	48.20	48.29	47.68	44.83	48.06	48.02	.....	48.24	7.1	7.2	.....
1979	75.63	72.62	50.28	51.93	52.19	51.01	48.84	52.07	52.26	.....	52.25	8.3	8.8	.....
1980	83.32	90.45	55.80	57.45	57.93	56.01	54.32	56.86	57.79	.....	57.06	9.2	10.6	.....
1981	89.41	95.32	61.30	63.06	63.71	61.22	59.71	62.16	63.05	.....	62.38	9.3	9.1	.....
1982	89.83	92.10	65.43	67.53	68.44	65.05	63.57	66.08	66.71	65.18	66.27	6.2	5.8	.....
1983	90.24	88.65	68.08	69.95	70.86	67.48	66.39	68.69	69.05	67.76	68.89	3.9	3.5	4.0
1984	91.13	87.89	71.61	74.14	75.95	69.25	69.36	71.25	71.46	70.26	71.45	3.7	3.5	3.7
1985	88.70	85.02	73.78	75.67	77.24	71.45	72.07	73.55	73.56	72.56	73.70	3.2	2.9	3.3
1986	87.33	85.01	75.08	76.10	77.27	73.06	74.10	75.20	75.22	74.89	75.33	2.2	2.3	3.2
1987	89.62	90.02	77.21	77.03	78.01	74.58	77.26	77.44	77.70	77.46	77.58	3.0	3.3	3.4
1988	94.39	94.46	79.30	78.82	79.65	76.84	79.60	80.12	80.36	80.29	80.22	3.4	3.4	3.7
1989	96.15	96.87	81.89	81.12	81.91	79.26	82.41	83.18	83.45	83.20	83.28	3.8	3.8	3.6
1990	96.79	99.43	85.16	83.78	84.57	81.96	86.16	86.46	86.85	86.33	86.54	3.9	4.1	3.8
1991	98.10	98.93	88.04	87.18	87.70	86.06	88.64	89.60	89.81	89.43	89.67	3.6	3.4	3.6
1992	97.82	99.09	90.11	89.83	90.75	87.72	90.28	91.79	92.03	91.90	91.84	2.4	2.5	2.8
1993	97.82	98.18	92.44	92.18	92.45	91.58	92.59	94.00	94.14	94.16	94.06	2.4	2.3	2.5
1994	98.94	99.12	94.84	94.51	94.48	94.55	95.04	95.97	96.06	96.22	96.02	2.1	2.0	2.2
1995	101.29	101.83	97.56	97.21	96.88	97.90	97.77	98.07	98.20	98.44	98.11	2.2	2.2	2.3
1996	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	1.9	1.8	1.6
1997	98.47	96.44	102.23	101.63	101.41	102.06	102.58	101.98	101.64	101.64	101.93	1.9	1.6	1.6
1998	96.26	91.27	103.72	102.63	102.22	103.42	104.35	103.28	102.43	102.76	103.17	1.2	.8	1.1
1999	95.47	91.34	106.52	105.08	104.45	106.29	107.33	104.79	103.97	104.15	104.65	1.4	1.5	1.3
2000	96.83	95.49	110.65	108.23	107.53	109.55	111.98	107.02	106.58	106.12	106.86	2.1	2.5	1.9
2001	96.10	92.70	113.27	110.09	109.27	111.64	115.01	109.55	108.65	108.05	109.39	2.4	1.9	1.8
1998: I	97.08	92.58	103.14	102.14	101.92	102.59	103.72	102.83	102.09	102.32	102.73	1.1	.1	.9
II	96.58	91.58	103.46	102.43	101.98	103.29	104.05	103.09	102.26	102.59	102.98	1.0	.7	1.1
III	95.86	90.48	103.91	102.78	102.37	103.57	104.56	103.46	102.54	102.91	103.34	1.4	1.1	1.3
IV	95.52	90.43	104.36	103.15	102.59	104.22	105.05	103.74	102.84	103.23	103.62	1.1	1.2	1.2
1999: I	95.21	89.57	105.20	104.35	103.78	105.43	105.71	104.21	103.19	103.62	104.08	1.8	1.4	1.5
II	95.30	90.65	106.13	104.82	104.16	106.09	106.87	104.62	103.72	103.97	104.48	1.5	2.1	1.4
III	95.48	91.94	106.96	105.37	104.67	106.70	107.86	104.94	104.21	104.29	104.80	1.2	1.9	1.2
IV	95.88	93.19	107.78	105.78	105.18	106.94	108.90	105.38	104.77	104.72	105.24	1.7	2.2	1.7
2000: I	96.36	94.69	109.46	107.87	107.09	109.34	110.36	106.19	105.72	105.43	106.05	3.1	3.7	2.7
II	96.84	94.96	110.26	108.05	107.27	109.52	111.50	106.81	106.30	105.93	106.65	2.3	2.2	1.9
III	97.04	96.03	111.07	108.48	107.80	109.77	112.49	107.25	106.87	106.33	107.09	1.6	2.2	1.5
IV	97.08	96.26	111.80	108.51	107.96	109.58	113.59	107.81	107.43	106.80	107.64	2.1	2.1	1.7
2001: I	96.87	95.66	112.96	109.73	109.03	111.07	114.73	108.78	108.30	107.56	108.63	3.7	3.3	2.9
II	96.46	94.22	113.47	110.15	109.34	111.68	115.28	109.45	108.76	107.92	109.29	2.5	1.7	1.3
III	96.00	89.93	113.37	110.30	109.51	111.80	115.06	110.05	108.72	108.08	109.89	2.2	–.2	.6
IV	95.06	90.97	113.27	110.18	109.21	111.99	114.97	109.91	108.84	108.62	109.75	–.5	.4	2.0
2002: I	94.88	90.61	114.27	112.42	111.14	114.79	115.29	110.28	109.15	109.01	110.11	1.3	1.2	1.4
II	95.58	93.03	115.06	113.07	111.71	115.61	116.17	110.62	109.77	109.42	110.45	1.2	2.3	1.5
III	96.41	94.05	115.47	113.44	112.12	115.89	116.60	110.91	110.11	109.75	110.73	1.0	1.2	1.2

[1] Gross domestic product (GDP) less exports of goods and services plus imports of goods and services.
[2] Percent changes based on unrounded data. Quarterly percent changes are at annual rates.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–8.—*Gross domestic product by major type of product, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Final sales of domestic product	Change in private inventories	Goods							Services	Structures
				Total			Durable goods		Nondurable goods			
				Total	Final sales	Change in private inventories	Final sales	Change in private inventories [1]	Final sales	Change in private inventories [1]		
1959	507.4	503.5	3.9	251.7	247.8	3.9	92.4	2.9	155.5	1.1	193.2	62.5
1960	527.4	524.1	3.2	258.0	254.7	3.2	95.2	1.7	159.5	1.6	207.5	61.9
1961	545.7	542.7	3.0	260.7	257.7	3.0	94.5	–.1	163.2	3.0	221.4	63.6
1962	586.5	580.4	6.1	281.5	275.4	6.1	104.7	3.4	170.7	2.7	237.2	67.8
1963	618.7	613.1	5.6	293.2	287.6	5.6	111.5	2.6	176.1	3.0	252.8	72.7
1964	664.4	659.6	4.8	313.6	308.8	4.8	121.2	3.8	187.6	1.0	272.3	78.4
1965	720.1	710.9	9.2	343.3	334.1	9.2	134.2	6.2	199.9	3.0	292.1	84.7
1966	789.3	775.7	13.6	381.7	368.0	13.6	150.2	10.0	217.8	3.6	319.6	88.0
1967	834.1	824.2	9.9	395.3	385.5	9.9	155.3	4.8	230.2	5.0	349.1	89.6
1968	911.5	902.4	9.1	428.3	419.2	9.1	169.5	4.5	249.8	4.5	383.2	100.0
1969	985.3	976.2	9.2	457.7	448.5	9.2	180.9	6.0	267.6	3.2	419.3	108.3
1970	1,039.7	1,037.7	2.0	470.3	468.3	2.0	183.2	–.2	285.1	2.2	459.6	109.7
1971	1,128.6	1,120.3	8.3	496.1	487.9	8.3	190.2	2.9	297.6	5.3	504.0	128.4
1972	1,240.4	1,231.3	9.1	542.7	533.6	9.1	213.0	6.4	320.6	2.7	550.8	146.9
1973	1,385.5	1,369.7	15.9	622.0	606.1	15.9	245.8	13.0	360.3	2.9	600.6	162.9
1974	1,501.0	1,487.0	14.0	670.9	656.9	14.0	262.1	10.9	394.9	3.1	664.4	165.6
1975	1,635.2	1,641.4	–6.3	724.8	731.1	–6.3	294.7	–7.5	436.4	1.2	743.6	166.7
1976	1,823.9	1,806.8	17.1	811.4	794.3	17.1	329.6	10.8	464.7	6.3	821.3	191.2
1977	2,031.4	2,009.1	22.3	890.7	868.4	22.3	374.6	9.5	493.8	12.8	913.9	226.8
1978	2,295.9	2,270.1	25.8	1,004.5	978.7	25.8	426.2	18.2	552.5	7.6	1,019.6	271.8
1979	2,566.4	2,548.4	18.0	1,128.7	1,110.7	18.0	487.3	12.8	623.4	5.2	1,127.1	310.6
1980	2,795.6	2,801.9	–6.3	1,207.6	1,213.9	–6.3	518.0	–2.3	695.9	–4.0	1,268.9	319.1
1981	3,131.3	3,101.5	29.8	1,362.8	1,333.0	29.8	564.5	7.3	768.5	22.5	1,418.6	350.0
1982	3,259.2	3,274.1	–14.9	1,354.6	1,369.6	–14.9	566.1	–16.0	803.4	1.1	1,562.6	342.0
1983	3,534.9	3,540.7	–5.8	1,452.1	1,457.8	–5.8	611.8	2.5	846.1	–8.2	1,716.1	366.8
1984	3,932.7	3,867.3	65.4	1,637.0	1,571.6	65.4	686.6	41.4	885.0	24.0	1,872.2	423.6
1985	4,213.0	4,191.2	21.8	1,702.7	1,680.9	21.8	750.0	4.4	930.9	17.4	2,054.0	456.3
1986	4,452.9	4,446.3	6.6	1,758.2	1,751.7	6.6	781.5	–1.9	970.2	8.4	2,217.2	477.4
1987	4,742.5	4,715.3	27.1	1,853.5	1,826.4	27.1	809.9	22.9	1,016.5	4.2	2,399.6	489.3
1988	5,108.3	5,089.8	18.5	2,000.0	1,981.5	18.5	886.4	22.7	1,095.1	–4.3	2,599.5	508.8
1989	5,489.1	5,461.4	27.7	2,175.3	2,147.6	27.7	963.8	20.0	1,183.8	7.7	2,792.8	521.0
1990	5,803.2	5,788.7	14.5	2,266.4	2,251.9	14.5	994.3	7.7	1,257.6	6.8	3,010.8	526.0
1991	5,986.2	5,986.4	–.2	2,296.1	2,296.3	–.2	988.3	–13.6	1,308.0	13.4	3,203.9	486.2
1992	6,318.9	6,303.9	15.0	2,391.4	2,376.4	15.0	1,029.4	–3.0	1,346.9	18.0	3,416.0	511.5
1993	6,642.3	6,621.2	21.1	2,503.2	2,482.1	21.1	1,090.7	17.1	1,391.4	4.0	3,593.5	545.6
1994	7,054.3	6,991.8	62.6	2,680.2	2,617.6	62.6	1,161.6	35.7	1,456.0	26.8	3,782.6	591.6
1995	7,400.5	7,367.5	33.0	2,798.1	2,765.1	33.0	1,239.8	33.6	1,525.3	–.5	3,985.1	617.3
1996	7,813.2	7,783.2	30.0	2,951.3	2,921.3	30.0	1,331.9	19.1	1,589.4	10.9	4,191.0	670.9
1997	8,318.4	8,255.5	62.9	3,145.4	3,082.5	62.9	1,436.2	33.1	1,646.3	29.8	4,442.0	730.9
1998	8,781.5	8,708.4	73.1	3,305.4	3,232.3	73.1	1,524.4	44.6	1,707.9	28.5	4,678.6	797.5
1999	9,274.3	9,214.8	59.5	3,473.4	3,413.9	59.5	1,612.1	37.5	1,801.7	22.0	4,947.1	853.8
2000	9,824.6	9,761.1	63.6	3,651.0	3,587.4	63.6	1,690.9	44.1	1,896.5	19.4	5,259.2	914.5
2001	10,082.2	10,142.5	–60.3	3,593.7	3,654.0	–60.3	1,676.4	–65.0	1,977.6	4.7	5,535.1	953.3
1998: I	8,627.8	8,521.1	106.7	3,282.8	3,176.1	106.7	1,495.1	66.2	1,680.9	40.5	4,579.9	765.1
II	8,697.3	8,656.4	40.9	3,248.7	3,207.8	40.9	1,513.8	22.0	1,694.0	19.0	4,659.0	789.5
III	8,816.5	8,747.0	69.5	3,297.1	3,227.5	69.5	1,516.2	40.8	1,711.4	28.7	4,710.5	808.9
IV	8,984.5	8,909.1	75.4	3,393.2	3,317.8	75.4	1,572.4	49.6	1,745.4	25.8	4,764.8	826.5
1999: I	9,092.7	9,018.0	74.7	3,406.8	3,332.1	74.7	1,568.6	44.6	1,763.5	30.1	4,841.5	844.4
II	9,171.7	9,144.0	27.7	3,420.7	3,393.0	27.7	1,601.9	12.2	1,791.1	15.5	4,902.0	849.0
III	9,316.5	9,269.7	46.8	3,483.5	3,436.7	46.8	1,632.4	35.4	1,804.3	11.4	4,982.3	850.8
IV	9,516.4	9,427.5	88.9	3,582.6	3,493.7	88.9	1,645.5	57.8	1,848.1	31.1	5,062.6	871.2
2000: I	9,649.5	9,602.6	46.8	3,604.0	3,557.2	46.8	1,684.3	35.7	1,872.8	11.1	5,138.5	907.0
II	9,820.7	9,731.5	89.2	3,676.0	3,586.8	89.2	1,695.5	63.6	1,891.3	25.6	5,236.0	908.7
III	9,874.8	9,813.6	61.1	3,672.1	3,611.0	61.1	1,708.4	33.2	1,902.6	28.0	5,288.3	914.4
IV	9,953.6	9,896.6	57.1	3,651.7	3,594.7	57.1	1,675.5	44.0	1,919.2	13.1	5,373.9	927.9
2001: I	10,028.1	10,055.3	–27.2	3,619.1	3,646.3	–27.2	1,697.3	–37.2	1,949.1	10.0	5,450.6	958.4
II	10,049.9	10,107.0	–57.1	3,578.9	3,645.0	–57.1	1,671.5	–62.8	1,973.5	5.6	5,497.4	964.6
III	10,097.7	10,158.3	–60.6	3,568.6	3,629.2	–60.6	1,647.9	–65.2	1,981.3	4.7	5,579.4	949.7
IV	10,152.9	10,249.4	–96.5	3,599.1	3,695.5	–96.5	1,689.1	–95.0	2,006.4	–1.5	5,613.1	940.7
2002: I	10,313.1	10,343.0	–29.9	3,664.2	3,694.1	–29.9	1,641.5	–20.3	2,052.6	–9.7	5,696.6	952.3
II	10,376.9	10,373.5	3.4	3,659.1	3,655.7	3.4	1,616.8	–4.8	2,038.9	8.2	5,781.5	936.3
III	10,506.2	10,488.7	17.6	3,732.7	3,715.2	17.6	1,678.3	4.8	2,036.9	12.7	5,849.7	923.8

[1] Estimates for durable and nondurable goods for 1997 and earlier periods are based on the Standard Industrial Classification (SIC); later estimates are based on the North American Industry Classification System (NAICS).

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–9.—*Real gross domestic product by major type of product, 1959–2002*

[Billions of chained (1996) dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Final sales of domestic product	Change in private inventories	Goods							Services	Structures
				Total			Durable goods		Nondurable goods			
				Total	Final sales	Change in private inventories	Final sales	Change in private inventories [1]	Final sales	Change in private inventories [1]		
1959	2,319.0	2,317.4	12.1	764.7							1,222.2	340.6
1960	2,376.7	2,378.5	10.9	777.1							1,279.7	337.4
1961	2,432.0	2,435.5	9.5	780.6							1,337.4	346.8
1962	2,578.9	2,569.5	19.6	837.0							1,400.7	366.6
1963	2,690.4	2,683.6	18.4	866.1							1,465.7	391.3
1964	2,846.5	2,844.1	15.1	919.2							1,541.4	417.7
1965	3,028.5	3,008.5	30.6	994.9							1,613.8	438.6
1966	3,227.5	3,191.1	42.8	1,083.4							1,705.9	439.2
1967	3,308.3	3,288.2	31.7	1,095.2							1,795.9	432.7
1968	3,466.1	3,450.0	28.4	1,146.7							1,876.5	459.3
1969	3,571.4	3,555.9	27.4	1,180.6							1,943.9	465.2
1970	3,578.0	3,588.6	4.4	1,166.5							1,999.0	445.1
1971	3,697.7	3,688.1	23.9	1,194.3							2,056.8	486.4
1972	3,898.4	3,887.7	23.7	1,280.1							2,123.2	522.4
1973	4,123.4	4,094.3	35.6	1,395.0							2,199.5	533.7
1974	4,099.0	4,080.7	25.0	1,378.5							2,259.6	478.4
1975	4,084.4	4,118.5	–9.4	1,357.9							2,327.5	435.0
1976	4,311.7	4,288.8	32.5	1,453.8							2,403.5	475.9
1977	4,511.8	4,478.8	40.8	1,524.1							2,483.1	521.1
1978	4,760.6	4,722.9	44.1	1,621.8							2,577.9	567.1
1979	4,912.1	4,894.4	26.1	1,686.1							2,642.9	582.7
1980	4,900.9	4,928.1	–10.5	1,677.0							2,695.2	541.4
1981	5,021.0	4,989.5	37.9	1,753.6							2,733.9	533.5
1982	4,919.3	4,954.9	–15.6	1,678.4							2,780.7	487.8
1983	5,132.3	5,154.5	–9.7	1,754.8							2,877.3	524.3
1984	5,505.2	5,427.9	76.1	1,941.1							2,968.4	595.2
1985	5,717.1	5,698.8	27.1	1,990.0							3,107.7	626.1
1986	5,912.4	5,912.6	9.6	2,057.5							3,227.9	635.2
1987	6,113.3	6,088.8	29.6	2,136.3	2,112.2	29.6	837.8	25.0	1,285.3	3.1	3,354.6	631.1
1988	6,368.4	6,352.6	18.4	2,255.3	2,239.0	18.4	919.1	23.9	1,325.4	–6.9	3,485.3	632.8
1989	6,591.8	6,565.4	29.6	2,379.6	2,353.6	29.6	982.7	20.6	1,374.2	8.7	3,584.9	626.5
1990	6,707.9	6,695.6	16.5	2,404.2	2,391.1	16.5	1,000.0	7.9	1,394.2	8.6	3,692.3	614.8
1991	6,676.4	6,681.5	–1.0	2,372.7	2,375.6	–1.0	976.8	–14.0	1,403.6	13.5	3,752.1	559.5
1992	6,880.0	6,867.7	17.1	2,455.0	2,441.5	17.1	1,018.0	–2.9	1,427.2	20.6	3,847.3	584.9
1993	7,062.6	7,043.8	20.0	2,548.2	2,528.5	20.0	1,076.5	17.7	1,454.4	2.0	3,916.8	602.5
1994	7,347.7	7,285.8	66.8	2,708.3	2,647.0	66.8	1,144.2	35.9	1,504.4	30.8	4,010.3	630.7
1995	7,543.8	7,512.2	30.4	2,813.8	2,782.3	30.4	1,231.8	33.3	1,551.0	–3.6	4,097.5	632.9
1996	7,813.2	7,783.2	30.0	2,951.3	2,921.3	30.0	1,331.9	19.1	1,589.4	10.9	4,191.0	670.9
1997	8,159.5	8,095.2	63.8	3,145.9	3,081.3	63.8	1,457.5	33.4	1,624.4	30.4	4,307.6	706.9
1998	8,508.9	8,431.8	76.7	3,332.3	3,254.5	76.7	1,585.3	46.5	1,671.7	29.6	4,431.0	748.7
1999	8,859.0	8,793.9	62.8	3,510.3	3,445.2	62.8	1,714.5	39.9	1,736.1	22.8	4,577.6	777.2
2000	9,191.4	9,121.1	65.0	3,674.3	3,603.7	65.0	1,821.1	46.0	1,791.2	19.5	4,728.9	797.9
2001	9,214.5	9,258.4	–61.4	3,589.9	3,643.3	–61.4	1,823.9	–67.9	1,825.6	4.8	4,826.4	797.1
1998: I	8,396.3	8,286.6	113.1	3,300.7	3,189.1	113.1	1,540.9	69.9	1,650.0	40.9	4,373.4	725.9
II	8,442.9	8,397.2	42.0	3,275.1	3,229.9	42.0	1,569.4	22.5	1,662.7	19.5	4,424.8	744.3
III	8,528.5	8,454.9	71.8	3,324.4	3,250.2	71.8	1,580.7	41.4	1,671.8	30.3	4,449.3	757.0
IV	8,667.9	8,588.5	80.0	3,429.0	3,348.9	80.0	1,650.4	52.2	1,702.3	27.5	4,476.7	767.6
1999: I	8,733.2	8,654.3	80.0	3,441.1	3,361.5	80.0	1,657.4	47.2	1,707.9	32.6	4,518.0	778.3
II	8,775.5	8,741.0	31.2	3,453.7	3,420.9	31.2	1,698.8	14.2	1,727.1	16.9	4,550.3	775.5
III	8,886.9	8,833.6	47.6	3,522.7	3,470.1	47.6	1,740.9	37.2	1,735.9	10.5	4,598.9	771.7
IV	9,040.1	8,946.6	92.2	3,623.6	3,528.3	92.2	1,760.8	61.0	1,773.4	31.4	4,643.2	783.4
2000: I	9,097.4	9,042.9	45.3	3,636.7	3,583.0	45.3	1,811.5	36.1	1,780.1	9.6	4,666.2	803.7
II	9,205.7	9,111.1	91.5	3,698.1	3,601.4	91.5	1,826.2	66.4	1,784.5	25.9	4,722.9	796.5
III	9,218.7	9,150.4	63.1	3,693.9	3,625.6	63.1	1,840.4	35.4	1,794.9	27.9	4,741.7	794.0
IV	9,243.8	9,179.8	59.9	3,668.7	3,604.8	59.9	1,806.1	46.2	1,805.4	14.5	4,784.8	797.3
2001: I	9,229.9	9,243.8	–26.9	3,627.2	3,647.8	–26.9	1,839.0	–38.1	1,817.0	9.8	4,795.6	809.2
II	9,193.1	9,234.3	–58.3	3,574.1	3,624.5	–58.3	1,816.8	–65.7	1,814.4	5.1	4,809.7	806.7
III	9,186.4	9,230.5	–61.8	3,560.3	3,613.8	–61.8	1,796.1	–68.5	1,821.9	4.9	4,830.9	791.8
IV	9,248.8	9,324.9	–98.4	3,598.2	3,686.8	–98.4	1,843.8	–99.3	1,849.1	–.8	4,869.1	780.5
2002: I	9,363.2	9,379.4	–28.9	3,670.8	3,693.4	–28.9	1,801.6	–20.3	1,890.7	–8.8	4,903.2	792.1
II	9,392.4	9,377.9	4.9	3,674.4	3,663.0	4.9	1,787.6	–4.4	1,874.5	9.0	4,945.5	774.9
III	9,485.6	9,457.2	18.8	3,754.8	3,728.1	18.8	1,864.6	5.0	1,870.2	13.6	4,976.4	764.0

[1] Estimates for durable and nondurable goods for 1997 and earlier periods are based on the Standard Industrial Classification (SIC); later estimates are based on the North American Industry Classification System (NAICS).

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–10.—*Gross domestic product by sector, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Business [1]					Households and institutions			General government [2]		
		Total	Nonfarm [1]			Farm	Total	Private households	Nonprofit institutions	Total	Federal	State and local
			Total [1]	Nonfarm less housing	Housing							
1959	507.4	436.6	417.7	382.1	35.6	18.9	12.4	3.6	8.9	58.4	32.0	26.5
1960	527.4	451.3	431.5	392.9	38.6	19.8	13.9	3.8	10.1	62.1	33.2	28.9
1961	545.7	465.1	445.0	403.6	41.4	20.1	14.5	3.7	10.7	66.1	34.5	31.6
1962	586.5	500.0	479.8	435.2	44.6	20.2	15.6	3.8	11.8	70.9	36.7	34.2
1963	618.7	526.3	506.0	458.5	47.4	20.4	16.7	3.8	12.8	75.7	38.6	37.1
1964	664.4	565.2	546.0	495.8	50.2	19.3	17.9	3.9	14.0	81.3	40.9	40.4
1965	720.1	613.9	592.1	538.5	53.5	21.9	19.3	4.0	15.3	86.8	42.6	44.2
1966	789.3	671.0	648.2	591.2	57.0	22.9	21.3	4.0	17.2	97.0	47.4	49.6
1967	834.1	703.4	681.1	620.3	60.8	22.2	23.4	4.2	19.2	107.3	51.8	55.5
1968	911.5	766.1	743.4	678.6	64.8	22.7	26.1	4.4	21.7	119.3	56.7	62.5
1969	985.3	825.4	800.2	730.3	69.9	25.2	29.5	4.4	25.0	130.5	60.5	70.0
1970	1,039.7	863.1	836.9	761.9	74.9	26.2	32.4	4.5	27.9	144.2	64.7	79.5
1971	1,128.6	935.7	907.6	825.9	81.7	28.1	35.6	4.6	31.0	157.3	68.6	88.7
1972	1,240.4	1,030.0	997.3	908.6	88.7	32.6	38.9	4.6	34.3	171.5	73.6	97.9
1973	1,385.5	1,156.8	1,107.1	1,010.1	96.9	49.8	43.0	4.8	38.2	185.7	76.4	109.3
1974	1,501.0	1,250.5	1,203.1	1,097.2	105.9	47.4	47.1	4.6	42.6	203.4	81.6	121.8
1975	1,635.2	1,356.8	1,308.1	1,193.8	114.3	48.8	52.0	4.6	47.3	226.4	89.1	137.2
1976	1,823.9	1,521.6	1,475.1	1,350.1	125.0	46.4	57.1	5.4	51.6	245.3	95.6	149.7
1977	2,031.4	1,702.8	1,655.6	1,516.2	139.4	47.2	62.4	5.9	56.4	266.2	103.6	162.7
1978	2,295.9	1,937.3	1,882.5	1,726.7	155.8	54.7	69.7	6.5	63.2	288.9	111.0	177.9
1979	2,566.4	2,174.9	2,110.5	1,934.4	176.1	64.5	77.3	6.4	70.9	314.2	118.7	195.5
1980	2,795.6	2,358.8	2,302.7	2,097.6	205.1	56.1	87.1	6.1	81.0	349.7	132.1	217.5
1981	3,131.3	2,647.3	2,577.4	2,342.2	235.2	69.9	97.6	6.2	91.4	386.5	148.3	238.2
1982	3,259.2	2,729.8	2,664.6	2,405.2	259.4	65.1	108.2	6.3	102.0	421.2	163.1	258.1
1983	3,534.9	2,968.1	2,918.9	2,642.2	276.7	49.2	119.2	6.3	112.9	447.7	173.0	274.7
1984	3,932.7	3,313.9	3,245.3	2,942.8	302.6	68.5	131.2	7.3	123.9	487.7	194.0	293.7
1985	4,213.0	3,546.8	3,479.7	3,147.4	332.3	67.1	141.0	7.3	133.6	525.3	206.3	319.1
1986	4,452.9	3,740.9	3,678.0	3,318.9	359.0	63.0	153.7	7.7	146.0	558.2	213.9	344.3
1987	4,742.5	3,976.0	3,910.9	3,523.9	387.0	65.1	173.3	7.7	165.6	593.1	224.5	368.7
1988	5,108.3	4,281.2	4,217.4	3,799.0	418.4	63.8	195.1	8.3	186.8	632.0	235.9	396.2
1989	5,489.1	4,600.9	4,524.7	4,074.5	450.2	76.2	214.6	8.9	205.7	673.6	247.6	426.0
1990	5,803.2	4,842.0	4,762.4	4,281.1	481.3	79.6	237.9	9.4	228.6	723.3	259.7	463.6
1991	5,986.2	4,962.4	4,889.2	4,381.3	507.9	73.2	257.5	9.1	248.4	766.3	275.8	490.4
1992	6,318.9	5,242.1	5,161.6	4,626.2	535.4	80.5	279.5	10.1	269.4	797.3	282.8	514.5
1993	6,642.3	5,518.0	5,444.4	4,895.5	548.9	73.6	297.0	10.7	286.3	827.3	287.0	540.3
1994	7,054.3	5,886.6	5,803.0	5,218.3	584.7	83.6	313.3	11.1	302.2	854.5	287.4	567.0
1995	7,400.5	6,190.1	6,116.9	5,499.4	617.5	73.2	330.3	11.9	318.4	880.1	286.8	593.3
1996	7,813.2	6,556.0	6,463.8	5,820.9	642.8	92.2	348.6	12.0	336.5	908.7	292.0	616.7
1997	8,318.4	7,010.5	6,922.2	6,255.6	666.7	88.3	363.2	12.0	351.2	944.6	295.4	649.2
1998	8,781.5	7,418.0	7,337.4	6,631.8	705.6	80.6	383.8	14.0	369.8	979.8	298.6	681.2
1999	9,274.3	7,847.7	7,772.5	7,018.9	753.6	75.2	403.1	12.7	390.4	1,023.5	307.6	715.9
2000	9,824.6	8,311.4	8,233.6	7,435.9	797.8	77.8	431.1	13.6	417.5	1,082.1	323.4	758.7
2001	10,082.2	8,482.7	8,402.1	7,571.1	831.1	80.6	459.6	11.9	447.7	1,139.8	332.8	807.0
1998: I	8,627.8	7,287.6	7,206.1	6,522.5	683.6	81.4	375.0	13.5	361.5	965.2	296.0	669.2
II	8,697.3	7,341.7	7,261.1	6,561.5	699.6	80.6	381.3	14.1	367.2	974.3	297.1	677.2
III	8,816.5	7,444.5	7,365.1	6,649.9	715.3	79.4	387.0	14.3	372.8	984.9	299.6	685.4
IV	8,984.5	7,598.0	7,517.2	6,793.2	724.0	80.9	391.8	14.1	377.7	994.7	301.5	693.2
1999: I	9,092.7	7,688.5	7,608.9	6,871.8	737.1	79.6	395.8	13.2	382.5	1,008.4	307.3	701.1
II	9,171.7	7,751.5	7,674.6	6,928.0	746.6	76.9	402.8	12.7	390.1	1,017.4	307.1	710.3
III	9,316.5	7,886.0	7,813.7	7,054.1	759.5	72.4	401.9	12.4	389.5	1,028.6	308.3	720.3
IV	9,516.4	8,064.8	7,992.9	7,221.7	771.2	71.9	412.1	12.5	399.6	1,039.5	307.6	731.8
2000: I	9,649.5	8,164.3	8,090.8	7,306.8	784.0	73.5	420.9	13.6	407.4	1,064.3	321.3	743.0
II	9,820.7	8,313.0	8,232.7	7,441.3	791.4	80.3	426.2	13.7	412.5	1,081.5	328.0	753.4
III	9,874.8	8,352.3	8,274.6	7,472.0	802.6	77.8	435.4	13.6	421.8	1,087.0	323.1	763.9
IV	9,953.6	8,416.1	8,336.4	7,523.4	813.0	79.7	441.8	13.4	428.4	1,095.7	321.1	774.6
2001: I	10,028.1	8,461.6	8,328.3	7,567.1	815.2	79.3	449.2	12.9	436.2	1,117.4	330.5	786.8
II	10,049.9	8,459.5	8,379.9	7,549.3	830.6	79.7	457.7	12.3	445.3	1,132.6	332.7	800.0
III	10,097.7	8,484.6	8,402.7	7,566.4	836.3	81.9	465.1	11.6	453.5	1,148.0	333.7	814.3
IV	10,152.9	8,525.2	8,443.7	7,601.5	842.1	81.6	466.6	10.7	455.9	1,161.1	334.3	826.8
2002: I	10,313.1	8,656.2	8,567.6	7,712.8	854.8	88.6	472.5	10.5	462.0	1,184.4	350.1	834.3
II	10,376.9	8,700.1	8,631.5	7,757.5	874.1	68.6	481.4	10.7	470.8	1,195.3	354.1	841.3
III	10,506.2	8,808.6	8,731.3	7,862.0	869.2	77.4	490.5	10.8	479.7	1,207.1	357.7	849.3

[1] Gross domestic business product equals gross domestic product less gross product of households and institutions and of general government. Nonfarm product equals gross domestic business product less gross farm product.

[2] Equals compensation of general government employees plus general government consumption of fixed capital.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–11.—*Real gross domestic product by sector, 1959–2002*

[Billions of chained (1996) dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Business [1]					Households and institutions			General government [2]		
		Total	Nonfarm [1]			Farm	Total	Private households	Nonprofit institutions	Total	Federal	State and local
			Total [1]	Nonfarm less housing	Housing							
1959	2,319.0	1,788.0	1,738.5	1,567.3	167.8	40.2	115.6	22.6	86.1	460.3	250.4	211.1
1960	2,376.7	1,827.9	1,775.1	1,593.4	179.2	42.2	123.5	22.8	94.1	476.3	255.3	222.3
1961	2,432.0	1,868.1	1,815.5	1,624.0	189.8	42.5	124.4	22.1	96.1	493.3	260.8	233.7
1962	2,578.9	1,988.1	1,938.9	1,734.8	202.2	41.7	129.0	21.9	101.0	512.6	271.7	242.3
1963	2,690.4	2,079.0	2,029.0	1,814.4	212.7	42.9	132.1	21.6	104.7	527.8	274.1	254.9
1964	2,846.5	2,209.0	2,163.6	1,938.2	222.9	41.5	135.9	21.4	108.9	545.7	276.6	270.2
1965	3,028.5	2,362.0	2,314.5	2,076.0	235.5	43.8	140.8	20.7	115.0	564.0	278.4	286.6
1966	3,227.5	2,520.3	2,478.3	2,227.5	246.9	42.4	146.0	19.9	121.5	599.4	296.8	303.7
1967	3,308.3	2,572.3	2,525.7	2,263.6	259.2	45.2	150.8	20.0	126.3	631.5	316.4	316.4
1968	3,466.1	2,699.7	2,657.6	2,384.8	269.3	43.7	155.3	19.0	132.2	656.5	322.1	335.4
1969	3,571.4	2,783.4	2,740.2	2,455.9	281.4	44.9	160.3	18.0	138.7	673.6	323.5	350.7
1970	3,578.0	2,788.7	2,743.0	2,451.5	289.7	46.3	158.8	16.9	138.7	676.4	310.0	366.2
1971	3,697.7	2,897.9	2,850.0	2,546.7	301.7	48.4	162.3	16.1	143.3	678.0	296.4	381.2
1972	3,898.4	3,085.6	3,040.7	2,721.5	316.6	48.3	166.9	15.6	148.6	677.6	282.9	394.5
1973	4,123.4	3,295.5	3,256.4	2,921.0	331.4	48.1	170.9	15.2	153.2	680.5	272.7	408.1
1974	4,099.0	3,261.1	3,223.9	2,874.6	349.1	47.0	172.2	13.1	157.1	693.7	271.4	422.9
1975	4,084.4	3,235.1	3,177.1	2,825.8	353.1	55.5	177.7	12.3	163.8	704.4	269.5	435.8
1976	4,311.7	3,446.7	3,397.0	3,033.3	362.1	53.3	179.8	12.7	165.4	709.9	269.4	441.5
1977	4,511.8	3,629.7	3,577.7	3,200.8	373.4	56.0	185.0	12.9	170.4	716.4	269.2	448.3
1978	4,760.6	3,855.5	3,810.5	3,412.5	393.4	54.1	188.4	13.3	173.3	729.8	272.3	458.7
1979	4,912.1	3,992.1	3,940.8	3,523.2	414.4	58.3	192.5	11.8	179.5	737.2	271.7	466.9
1980	4,900.9	3,969.1	3,921.0	3,482.7	441.8	56.5	198.1	10.4	187.0	747.4	275.7	473.2
1981	5,021.0	4,077.9	4,005.4	3,551.6	459.3	72.6	202.6	9.7	192.6	751.4	279.8	473.0
1982	4,919.3	3,970.0	3,892.4	3,436.5	465.3	75.7	208.4	9.3	199.0	758.6	283.9	476.0
1983	5,132.3	4,168.3	4,125.4	3,662.2	468.3	50.5	213.0	9.2	203.8	763.2	290.2	474.1
1984	5,505.2	4,518.2	4,454.1	3,970.0	486.4	67.4	218.2	10.4	207.6	772.4	296.5	476.9
1985	5,717.1	4,700.4	4,620.5	4,120.1	502.4	80.7	224.9	10.1	214.7	794.3	304.7	490.6
1986	5,912.4	4,865.0	4,788.7	4,278.6	511.2	77.5	236.0	10.4	225.5	813.7	309.9	504.8
1987	6,113.3	5,035.9	4,958.5	4,433.0	526.3	78.8	247.8	10.2	237.6	831.4	318.0	514.5
1988	6,368.4	5,251.5	5,183.8	4,640.7	543.5	70.2	265.5	10.6	254.8	852.8	321.8	532.1
1989	6,591.8	5,440.1	5,362.5	4,801.5	561.4	79.5	279.8	11.1	268.6	873.0	325.6	548.5
1990	6,707.9	5,523.5	5,440.8	4,869.5	571.8	84.2	291.5	11.4	280.1	895.1	331.4	564.7
1991	6,676.4	5,475.7	5,391.6	4,806.6	586.4	85.6	300.9	10.5	290.4	903.6	333.3	571.2
1992	6,880.0	5,668.9	5,575.3	4,976.6	599.8	95.7	308.6	11.3	297.3	904.9	326.2	579.4
1993	7,062.6	5,838.3	5,753.4	5,154.3	599.5	85.8	319.7	11.7	308.0	906.2	319.7	587.1
1994	7,347.7	6,111.8	6,013.7	5,392.4	621.6	100.3	330.9	11.8	319.1	905.6	309.9	596.1
1995	7,543.8	6,295.9	6,210.3	5,574.2	636.2	85.5	341.5	12.2	329.3	906.7	299.1	607.7
1996	7,813.2	6,556.0	6,463.8	5,820.9	642.8	92.2	348.6	12.0	336.5	908.7	292.0	616.7
1997	8,159.5	6,881.8	6,778.9	6,130.0	649.0	103.6	360.5	11.7	348.8	917.3	287.9	629.3
1998	8,508.9	7,208.9	7,107.7	6,443.3	664.7	100.3	371.9	13.3	358.6	928.8	286.2	642.5
1999	8,859.0	7,542.5	7,434.4	6,743.0	691.9	108.1	379.2	11.7	367.5	939.0	285.2	653.7
2000	9,191.4	7,846.8	7,729.2	7,019.1	711.0	120.5	388.9	12.0	376.9	958.6	289.4	669.0
2001	9,214.5	7,838.3	7,724.7	7,012.9	712.6	114.3	398.7	10.1	388.7	978.5	291.3	687.0
1998: I	8,396.3	7,105.2	7,004.5	6,352.5	652.3	100.0	368.7	13.0	355.7	922.9	285.8	637.0
II	8,442.9	7,145.7	7,046.4	6,384.3	662.3	98.1	370.7	13.4	357.3	926.9	285.9	641.0
III	8,528.5	7,224.7	7,123.1	6,452.3	670.9	100.8	373.2	13.5	359.7	931.3	286.5	644.7
IV	8,667.9	7,359.8	7,256.8	6,583.9	673.5	102.1	375.1	13.2	361.8	934.0	286.7	647.2
1999: I	8,733.2	7,422.4	7,317.8	6,636.3	682.0	104.0	376.2	12.3	363.9	935.7	287.0	648.6
II	8,775.5	7,462.6	7,353.6	6,666.3	687.7	110.1	377.9	11.7	366.2	936.3	285.1	651.1
III	8,886.9	7,568.7	7,460.4	6,764.8	696.0	108.0	379.7	11.4	368.3	940.3	284.8	655.3
IV	9,040.1	7,716.3	7,605.8	6,904.6	701.9	110.3	382.8	11.4	371.4	943.6	283.8	659.7
2000: I	9,097.4	7,761.8	7,645.7	6,940.4	706.2	118.9	386.1	12.2	373.9	952.0	287.6	664.3
II	9,205.7	7,860.1	7,742.6	7,035.1	708.6	120.3	387.6	12.1	375.5	960.9	293.7	667.1
III	9,218.7	7,872.6	7,752.4	7,040.2	713.2	124.6	389.5	12.0	377.6	959.5	288.8	670.6
IV	9,243.8	7,892.5	7,776.1	7,060.7	716.2	118.2	392.2	11.7	380.6	962.0	287.7	674.2
2001: I	9,229.9	7,869.2	7,755.0	7,044.4	711.6	114.9	394.9	11.1	383.9	968.0	290.6	677.2
II	9,193.1	7,821.3	7,710.8	6,994.0	717.1	109.5	398.6	10.6	388.1	974.3	291.1	683.0
III	9,186.4	7,803.4	7,693.9	6,980.8	713.5	108.3	400.4	9.8	390.6	982.9	291.6	691.0
IV	9,248.8	7,859.4	7,739.2	7,032.2	708.3	124.4	401.0	9.0	392.0	988.9	292.0	696.5
2002: I	9,363.2	7,966.9	7,849.1	7,140.4	710.9	119.8	403.4	8.7	394.8	994.3	294.3	699.7
II	9,392.4	7,989.2	7,876.8	7,157.0	721.0	110.8	406.4	8.8	397.7	998.1	296.0	701.7
III	9,485.6	8,075.1	7,961.0	7,252.6	711.7	112.9	409.0	8.9	400.3	1,003.2	298.5	704.4

[1] Gross domestic business product equals gross domestic product less gross product of households and institutions and of general government. Nonfarm product equals gross domestic business product less gross farm product.

[2] Equals compensation of general government employees plus general government consumption of fixed capital.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–12.—*Gross domestic product by industry, 1959–2001*

[Billions of dollars]

Year	Gross domestic product	Private industries											Government
		Total private industries	Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Statistical discrepancy [1]	
Based on 1972 SIC:													
1959	507.4	442.1	20.3	12.6	23.6	140.3	45.3	35.7	49.5	65.5	48.4	0.8	65.3
1960	527.4	457.9	21.4	13.0	24.1	142.5	47.5	37.4	50.7	70.3	51.6	–.6	69.5
1961	545.7	472.0	21.7	13.1	25.1	143.0	49.1	38.4	52.0	74.7	55.0	–.2	73.7
1962	586.5	507.6	22.1	13.3	26.9	156.8	52.2	41.0	55.7	79.5	59.4	.7	79.0
1963	618.7	533.9	22.3	13.6	28.8	166.2	55.1	42.8	58.2	83.8	63.5	–.4	84.8
1964	664.4	573.4	21.4	14.0	31.4	178.1	58.6	46.0	63.9	89.5	69.2	1.2	90.9
1965	720.1	623.0	24.2	14.2	34.5	196.6	62.7	49.7	68.4	96.0	74.8	1.9	97.1
1966	789.3	681.6	25.4	14.8	37.6	215.8	67.6	54.1	73.1	103.9	82.8	6.4	107.7
1967	834.1	715.5	24.9	15.3	39.4	221.3	70.9	57.5	78.7	111.6	91.0	4.8	118.6
1968	911.5	779.4	25.7	16.4	43.1	241.8	76.8	63.1	87.1	121.5	99.7	4.3	132.0
1969	985.3	841.1	28.5	17.3	48.3	254.6	83.1	68.3	94.6	132.3	111.1	2.9	144.3
1970	1,039.7	880.7	29.8	18.9	50.9	249.8	88.7	72.0	100.7	142.1	120.9	6.9	158.9
1971	1,128.6	955.4	32.1	19.1	55.9	263.2	97.8	77.7	109.7	157.6	130.8	11.3	173.2
1972	1,240.4	1,051.1	37.3	20.0	62.1	290.5	109.0	86.9	119.2	172.0	145.4	8.7	189.3
1973	1,385.5	1,180.9	55.0	24.0	70.2	321.9	119.7	97.8	131.1	189.5	163.7	8.0	204.6
1974	1,501.0	1,276.4	53.2	37.1	75.0	337.1	130.1	111.1	137.0	206.1	179.6	10.0	224.7
1975	1,635.2	1,386.5	54.9	42.8	75.5	354.8	142.4	121.1	153.2	224.6	199.5	17.7	248.7
1976	1,823.9	1,553.1	53.7	47.5	85.8	405.8	161.4	129.1	172.7	248.0	224.4	24.5	270.8
1977	2,031.4	1,738.3	54.3	54.0	94.8	462.8	179.4	142.2	190.9	282.2	256.2	21.6	293.1
1978	2,295.9	1,976.8	63.3	61.7	112.0	517.5	202.3	162.1	214.8	327.0	295.1	21.0	319.1
1979	2,566.4	2,219.5	74.5	71.5	126.5	571.0	219.0	183.8	233.5	369.7	334.3	35.7	346.8
1980	2,795.6	2,410.8	66.7	113.1	129.8	587.5	242.4	196.9	245.4	416.2	378.9	33.9	384.8
1981	3,131.3	2,704.3	81.1	152.6	131.5	652.2	274.6	218.5	270.6	467.5	428.1	27.5	427.0
1982	3,259.2	2,794.8	77.1	150.4	130.8	650.7	295.4	224.2	288.1	500.7	474.9	2.5	464.5
1983	3,534.9	3,039.7	62.6	129.1	139.8	693.3	324.0	236.9	322.4	559.0	525.5	47.0	495.3
1984	3,932.7	3,392.3	83.8	135.9	166.1	782.5	357.5	271.1	361.9	619.6	595.3	18.6	540.5
1985	4,213.0	3,627.9	84.7	135.3	186.3	804.4	379.0	289.1	394.4	686.5	656.5	11.7	585.1
1986	4,452.9	3,830.8	82.4	88.2	207.9	829.5	395.5	301.2	415.2	750.9	716.3	43.9	622.0
Based on 1987 SIC:													
1987	4,742.5	4,081.4	88.9	92.2	219.3	888.6	426.2	308.9	434.5	829.7	789.9	3.3	661.0
1988	5,108.3	4,401.8	89.1	99.2	237.2	979.9	449.0	346.6	461.5	893.7	887.9	–42.2	706.5
1989	5,489.1	4,735.5	102.0	97.1	245.8	1,017.7	468.7	364.7	492.7	954.5	976.0	16.3	753.6
1990	5,803.2	4,996.7	108.3	111.9	248.7	1,040.6	490.9	376.1	507.8	1,010.3	1,071.5	30.6	806.6
1991	5,986.2	5,129.1	102.9	96.7	232.7	1,043.5	518.3	395.6	523.7	1,072.2	1,123.8	19.6	857.1
1992	6,318.9	5,424.5	111.7	87.6	234.4	1,082.0	538.5	414.6	551.7	1,140.9	1,219.4	43.7	894.4
1993	6,642.3	5,717.5	108.3	88.4	248.9	1,131.4	573.3	432.5	578.0	1,205.3	1,287.7	63.8	924.8
1994	7,054.3	6,096.7	118.5	90.2	275.3	1,223.2	611.4	479.2	620.6	1,254.8	1,365.0	58.5	957.6
1995	7,400.5	6,411.1	109.8	95.7	290.3	1,289.1	642.6	500.6	646.8	1,347.2	1,462.4	26.5	989.5
1996	7,813.2	6,792.8	130.4	113.0	316.4	1,316.0	666.3	529.6	687.1	1,436.8	1,564.2	32.8	1,020.4
1997	8,318.4	7,253.6	130.0	118.9	338.2	1,379.6	688.4	566.8	740.5	1,569.9	1,691.5	29.7	1,064.8
1998	8,781.5	7,678.2	128.0	100.2	380.8	1,431.5	732.0	607.9	790.4	1,708.5	1,829.9	–31.0	1,103.3
1999	9,274.3	8,123.0	127.7	104.1	425.4	1,481.3	770.1	645.3	831.7	1,798.8	1,977.2	–38.8	1,151.3
2000	9,824.6	8,606.9	134.3	133.1	461.3	1,520.3	809.3	696.8	887.3	1,976.7	2,116.4	–128.5	1,217.7
2001	10,082.2	8,800.8	140.7	139.0	480.0	1,423.0	819.5	680.7	931.8	2,076.9	2,226.6	–117.3	1,281.3

[1] Equals gross domestic product (GDP) measured as the sum of expenditures less gross domestic income.

Note.—For details regarding these data, see *Survey of Current Business*, June 2000 and November 2001 and 2002.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–13.—*Real gross domestic product by industry, 1987–2001*

[Billions of chained (1996) dollars]

Year	Gross domestic product	Private industries											Government	Not allocated by industry[2]
		Total private industries	Agriculture, forestry, and fishing	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Statistical discrepancy[1]		
Based on 1987 SIC:														
1987	6,113.3	5,212.0	110.3	98.5	278.4	1,046.3	460.4	353.5	512.1	1,169.1	1,181.0	4.2	938.0	–139.6
1988	6,368.4	5,445.6	101.2	114.5	294.1	1,120.2	479.0	379.4	544.6	1,209.1	1,255.1	–51.8	961.0	–111.0
1989	6,591.8	5,648.2	111.4	102.8	296.3	1,111.6	500.4	399.3	562.5	1,234.3	1,313.8	19.3	984.3	–91.0
1990	6,707.9	5,736.8	118.5	105.8	290.7	1,102.3	525.0	395.1	559.5	1,250.6	1,361.9	34.9	1,008.2	–89.5
1991	6,676.4	5,707.8	121.3	101.1	268.8	1,066.3	543.1	416.6	554.6	1,270.6	1,352.4	21.7	1,012.1	–100.5
1992	6,880.0	5,880.3	130.7	95.7	271.7	1,085.0	555.7	444.9	569.7	1,297.4	1,391.4	47.3	1,015.3	–59.3
1993	7,062.6	6,043.2	122.6	101.1	279.2	1,122.9	576.3	452.4	581.8	1,328.9	1,418.0	67.5	1,013.1	–28.3
1994	7,347.7	6,314.4	135.8	108.1	297.2	1,206.0	606.1	481.6	617.2	1,347.6	1,458.1	60.7	1,016.0	–2.2
1995	7,543.8	6,508.7	123.1	113.0	299.6	1,284.7	634.5	483.0	641.4	1,393.0	1,510.4	27.0	1,017.1	9.7
1996	7,813.2	6,792.8	130.4	113.0	316.4	1,316.0	666.3	529.6	687.1	1,436.8	1,564.2	32.8	1,020.4	0
1997	8,159.5	7,151.2	143.7	117.0	324.6	1,387.2	668.7	584.1	745.3	1,520.8	1,632.2	29.2	1,035.5	–33.3
1998	8,508.9	7,490.6	145.5	119.7	348.9	1,444.3	683.1	663.3	800.0	1,622.1	1,699.0	–30.1	1,047.3	–48.9
1999	8,859.0	7,851.0	154.6	114.7	367.8	1,513.9	732.2	708.6	846.2	1,688.3	1,768.4	–37.3	1,061.1	–97.1
2000	9,191.4	8,157.8	166.7	101.9	378.0	1,585.4	781.9	750.2	909.2	1,793.5	1,826.0	–121.3	1,088.8	–159.1
2001	9,214.5	8,189.4	163.9	106.8	371.9	1,490.3	780.5	748.7	951.2	1,843.5	1,843.3	–108.3	1,107.5	–204.4

[1] Equals the current-dollar statistical discrepancy deflated by the implicit price deflator for gross domestic business product.

[2] Equals gross domestic product (GDP) less the statistical discrepancy and the sum of GDP by industry of the detailed industries. The value of not allocated by industry reflects the nonadditivity of chained-dollar estimates and the differences in source data used to estimate real GDP by industry and the expenditures measure of real GDP.

Note.—For details regarding these data, see *Survey of Current Business,* June 2000 and November 2001 and 2002.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–14.—*Gross product of nonfinancial corporate business, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross product of nonfinancial corporate business	Consumption of fixed capital	Net product												
			Total	Indirect business taxes [1]	Domestic income										
					Total	Compensation of employees	Corporate profits with inventory valuation and capital consumption adjustments								Net interest
							Total	Profits					Inventory valuation adjustment	Capital consumption adjustment	
								Profits before tax	Profits tax liability	Profits after tax					
										Total	Dividends	Undistributed profits			
1959	267.3	23.1	244.2	26.1	218.2	171.3	43.7	43.6	20.7	22.9	10.0	12.9	–0.3	0.4	3.1
1960	278.0	24.0	254.0	28.4	225.6	181.0	41.1	40.3	19.2	21.1	10.6	10.5	–.2	1.0	3.5
1961	285.5	24.6	260.9	29.6	231.3	185.2	42.1	40.1	19.5	20.6	10.6	10.1	.3	1.8	4.0
1962	311.7	25.5	286.2	32.1	254.1	200.0	49.6	44.9	20.6	24.3	11.4	12.9	.0	4.6	4.5
1963	331.8	26.5	305.4	34.1	271.2	210.9	55.5	49.8	22.8	27.1	12.6	14.4	.1	5.6	4.8
1964	358.2	27.9	330.3	36.7	293.7	226.5	61.9	56.1	24.0	32.1	13.7	18.4	–.5	6.2	5.3
1965	393.7	29.9	363.8	39.3	324.6	246.3	72.2	66.3	27.2	39.1	15.6	23.5	–1.2	7.1	6.1
1966	431.4	32.7	398.7	40.5	358.2	273.8	77.0	71.6	29.5	42.1	16.8	25.3	–2.1	7.5	7.4
1967	453.9	35.9	418.0	43.2	374.9	292.2	73.9	67.7	27.8	39.9	17.5	22.4	–1.6	7.8	8.8
1968	501.0	39.7	461.4	49.8	411.5	323.1	78.3	74.1	33.6	40.6	19.1	21.4	–3.7	7.8	10.1
1969	543.9	43.9	500.0	54.8	445.2	358.5	73.5	71.1	33.3	37.8	19.1	18.7	–5.9	8.2	13.2
1970	562.0	48.5	513.5	59.0	454.6	378.1	59.4	58.5	27.2	31.4	18.5	12.8	–6.6	7.4	17.1
1971	606.9	53.1	553.8	64.6	489.1	401.2	69.8	67.3	29.9	37.4	18.5	18.9	–4.6	7.1	18.1
1972	673.9	58.4	615.6	69.4	546.2	445.9	81.1	79.0	33.8	45.3	20.1	25.2	–6.6	8.7	19.2
1973	755.6	63.8	691.8	76.6	615.2	504.5	88.2	99.0	40.2	58.8	21.1	37.8	–19.6	8.8	22.5
1974	816.7	74.7	742.0	81.9	660.1	555.1	76.7	109.6	42.2	67.4	21.7	45.7	–38.2	5.3	28.3
1975	883.0	89.2	793.8	88.0	705.8	578.6	98.5	110.5	41.5	69.0	24.8	44.2	–10.5	–1.4	28.7
1976	997.1	98.9	898.2	95.9	802.4	655.0	119.9	137.9	53.0	84.9	28.0	56.9	–14.1	–3.8	27.5
1977	1,127.8	111.0	1,016.9	104.9	912.0	740.0	141.3	159.2	59.9	99.3	31.5	67.8	–15.7	–2.3	30.7
1978	1,285.0	126.8	1,158.2	114.4	1,043.8	851.0	156.5	184.4	67.1	117.3	36.4	80.9	–23.7	–4.2	36.3
1979	1,431.5	147.0	1,284.6	123.3	1,161.3	966.2	150.1	197.1	69.6	127.5	38.1	89.4	–40.1	–6.9	45.0
1980	1,556.6	169.4	1,387.2	139.5	1,247.8	1,056.9	132.7	183.6	67.0	116.6	45.3	71.3	–42.1	–8.8	58.1
1981	1,770.1	195.9	1,574.2	168.1	1,406.1	1,169.9	164.4	184.2	63.9	120.3	53.3	67.0	–24.6	4.8	71.8
1982	1,831.4	216.8	1,614.6	169.7	1,444.9	1,216.1	146.3	136.9	46.3	90.7	53.3	37.4	–7.5	16.9	82.5
1983	1,953.3	225.1	1,728.2	185.3	1,542.9	1,279.9	186.4	160.7	59.4	101.3	64.2	37.1	–7.4	33.1	76.6
1984	2,194.8	237.3	1,957.5	205.4	1,752.1	1,421.4	242.9	195.3	73.7	121.6	67.8	53.8	–4.0	51.7	87.7
1985	2,329.3	253.9	2,075.4	219.0	1,856.4	1,522.3	243.7	172.3	69.9	102.3	72.3	30.1	.0	71.4	90.4
1986	2,414.4	270.3	2,144.1	231.2	1,912.9	1,603.8	210.7	147.9	75.6	72.3	73.9	–1.6	7.1	55.8	98.4
1987	2,595.3	283.8	2,311.6	241.9	2,069.7	1,716.3	248.3	209.5	93.5	116.0	75.9	40.1	–16.2	55.0	105.1
1988	2,814.5	302.0	2,512.5	256.3	2,256.2	1,844.1	288.6	257.3	101.9	155.5	79.8	75.7	–22.2	53.4	123.6
1989	2,961.4	322.8	2,638.6	275.9	2,362.7	1,946.6	264.2	235.6	98.9	136.7	104.2	32.6	–16.3	45.0	151.8
1990	3,096.2	338.4	2,757.9	290.6	2,467.3	2,052.7	258.5	237.2	95.8	141.4	119.2	22.2	–12.9	34.3	156.0
1991	3,150.6	354.9	2,795.7	313.1	2,482.6	2,086.9	252.8	221.6	85.5	136.1	125.8	10.3	4.9	26.3	143.0
1992	3,288.0	369.6	2,918.5	332.0	2,586.5	2,194.2	278.9	258.0	91.2	166.8	135.0	31.9	–2.8	23.7	113.3
1993	3,457.6	386.4	3,071.3	349.3	2,721.9	2,290.7	325.3	305.8	105.2	200.5	149.3	51.2	–4.0	23.6	105.9
1994	3,737.2	414.5	3,322.7	382.1	2,940.6	2,430.2	402.5	381.4	128.9	252.6	158.6	94.0	–12.4	33.5	107.9
1995	3,945.9	437.5	3,508.4	397.3	3,111.0	2,552.7	442.5	422.1	136.7	285.4	179.3	106.0	–18.3	38.7	115.8
1996	4,159.5	462.7	3,696.9	411.9	3,284.9	2,667.1	509.1	460.2	150.1	310.1	201.9	108.2	3.1	45.8	108.7
1997	4,435.1	493.0	3,942.1	431.4	3,510.7	2,835.1	555.6	496.1	158.3	337.7	218.1	119.6	8.4	51.1	120.0
1998	4,707.1	523.1	4,183.9	457.4	3,726.5	3,058.0	530.7	460.4	154.6	305.8	242.2	63.6	18.3	52.0	137.7
1999	4,981.0	556.2	4,424.9	478.4	3,946.5	3,272.0	518.5	460.1	166.9	293.2	239.2	54.0	–4.2	62.6	156.1
2000	5,295.0	599.4	4,695.6	508.9	4,186.6	3,542.1	461.8	437.9	172.4	265.5	259.6	5.9	–15.0	38.8	182.7
2001	5,354.2	652.8	4,701.4	523.7	4,177.7	3,573.5	407.4	328.8	123.5	205.3	278.5	–73.2	5.0	73.6	196.8
1998: I	4,596.8	511.8	4,085.1	446.7	3,638.3	2,982.9	526.3	455.4	152.0	303.4	237.8	65.6	20.0	50.9	129.1
II	4,658.0	518.7	4,139.2	451.7	3,687.5	3,031.3	521.2	460.0	154.4	305.6	243.0	62.5	10.3	50.9	135.1
III	4,756.0	526.8	4,229.2	457.5	3,771.7	3,082.9	548.1	476.2	160.8	315.5	241.6	73.8	20.2	51.7	140.6
IV	4,817.4	535.2	4,282.2	473.8	3,808.4	3,135.0	527.2	450.1	151.2	298.9	246.5	52.4	22.9	54.2	146.1
1999: I	4,899.9	542.2	4,357.7	467.6	3,890.1	3,213.4	532.8	455.9	165.5	290.4	254.7	35.6	16.0	60.9	143.9
II	4,945.1	549.6	4,395.6	473.1	3,922.5	3,240.2	530.6	467.2	169.9	297.4	242.8	54.6	–2.5	65.8	151.6
III	4,995.0	564.0	4,431.1	482.4	3,948.7	3,283.8	504.6	454.7	164.9	289.8	225.3	64.5	–13.8	63.7	160.2
IV	5,084.2	569.1	4,515.1	490.4	4,024.7	3,350.4	505.9	462.8	167.3	295.4	234.0	61.4	–16.6	59.8	168.5
2000: I	5,228.7	581.2	4,647.5	503.2	4,144.3	3,482.9	490.9	463.6	183.8	279.8	252.3	27.6	–22.6	49.9	170.5
II	5,275.1	593.7	4,681.4	506.3	4,175.1	3,503.6	490.1	466.0	183.6	282.5	250.4	32.1	–16.4	40.4	181.4
III	5,335.5	605.8	4,729.7	510.5	4,219.2	3,575.3	456.2	430.7	169.1	261.6	266.3	–4.6	–8.3	33.9	187.7
IV	5,340.7	617.1	4,723.6	515.8	4,207.8	3,606.4	410.0	391.3	153.2	238.1	269.7	–31.6	–12.5	31.3	191.3
2001: I	5,318.6	627.6	4,691.0	523.3	4,167.7	3,589.0	384.3	362.8	134.3	228.4	276.7	–48.3	–10.1	31.7	194.4
II	5,340.9	641.6	4,699.3	529.3	4,170.0	3,580.7	393.1	368.2	136.2	232.0	268.3	–36.3	–6.2	31.1	196.1
III	5,365.7	684.9	4,680.8	508.0	4,172.8	3,572.5	403.0	349.8	129.4	220.4	283.8	–63.4	8.9	44.3	197.3
IV	5,391.6	657.0	4,734.6	534.3	4,200.3	3,551.8	449.0	234.3	94.0	140.3	285.2	–144.9	27.2	187.4	199.5
2002: I	5,423.8	670.7	4,753.1	539.3	4,213.9	3,570.1	452.4	289.2	119.8	169.5	293.1	–123.6	1.9	161.3	191.4
II	5,489.0	685.1	4,803.8	545.6	4,258.2	3,604.4	459.3	324.4	130.8	193.6	280.2	–86.6	–5.7	140.6	194.6
III	5,533.0	693.7	4,839.3	554.2	4,285.2	3,643.2	447.6	336.3	133.4	202.9	275.9	–73.0	–15.1	126.4	194.3

[1] Indirect business tax and nontax liability plus business transfer payments less subsidies.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–15.—*Output, price, costs, and profits of nonfinancial corporate business, 1959–2002*

[Quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross product of nonfinancial corporate business (billions of dollars)		Price, costs, and profit per unit of real output (dollars)								
			Price per unit of real gross product of nonfinancial corporate business[1]	Compensation of employees (unit labor cost)	Unit nonlabor cost				Corporate profits with inventory valuation and capital consumption adjustments[3]		
	Current dollars	Chained (1996) dollars			Total	Consumption of fixed capital	Indirect business taxes[2]	Net interest	Total	Profits tax liability	Profits after tax[4]
1959	267.3	986.1	0.271	0.174	0.052	0.023	0.026	0.003	0.044	0.021	0.023
1960	278.0	1,018.7	.273	.178	.055	.024	.028	.003	.040	.019	.022
1961	285.5	1,041.5	.274	.178	.056	.024	.028	.004	.040	.019	.022
1962	311.7	1,128.0	.276	.177	.055	.023	.028	.004	.044	.018	.026
1963	331.8	1,194.5	.278	.177	.055	.022	.029	.004	.046	.019	.027
1964	358.2	1,278.5	.280	.177	.055	.022	.029	.004	.048	.019	.030
1965	393.7	1,384.3	.284	.178	.054	.022	.028	.004	.052	.020	.032
1966	431.4	1,480.9	.291	.185	.054	.022	.027	.005	.052	.020	.032
1967	453.9	1,519.2	.299	.192	.058	.024	.028	.006	.049	.018	.030
1968	501.0	1,615.8	.310	.200	.062	.025	.031	.006	.048	.021	.028
1969	543.9	1,680.2	.324	.213	.067	.026	.033	.008	.044	.020	.024
1970	562.0	1,663.3	.338	.227	.074	.029	.035	.010	.036	.016	.019
1971	606.9	1,730.0	.351	.232	.078	.031	.037	.010	.040	.017	.023
1972	673.9	1,865.8	.361	.239	.078	.031	.037	.010	.043	.018	.025
1973	755.6	1,975.4	.382	.255	.082	.032	.039	.011	.045	.020	.024
1974	816.7	1,941.2	.421	.286	.095	.038	.042	.015	.040	.022	.018
1975	883.0	1,910.5	.462	.303	.108	.047	.046	.015	.052	.022	.030
1976	997.1	2,062.3	.484	.318	.107	.048	.046	.013	.058	.026	.032
1977	1,127.8	2,212.7	.510	.334	.111	.050	.047	.014	.064	.027	.037
1978	1,285.0	2,360.3	.544	.361	.117	.054	.048	.015	.066	.028	.038
1979	1,431.5	2,434.2	.588	.397	.130	.060	.051	.019	.062	.029	.033
1980	1,556.6	2,400.4	.648	.440	.153	.071	.058	.024	.055	.028	.027
1981	1,770.1	2,479.5	.714	.472	.176	.079	.068	.029	.066	.026	.041
1982	1,831.4	2,426.6	.755	.501	.193	.089	.070	.034	.060	.019	.041
1983	1,953.3	2,542.0	.768	.503	.192	.089	.073	.030	.073	.023	.050
1984	2,194.8	2,782.4	.789	.511	.191	.085	.074	.032	.087	.026	.061
1985	2,329.3	2,907.9	.801	.523	.193	.087	.075	.031	.084	.024	.060
1986	2,414.4	2,978.9	.811	.538	.202	.091	.078	.033	.071	.025	.045
1987	2,595.3	3,146.6	.825	.545	.200	.090	.077	.033	.079	.030	.049
1988	2,814.5	3,322.1	.847	.555	.205	.091	.077	.037	.087	.031	.056
1989	2,961.4	3,377.5	.877	.576	.223	.096	.082	.045	.078	.029	.049
1990	3,096.2	3,409.2	.908	.602	.230	.099	.085	.046	.076	.028	.048
1991	3,150.6	3,381.9	.932	.617	.240	.105	.093	.042	.075	.025	.049
1992	3,288.0	3,468.4	.948	.633	.236	.107	.096	.033	.080	.026	.054
1993	3,457.6	3,573.8	.967	.641	.236	.108	.098	.030	.091	.029	.062
1994	3,737.2	3,801.5	.983	.639	.238	.109	.101	.028	.106	.034	.072
1995	3,945.9	3,960.1	.996	.645	.239	.110	.100	.029	.112	.035	.077
1996	4,159.5	4,159.5	1.000	.641	.236	.111	.099	.026	.122	.036	.086
1997	4,435.1	4,404.2	1.007	.644	.237	.112	.098	.027	.126	.036	.090
1998	4,707.1	4,658.1	1.011	.656	.240	.112	.098	.030	.114	.033	.081
1999	4,981.0	4,902.1	1.016	.667	.243	.113	.098	.032	.106	.034	.072
2000	5,295.0	5,148.3	1.029	.688	.250	.116	.099	.035	.090	.033	.056
2001	5,354.2	5,141.8	1.041	.695	.267	.127	.102	.038	.079	.024	.055
1998: I	4,596.8	4,551.1	1.010	.655	.238	.112	.098	.028	.116	.033	.082
II	4,658.0	4,616.9	1.009	.657	.239	.112	.098	.029	.113	.033	.079
III	4,756.0	4,703.9	1.011	.655	.239	.112	.097	.030	.117	.034	.082
IV	4,817.4	4,760.7	1.012	.659	.243	.112	.100	.031	.111	.032	.079
1999: I	4,899.9	4,832.3	1.014	.665	.239	.112	.097	.030	.110	.034	.076
II	4,945.1	4,866.8	1.016	.666	.241	.113	.097	.031	.109	.035	.074
III	4,995.0	4,914.7	1.016	.668	.246	.115	.098	.033	.103	.034	.069
IV	5,084.2	4,994.6	1.018	.671	.246	.114	.098	.034	.101	.033	.068
2000: I	5,228.7	5,109.2	1.023	.682	.245	.114	.098	.033	.096	.036	.060
II	5,275.1	5,129.2	1.028	.683	.250	.116	.099	.035	.096	.036	.060
III	5,335.5	5,180.2	1.030	.690	.252	.117	.099	.036	.088	.033	.055
IV	5,340.7	5,174.4	1.032	.697	.256	.119	.100	.037	.079	.030	.050
2001: I	5,318.6	5,131.4	1.037	.699	.262	.122	.102	.038	.075	.026	.049
II	5,340.9	5,125.2	1.042	.699	.266	.125	.103	.038	.077	.027	.050
III	5,365.7	5,121.3	1.048	.698	.272	.134	.099	.039	.079	.025	.053
IV	5,391.6	5,189.3	1.039	.684	.268	.127	.103	.038	.087	.018	.068
2002: I	5,423.8	5,231.3	1.037	.682	.268	.128	.103	.037	.086	.023	.064
II	5,489.0	5,298.7	1.036	.680	.269	.129	.103	.037	.087	.025	.062
III	5,533.0	5,348.0	1.035	.681	.270	.130	.104	.036	.084	.025	.059

[1] The implicit price deflator for gross product of nonfinancial corporate business divided by 100.
[2] Indirect business tax and nontax liability plus business transfer payments less subsidies.
[3] Unit profits from current production.
[4] With inventory valuation and capital consumption adjustments.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–16.—*Personal consumption expenditures, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
		Total [1]	Motor vehicles and parts	Furniture and household equipment	Total [1]	Food	Clothing and shoes	Gasoline and oil	Fuel oil and coal	Total [1]	Housing [2]	Household operation		Transportation	Medical care
												Total [1]	Electricity and gas		
1959	318.1	42.7	18.9	18.1	148.5	80.7	26.4	11.3	4.0	127.0	45.0	18.7	7.6	10.5	16.4
1960	332.3	43.3	19.7	18.0	152.9	82.3	27.0	12.0	3.8	136.1	48.2	20.3	8.3	11.2	17.6
1961	342.7	41.8	17.8	18.3	156.6	84.0	27.6	12.0	3.8	144.3	51.2	21.2	8.8	11.7	18.7
1962	363.8	46.9	21.5	19.3	162.8	86.1	29.0	12.6	3.8	154.1	54.7	22.4	9.4	12.2	20.8
1963	383.1	51.6	24.4	20.7	168.2	88.3	29.8	13.0	4.0	163.4	58.0	23.6	9.9	12.7	22.6
1964	411.7	56.7	26.0	23.2	178.7	93.6	32.4	13.6	4.1	176.4	61.4	25.0	10.4	13.4	25.8
1965	444.3	63.3	29.9	25.1	191.6	100.7	34.1	14.8	4.4	189.5	65.4	26.5	10.9	14.5	27.9
1966	481.8	68.3	30.3	28.2	208.8	109.3	37.4	16.0	4.7	204.7	69.5	28.2	11.5	15.9	30.7
1967	508.7	70.4	30.0	30.0	217.1	112.5	39.2	17.1	4.8	221.2	74.1	30.2	12.2	17.3	33.9
1968	558.7	80.8	36.1	32.9	235.7	122.2	43.2	18.6	4.7	242.3	79.7	32.4	13.0	18.9	39.2
1969	605.5	85.9	38.4	34.7	253.2	131.5	46.5	20.5	4.6	266.4	86.8	35.2	14.1	20.9	44.8
1970	648.9	85.0	35.5	35.7	272.0	143.8	47.8	21.9	4.4	292.0	94.0	37.9	15.3	23.7	50.4
1971	702.4	96.9	44.5	37.8	285.5	149.7	51.7	23.2	4.6	320.0	102.7	41.3	16.9	27.1	56.9
1972	770.7	110.4	51.1	42.4	308.0	161.4	56.4	24.4	5.1	352.3	112.1	45.7	18.8	29.8	63.9
1973	852.5	123.5	56.1	47.9	343.1	179.6	62.5	28.1	6.3	385.9	122.7	50.2	20.4	31.2	71.5
1974	932.4	122.3	49.5	51.5	384.5	201.8	66.0	36.1	7.8	425.5	134.1	56.0	24.0	33.3	80.4
1975	1,030.3	133.5	54.8	54.5	420.7	223.2	70.8	39.7	8.4	476.1	147.0	64.3	29.2	35.7	93.4
1976	1,149.8	158.9	71.3	60.2	458.3	242.5	76.6	43.0	10.1	532.6	161.5	73.1	33.2	41.3	106.5
1977	1,278.4	181.2	83.5	67.2	497.2	262.7	84.1	46.9	11.1	600.0	179.5	82.7	38.5	49.2	122.6
1978	1,430.4	201.7	93.1	74.3	550.2	289.6	94.3	50.1	11.5	678.4	201.7	92.1	43.0	53.5	140.0
1979	1,596.3	214.4	93.5	82.7	624.4	324.7	101.2	66.2	14.4	757.4	226.5	101.0	47.8	59.1	158.1
1980	1,762.9	214.2	87.0	86.7	696.1	356.0	107.3	86.7	15.4	852.7	255.1	114.2	57.5	64.7	181.2
1981	1,944.2	231.3	95.8	92.1	758.9	383.5	117.2	97.9	15.8	954.0	287.7	127.3	64.8	68.7	213.0
1982	2,079.3	240.2	102.9	93.4	787.6	403.4	120.5	94.1	14.5	1,051.5	313.0	143.0	74.2	70.9	239.3
1983	2,286.4	281.2	126.9	106.6	831.2	423.8	130.9	93.1	13.6	1,174.0	338.7	157.6	82.4	79.4	267.9
1984	2,498.4	326.9	152.5	119.0	884.7	447.4	142.5	94.6	13.9	1,286.9	370.3	169.8	86.5	90.0	294.6
1985	2,712.6	363.3	175.7	128.5	928.8	467.6	152.1	97.2	13.6	1,420.6	406.8	182.2	90.8	100.0	322.5
1986	2,895.2	401.3	192.4	143.0	958.5	492.0	163.1	80.1	11.3	1,535.4	442.0	188.9	89.2	107.3	346.8
1987	3,105.3	419.7	193.1	153.4	1,015.3	515.3	174.4	85.4	11.2	1,670.3	476.4	196.9	90.9	118.2	381.8
1988	3,356.6	450.2	206.1	163.6	1,082.9	553.5	185.5	87.7	11.7	1,823.5	511.9	208.4	96.3	129.9	429.9
1989	3,596.7	467.8	211.4	171.4	1,165.4	591.9	198.9	97.0	11.9	1,963.5	546.4	221.3	101.0	136.6	479.2
1990	3,831.5	467.6	206.4	171.4	1,246.1	636.9	204.1	107.3	12.9	2,117.8	585.6	227.6	101.0	141.8	540.6
1991	3,971.2	443.0	182.8	171.5	1,278.8	657.6	208.7	102.5	12.4	2,249.4	616.0	238.6	107.4	142.8	591.0
1992	4,209.7	470.8	200.2	178.7	1,322.9	669.3	221.9	104.9	12.2	2,415.9	641.3	248.3	108.9	155.0	652.6
1993	4,454.7	513.4	222.1	192.4	1,375.2	697.9	231.1	106.6	12.9	2,566.1	666.5	268.9	118.6	166.2	700.6
1994	4,716.4	560.8	242.3	211.2	1,438.0	728.2	240.7	109.0	13.5	2,717.6	704.7	284.0	119.8	180.9	737.3
1995	4,969.0	589.7	249.3	225.0	1,497.3	755.8	247.8	113.3	14.1	2,882.0	740.8	298.1	122.5	197.7	780.7
1996	5,237.5	616.5	256.3	236.9	1,574.1	786.0	258.6	124.2	15.6	3,047.0	772.5	317.3	128.7	214.2	814.4
1997	5,529.3	642.5	264.2	248.9	1,641.6	812.2	271.7	128.1	15.1	3,245.2	810.5	333.0	130.4	234.4	854.6
1998	5,856.0	693.2	288.8	265.2	1,708.5	852.6	284.8	114.8	13.1	3,454.3	859.7	345.6	128.9	246.3	899.0
1999	6,246.5	755.9	319.1	285.5	1,830.1	898.9	301.0	129.3	13.6	3,660.5	912.6	360.4	129.9	259.4	937.2
2000	6,683.7	803.9	336.6	304.8	1,972.9	955.0	313.7	164.4	18.1	3,906.9	960.0	386.2	142.4	267.8	991.8
2001	6,987.0	835.9	361.3	306.1	2,041.3	992.4	315.3	162.1	16.5	4,109.9	1,014.5	406.3	154.5	271.4	1,072.2
1998: I	5,719.9	666.8	271.7	259.8	1,675.8	831.7	281.6	118.8	13.4	3,377.3	839.8	338.8	127.2	241.8	886.9
II	5,820.0	689.3	288.6	262.6	1,697.2	846.7	284.5	113.8	13.7	3,433.5	853.0	347.8	133.1	245.2	895.8
III	5,895.1	691.7	284.3	267.3	1,716.7	858.8	284.3	113.5	13.1	3,486.7	866.5	351.8	132.5	248.0	903.2
IV	5,989.1	725.1	310.7	270.9	1,744.4	873.1	288.5	112.9	12.2	3,519.6	879.6	344.2	122.8	250.2	910.1
1999: I	6,076.6	728.7	305.3	276.6	1,773.1	877.8	296.4	110.6	12.5	3,574.8	895.7	351.0	126.7	254.9	919.9
II	6,195.6	749.9	318.7	282.1	1,814.4	891.1	301.6	126.4	13.5	3,631.3	907.4	358.5	129.6	258.0	929.9
III	6,299.4	765.1	324.6	288.6	1,841.3	900.7	302.1	134.8	13.8	3,693.1	918.4	367.8	134.9	261.4	943.0
IV	6,414.5	779.9	328.0	294.8	1,891.7	925.9	304.1	145.4	14.4	3,742.9	928.7	364.3	128.6	263.3	956.0
2000: I	6,552.2	808.4	344.4	303.0	1,926.9	937.5	308.7	156.2	16.8	3,816.9	941.2	366.6	127.1	264.8	965.9
II	6,638.7	799.3	332.4	305.4	1,964.9	952.7	312.1	164.2	17.3	3,874.5	953.5	382.6	139.1	267.1	982.3
III	6,736.1	810.6	341.7	306.0	1,988.9	961.2	315.1	167.6	18.1	3,936.6	965.9	390.3	144.5	268.4	1,000.1
IV	6,808.0	797.2	328.1	304.9	2,011.1	968.8	318.7	169.5	20.2	3,999.7	979.3	405.5	158.7	271.0	1,019.1
2001: I	6,904.7	816.8	345.8	304.3	2,031.5	984.2	317.9	167.0	19.6	4,056.4	993.4	416.8	167.2	273.3	1,042.6
II	6,959.8	820.3	349.0	303.9	2,044.8	988.7	313.6	175.4	16.2	4,094.7	1,007.9	406.7	155.8	273.2	1,064.2
III	6,983.7	824.0	351.0	304.9	2,044.3	993.8	312.1	163.6	15.7	4,115.4	1,021.1	404.8	151.8	270.1	1,079.0
IV	7,099.9	882.6	399.5	311.5	2,044.4	1,002.8	317.4	142.2	14.5	4,172.9	1,035.5	396.9	143.1	269.0	1,103.1
2002: I	7,174.2	859.0	365.8	317.1	2,085.1	1,025.0	325.8	142.3	13.9	4,230.1	1,051.7	399.2	143.9	273.3	1,119.0
II	7,254.7	856.9	362.1	319.1	2,108.2	1,023.9	323.9	160.7	14.0	4,289.5	1,066.0	400.9	144.9	275.6	1,139.3
III	7,360.7	897.8	400.7	319.2	2,116.9	1,024.8	321.0	163.5	14.7	4,346.0	1,078.0	406.3	147.4	276.1	1,158.8

[1] Includes other items not shown separately.
[2] Includes imputed rental value of owner-occupied housing.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–17.—*Real personal consumption expenditures, 1987–2002*

[Billions of chained (1996) dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
		Total[1]	Motor vehicles and parts	Furniture and household equipment	Total[1]	Food	Clothing and shoes	Gasoline and oil	Fuel oil and coal	Total[1]	Housing[2]	Household operation		Transportation	Medical care
												Total[1]	Electricity and gas		
1987	4,113.4	455.2	242.4	133.3	1,274.5	664.6	182.4	112.8	14.2	2,379.3	644.8	238.0	106.9	164.6	631.0
1988	4,279.5	481.5	254.9	142.3	1,315.1	690.7	187.8	114.9	14.7	2,477.2	663.4	248.2	112.3	172.8	659.9
1989	4,393.7	491.7	253.9	149.9	1,351.0	703.5	198.6	116.4	14.4	2,546.0	679.9	257.2	114.7	174.6	678.5
1990	4,474.5	487.1	246.1	150.9	1,369.6	722.4	197.2	113.1	13.1	2,616.2	696.2	259.8	112.8	173.4	710.9
1991	4,466.6	454.9	211.8	152.7	1,364.0	721.4	197.8	109.4	12.9	2,651.8	709.8	262.9	116.3	164.7	734.4
1992	4,594.5	479.0	225.7	161.5	1,389.7	725.6	208.8	112.5	13.2	2,729.7	719.3	267.6	115.7	171.1	765.4
1993	4,748.9	518.3	242.2	177.4	1,430.3	745.1	218.5	115.4	14.0	2,802.5	728.1	282.3	122.2	176.6	775.4
1994	4,928.1	557.7	255.1	196.3	1,485.1	764.9	231.6	117.4	15.0	2,886.2	749.1	293.0	122.8	189.0	783.1
1995	5,075.6	583.5	253.4	215.4	1,529.0	777.0	244.3	120.2	15.7	2,963.4	763.7	304.0	125.3	201.0	797.7
1996	5,237.5	616.5	256.3	236.9	1,574.1	786.0	258.6	124.2	15.6	3,047.0	772.6	317.3	128.7	214.2	814.4
1997	5,423.9	657.3	264.8	261.9	1,619.9	794.5	271.6	128.1	15.0	3,147.0	787.2	327.4	127.5	226.4	835.4
1998	5,683.7	726.7	292.0	293.3	1,686.4	819.4	290.4	131.8	14.3	3,273.4	808.7	343.5	130.9	234.7	857.7
1999	5,964.5	812.5	322.1	335.1	1,765.1	846.8	312.1	136.4	14.7	3,395.4	835.0	358.7	132.3	246.2	875.6
2000	6,223.9	878.9	338.4	374.0	1,833.8	879.0	329.4	135.7	14.0	3,524.5	851.3	377.8	137.0	253.0	900.1
2001	6,377.2	931.9	361.9	398.0	1,869.8	887.0	337.7	138.8	12.6	3,594.9	866.0	382.6	134.5	251.1	938.3
1998: I	5,576.3	692.5	274.7	281.3	1,656.3	804.0	286.1	129.5	14.3	3,228.4	800.0	336.5	128.1	230.4	853.6
II	5,660.2	719.7	292.7	286.9	1,680.5	816.8	290.6	131.2	14.8	3,262.3	805.8	345.0	134.5	234.2	855.9
III	5,713.7	727.1	287.2	297.9	1,693.6	824.0	289.3	133.0	14.3	3,295.2	811.7	350.0	135.3	236.1	859.0
IV	5,784.7	767.3	313.2	307.2	1,715.3	832.8	295.8	133.4	13.9	3,307.6	817.1	342.7	125.9	238.2	862.4
1999: I	5,851.4	777.6	309.0	317.8	1,736.1	831.9	307.9	134.3	14.6	3,343.6	827.6	349.6	129.9	242.3	867.3
II	5,932.8	804.2	322.9	328.6	1,756.7	842.2	311.6	136.8	15.2	3,379.7	833.0	357.8	132.7	244.5	872.1
III	6,000.1	824.1	326.9	340.8	1,767.7	847.3	314.1	136.1	14.7	3,417.4	837.7	366.9	137.2	248.0	878.6
IV	6,073.6	844.2	329.5	353.1	1,799.9	866.0	314.7	138.6	14.1	3,440.7	841.6	360.7	129.5	250.0	884.4
2000: I	6,151.9	879.5	347.3	366.0	1,809.7	870.8	322.3	134.4	13.3	3,477.7	844.7	362.7	127.8	251.7	888.5
II	6,198.2	871.3	333.8	372.2	1,831.6	880.5	327.9	135.9	14.2	3,508.2	849.5	377.2	137.2	253.0	896.2
III	6,256.8	888.5	343.6	377.1	1,840.9	880.7	332.3	136.1	14.0	3,541.7	853.4	380.8	137.5	253.2	903.2
IV	6,288.8	876.5	329.1	380.6	1,853.1	883.9	335.1	136.3	14.5	3,570.6	857.5	390.5	145.7	254.2	912.5
2001: I	6,326.0	900.6	345.1	386.0	1,863.7	889.1	334.3	137.6	13.9	3,576.3	862.0	389.4	142.5	253.3	921.4
II	6,348.0	912.4	349.5	392.8	1,862.3	887.4	334.7	136.2	12.3	3,589.3	865.1	381.5	133.0	252.5	932.7
III	6,370.9	922.6	352.8	399.5	1,868.3	884.3	337.1	139.9	12.2	3,597.5	867.1	381.9	132.4	250.0	944.3
IV	6,464.0	992.0	400.4	413.6	1,885.0	887.1	344.8	141.4	12.2	3,616.6	869.6	377.7	130.2	248.6	954.9
2002: I	6,513.8	975.9	370.0	428.2	1,921.4	901.4	355.8	145.1	12.4	3,642.2	874.0	381.3	133.5	250.9	963.4
II	6,542.4	980.7	369.1	435.2	1,920.9	899.2	355.1	144.7	12.1	3,666.2	878.5	382.9	133.6	250.3	974.7
III	6,609.9	1,032.4	407.6	441.4	1,925.8	897.9	355.3	145.4	12.4	3,687.0	882.1	384.7	135.7	249.8	984.4

[1] Includes other items not shown separately.

[2] Includes imputed rental value of owner-occupied housing.

Note.—See Table B-2 for data for total personal consumption expenditures for 1959-86.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–18.—*Private fixed investment by type, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Private fixed investment	Nonresidential												Residential
		Total nonresidential	Structures				Equipment and software							
			Total [1]	Nonresidential buildings including farm	Utilities	Mining exploration, shafts, and wells	Total [1]	Information processing equipment and software				Industrial equipment	Transportation equipment	
								Total	Computers and peripheral equipment [2]	Software [3]	Other			
1959	74.6	46.5	18.1	10.6	4.9	2.5	28.4	4.0	0.0	0.0	4.0	8.4	8.3	28.1
1960	75.7	49.4	19.6	12.0	5.0	2.3	29.8	4.9	.2	.1	4.5	9.3	8.5	26.3
1961	75.2	48.8	19.7	12.7	4.6	2.3	29.1	5.2	.3	.2	4.8	8.7	8.0	26.4
1962	82.0	53.1	20.8	13.7	4.6	2.5	32.3	5.7	.3	.2	5.1	9.2	9.8	29.0
1963	88.1	56.0	21.2	13.9	5.0	2.3	34.8	6.5	.7	.4	5.3	10.0	9.4	32.1
1964	97.2	63.0	23.7	15.8	5.4	2.4	39.2	7.3	.9	.5	5.8	11.4	10.6	34.3
1965	109.0	74.8	28.3	19.5	6.1	2.4	46.5	8.5	1.2	.7	6.6	13.6	13.2	34.2
1966	117.7	85.4	31.3	21.3	7.1	2.5	54.0	10.6	1.7	1.0	7.9	16.1	14.5	32.3
1967	118.7	86.4	31.5	20.6	7.8	2.4	54.9	11.2	1.9	1.2	8.1	16.8	14.3	32.4
1968	132.1	93.4	33.6	21.1	9.2	2.6	59.9	11.9	1.9	1.3	8.6	17.2	17.6	38.7
1969	147.3	104.7	37.7	24.4	9.6	2.8	67.0	14.6	2.4	1.8	10.4	18.9	18.9	42.6
1970	150.4	109.0	40.3	25.4	11.1	2.8	68.7	16.7	2.7	2.3	11.6	20.2	16.2	41.4
1971	169.9	114.1	42.7	27.1	11.9	2.7	71.5	17.3	2.8	2.4	12.1	19.4	18.4	55.8
1972	198.5	128.8	47.2	30.1	13.1	3.1	81.7	19.3	3.5	2.8	13.1	21.3	21.8	69.7
1973	228.6	153.3	55.0	35.5	15.0	3.5	98.3	23.0	3.5	3.2	16.3	25.9	26.6	75.3
1974	235.4	169.5	61.2	38.3	16.5	5.2	108.2	26.8	3.9	3.9	19.0	30.5	26.3	66.0
1975	236.5	173.7	61.4	35.6	17.1	7.4	112.4	28.2	3.6	4.8	19.9	31.1	25.2	62.7
1976	274.8	192.4	65.9	35.9	20.0	8.6	126.4	32.4	4.4	5.2	22.8	33.9	30.0	82.5
1977	339.0	228.7	74.6	39.9	21.5	11.5	154.1	38.6	5.7	5.5	27.5	39.2	39.3	110.3
1978	410.2	278.6	91.4	49.7	24.1	15.4	187.2	48.3	7.6	6.6	34.2	47.4	47.3	131.6
1979	472.7	331.6	114.9	65.7	27.5	19.0	216.7	58.6	10.2	8.7	39.8	55.9	53.6	141.0
1980	484.2	360.9	133.9	73.7	30.2	27.4	227.0	69.6	12.5	10.7	46.4	60.4	48.4	123.2
1981	541.0	418.4	164.6	86.3	33.0	42.5	253.8	82.4	17.1	12.9	52.3	65.2	50.6	122.6
1982	531.0	425.3	175.0	94.5	32.5	44.8	250.3	88.9	18.9	15.4	54.6	62.3	46.8	105.7
1983	570.0	417.4	152.7	90.5	28.7	30.0	264.7	100.8	23.9	18.0	58.9	58.4	53.7	152.5
1984	670.1	490.3	176.0	110.0	30.0	31.3	314.3	121.7	31.6	22.1	68.0	67.6	64.8	179.8
1985	714.5	527.6	193.3	128.0	30.6	27.9	334.3	130.8	33.7	25.6	71.5	71.9	69.7	186.9
1986	740.7	522.5	175.8	123.3	31.2	15.7	346.8	137.6	33.4	27.8	76.4	74.8	71.8	218.1
1987	754.3	526.7	172.1	126.0	26.5	13.1	354.7	141.9	35.8	31.4	74.8	76.1	70.4	227.6
1988	802.7	568.4	181.6	133.8	26.6	15.7	386.8	155.9	38.0	36.7	81.2	83.5	76.1	234.2
1989	845.2	613.4	193.4	142.7	29.5	14.9	420.0	173.0	43.1	44.4	85.5	92.7	71.4	231.8
1990	847.2	630.3	202.5	149.1	28.4	17.9	427.8	176.1	38.6	50.2	87.3	91.5	75.7	216.8
1991	800.4	608.9	183.4	124.2	33.7	18.5	425.4	181.4	37.7	56.6	87.1	88.7	79.5	191.5
1992	851.6	626.1	172.2	113.2	36.7	14.2	453.9	197.5	43.6	60.8	93.1	92.4	86.1	225.5
1993	934.0	682.2	179.4	119.3	34.8	17.7	502.8	215.0	47.2	69.4	98.4	101.8	98.1	251.8
1994	1,034.6	748.6	187.5	129.0	34.0	17.4	561.1	233.7	51.3	75.5	106.9	113.3	117.8	286.0
1995	1,110.7	825.1	204.6	144.3	35.8	17.2	620.5	262.0	64.6	83.5	113.8	128.7	126.1	285.6
1996	1,212.7	899.4	225.0	161.7	36.0	21.1	674.4	287.3	70.9	95.1	121.3	136.4	138.9	313.3
1997	1,327.7	999.4	255.8	182.7	36.1	30.1	743.6	325.2	79.6	116.5	129.2	141.0	151.4	328.2
1998	1,465.6	1,101.2	282.4	201.4	44.2	30.2	818.9	363.4	84.2	140.1	139.2	147.6	168.2	364.4
1999	1,577.2	1,173.5	283.7	206.9	47.3	22.8	889.8	402.3	90.4	162.5	149.4	150.4	194.7	403.7
2000	1,691.8	1,265.8	314.2	223.9	53.7	29.2	951.6	446.9	93.3	179.4	174.2	164.9	189.7	426.0
2001	1,646.3	1,201.6	324.5	216.3	55.0	42.7	877.1	404.3	74.2	180.4	149.8	159.0	165.8	444.8
1998: I	1,422.0	1,074.8	273.2	194.3	41.9	30.5	801.6	355.0	86.1	132.7	136.3	150.3	160.9	347.2
II	1,457.5	1,099.9	284.9	201.6	44.4	32.2	815.0	361.3	84.6	137.7	139.0	147.3	165.8	357.6
III	1,469.1	1,098.6	283.9	201.5	45.3	30.7	814.7	362.9	81.0	142.8	139.2	145.4	164.1	370.5
IV	1,513.9	1,131.7	287.5	208.5	45.3	27.3	844.2	374.3	85.0	147.0	142.3	147.2	181.9	382.2
1999: I	1,543.3	1,150.0	285.5	211.1	45.4	22.5	864.5	385.7	87.9	153.2	144.5	145.2	190.0	393.3
II	1,570.1	1,167.7	283.0	206.6	45.7	23.3	884.7	403.7	93.0	161.1	149.6	149.5	190.7	402.4
III	1,591.1	1,184.5	279.9	204.2	47.8	21.5	904.6	410.7	92.6	165.9	152.2	153.0	200.0	406.5
IV	1,604.3	1,191.9	286.3	205.5	50.3	23.9	905.5	409.2	88.1	169.8	151.3	153.9	198.2	412.5
2000: I	1,664.6	1,236.6	299.5	216.2	50.8	25.6	937.1	433.3	90.1	174.5	168.6	159.7	196.4	428.0
II	1,697.1	1,268.3	308.5	222.8	52.5	26.2	959.8	449.1	95.7	178.2	175.2	163.2	195.5	428.8
III	1,705.2	1,283.4	320.9	227.4	54.7	31.1	962.5	453.3	95.7	182.2	175.4	168.8	190.3	421.8
IV	1,700.4	1,274.8	328.0	229.1	57.1	33.8	946.8	451.8	91.8	182.5	177.5	167.9	176.5	425.6
2001: I	1,698.3	1,258.3	333.7	231.9	54.9	39.7	924.6	433.2	84.0	183.4	165.8	170.0	169.5	440.0
II	1,654.3	1,210.0	329.9	221.3	56.2	45.5	880.2	407.9	75.8	180.7	151.5	161.8	162.7	444.2
III	1,635.5	1,188.1	332.0	211.5	54.6	45.1	856.1	390.7	67.6	178.7	144.5	154.3	162.7	447.4
IV	1,597.2	1,149.8	302.3	200.4	54.4	40.4	847.4	385.5	69.3	178.9	137.3	149.8	168.3	447.4
2002: I	1,589.4	1,126.8	288.3	192.4	56.3	32.3	838.5	388.7	71.9	177.2	139.6	153.4	154.1	462.6
II	1,584.6	1,115.8	275.2	182.3	53.9	31.7	840.7	397.1	72.8	181.0	143.3	150.5	145.2	468.7
III	1,579.7	1,109.8	259.4	171.1	51.5	31.0	850.4	406.9	76.8	186.3	143.8	153.3	141.7	469.9

[1] Includes other items, not shown separately.
[2] Includes new computers and peripheral equipment only.
[3] Excludes software "embedded," or bundled, in computers and other equipment.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–19.—*Real private fixed investment by type, 1987–2002*

[Billions of chained (1996) dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Private fixed investment	Nonresidential												Residential
		Total nonresidential	Structures				Equipment and software							
			Total [1]	Nonresidential buildings including farm	Utilities	Mining exploration, shafts, and wells	Total [1]	Information processing equipment and software				Industrial equipment	Transportation equipment	
								Total	Computers and peripheral equipment [2]	Software [3]	Other			
1987	856.0	572.5	224.3	162.6	34.9	18.6	360.0	105.1	10.3	27.9	78.0	99.9	88.0	290.7
1988	887.1	603.6	227.1	166.5	33.6	20.4	386.9	116.4	11.8	32.4	83.5	104.9	93.6	289.2
1989	911.2	637.0	232.7	171.4	35.4	18.4	414.0	131.3	14.4	40.1	86.8	112.4	84.9	277.3
1990	894.6	641.7	236.1	173.6	33.0	21.3	415.7	136.4	14.2	45.9	87.6	105.8	87.4	253.5
1991	832.5	610.1	210.1	142.7	38.9	20.8	407.2	142.7	15.4	51.4	86.4	99.0	87.7	221.1
1992	886.5	630.6	197.3	129.2	41.8	17.2	437.5	163.0	20.8	58.7	91.5	100.8	92.3	257.2
1993	958.4	683.6	198.9	131.7	38.4	20.5	487.1	183.4	26.4	66.8	96.4	109.6	103.4	276.0
1994	1,045.9	744.6	200.5	137.2	36.1	19.8	544.9	206.6	32.6	74.3	104.9	119.6	120.4	302.7
1995	1,109.2	817.5	210.1	147.6	36.8	18.2	607.6	242.8	49.2	82.0	113.1	131.3	128.2	291.7
1996	1,212.7	899.4	225.0	161.7	36.0	21.1	674.4	287.3	70.9	95.1	121.3	136.4	138.9	313.3
1997	1,328.6	1,009.3	245.4	177.0	35.3	26.2	764.2	349.8	102.9	119.0	129.8	140.0	150.5	319.7
1998	1,480.0	1,135.9	262.2	188.3	42.7	25.1	875.4	429.3	147.7	147.1	143.5	145.6	168.2	345.1
1999	1,595.2	1,228.4	258.6	185.5	45.7	21.6	975.9	508.1	207.4	169.3	157.5	147.5	193.2	368.3
2000	1,691.9	1,324.2	275.5	192.3	50.4	27.0	1,056.0	583.3	246.4	184.4	187.4	160.8	186.6	372.4
2001	1,627.4	1,255.1	270.9	178.7	50.3	34.0	988.2	548.5	239.9	182.0	163.9	153.8	163.6	373.5
1998:I	1,431.4	1,099.5	255.7	184.1	40.6	24.9	845.0	404.5	132.7	138.8	138.9	148.7	161.2	333.0
II	1,471.4	1,132.3	264.8	189.6	43.0	26.0	868.6	422.5	142.4	144.6	143.0	145.6	166.4	340.5
III	1,485.4	1,136.6	263.0	187.5	43.7	25.9	875.1	433.7	147.7	150.0	144.4	143.3	164.2	349.5
IV	1,531.7	1,175.4	265.1	191.9	43.7	23.7	912.9	456.4	167.7	155.0	147.9	144.8	181.0	357.4
1999:I	1,560.5	1,197.5	262.4	192.1	44.1	20.4	939.1	477.3	186.1	160.2	151.1	142.5	188.1	364.1
II	1,587.6	1,220.4	258.9	186.0	44.3	21.9	967.1	506.8	209.2	167.8	157.1	146.9	188.6	368.4
III	1,610.6	1,243.3	254.7	182.3	46.2	20.8	996.1	522.2	218.8	172.5	160.7	150.1	199.1	369.2
IV	1,622.2	1,252.4	258.5	181.7	48.3	23.1	1,001.2	526.1	215.3	176.8	161.2	150.5	196.8	371.7
2000:I	1,673.6	1,297.1	267.0	188.4	48.3	24.5	1,038.0	561.3	226.7	181.8	180.2	156.0	193.9	379.1
II	1,700.9	1,329.1	272.3	192.4	49.3	25.0	1,065.3	585.5	249.2	184.3	188.2	159.3	192.5	376.2
III	1,701.7	1,340.7	280.2	194.5	51.1	28.6	1,067.7	591.9	255.9	185.8	189.1	164.5	186.9	367.2
IV	1,691.3	1,329.9	282.7	193.9	52.9	30.1	1,053.1	594.3	253.9	185.6	192.2	163.4	173.0	367.2
2001:I	1,682.1	1,311.4	280.4	193.8	50.6	30.9	1,036.1	578.9	253.0	185.5	180.2	164.8	167.6	374.5
II	1,633.5	1,261.0	274.4	183.2	51.5	34.6	989.9	549.8	239.0	181.7	165.7	156.4	161.6	374.0
III	1,615.7	1,241.7	276.3	174.2	49.7	35.9	966.4	533.4	224.5	180.5	158.6	149.2	160.0	374.3
IV	1,578.4	1,206.4	252.7	163.5	49.3	34.8	960.3	531.8	243.3	180.6	151.2	144.7	165.4	371.0
2002:I	1,576.4	1,188.4	243.2	157.1	50.8	30.2	953.7	540.4	262.1	179.0	154.1	148.3	151.5	383.6
II	1,572.6	1,181.1	231.7	148.2	48.4	30.3	961.4	557.0	271.6	184.3	158.5	145.6	143.4	386.1
III	1,571.6	1,178.7	218.2	139.1	45.6	29.9	977.2	575.2	297.6	189.4	159.7	147.9	141.7	387.1

[1] Includes other items, not shown separately.
[2] Includes new computers and peripheral equipment only.
[3] Excludes software "embedded," or bundled, in computers and other equipment.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–20.—*Government consumption expenditures and gross investment by type, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Government consumption expenditures and gross investment													
	Total	Federal									State and local			
		Total	National defense				Nondefense							
			Total	Consumption expenditures	Gross investment		Total	Consumption expenditures	Gross investment		Total	Consumption expenditures	Gross investment	
					Structures	Equipment and software			Structures	Equipment and software			Structures	Equipment and software
1959	112.5	67.4	56.0	42.2	2.5	11.2	11.4	9.8	1.5	0.2	45.1	31.1	12.8	1.1
1960	113.8	65.9	55.2	42.8	2.2	10.1	10.7	8.7	1.7	.3	47.9	34.0	12.7	1.2
1961	121.5	69.5	58.1	44.3	2.4	11.5	11.3	8.9	1.9	.6	52.0	37.0	13.8	1.3
1962	132.2	76.9	62.8	48.3	2.0	12.5	14.1	11.2	2.1	.8	55.3	39.4	14.5	1.3
1963	138.5	78.5	62.7	50.1	1.6	11.0	15.8	12.3	2.3	1.2	59.9	42.4	16.0	1.5
1964	145.1	79.8	61.8	50.3	1.3	10.2	18.0	13.9	2.5	1.6	65.3	46.3	17.2	1.8
1965	153.7	82.1	62.4	52.4	1.1	8.9	19.7	15.0	2.8	1.9	71.6	50.8	19.0	1.9
1966	174.3	94.4	73.8	61.4	1.3	11.1	20.7	15.8	2.8	2.1	79.9	56.8	21.0	2.1
1967	195.3	106.8	85.8	71.5	1.2	13.1	21.0	16.9	2.2	1.9	88.6	63.2	23.0	2.3
1968	212.8	114.0	92.2	79.0	1.2	11.9	21.8	18.0	2.1	1.7	98.8	71.1	25.2	2.4
1969	224.6	116.1	92.6	80.1	1.5	11.0	23.5	19.9	1.9	1.7	108.5	80.2	25.6	2.7
1970	237.1	116.4	90.9	78.7	1.3	10.9	25.5	21.7	2.1	1.7	120.7	92.0	25.8	3.0
1971	251.0	117.6	89.0	79.3	1.8	7.9	28.6	24.4	2.5	1.7	133.5	103.4	27.0	3.1
1972	270.1	125.6	93.5	82.3	1.8	9.4	32.2	27.6	2.7	1.8	144.4	113.8	27.1	3.5
1973	287.9	127.8	93.9	82.6	2.1	9.2	33.9	29.0	3.1	1.8	160.1	126.9	29.1	4.1
1974	322.4	138.2	99.7	87.5	2.2	10.1	38.5	32.9	3.4	2.2	184.2	144.5	34.7	4.9
1975	361.1	152.1	107.9	93.4	2.3	12.1	44.2	37.7	4.1	2.4	209.0	165.4	38.1	5.5
1976	384.5	160.6	113.2	97.9	2.1	13.2	47.4	40.1	4.6	2.7	223.9	180.1	38.1	5.7
1977	415.3	176.0	122.6	105.8	2.4	14.4	53.5	45.5	5.0	3.0	239.3	196.5	36.9	5.9
1978	455.6	191.9	132.0	114.2	2.5	15.3	59.8	50.1	6.1	3.7	263.8	214.3	42.8	6.6
1979	503.5	211.6	146.7	125.3	2.5	18.9	65.0	54.7	6.3	4.0	291.8	235.0	49.0	7.8
1980	569.7	245.3	169.6	145.3	3.2	21.1	75.6	63.6	7.1	4.9	324.4	260.5	55.1	8.9
1981	631.4	281.8	197.8	168.9	3.2	25.7	84.0	71.0	7.7	5.3	349.6	284.6	55.4	9.5
1982	684.4	312.8	228.3	193.6	4.0	30.8	84.5	71.7	6.8	6.0	371.6	306.8	54.2	10.6
1983	735.9	344.4	252.5	210.6	4.8	37.1	92.0	77.4	6.7	7.8	391.5	325.1	54.2	12.2
1984	800.8	376.4	283.5	234.9	4.9	43.8	92.8	77.1	7.0	8.7	424.4	349.5	60.5	14.4
1985	878.3	413.4	312.4	254.9	6.2	51.3	101.0	84.1	7.3	9.6	464.9	380.5	67.6	16.8
1986	942.3	438.7	332.2	269.3	6.8	56.1	106.5	89.0	8.0	9.5	503.6	410.8	74.2	18.6
1987	997.9	460.4	351.2	284.8	7.7	58.8	109.3	89.9	9.0	10.4	537.5	439.0	78.8	19.6
1988	1,036.9	462.6	355.9	294.6	7.4	53.9	106.8	88.2	6.8	11.7	574.3	467.9	84.8	21.5
1989	1,100.2	482.6	363.2	300.5	6.4	56.3	119.3	99.1	6.9	13.4	617.7	503.0	88.7	26.0
1990	1,181.4	508.4	374.9	308.9	6.1	59.8	133.6	111.0	8.0	14.6	673.0	545.8	98.5	28.7
1991	1,235.5	527.4	384.5	321.1	4.6	58.8	142.9	118.1	9.2	15.7	708.1	576.1	103.2	28.9
1992	1,270.5	534.5	378.5	316.9	5.2	56.3	156.0	128.8	10.3	16.9	736.0	601.6	104.2	30.1
1993	1,293.0	527.3	364.9	309.2	5.1	50.7	162.4	133.4	11.2	17.7	765.7	629.5	104.5	31.7
1994	1,327.9	521.1	355.1	301.1	5.7	48.3	165.9	138.6	10.5	16.8	806.8	662.6	108.7	35.5
1995	1,372.0	521.5	350.6	297.5	6.3	46.9	170.9	141.8	10.8	18.4	850.5	694.7	117.3	38.6
1996	1,421.9	531.6	357.0	302.4	6.7	47.9	174.6	142.9	11.1	20.5	890.4	726.5	122.5	41.3
1997	1,487.9	538.2	352.6	304.2	5.7	42.7	185.6	152.7	9.7	23.2	949.7	766.4	139.3	44.0
1998	1,538.5	539.2	349.1	299.7	5.4	44.0	190.1	153.4	11.2	25.5	999.3	808.3	142.4	48.6
1999	1,641.0	565.0	364.3	312.0	5.3	47.0	200.7	159.6	11.6	29.4	1,076.0	864.7	158.3	53.0
2000	1,751.0	589.2	374.9	321.4	5.3	48.2	214.3	171.9	10.8	31.6	1,161.8	937.9	167.4	56.5
2001	1,858.0	628.1	399.9	344.5	5.4	50.0	228.2	184.0	10.4	33.8	1,229.9	993.7	177.6	58.6
1998:I	1,501.8	526.1	338.4	291.6	5.6	41.1	187.7	152.6	10.7	24.4	975.8	792.3	136.5	47.0
II	1,533.8	542.9	348.8	300.8	5.0	42.9	194.2	155.7	10.6	27.9	990.9	803.2	139.6	48.1
III	1,548.1	539.5	354.7	301.4	5.8	47.4	184.8	148.5	11.5	24.8	1,008.6	814.1	145.5	49.0
IV	1,570.3	548.4	354.7	305.0	5.1	44.5	193.7	156.7	12.0	24.9	1,021.9	823.6	148.0	50.3
1999:I	1,594.6	550.0	354.0	306.9	5.5	41.6	196.0	158.6	11.7	25.7	1,044.5	836.3	156.9	51.3
II	1,620.1	556.1	355.1	303.0	5.5	46.7	201.0	158.6	11.0	31.4	1,064.0	855.6	155.8	52.6
III	1,653.9	569.0	368.7	313.4	5.2	50.2	200.3	160.0	11.3	29.0	1,084.8	874.4	156.9	53.6
IV	1,695.4	584.9	379.5	324.8	5.1	49.6	205.5	161.3	12.5	31.7	1,110.5	892.3	163.8	54.4
2000:I	1,716.5	575.7	365.5	311.9	5.0	48.6	210.2	168.1	11.6	30.6	1,140.8	914.0	172.2	54.6
II	1,748.8	598.5	379.1	325.8	5.4	47.9	219.4	175.5	10.8	33.1	1,150.3	930.0	164.5	55.9
III	1,757.2	589.7	375.0	321.3	5.8	47.9	214.7	172.8	10.3	31.5	1,167.4	945.4	164.8	57.3
IV	1,781.4	592.9	380.0	326.5	5.2	48.3	213.0	171.3	10.5	31.2	1,188.5	962.2	168.0	58.4
2001:I	1,825.0	613.3	391.4	338.4	5.5	47.5	221.9	178.8	10.7	32.4	1,211.7	976.2	177.8	57.7
II	1,858.5	624.8	395.2	340.0	5.5	49.7	229.6	184.9	9.6	35.0	1,233.7	990.6	184.6	58.6
III	1,851.7	627.4	400.3	343.4	5.0	51.9	227.2	184.5	9.8	32.8	1,224.3	1,000.1	164.8	59.4
IV	1,896.8	646.9	412.8	356.0	5.7	51.1	234.1	187.5	11.6	35.0	1,249.8	1,008.2	183.1	58.6
2002:I	1,939.5	672.0	431.7	372.1	5.1	54.6	240.3	194.2	13.3	32.8	1,267.5	1,017.7	192.5	57.2
II	1,959.8	688.2	442.1	382.5	5.4	54.2	246.1	198.6	12.1	35.4	1,271.6	1,030.6	184.4	56.6
III	1,981.1	697.7	451.2	388.9	5.4	57.0	246.5	200.9	11.3	34.3	1,283.3	1,039.6	187.4	56.4

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–21.—*Real government consumption expenditures and gross investment by type, 1987–2002*

[Billions of chained (1996) dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Government consumption expenditures and gross investment													
	Total	Federal									State and local			
		Total	National defense				Nondefense							
			Total	Consumption expenditures	Gross investment		Total	Consumption expenditures	Gross investment		Total	Consumption expenditures	Gross investment	
					Structures	Equipment and software			Structures	Equipment and software			Structures	Equipment and software
1987	1,292.5	597.8	450.2	373.2	11.2	65.7	146.5	125.4	11.6	10.6	695.6	577.3	99.9	20.3
1988	1,307.5	586.9	446.8	376.1	10.4	60.7	138.9	119.2	8.6	11.7	721.4	596.8	104.3	21.9
1989	1,343.5	594.7	443.3	372.4	8.3	62.6	150.5	129.6	8.3	13.2	749.5	617.9	106.5	26.0
1990	1,387.3	606.8	443.2	369.7	7.7	65.4	163.0	140.1	9.3	14.2	781.1	638.9	114.5	28.4
1991	1,403.4	604.9	438.4	369.5	5.7	62.9	166.0	140.9	10.4	15.0	798.9	653.4	118.3	28.1
1992	1,410.0	595.1	417.1	350.6	6.3	60.0	177.9	150.0	11.6	16.5	815.3	667.8	118.7	29.4
1993	1,398.8	572.0	394.7	336.1	5.7	52.8	177.3	147.8	12.4	17.2	827.0	680.4	116.1	31.0
1994	1,400.1	551.3	375.9	320.5	6.2	49.2	175.5	148.0	11.2	16.5	848.9	697.5	117.0	34.6
1995	1,406.4	536.5	361.9	308.7	6.5	46.8	174.6	145.7	11.1	17.9	869.9	711.3	120.9	37.8
1996	1,421.9	531.6	357.0	302.4	6.7	47.9	174.6	142.9	11.1	20.5	890.4	726.5	122.5	41.3
1997	1,455.4	529.6	347.7	298.5	5.5	43.6	181.8	148.6	9.4	23.9	925.8	745.7	134.7	45.4
1998	1,483.3	525.4	341.6	290.6	5.1	45.9	183.8	146.5	10.6	27.0	957.7	771.9	134.0	52.3
1999	1,540.6	537.7	348.8	295.3	4.8	49.0	188.8	147.6	10.7	31.2	1,002.4	801.2	143.8	58.4
2000	1,582.5	544.4	348.7	294.1	4.6	50.4	195.6	153.7	9.5	33.3	1,037.4	831.1	145.2	62.7
2001	1,640.4	570.6	366.0	308.9	4.6	53.0	204.4	161.1	8.9	35.4	1,069.4	856.8	148.6	65.9
1998:I	1,456.1	515.0	332.0	283.9	5.4	42.7	183.0	147.3	10.2	25.7	940.8	761.7	129.6	49.9
II	1,482.6	530.1	342.0	292.7	4.8	44.6	188.0	149.0	10.1	29.5	952.4	768.9	132.3	51.6
III	1,489.9	524.9	346.5	291.8	5.5	49.5	178.4	141.5	10.8	26.4	964.7	775.7	136.5	53.0
IV	1,504.8	531.7	345.8	294.2	4.8	47.0	185.8	148.2	11.3	26.6	972.8	781.3	137.5	54.7
1999:I	1,515.9	527.2	341.2	292.7	5.1	43.3	185.9	148.1	10.9	27.2	988.3	788.1	144.6	56.3
II	1,526.7	530.6	341.0	287.7	5.0	48.6	189.5	147.0	10.1	33.2	995.7	796.7	142.0	57.9
III	1,546.5	540.1	352.4	295.9	4.7	52.4	187.7	147.3	10.3	30.8	1,006.0	805.9	141.9	59.3
IV	1,573.2	553.0	360.8	305.0	4.6	51.7	192.1	148.2	11.3	33.6	1,019.8	814.2	146.6	60.2
2000:I	1,568.3	533.8	341.3	286.8	4.4	50.8	192.3	150.4	10.3	32.4	1,033.8	822.0	152.3	60.5
II	1,586.1	554.0	353.4	299.0	4.7	50.1	200.3	156.9	9.6	34.9	1,031.8	828.1	143.1	62.0
III	1,582.2	543.7	347.9	293.3	5.0	50.1	195.6	154.3	9.1	33.1	1,037.8	834.1	142.0	63.4
IV	1,593.4	546.4	351.9	297.4	4.5	50.6	194.3	153.3	9.1	32.7	1,046.3	840.1	143.4	64.8
2001:I	1,615.7	559.0	359.0	304.5	4.7	50.1	199.8	157.5	9.2	34.0	1,056.2	843.3	149.9	64.6
II	1,638.0	567.2	361.4	304.9	4.6	52.4	205.6	162.0	8.3	36.5	1,070.2	851.4	154.9	65.7
III	1,633.3	568.9	365.5	307.2	4.2	54.9	203.2	161.3	8.4	34.4	1,064.1	861.8	137.9	66.7
IV	1,674.5	587.2	378.0	319.1	4.7	54.6	209.1	163.7	9.9	36.6	1,087.1	870.7	151.7	66.4
2002:I	1,697.3	597.8	388.5	326.7	4.2	58.5	209.3	164.3	11.3	34.4	1,099.3	875.9	159.4	65.0
II	1,703.3	608.7	395.8	333.9	4.5	58.2	212.9	166.5	10.2	37.3	1,094.7	879.4	151.9	64.6
III	1,715.6	615.1	402.5	338.0	4.4	61.1	212.7	167.9	9.5	36.3	1,100.6	883.0	153.9	64.7

Note.—See Table B-2 for data for total Government consumption expenditures and gross investment for 1959-86.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–22.—*Private inventories and domestic final sales by industry, 1959–2002*

[Billions of dollars, except as noted; seasonally adjusted]

Quarter	Private inventories[1]								Final sales of domestic business[3]	Ratio of private inventories to final sales of domestic business	
	Total[2]	Farm	Construction, mining, and utilities[2]	Manufacturing	Wholesale trade	Retail trade	Other industries[2]	Nonfarm[2]		Total	Nonfarm
Fourth quarter:											
1959	121.4	30.6	.....	47.7	16.5	20.5	6.1	90.8	36.5	3.33	2.49
1960	125.0	31.4	.....	48.7	16.9	21.9	6.1	93.5	37.7	3.31	2.48
1961	128.2	33.0	.....	50.1	17.3	21.3	6.6	95.2	39.5	3.24	2.41
1962	135.3	34.9	.....	53.2	18.0	22.7	6.6	100.5	41.9	3.23	2.40
1963	137.7	32.2	.....	55.1	19.5	23.9	7.1	105.5	44.5	3.09	2.37
1964	143.1	30.8	.....	58.6	20.8	25.2	7.7	112.2	47.5	3.01	2.36
1965	157.2	35.0	.....	63.4	22.5	28.0	8.3	122.2	52.5	2.99	2.33
1966	173.7	35.4	.....	73.0	25.8	30.6	8.9	138.3	55.7	3.12	2.48
1967	184.0	35.0	.....	79.9	28.1	30.9	10.1	149.1	59.2	3.11	2.52
1968	197.4	38.1	.....	85.1	29.3	34.2	10.6	159.3	65.1	3.03	2.45
1969	215.8	41.2	.....	92.6	32.5	37.5	12.0	174.6	69.4	3.11	2.52
1970	222.9	39.6	.....	95.5	36.4	38.5	12.9	183.3	73.1	3.05	2.51
1971	240.6	46.3	.....	96.6	39.4	44.7	13.7	194.4	79.6	3.02	2.44
1972	266.7	56.9	.....	102.1	43.1	49.8	14.8	209.9	88.7	3.01	2.37
1973	322.7	73.4	.....	121.5	51.7	58.4	17.7	249.4	97.8	3.30	2.55
1974	382.3	64.2	.....	162.6	66.9	63.9	24.7	318.1	105.8	3.61	3.01
1975	387.3	68.3	.....	162.2	66.5	64.4	25.9	319.0	118.5	3.27	2.69
1976	419.3	65.1	.....	178.7	74.1	73.0	28.5	354.2	130.3	3.22	2.72
1977	462.7	71.3	.....	193.2	84.0	80.9	33.3	391.4	145.6	3.18	2.69
1978	546.8	95.1	.....	219.8	99.0	94.1	38.8	451.7	168.3	3.25	2.68
1979	644.7	112.1	.....	261.8	119.5	104.7	46.6	532.6	187.3	3.44	2.84
1980	710.7	112.1	.....	293.4	139.4	111.7	54.1	598.7	205.8	3.45	2.91
1981	754.9	103.2	.....	313.1	148.8	123.2	66.6	651.7	223.0	3.39	2.92
1982	752.1	109.5	.....	304.6	147.9	123.2	66.8	642.6	234.2	3.21	2.74
1983	769.6	104.5	.....	308.9	153.4	137.6	65.2	665.1	257.2	2.99	2.59
1984	845.5	108.0	.....	344.5	169.1	157.0	66.9	737.6	279.2	3.03	2.64
1985	856.5	106.3	.....	333.3	175.9	171.4	69.5	750.2	300.2	2.85	2.50
1986	839.4	94.3	.....	320.6	182.0	176.2	66.3	745.1	318.5	2.64	2.34
1987	901.0	96.6	.....	339.6	195.8	199.1	69.9	804.4	336.5	2.68	2.39
1988	968.8	99.7	.....	372.4	213.9	213.2	69.5	869.1	366.0	2.65	2.37
1989	1,016.3	101.6	.....	390.5	222.8	231.4	70.1	914.7	388.5	2.62	2.35
1990	1,054.5	105.7	.....	404.5	236.8	236.6	71.0	948.9	406.2	2.60	2.34
1991	1,028.0	94.0	.....	384.1	239.2	240.2	70.5	934.0	417.5	2.46	2.24
1992	1,052.0	102.4	.....	377.6	248.3	249.4	74.3	949.5	446.6	2.36	2.13
1993	1,082.8	99.1	.....	380.1	258.6	268.6	76.5	983.7	470.0	2.30	2.09
1994	1,163.0	102.9	.....	404.3	281.5	293.6	80.6	1,060.0	496.8	2.34	2.13
1995	1,222.4	96.3	.....	424.5	303.7	312.2	85.6	1,126.1	523.7	2.33	2.15
NAICS:											
1996	1,251.5	103.4	31.1	421.0	285.1	328.7	82.1	1,148.1	556.3	2.25	2.06
1997	1,296.5	107.3	31.3	429.7	303.5	337.7	87.0	1,189.1	590.7	2.19	2.01
1998: I	1,312.3	107.8	30.4	433.8	308.0	345.4	87.0	1,204.5	598.4	2.19	2.01
II	1,312.9	101.2	31.8	437.7	308.7	345.9	87.6	1,211.7	608.4	2.16	1.99
III	1,315.3	93.9	32.1	439.0	312.0	350.0	88.4	1,221.4	614.6	2.14	1.99
IV	1,325.6	93.0	33.3	439.3	315.5	354.9	89.6	1,232.6	626.9	2.11	1.97
1999: I	1,346.6	101.3	33.5	441.1	319.3	360.8	90.7	1,245.3	634.5	2.12	1.96
II	1,365.0	101.9	34.8	446.3	322.4	366.3	93.2	1,263.0	643.6	2.12	1.96
III	1,390.4	98.7	35.6	455.8	330.6	374.2	95.5	1,291.7	653.3	2.13	1.98
IV	1,423.5	98.9	35.4	467.7	339.2	385.0	97.2	1,324.6	664.7	2.14	1.99
2000: I	1,452.7	102.5	36.0	476.4	348.5	388.0	101.3	1,350.3	676.5	2.15	2.00
II	1,480.6	100.7	37.1	485.1	354.9	397.5	105.2	1,379.9	685.3	2.16	2.01
III	1,498.8	95.9	39.1	492.7	358.7	403.0	109.5	1,402.9	690.9	2.17	2.03
IV	1,524.8	102.5	40.0	497.3	362.5	411.6	111.0	1,422.3	696.6	2.19	2.04
2001: I	1,529.5	110.0	44.3	495.5	360.0	407.2	112.4	1,419.4	707.4	2.16	2.01
II	1,507.7	107.4	42.7	484.2	357.3	402.8	113.3	1,400.3	709.7	2.12	1.97
III	1,475.5	101.2	39.8	470.5	349.3	401.8	112.9	1,374.3	712.1	2.07	1.93
IV	1,430.1	100.8	39.3	451.9	337.3	388.9	111.9	1,329.4	718.5	1.99	1.85
2002: I	1,429.4	104.7	39.5	447.0	334.5	392.4	111.4	1,324.7	723.8	1.97	1.83
II	1,438.1	104.0	41.9	445.7	335.1	398.0	113.4	1,334.1	724.7	1.98	1.84
III	1,446.9	100.1	41.3	447.9	341.2	402.3	114.1	1,346.8	732.6	1.98	1.84

[1] Inventories at end of quarter. Quarter-to-quarter change calculated from this table is not the current-dollar change in private inventories component of GDP. The former is the difference between two inventory stocks, each valued at its respective end-of-quarter prices. The latter is the change in the physical volume of inventories valued at average prices of the quarter. In addition, changes calculated from this table are at quarterly rates, whereas change in private inventories is stated at annual rates.

[2] Inventories of construction, mining, and utilities establishments are included in other industries through 1995.

[3] Quarterly totals at monthly rates. Final sales of domestic business equals final sales of domestic product less gross product of households and institutions and of general government and includes a small amount of final sales by farm and by government enterprises.

Note.—The industry classification of inventories is on an establishment basis. Estimates through 1995 are based on the Standard Industrial Classification (SIC). Beginning with 1996, estimates are based on the North American Industry Classification System (NAICS).

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–23.—*Real private inventories and domestic final sales by industry, 1987–2002*

[Billions of chained (1996) dollars, except as noted; seasonally adjusted]

Quarter	Private inventories[1]								Final sales of domestic business[3]	Ratio of private inventories to final sales of domestic business	
	Total[2]	Farm	Construction, mining, and utilities[2]	Manufacturing	Wholesale trade	Retail trade	Other industries[2]	Nonfarm[2]		Total	Nonfarm
Fourth quarter:											
1987	1,024.1	110.7	.....	361.6	228.6	239.7	81.6	911.7	422.7	2.42	2.16
1988	1,042.5	96.5	.....	378.5	238.5	247.4	80.4	945.4	443.0	2.35	2.13
1989	1,072.1	96.6	.....	392.7	243.2	261.9	76.8	975.2	454.7	2.36	2.14
1990	1,088.6	99.2	.....	401.6	252.2	260.2	73.8	989.0	457.2	2.38	2.16
1991	1,087.6	96.9	.....	394.9	257.3	260.8	76.8	990.4	457.5	2.38	2.17
1992	1,104.7	103.1	.....	390.1	266.2	265.4	79.1	1,001.1	479.7	2.30	2.09
1993	1,124.6	95.2	.....	393.7	273.1	280.8	81.9	1,029.8	493.9	2.28	2.08
1994	1,191.5	108.1	.....	405.8	290.2	301.4	85.9	1,083.3	512.2	2.33	2.11
1995	1,221.9	95.9	.....	419.9	304.5	313.6	88.0	1,126.0	529.7	2.31	2.13
NAICS:											
1996	1,251.9	103.7	28.9	422.1	287.4	327.9	81.9	1,148.1	552.8	2.26	2.08
1997	1,315.6	106.9	31.6	436.8	311.3	339.9	88.7	1,208.7	576.7	2.28	2.10
1998: I	1,343.9	108.5	32.9	446.3	319.7	347.0	89.1	1,235.4	582.9	2.31	2.12
II	1,354.4	107.1	34.4	453.0	322.6	347.0	89.9	1,247.2	591.7	2.29	2.11
III	1,372.3	107.3	35.5	458.3	329.8	350.3	90.9	1,264.9	595.9	2.30	2.12
IV	1,392.3	108.4	37.1	464.0	335.2	354.4	92.9	1,283.7	606.7	2.29	2.12
1999: I	1,412.3	110.7	38.0	467.6	340.1	361.1	94.5	1,301.4	612.0	2.31	2.13
II	1,420.1	110.9	37.8	467.9	341.6	365.1	96.3	1,309.0	619.0	2.29	2.11
III	1,432.0	107.8	36.9	471.5	347.0	370.3	97.7	1,323.6	626.3	2.29	2.11
IV	1,455.1	106.5	36.2	478.3	354.2	380.0	98.6	1,347.8	635.2	2.29	2.12
2000: I	1,466.4	103.0	36.7	482.0	359.9	381.9	101.6	1,362.5	642.3	2.28	2.12
II	1,489.3	103.7	35.7	488.3	365.5	390.0	104.7	1,384.7	647.1	2.30	2.14
III	1,505.1	103.2	35.5	491.8	369.6	394.8	108.7	1,400.8	650.4	2.31	2.15
IV	1,520.1	104.0	33.6	495.8	374.1	401.6	109.8	1,415.0	652.4	2.33	2.17
2001: I	1,513.3	105.4	34.9	491.1	372.9	396.6	111.0	1,406.8	657.0	2.30	2.14
II	1,498.8	104.6	37.5	480.7	370.6	392.3	111.3	1,393.1	655.3	2.29	2.13
III	1,483.3	105.1	38.9	469.7	364.3	391.5	111.8	1,377.2	654.1	2.27	2.11
IV	1,458.7	106.0	40.0	459.6	357.6	381.3	112.4	1,351.8	661.4	2.21	2.04
2002: I	1,451.5	107.6	40.4	451.7	352.6	384.7	112.4	1,343.1	665.3	2.18	2.02
II	1,452.7	107.8	40.2	448.1	350.4	390.2	113.7	1,344.1	664.6	2.19	2.02
III	1,457.4	107.2	39.6	447.5	352.4	394.1	114.3	1,349.3	670.6	2.17	2.01

[1] Inventories at end of quarter. Quarter-to-quarter changes calculated from this table are at quarterly rates, whereas the change in private inventories component of GDP is stated at annual rates.

[2] Inventories of construction, mining, and utilities establishments are included in other industries through 1995.

[3] Quarterly totals at monthly rates. Final sales of domestic business equals final sales of domestic product less gross product of households and institutions and of general government and includes a small amount of final sales by farm and by government enterprises.

Note.—The industry classification of inventories is on an establishment basis. Estimates for 1987 through 1995 are based on the 1987 Standard Industrial Classification (SIC). Beginning with 1996, estimates are based on the North American Industry Classification System (NAICS).

See *Survey of Current Business,* Table 5.13B, for detailed information on calculation of the chained (1996) dollar inventory series.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–24.—*Foreign transactions in the national income and product accounts, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts from rest of the world					Payments to rest of the world									
	Total	Exports of goods and services			Income receipts	Total	Imports of goods and services			Income payments	Transfer payments (net)				Net foreign investment
		Total	Goods[1]	Services[1]			Total	Goods[1]	Services[1]		Total	From persons (net)	From government (net)	From business	
1959	25.0	20.6	16.5	4.2	4.3	25.0	22.3	15.3	7.0	1.5	2.4	0.5	1.8	0.1	–1.2
1960	30.2	25.3	20.5	4.8	5.0	30.2	22.8	15.2	7.6	1.8	2.4	.5	1.8	.1	3.2
1961	31.4	26.0	20.9	5.1	5.4	31.4	22.7	15.1	7.6	1.8	2.7	.5	2.1	.1	4.3
1962	33.5	27.4	21.7	5.7	6.1	33.5	25.0	16.9	8.1	1.8	2.8	.5	2.1	.1	3.9
1963	36.1	29.4	23.3	6.1	6.6	36.1	26.1	17.7	8.4	2.1	2.8	.7	2.1	.1	5.0
1964	41.0	33.6	26.7	6.9	7.4	41.0	28.1	19.4	8.7	2.4	3.0	.7	2.1	.2	7.5
1965	43.5	35.4	27.8	7.6	8.1	43.5	31.5	22.2	9.3	2.7	3.0	.8	2.0	.2	6.2
1966	47.2	38.9	30.7	8.2	8.3	47.2	37.1	26.3	10.7	3.1	3.2	.8	2.2	.2	3.9
1967	50.2	41.4	32.2	9.2	8.9	50.2	39.9	27.8	12.2	3.4	3.4	1.0	2.1	.2	3.5
1968	55.6	45.3	35.3	10.0	10.3	55.6	46.6	33.9	12.6	4.1	3.2	1.0	1.9	.3	1.7
1969	61.2	49.3	38.3	11.0	11.9	61.2	50.5	36.8	13.7	5.8	3.2	1.1	1.8	.3	1.8
1970	69.9	57.0	44.5	12.4	13.0	69.9	55.8	40.9	14.9	6.6	3.6	1.3	1.9	.4	4.0
1971	73.4	59.3	45.6	13.8	14.1	73.4	62.3	46.6	15.8	6.4	4.1	1.3	2.3	.4	.6
1972	82.6	66.2	51.8	14.4	16.4	82.6	74.2	56.9	17.3	7.7	4.3	1.4	2.5	.5	–3.6
1973	115.6	91.8	73.9	17.8	23.8	115.6	91.2	71.8	19.3	11.1	4.6	1.5	2.4	.7	8.7
1974	154.6	124.3	101.0	23.3	30.3	154.6	127.5	104.5	22.9	14.6	5.4	1.3	3.1	1.0	7.1
1975	164.4	136.3	109.6	26.7	28.2	164.4	122.7	99.0	23.7	14.9	5.4	1.3	3.4	.7	21.4
1976	181.7	148.9	117.8	31.1	32.9	181.7	151.1	124.6	26.5	15.7	6.0	1.3	3.6	1.1	8.9
1977	196.6	158.8	123.7	35.1	37.9	196.6	182.4	152.6	29.8	17.2	6.0	1.3	3.3	1.4	–9.0
1978	233.5	186.1	145.4	40.7	47.4	233.5	212.3	177.4	34.8	25.3	6.4	1.5	3.6	1.4	–10.4
1979	299.1	228.7	184.0	44.7	70.4	299.1	252.7	212.8	39.9	37.5	7.5	1.6	3.9	2.0	1.4
1980	360.7	278.9	225.8	53.2	81.8	360.7	293.8	248.6	45.3	46.5	9.0	1.8	4.8	2.4	11.4
1981	398.4	302.8	239.1	63.7	95.6	398.4	317.8	267.8	49.9	60.9	13.4	5.5	4.8	3.2	6.3
1982	385.0	282.6	215.0	67.6	102.4	385.0	303.2	250.5	52.6	65.9	16.1	6.5	6.1	3.4	–.2
1983	379.5	277.0	207.3	69.7	102.5	379.5	328.6	272.7	56.0	65.6	17.2	6.8	7.0	3.4	–32.0
1984	426.0	303.1	225.6	77.5	122.9	426.0	405.1	336.3	68.8	87.6	20.3	7.7	9.1	3.5	–87.0
1985	416.1	303.0	222.2	80.8	113.1	416.1	417.2	343.3	73.9	87.8	22.1	8.1	11.1	2.9	–110.9
1986	431.4	320.3	226.0	94.3	111.1	431.4	452.2	370.0	82.2	95.6	24.2	9.0	12.1	3.2	–140.6
1987	488.5	365.6	257.5	108.1	122.9	488.5	507.9	414.8	93.1	109.2	23.4	9.9	10.2	3.4	–152.0
1988	598.7	446.9	325.8	121.1	151.8	598.7	553.2	452.1	101.1	133.4	25.4	10.6	10.3	4.5	–113.2
1989	686.2	509.0	371.7	137.3	177.2	686.2	589.7	484.5	105.2	156.8	26.3	11.4	10.4	4.6	–86.7
1990	745.5	557.2	398.5	158.6	188.3	745.5	628.6	508.0	120.6	159.3	26.8	12.0	10.0	4.8	–69.2
1991	769.3	601.6	426.4	175.2	167.7	769.3	622.3	500.7	121.6	143.0	–11.0	13.0	–29.0	5.0	14.9
1992	787.8	636.8	448.7	188.1	151.1	787.8	664.6	544.9	119.8	127.6	34.2	12.5	16.2	5.5	–38.7
1993	812.5	658.0	459.7	198.3	154.4	812.5	718.5	592.8	125.7	130.1	36.8	14.4	16.7	5.7	–72.9
1994	909.3	725.1	509.6	215.5	184.3	909.3	812.1	676.7	135.4	167.5	38.0	15.6	15.3	7.1	–108.3
1995	1,050.8	818.6	583.8	234.7	232.3	1,050.8	902.8	757.6	145.2	211.9	34.0	16.5	9.8	7.7	–98.0
1996	1,119.7	874.2	618.4	255.8	245.6	1,119.7	963.1	808.3	154.8	227.5	39.8	18.2	13.6	8.0	–110.7
1997	1,247.7	966.4	688.9	277.5	281.3	1,247.7	1,055.8	885.1	170.7	274.2	40.8	21.2	10.6	8.9	–123.1
1998	1,251.1	964.9	681.3	283.6	286.1	1,251.1	1,116.7	930.0	186.7	289.6	44.5	24.3	11.0	9.2	–199.7
1999	1,306.2	989.3	697.3	292.0	316.9	1,306.2	1,239.2	1,045.3	193.9	294.1	48.9	27.3	11.4	10.2	–276.0
2000	1,484.5	1,101.1	785.0	316.1	383.4	1,484.5	1,466.6	1,243.1	223.5	360.0	53.7	29.5	13.6	10.6	–395.8
2001	1,351.1	1,034.1	733.5	300.6	316.9	1,351.1	1,383.0	1,167.2	215.8	295.0	49.8	31.1	9.6	9.1	–376.7
1998: I	1,264.2	974.1	693.6	280.4	290.1	1,264.2	1,096.7	915.5	181.2	283.4	39.6	22.9	8.1	8.6	–155.5
II	1,252.6	959.2	673.0	286.2	293.4	1,252.6	1,114.1	928.4	185.7	290.4	40.6	24.3	7.1	9.2	–192.5
III	1,225.1	946.7	666.7	280.0	278.3	1,225.1	1,112.0	923.2	188.9	292.7	43.1	24.2	9.4	9.5	–222.7
IV	1,262.4	979.7	692.0	287.7	282.7	1,262.4	1,143.8	952.8	191.0	291.8	54.7	25.8	19.2	9.7	–228.0
1999: I	1,250.6	959.2	673.3	285.9	291.4	1,250.6	1,155.6	969.5	186.1	271.4	44.5	26.3	8.3	9.9	–221.0
II	1,275.5	970.2	680.4	289.8	305.3	1,275.5	1,212.0	1,021.0	190.9	281.1	46.6	27.2	9.9	9.6	–264.2
III	1,321.6	996.8	703.1	293.7	324.7	1,321.6	1,271.4	1,074.3	197.1	307.6	46.7	27.6	8.6	10.5	–304.2
IV	1,377.1	1,031.2	732.5	298.7	345.9	1,377.1	1,317.9	1,116.5	201.4	316.3	57.6	28.2	18.7	10.8	–314.7
2000: I	1,421.1	1,055.9	746.9	308.9	365.2	1,421.1	1,386.5	1,172.4	214.1	344.2	47.2	28.2	8.6	10.5	–356.9
II	1,488.5	1,098.0	778.4	319.6	390.5	1,488.5	1,451.1	1,231.6	219.5	364.7	49.6	29.0	9.5	11.1	–377.1
III	1,514.4	1,130.9	814.5	316.4	383.5	1,514.4	1,515.8	1,285.7	230.1	365.8	52.0	30.0	11.6	10.4	–419.1
IV	1,514.2	1,119.8	800.3	319.5	394.4	1,514.2	1,513.0	1,282.6	230.4	365.2	65.9	30.9	24.5	10.5	–430.0
2001: I	1,464.3	1,100.0	787.3	312.7	364.2	1,464.3	1,472.8	1,240.1	232.7	354.3	46.7	30.9	6.4	9.4	–409.5
II	1,392.2	1,059.7	750.6	309.1	332.5	1,392.2	1,425.3	1,189.9	235.5	301.4	48.0	30.9	7.7	9.3	–382.5
III	1,307.8	1,005.8	708.5	297.3	302.0	1,307.8	1,318.4	1,140.6	177.8	290.5	49.7	31.8	8.9	9.0	–350.8
IV	1,240.0	971.1	687.7	283.4	269.0	1,240.0	1,315.6	1,098.3	217.3	233.7	54.6	30.6	15.3	8.8	–363.9
2002: I	1,242.2	977.5	679.8	297.7	264.7	1,242.2	1,337.5	1,102.3	235.2	262.8	63.5	31.5	22.8	9.2	–421.7
II	1,294.1	1,018.1	709.4	308.8	276.0	1,294.1	1,443.7	1,202.9	240.8	296.1	51.5	31.9	10.6	9.0	–497.2
III	1,325.9	1,038.6	722.6	316.0	287.3	1,325.9	1,471.5	1,220.9	250.6	298.2	51.8	32.9	9.7	9.2	–495.6

[1] Certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services. Beginning with 1986, repairs and alterations of equipment were reclassified from goods to services.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–25.—*Real exports and imports of goods and services and receipts and payments of income, 1987–2002*

[Billions of chained (1996) dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Exports of goods and services					Income receipts	Imports of goods and services					Income payments
	Total	Goods [1]			Services [1]		Total	Goods [1]			Services [1]	
		Total	Durable goods	Nondurable goods				Total	Durable goods	Nondurable goods		
1987	408.0	271.4	154.7	123.0	139.1	161.6	564.2	445.8	267.9	181.5	120.2	144.0
1988	473.5	322.6	191.9	135.6	152.0	192.6	585.6	463.9	279.1	188.5	123.4	169.8
1989	529.4	363.2	221.3	146.3	166.7	215.7	608.8	483.4	291.2	195.9	126.9	192.0
1990	575.7	393.2	243.0	154.0	183.5	219.2	632.2	497.9	299.2	202.7	136.6	186.9
1991	613.2	421.1	261.6	163.3	192.9	188.4	629.0	497.6	300.9	200.5	133.4	161.1
1992	651.0	449.8	280.8	172.7	201.7	165.1	670.8	543.7	331.9	215.5	128.0	139.1
1993	672.7	463.4	295.2	170.6	209.9	164.6	731.8	598.4	370.9	230.8	134.0	139.2
1994	732.8	508.2	330.5	178.9	225.1	191.9	819.4	677.9	432.2	247.4	141.9	175.2
1995	808.2	568.8	378.0	191.0	239.5	236.5	886.6	739.1	481.7	257.8	147.7	216.2
1996	874.2	618.4	421.7	196.7	255.8	245.6	963.1	808.3	533.3	275.1	154.8	227.5
1997	981.5	708.1	498.3	209.8	273.6	276.8	1,094.8	923.1	619.8	303.5	171.7	268.0
1998	1,002.4	722.9	513.7	209.2	279.8	279.3	1,223.5	1,031.4	701.2	330.4	192.2	279.8
1999	1,036.3	750.0	537.5	212.4	286.8	304.4	1,356.8	1,157.5	801.7	356.2	200.3	279.6
2000	1,137.2	834.7	607.8	226.7	304.1	359.0	1,536.0	1,313.7	924.1	391.6	223.6	333.6
2001	1,076.1	785.2	558.3	226.7	292.0	292.0	1,492.0	1,270.5	865.6	402.3	222.4	269.2
1998: I	1,003.4	726.7	516.8	210.0	277.0	284.2	1,184.2	995.9	676.8	319.3	188.2	275.1
II	993.1	710.6	503.1	207.5	282.4	286.9	1,216.2	1,024.9	693.9	331.3	191.3	281.0
III	987.6	711.5	505.8	205.7	276.3	271.3	1,228.9	1,034.2	698.6	335.9	194.6	282.3
IV	1,025.6	742.8	529.3	213.4	283.3	274.8	1,264.8	1,070.6	735.6	335.0	194.6	280.7
1999: I	1,007.5	725.4	519.1	206.2	282.3	282.2	1,290.7	1,096.7	752.2	344.5	194.7	260.0
II	1,018.1	733.7	523.6	210.0	284.6	294.2	1,337.7	1,140.7	787.3	353.4	197.9	267.9
III	1,044.1	756.8	543.3	213.4	287.9	311.4	1,383.7	1,182.3	819.4	363.1	202.6	291.8
IV	1,075.6	784.2	564.2	219.9	292.4	329.9	1,415.2	1,210.2	847.8	363.6	206.1	298.6
2000: I	1,095.8	797.1	577.7	219.2	299.6	344.6	1,464.6	1,249.6	881.6	370.1	216.0	321.8
II	1,133.9	827.4	606.4	220.9	307.6	366.7	1,528.5	1,308.8	919.3	391.2	221.0	338.8
III	1,165.5	865.0	629.7	235.2	303.0	358.1	1,578.6	1,351.1	949.1	404.0	228.9	337.9
IV	1,153.7	849.2	617.5	231.6	306.3	366.6	1,572.2	1,345.1	946.4	401.1	228.6	335.9
2001: I	1,135.8	836.0	605.6	230.2	301.6	336.4	1,540.3	1,313.1	908.4	404.3	228.8	324.2
II	1,098.8	800.1	572.0	227.8	299.7	306.0	1,513.6	1,281.1	869.8	408.0	233.5	274.8
III	1,048.0	760.0	538.1	221.6	288.7	278.1	1,467.0	1,249.2	845.9	399.9	218.6	264.9
IV	1,021.8	744.6	517.3	227.1	278.2	247.4	1,447.2	1,238.7	838.2	397.1	208.9	213.1
2002: I	1,030.6	738.1	512.3	225.7	292.2	242.8	1,477.1	1,250.0	856.0	391.5	225.5	239.2
II	1,065.5	765.8	536.3	229.3	299.7	251.8	1,552.9	1,329.2	912.5	414.3	224.3	268.2
III	1,077.7	773.5	546.6	226.7	304.0	261.3	1,565.7	1,340.3	915.5	421.7	226.0	269.5

[1] Certain goods, primarily military equipment purchased and sold by the Federal Government, are included in services. Beginning with 1986, repairs and alterations of equipment were reclassified from goods to services.

Note.—See Table B-2 for data for total exports of goods and services and total imports of goods and services for 1959-86.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–26.—*Relation of gross domestic product, gross national product, net national product, and national income, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Plus: Income receipts from rest of the world	Less: Income payments to rest of the world	Equals: Gross national product	Less: Consumption of fixed capital			Equals: Net national product	Less:			Plus: Subsidies less current surplus of government enterprises	Equals: National income
					Total	Private	Government		Indirect business tax and nontax liability	Business transfer payments	Statistical discrepancy		
1959	507.4	4.3	1.5	510.3	54.8	40.2	14.6	455.5	41.9	1.4	0.8	0.1	411.5
1960	527.4	5.0	1.8	530.6	56.9	41.8	15.2	473.6	45.5	1.4	–.6	.2	427.5
1961	545.7	5.4	1.8	549.3	58.5	42.8	15.7	490.8	48.1	1.5	–.2	1.2	442.5
1962	586.5	6.1	1.8	590.7	61.0	44.3	16.7	529.7	51.7	1.6	.7	1.4	477.1
1963	618.7	6.6	2.1	623.2	63.6	46.0	17.6	559.6	54.7	1.8	–.4	.9	504.4
1964	664.4	7.4	2.4	669.4	66.6	48.4	18.3	602.8	58.8	2.0	1.2	1.4	542.1
1965	720.1	8.1	2.7	725.5	70.8	51.7	19.1	654.7	62.7	2.2	1.9	1.7	589.6
1966	789.3	8.3	3.1	794.5	76.5	56.3	20.2	717.9	65.4	2.3	6.4	3.0	646.7
1967	834.1	8.9	3.4	839.5	83.1	61.4	21.7	756.4	70.4	2.5	4.8	2.9	681.7
1968	911.5	10.3	4.1	917.6	90.9	67.4	23.4	826.7	79.0	2.8	4.3	3.0	743.6
1969	985.3	11.9	5.8	991.5	99.8	74.5	25.2	891.7	86.6	3.1	2.9	3.5	802.7
1970	1,039.7	13.0	6.6	1,046.1	109.1	81.8	27.3	937.0	94.3	3.2	6.9	4.8	837.5
1971	1,128.6	14.1	6.4	1,136.2	118.9	89.8	29.2	1,017.3	103.6	3.4	11.3	4.9	903.9
1972	1,240.4	16.4	7.7	1,249.1	130.9	99.4	31.5	1,118.2	111.4	3.9	8.7	6.1	1,000.4
1973	1,385.5	23.8	11.1	1,398.2	142.9	109.1	33.8	1,255.3	121.0	4.5	8.0	5.6	1,127.4
1974	1,501.0	30.3	14.6	1,516.7	164.8	126.9	37.9	1,351.9	129.3	5.0	10.0	4.2	1,211.9
1975	1,635.2	28.2	14.9	1,648.4	190.9	149.1	41.8	1,457.5	140.0	5.2	17.7	7.7	1,302.2
1976	1,823.9	32.9	15.7	1,841.0	209.0	164.5	44.4	1,632.1	151.6	6.5	24.5	6.9	1,456.4
1977	2,031.4	37.9	17.2	2,052.1	231.6	184.4	47.2	1,820.5	165.5	7.3	21.6	9.7	1,635.8
1978	2,295.9	47.4	25.3	2,318.0	261.5	210.7	50.8	2,056.5	177.8	8.2	21.0	10.6	1,860.2
1979	2,566.4	70.4	37.5	2,599.3	300.4	244.9	55.5	2,298.9	188.7	9.9	35.7	11.0	2,075.6
1980	2,795.6	81.8	46.5	2,830.8	345.2	282.6	62.7	2,485.6	212.0	11.2	33.9	14.5	2,243.0
1981	3,131.3	95.6	60.9	3,166.1	394.8	323.9	71.0	2,771.2	249.3	13.4	27.5	16.1	2,497.1
1982	3,259.2	102.4	65.9	3,295.7	436.5	357.5	79.0	2,859.2	256.7	15.2	2.5	18.1	2,603.0
1983	3,534.9	102.5	65.6	3,571.8	456.1	372.7	83.3	3,115.7	280.3	16.2	47.0	24.3	2,796.5
1984	3,932.7	122.9	87.6	3,968.1	482.4	393.5	88.8	3,485.7	309.1	18.6	18.6	22.9	3,162.3
1985	4,213.0	113.1	87.8	4,238.4	516.5	422.5	94.0	3,721.9	329.4	20.7	11.7	20.4	3,380.4
1986	4,452.9	111.1	95.6	4,468.3	551.6	450.8	100.8	3,916.8	346.8	23.8	43.9	23.6	3,525.8
1987	4,742.5	122.9	109.2	4,756.2	586.1	478.2	107.8	4,170.1	369.3	24.2	3.3	30.1	3,803.4
1988	5,108.3	151.8	133.4	5,126.8	627.4	512.4	115.0	4,499.4	392.6	25.3	–42.2	27.4	4,151.1
1989	5,489.1	177.2	156.8	5,509.4	677.2	554.0	123.2	4,832.2	420.7	25.8	16.3	22.6	4,392.1
1990	5,803.2	188.3	159.3	5,832.2	711.3	579.5	131.8	5,120.9	447.3	26.1	30.6	25.3	4,642.1
1991	5,986.2	167.7	143.0	6,010.9	748.0	608.1	140.0	5,262.8	482.3	25.9	19.6	21.5	4,756.6
1992	6,318.9	151.1	127.6	6,342.3	787.5	642.2	145.3	5,554.9	510.6	28.1	43.7	22.4	4,994.9
1993	6,642.3	154.4	130.1	6,666.7	812.8	660.1	152.6	5,853.9	540.1	27.8	63.8	29.6	5,251.9
1994	7,054.3	184.3	167.5	7,071.1	874.9	714.6	160.3	6,196.2	575.3	30.8	58.5	25.2	5,556.8
1995	7,400.5	232.3	211.9	7,420.9	911.7	743.6	168.1	6,509.1	594.6	33.5	26.5	22.2	5,876.7
1996	7,813.2	245.6	227.5	7,831.2	956.2	781.9	174.3	6,875.0	620.0	34.4	32.8	22.6	6,210.4
1997	8,318.4	281.3	274.2	8,325.4	1,013.3	832.4	180.9	7,312.1	646.2	36.8	29.7	19.1	6,618.4
1998	8,781.5	286.1	289.6	8,778.1	1,072.0	884.3	187.6	7,706.1	681.3	38.0	–31.0	23.5	7,041.4
1999	9,274.3	316.9	294.1	9,297.1	1,145.2	947.3	197.9	8,151.9	712.9	41.5	–38.8	32.5	7,468.7
2000	9,824.6	383.4	360.0	9,848.0	1,228.9	1,018.0	210.9	8,619.1	753.6	43.7	–128.5	34.1	7,984.4
2001	10,082.2	316.9	295.0	10,104.1	1,329.3	1,106.8	222.4	8,774.8	774.8	42.5	–117.3	47.3	8,122.0
1998: I	8,627.8	290.1	283.4	8,634.5	1,048.4	863.6	184.8	7,586.2	666.3	37.0	28.5	19.6	6,874.1
II	8,697.3	293.4	290.4	8,700.3	1,062.4	876.2	186.2	7,638.0	673.6	37.7	–37.2	21.6	6,985.5
III	8,816.5	278.3	292.7	8,802.1	1,079.8	891.1	188.6	7,722.4	681.4	38.3	–81.7	24.5	7,108.9
IV	8,984.5	282.7	291.8	8,975.4	1,097.4	906.4	191.0	7,878.0	703.9	39.0	–33.6	28.4	7,197.0
1999: I	9,092.7	291.4	271.4	9,112.7	1,113.8	920.3	193.5	7,998.8	697.8	40.6	–53.3	29.3	7,343.1
II	9,171.7	305.3	281.1	9,195.9	1,131.2	934.8	196.4	8,064.7	706.6	40.7	–56.2	32.3	7,405.9
III	9,316.5	324.7	307.6	9,333.6	1,164.1	964.9	199.2	8,169.5	717.1	42.0	–31.5	34.0	7,475.9
IV	9,516.4	345.9	316.3	9,546.0	1,711.5	969.0	202.5	8,374.5	730.3	42.7	–14.1	34.5	7,650.1
2000: I	9,649.5	365.2	344.2	9,670.5	1,194.7	988.7	206.0	8,475.8	745.1	43.4	–138.7	34.3	7,860.2
II	9,820.7	390.5	364.7	9,846.4	1,218.2	1,008.6	209.6	8,628.2	750.3	44.1	–86.8	33.9	7,954.5
III	9,874.8	383.5	365.8	9,892.5	1,240.8	1,028.0	212.8	8,651.7	757.9	43.5	–164.0	34.0	8,048.3
IV	9,953.6	394.4	365.2	9,982.8	1,261.9	1,046.5	215.4	8,720.9	761.1	43.6	–124.5	34.2	8,074.8
2001: I	10,028.1	364.2	354.3	10,038.0	1,281.7	1,064.1	217.6	8,756.4	770.6	42.1	–105.7	42.8	8,092.1
II	10,049.9	332.5	301.4	10,081.0	1,315.0	1,095.0	220.0	8,766.0	775.9	42.5	–112.9	49.7	8,110.1
III	10,097.7	302.0	290.5	10,109.3	1,381.8	1,153.8	227.9	8,727.5	772.7	42.6	–117.8	59.1	8,089.1
IV	10,152.9	269.0	233.7	10,188.1	1,338.6	1,114.4	224.2	8,849.5	779.9	42.8	–132.6	37.5	8,196.8
2002: I	10,313.1	264.7	262.8	10,314.9	1,363.5	1,136.9	226.5	8,951.5	786.2	43.8	–110.0	37.0	8,268.5
II	10,376.9	276.0	296.1	10,356.8	1,389.8	1,161.2	228.6	8,967.0	795.1	43.9	–165.0	35.1	8,328.0
III	10,506.2	287.3	298.2	10,495.3	1,405.3	1,174.8	230.5	9,090.0	806.9	44.4	–120.3	29.1	8,388.1

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–27.—*Relation of national income and personal income, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	National income	Less:				Plus:				Equals:
		Corporate profits with inventory valuation and capital consumption adjustments	Net interest	Contributions for social insurance	Wage accruals less disbursements	Personal interest income	Personal dividend income	Government transfer payments to persons	Business transfer payments to persons	Personal income
1959	411.5	53.7	9.7	13.8	0.0	23.0	12.6	22.9	1.3	394.0
1960	427.5	52.3	10.7	16.4	.0	25.6	13.4	24.4	1.3	412.7
1961	442.5	53.5	12.4	17.0	.0	27.3	13.9	28.1	1.4	430.3
1962	477.1	61.6	14.1	19.1	.0	30.2	15.0	28.8	1.5	457.9
1963	504.4	67.6	15.2	21.7	.0	33.0	16.2	30.3	1.7	481.0
1964	542.1	74.8	17.3	22.4	.0	36.9	18.2	31.3	1.8	515.8
1965	589.6	86.0	19.7	23.4	.0	40.8	20.2	33.9	2.0	557.4
1966	646.7	92.0	22.6	31.3	.0	45.3	20.7	37.5	2.1	606.4
1967	681.7	89.6	25.4	34.9	.0	49.4	21.5	45.4	2.3	650.4
1968	743.6	96.5	27.2	38.7	.0	54.1	23.5	53.0	2.5	714.5
1969	802.7	93.7	32.2	44.1	.0	62.3	24.2	58.8	2.8	780.8
1970	837.5	81.6	38.4	46.4	.0	71.5	24.3	71.6	2.8	841.1
1971	903.9	95.1	42.6	51.2	.6	77.5	25.0	85.2	3.0	905.1
1972	1,000.4	109.8	46.2	59.2	.0	84.2	26.8	94.6	3.4	994.3
1973	1,127.4	123.9	53.9	75.5	–.1	97.6	29.9	108.1	3.8	1,113.4
1974	1,211.9	114.5	68.8	85.2	–.5	116.1	33.2	128.4	4.0	1,225.6
1975	1,302.2	133.0	76.6	89.3	.1	128.0	32.9	163.0	4.5	1,331.7
1976	1,456.4	160.6	80.8	101.3	.1	140.5	39.0	176.9	5.5	1,475.4
1977	1,635.8	190.9	95.7	113.1	.1	161.9	44.7	188.7	5.9	1,637.1
1978	1,860.2	217.2	114.5	131.3	.3	191.3	50.7	202.5	6.8	1,848.3
1979	2,075.6	222.5	144.2	152.7	–.2	233.5	57.4	226.4	7.9	2,081.5
1980	2,243.0	198.5	183.9	166.2	.0	286.4	64.0	270.2	8.8	2,323.9
1981	2,497.1	219.0	226.5	195.7	.1	352.7	73.6	307.0	10.2	2,599.4
1982	2,603.0	201.2	256.3	208.9	.0	401.6	76.1	342.3	11.8	2,768.4
1983	2,796.5	254.1	267.2	226.0	–.4	431.6	83.5	369.4	12.8	2,946.9
1984	3,162.3	309.8	309.6	257.5	.2	505.3	90.8	378.3	15.1	3,274.8
1985	3,380.4	322.4	326.7	281.4	–.2	546.4	97.5	403.1	17.8	3,515.0
1986	3,525.8	300.7	343.6	303.4	.0	579.2	106.1	428.4	20.7	3,712.4
1987	3,803.4	346.6	361.5	323.1	.0	609.7	112.1	447.8	20.8	3,962.5
1988	4,151.1	405.0	389.4	361.5	.0	650.5	129.4	476.1	20.8	4,272.1
1989	4,392.1	395.7	443.1	385.2	.0	736.5	154.8	519.2	21.1	4,599.8
1990	4,642.1	408.6	452.4	410.1	.1	772.4	165.4	573.1	21.3	4,903.2
1991	4,756.6	431.2	429.8	430.2	–.1	771.8	178.3	649.1	20.8	5,085.4
1992	4,994.9	453.1	399.5	455.0	–15.8	750.1	185.3	729.2	22.5	5,390.4
1993	5,251.9	510.5	374.3	477.8	6.4	725.5	203.0	776.5	22.1	5,610.0
1994	5,556.8	573.2	380.5	508.4	17.6	742.4	234.7	810.1	23.7	5,888.0
1995	5,876.7	668.8	389.8	533.2	16.4	792.5	254.0	860.1	25.8	6,200.9
1996	6,210.4	754.0	386.3	555.8	3.6	810.6	297.4	902.4	26.4	6,547.4
1997	6,618.4	833.8	423.9	587.8	–2.9	864.0	334.9	934.4	27.9	6,937.0
1998	7,041.4	777.4	511.9	623.3	–.7	964.4	348.3	955.0	28.8	7,426.0
1999	7,468.7	805.8	526.6	660.4	5.2	969.2	328.0	987.2	31.3	7,786.5
2000	7,984.4	788.1	611.5	701.3	.0	1,077.0	375.7	1,037.3	33.0	8,406.6
2001	8,122.0	731.6	649.8	726.1	.0	1,091.3	409.2	1,137.0	33.4	8,685.3
1998: I	6,874.1	787.4	482.8	611.4	–.7	933.5	349.0	950.7	28.3	7,254.8
II	6,985.5	769.6	513.2	619.1	–.7	967.5	350.1	952.5	28.5	7,382.8
III	7,108.9	781.9	526.0	627.2	–.7	982.6	347.9	956.8	28.8	7,490.7
IV	7,197.0	770.8	525.5	635.3	–.7	974.2	346.3	959.8	29.3	7,575.8
1999: I	7,343.1	808.2	509.9	651.7	5.2	948.8	331.7	976.6	30.7	7,655.9
II	7,405.9	802.1	519.4	656.0	5.2	960.8	323.4	983.7	31.1	7,722.2
III	7,475.9	788.0	530.4	662.2	5.2	971.5	324.0	990.6	31.5	7,807.7
IV	7,650.1	824.7	546.8	671.7	5.2	995.8	331.1	997.7	32.0	7,960.2
2000: I	7,860.2	807.6	571.3	693.9	.0	1,028.7	350.8	1,011.9	32.9	8,211.6
II	7,954.5	807.3	611.1	694.9	.0	1,074.3	369.3	1,032.5	33.0	8,350.2
III	8,048.3	787.7	624.0	705.7	.0	1,094.6	385.7	1,043.6	33.1	8,487.8
IV	8,074.8	749.7	639.6	710.6	.0	1,110.3	397.2	1,061.0	33.2	8,576.6
2001: I	8,092.1	706.5	648.5	725.0	.0	1,108.4	402.5	1,102.3	32.7	8,658.1
II	8,110.1	721.4	648.6	726.4	.0	1,097.2	406.0	1,126.0	33.2	8,676.2
III	8,089.1	687.2	648.3	727.4	.0	1,086.4	411.0	1,148.9	33.6	8,706.2
IV	8,196.8	811.4	653.9	725.8	.0	1,072.9	417.3	1,171.0	34.0	8,700.9
2002: I	8,268.5	797.6	672.8	740.4	.0	1,069.9	423.7	1,217.4	34.6	8,803.4
II	8,328.0	785.0	678.1	746.1	.0	1,082.3	430.3	1,247.7	34.9	8,914.0
III	8,388.1	771.0	687.6	752.5	.0	1,080.7	437.3	1,263.1	35.3	8,993.3

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–28.—*National income by type of income, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	National income [1]	Compensation of employees							Proprietors' income with inventory valuation and capital consumption adjustments				
		Total	Wage and salary accruals			Supplements to wages and salaries			Total	Farm		Nonfarm	
			Total	Government	Other	Total	Employer contributions for social insurance	Other labor income		Total	Proprietors' income [2]	Total	Proprietors' income [3]
1959	411.5	281.0	259.8	46.0	213.8	21.2	7.9	13.4	51.8	10.9	11.8	40.9	40.3
1960	427.5	296.4	272.8	49.2	223.7	23.6	9.3	14.4	51.9	11.4	12.3	40.4	40.0
1961	442.5	305.3	280.5	52.4	228.0	24.8	9.6	15.2	54.4	12.1	12.9	42.3	42.0
1962	477.1	327.2	299.3	56.3	243.0	27.9	11.2	16.7	56.5	12.1	12.9	44.4	44.1
1963	504.4	345.3	314.8	60.0	254.8	30.4	12.4	18.0	57.8	11.9	12.7	45.8	45.5
1964	542.1	370.7	337.7	64.9	272.9	33.0	12.6	20.3	60.6	10.8	11.6	49.9	49.5
1965	589.6	399.5	363.7	69.9	293.8	35.8	13.1	22.7	65.2	13.1	13.9	52.2	52.2
1966	646.7	442.6	400.3	78.3	321.9	42.4	16.8	25.5	69.6	14.1	15.0	55.5	55.7
1967	681.7	475.2	428.9	86.4	342.5	46.2	18.0	28.2	71.1	12.8	13.7	58.4	58.7
1968	743.6	524.3	471.9	96.6	375.3	52.4	20.0	32.5	75.4	12.8	13.9	62.6	63.4
1969	802.7	577.6	518.3	105.5	412.7	59.4	22.8	36.6	78.9	14.2	15.4	64.7	65.5
1970	837.5	617.2	551.5	117.1	434.3	65.7	23.8	41.9	79.8	14.3	15.7	65.5	66.6
1971	903.9	658.8	584.5	126.7	457.8	74.4	26.4	48.0	86.1	14.9	16.5	71.2	72.6
1972	1,000.4	725.1	638.7	137.8	500.9	86.5	31.2	55.3	97.7	18.8	20.5	78.9	79.9
1973	1,127.4	811.2	708.6	148.7	560.0	102.6	39.8	62.8	115.2	30.7	32.6	84.5	86.6
1974	1,211.9	890.2	772.2	160.4	611.8	118.0	44.7	73.3	115.5	25.2	27.7	90.3	94.1
1975	1,302.2	949.0	814.7	176.1	638.6	134.4	46.7	87.6	121.6	23.5	26.9	98.1	99.9
1976	1,456.4	1,059.3	899.6	188.7	710.8	159.7	54.4	105.3	134.3	18.7	22.6	115.6	117.2
1977	1,635.8	1,180.4	994.0	202.4	791.6	186.4	61.1	125.3	148.3	17.5	21.7	130.8	131.9
1978	1,860.2	1,336.0	1,121.0	219.8	901.2	215.0	71.5	143.4	170.1	21.5	26.3	148.5	149.9
1979	2,075.6	1,500.8	1,255.6	236.9	1,018.7	245.2	82.6	162.6	183.7	23.7	29.4	160.0	161.4
1980	2,243.0	1,651.7	1,377.4	261.2	1,116.2	274.3	88.9	185.4	177.6	13.1	20.2	164.5	165.7
1981	2,497.1	1,825.7	1,517.3	285.6	1,231.7	308.5	103.6	204.8	186.2	20.3	28.6	165.9	161.4
1982	2,603.0	1,926.0	1,593.4	307.3	1,286.1	332.6	109.8	222.8	179.9	14.4	23.4	165.4	158.9
1983	2,796.5	2,042.7	1,684.3	324.5	1,359.8	358.5	119.9	238.6	195.5	7.2	16.0	188.3	172.8
1984	3,162.3	2,255.9	1,854.8	347.8	1,507.0	401.1	139.0	262.1	247.5	21.6	30.2	225.9	200.3
1985	3,380.4	2,425.2	1,995.2	373.5	1,621.7	430.0	147.7	282.3	267.0	21.5	29.7	245.5	211.2
1986	3,525.8	2,570.7	2,114.4	396.6	1,717.8	456.3	157.9	298.4	278.6	23.0	31.1	255.6	216.3
1987	3,803.4	2,755.6	2,270.2	422.2	1,848.0	485.4	166.3	319.1	303.9	29.0	36.9	274.8	239.8
1988	4,151.1	2,973.8	2,452.7	450.9	2,001.8	521.1	184.6	336.5	338.8	26.0	33.9	312.7	277.4
1989	4,392.1	3,151.0	2,596.8	479.7	2,117.1	554.2	193.7	360.5	361.8	32.2	40.0	329.6	293.5
1990	4,642.1	3,351.0	2,754.6	516.8	2,237.9	596.4	206.5	390.0	381.0	31.1	39.2	349.9	323.2
1991	4,756.6	3,454.9	2,824.2	545.6	2,278.6	630.7	215.1	415.6	384.2	26.4	34.4	357.8	333.0
1992	4,994.9	3,644.8	2,966.8	567.7	2,399.1	677.9	228.4	449.5	434.3	32.7	40.9	401.7	373.4
1993	5,251.9	3,814.4	3,091.6	584.9	2,506.8	722.8	240.0	482.8	461.8	30.1	38.2	431.7	401.4
1994	5,556.8	4,016.2	3,254.3	603.9	2,650.4	761.9	254.4	507.5	476.6	31.9	39.9	444.6	421.7
1995	5,876.7	4,202.5	3,441.1	622.7	2,818.4	761.4	264.5	497.0	497.7	22.2	30.2	475.5	447.8
1996	6,210.4	4,395.6	3,630.1	641.0	2,989.1	765.4	275.4	490.0	544.7	34.3	42.1	510.5	476.0
1997	6,618.4	4,651.3	3,886.0	664.3	3,221.7	765.3	289.9	475.4	581.2	29.7	37.5	551.5	507.2
1998	7,041.4	4,989.6	4,192.1	692.7	3,499.4	797.5	306.9	490.6	623.8	25.6	33.1	598.2	547.6
1999	7,468.7	5,308.8	4,475.6	724.2	3,751.4	833.2	323.0	510.2	678.4	27.7	35.8	650.7	589.6
2000	7,984.4	5,723.4	4,836.3	768.9	4,067.4	887.1	342.9	544.2	714.8	22.6	30.2	692.2	621.2
2001	8,122.0	5,874.9	4,950.6	810.8	4,139.8	924.3	353.9	570.4	727.9	19.0	26.7	708.8	621.6
1998: I	6,874.1	4,869.4	4,085.1	680.9	3,404.2	784.3	301.0	483.3	606.9	24.1	31.7	582.9	533.8
II	6,985.5	4,948.9	4,155.8	688.6	3,467.2	793.1	304.9	488.2	617.6	24.9	32.4	592.6	543.8
III	7,108.9	5,029.8	4,227.7	696.8	3,530.9	802.1	308.9	493.2	627.0	25.4	32.9	601.6	550.3
IV	7,197.0	5,110.5	4,299.8	704.6	3,595.3	810.6	312.9	497.7	643.8	27.9	35.6	615.8	562.4
1999: I	7,343.1	5,216.8	4,395.0	713.3	3,681.7	821.9	319.3	502.6	659.3	30.1	37.9	629.2	572.3
II	7,405.9	5,260.3	4,432.0	719.3	3,712.7	828.3	321.0	507.3	674.2	29.7	37.5	644.5	585.5
III	7,475.9	5,329.0	4,492.7	727.7	3,765.0	836.3	323.6	512.6	682.7	25.7	34.5	657.0	594.7
IV	7,650.1	5,429.1	4,582.7	736.4	3,846.3	846.4	328.1	518.3	697.4	25.4	33.2	672.0	605.7
2000: I	7,860.2	5,627.3	4,757.4	756.2	4,001.2	869.9	339.4	530.5	702.5	22.3	30.1	680.2	612.1
II	7,954.5	5,670.5	4,790.8	769.3	4,021.5	879.6	339.6	540.0	718.8	25.0	32.7	693.8	622.8
III	8,048.3	5,773.1	4,879.3	772.4	4,106.9	893.8	345.1	548.7	718.6	21.7	29.3	696.9	624.3
IV	8,074.8	5,822.7	4,917.8	777.9	4,139.9	904.9	347.5	557.4	719.3	21.2	28.8	698.1	625.5
2001: I	8,092.1	5,878.9	4,960.4	795.2	4,165.2	918.5	353.8	564.7	721.2	19.3	26.8	701.9	629.0
II	8,110.1	5,879.3	4,956.9	805.8	4,151.0	922.4	354.2	568.2	726.6	18.4	26.0	708.2	634.7
III	8,089.1	5,880.4	4,953.7	817.1	4,136.6	926.7	354.3	572.4	732.4	19.3	27.0	713.1	628.8
IV	8,196.8	5,860.9	4,931.4	825.2	4,106.2	929.4	353.2	576.3	731.3	19.2	27.1	712.1	594.1
2002: I	8,268.5	5,908.4	4,957.8	840.4	4,117.4	950.7	359.9	590.8	748.4	21.7	30.0	726.7	612.5
II	8,328.0	5,963.9	4,997.3	848.4	4,148.9	966.6	362.5	604.1	747.5	7.5	16.1	740.0	626.9
III	8,388.1	6,026.6	5,043.6	857.1	4,186.5	982.9	365.4	617.5	758.7	10.7	19.6	748.0	635.0

[1] National income is the total net income earned in production. It differs from gross domestic product mainly in that it excludes depreciation charges and other allowances for business and institutional consumption of durable capital goods and indirect business taxes. See Table B-26.

See next page for continuation of table.

TABLE B–28.—*National income by type of income, 1959–2002*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Rental income of persons with capital consumption adjustment			Corporate profits with inventory valuation and capital consumption adjustments									Net interest
					Profits with inventory valuation adjustment and without capital consumption adjustment								
						Profits							
								Profits after tax					
	Total	Rental income of persons	Capital consumption adjustment	Total	Total	Profits before tax	Profits tax liability	Total	Dividends	Undistributed profits	Inventory valuation adjustment	Capital consumption adjustment	
1959	15.2	17.3	–2.1	53.7	53.4	53.7	23.6	30.0	12.6	17.5	–0.3	0.3	9.7
1960	16.2	18.3	–2.1	52.3	51.4	51.5	22.7	28.8	13.4	15.5	–.2	1.0	10.7
1961	16.9	19.0	–2.1	53.5	51.7	51.5	22.8	28.7	13.9	14.8	.3	1.7	12.4
1962	17.8	19.9	–2.1	61.6	56.9	56.9	24.0	32.9	15.0	17.9	.0	4.6	14.1
1963	18.5	20.5	–2.0	67.6	62.0	61.9	26.2	35.7	16.2	19.5	.1	5.6	15.2
1964	18.6	20.6	–2.0	74.8	68.4	68.9	28.0	40.9	18.2	22.7	–.5	6.4	17.3
1965	19.2	21.4	–2.2	86.0	78.7	80.0	30.9	49.1	20.2	28.9	–1.2	7.2	19.7
1966	19.9	22.4	–2.5	92.0	84.4	86.5	33.7	52.8	20.7	32.1	–2.1	7.6	22.6
1967	20.4	23.2	–2.8	89.6	81.7	83.3	32.7	50.6	21.5	29.1	–1.6	7.9	25.4
1968	20.2	23.4	–3.3	96.5	88.5	92.2	39.4	52.8	23.5	29.3	–3.7	8.0	27.2
1969	20.3	24.3	–3.9	93.7	85.2	91.1	39.7	51.4	24.2	27.2	–5.9	8.5	32.2
1970	20.3	24.6	–4.3	81.6	74.0	80.6	34.4	46.2	24.3	21.9	–6.6	7.6	38.4
1971	21.2	26.1	–5.0	95.1	87.9	92.4	37.7	54.7	25.0	29.7	–4.6	7.3	42.6
1972	21.6	27.7	–6.1	109.8	100.7	107.3	41.9	65.5	26.8	38.6	–6.6	9.0	46.2
1973	23.1	30.1	–7.0	123.9	114.6	134.2	49.3	84.9	29.9	55.0	–19.6	9.4	53.9
1974	23.0	31.7	–8.7	114.5	108.5	146.8	51.8	95.0	33.2	61.8	–38.2	5.9	68.8
1975	22.0	32.3	–10.3	133.0	134.3	144.8	50.9	93.9	33.0	60.9	–10.5	–1.2	76.6
1976	21.5	33.0	–11.5	160.6	164.5	178.6	64.2	114.4	39.0	75.4	–14.1	–4.0	80.8
1977	20.4	34.0	–13.6	190.9	193.3	209.0	73.0	136.0	44.8	91.2	–15.7	–2.4	95.7
1978	22.4	38.9	–16.5	217.2	221.2	244.9	83.5	161.4	50.8	110.6	–23.7	–4.0	114.5
1979	24.5	44.5	–20.0	222.5	229.9	270.1	88.0	182.1	57.5	124.6	–40.1	–7.4	144.2
1980	31.3	54.9	–23.6	198.5	209.3	251.4	84.8	166.6	64.1	102.6	–42.1	–10.8	183.9
1981	39.6	66.1	–26.5	219.0	216.3	240.9	81.1	159.8	73.8	86.0	–24.6	2.7	226.5
1982	39.6	68.0	–28.5	201.2	188.0	195.5	63.1	132.4	76.2	56.2	–7.5	13.3	256.3
1983	36.9	65.9	–28.9	254.1	223.9	231.4	77.2	154.1	83.6	70.5	–7.4	30.2	267.2
1984	39.5	68.8	–29.4	309.8	262.0	266.0	94.0	172.0	91.0	81.0	–4.0	47.7	309.6
1985	39.1	70.3	–31.2	322.4	255.2	255.2	96.5	158.7	97.7	61.0	.0	67.2	326.7
1986	32.2	63.7	–31.5	300.7	250.5	243.4	106.5	136.9	106.3	30.6	7.1	50.3	343.6
1987	35.8	68.9	–33.1	346.6	298.4	314.6	127.1	187.5	112.2	75.3	–16.2	48.2	361.5
1988	44.1	79.1	–35.0	405.0	359.8	381.9	137.2	244.8	129.6	115.2	–22.2	45.3	389.4
1989	40.5	80.2	–39.7	395.7	360.4	376.7	141.5	235.3	155.0	80.2	–16.3	35.3	443.1
1990	49.1	87.2	–38.1	408.6	388.6	401.5	140.6	260.9	165.6	95.3	–12.9	19.9	452.4
1991	56.4	96.0	–39.6	431.2	421.1	416.1	133.6	282.6	178.4	104.1	4.9	10.2	429.8
1992	63.3	111.4	–48.1	453.1	448.8	451.6	143.1	308.4	185.5	122.9	–2.8	4.3	399.5
1993	90.9	133.6	–42.8	510.5	506.4	510.4	165.4	345.0	203.1	141.9	–4.0	4.1	374.3
1994	110.3	157.8	–47.5	573.2	561.0	573.4	186.7	386.7	234.9	151.8	–12.4	12.2	380.5
1995	117.9	165.4	–47.5	668.8	650.2	668.5	211.0	457.5	254.2	203.3	–18.3	18.6	389.8
1996	129.7	177.4	–47.6	754.0	729.4	726.3	223.6	502.7	297.7	205.0	3.1	24.6	386.3
1997	128.3	178.3	–50.0	833.8	800.8	792.4	237.2	555.2	335.2	220.0	8.4	32.9	423.9
1998	138.6	190.3	–51.7	777.4	739.4	721.1	238.8	482.3	348.7	133.6	18.3	38.0	511.9
1999	149.1	206.8	–57.6	805.8	757.9	762.1	247.8	514.3	328.4	185.9	–4.2	47.9	526.6
2000	146.6	206.6	–60.0	788.1	767.3	782.3	259.4	522.9	376.1	146.8	–15.0	20.8	611.5
2001	137.9	204.4	–66.5	731.6	675.1	670.2	199.3	470.9	409.6	61.2	5.0	56.5	649.8
1998: I	127.7	178.5	–50.9	787.4	751.8	731.7	239.9	491.8	349.4	142.5	20.0	35.6	482.8
II	136.1	187.5	–51.4	769.6	733.1	722.8	237.8	485.0	350.4	134.5	10.3	36.6	513.2
III	144.2	196.1	–52.0	781.9	743.8	723.6	243.6	480.1	348.3	131.8	20.2	38.1	526.0
IV	146.5	199.0	–52.5	770.8	729.2	706.3	234.1	472.2	346.7	125.5	22.9	41.7	525.5
1999: I	148.9	203.0	–54.1	808.2	760.5	744.4	243.1	501.3	332.0	169.2	16.0	47.8	509.9
II	149.9	205.9	–56.0	802.1	750.5	752.9	246.0	506.9	323.7	183.2	–2.5	51.6	519.4
III	145.8	207.7	–61.9	788.0	739.6	753.4	246.3	507.1	324.3	182.8	–13.8	48.5	530.4
IV	152.0	210.5	–58.5	824.7	781.0	797.6	255.7	542.0	333.5	208.5	–16.6	43.7	546.8
2000: I	151.4	210.5	–59.1	807.6	774.3	796.9	270.8	526.1	351.1	174.9	–22.6	33.4	571.3
II	146.7	206.3	–59.6	807.3	784.2	800.5	267.3	533.3	369.7	163.6	–16.4	23.1	611.1
III	144.9	205.0	–60.2	787.7	772.3	780.6	257.4	523.2	386.1	137.1	–8.3	15.4	624.0
IV	143.5	204.6	–61.1	749.7	738.6	751.1	241.9	509.2	397.6	111.6	–12.5	11.1	639.6
2001: I	137.0	199.4	–62.3	706.5	696.9	707.0	217.3	489.7	402.9	86.8	–10.1	9.6	648.5
II	134.3	204.8	–70.5	721.4	714.0	720.2	213.1	507.1	406.5	100.7	–6.2	7.3	648.6
III	140.8	206.5	–65.6	687.2	663.2	654.3	196.2	458.1	411.4	46.7	8.9	23.9	648.3
IV	139.3	206.9	–67.6	811.4	626.3	599.1	170.6	428.5	417.7	10.8	27.2	185.1	653.9
2002: I	141.3	209.1	–67.8	797.6	641.3	639.4	202.4	437.0	424.2	12.8	1.9	156.3	672.8
II	153.5	221.9	–68.4	785.0	652.2	657.9	213.7	444.3	430.8	13.5	–5.7	132.8	678.1
III	144.1	214.5	–70.3	771.0	653.4	668.5	214.7	453.8	437.7	16.1	–15.1	117.6	687.6

[2] Without capital consumption adjustment.
[3] Without inventory valuation and capital consumption adjustments.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–29.—*Sources of personal income, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal income	Wage and salary disbursements[1]							Other labor income[1]	Proprietors' income with inventory valuation and capital consumption adjustments	
		Total	Private industries					Government			
			Total	Goods-producing industries		Distributive industries	Service industries			Farm	Nonfarm
				Total	Manufacturing						
1959	394.0	259.8	213.8	109.9	86.9	65.1	38.8	46.0	13.4	10.9	40.9
1960	412.7	272.8	223.7	113.4	89.8	68.6	41.7	49.2	14.4	11.4	40.4
1961	430.3	280.5	228.0	114.0	89.9	69.6	44.4	52.4	15.2	12.1	42.3
1962	457.9	299.3	243.0	122.2	96.8	73.3	47.6	56.3	16.7	12.1	44.4
1963	481.0	314.8	254.8	127.4	100.7	76.8	50.7	60.0	18.0	11.9	45.8
1964	515.8	337.7	272.9	136.0	107.3	82.0	54.9	64.9	20.3	10.8	49.9
1965	557.4	363.7	293.8	146.6	115.7	87.9	59.4	69.9	22.7	13.1	52.2
1966	606.4	400.3	321.9	161.6	128.2	95.1	65.3	78.3	25.5	14.1	55.5
1967	650.4	428.9	342.5	169.0	134.3	101.6	72.0	86.4	28.2	12.8	58.4
1968	714.5	471.9	375.3	184.1	146.0	110.8	80.4	96.6	32.5	12.8	62.6
1969	780.8	518.3	412.7	200.4	157.7	121.7	90.6	105.5	36.6	14.2	64.7
1970	841.1	551.5	434.3	203.7	158.4	131.2	99.4	117.1	41.9	14.3	65.5
1971	905.1	583.9	457.4	209.1	160.5	140.4	107.9	126.5	48.0	14.9	71.2
1972	994.3	638.7	501.2	228.2	175.6	153.3	119.7	137.4	55.3	18.8	78.9
1973	1,113.4	708.7	560.0	255.9	196.6	170.3	133.9	148.7	62.8	30.7	84.5
1974	1,225.6	772.6	611.8	276.5	211.8	186.8	148.6	160.9	73.3	25.2	90.3
1975	1,331.7	814.6	638.6	277.1	211.6	198.1	163.4	176.0	87.6	23.5	98.1
1976	1,475.4	899.5	710.8	309.7	238.0	219.5	181.6	188.6	105.3	18.7	115.6
1977	1,637.1	993.9	791.6	346.1	266.7	242.7	202.8	202.3	125.3	17.5	130.8
1978	1,848.3	1,120.7	901.2	392.6	300.1	274.9	233.7	219.6	143.4	21.5	148.5
1979	2,081.5	1,255.8	1,018.7	442.3	335.2	308.5	267.8	237.1	162.6	23.7	160.0
1980	2,323.9	1,377.5	1,116.2	472.3	356.2	336.7	307.2	261.3	185.4	13.1	164.5
1981	2,599.4	1,517.2	1,231.7	514.5	387.6	368.5	348.6	285.6	204.8	20.3	165.9
1982	2,768.4	1,593.4	1,286.1	514.6	385.7	385.9	385.6	307.3	222.8	14.4	165.4
1983	2,946.9	1,684.7	1,359.8	527.7	400.7	405.7	426.4	325.0	238.6	7.2	188.3
1984	3,274.8	1,854.6	1,507.0	586.1	445.4	445.2	475.6	347.6	262.1	21.6	225.9
1985	3,515.0	1,995.4	1,621.7	620.2	468.5	476.5	524.9	373.8	282.3	21.5	245.5
1986	3,712.4	2,114.4	1,717.8	636.8	480.7	501.6	579.3	396.6	298.4	23.0	255.6
1987	3,962.5	2,270.2	1,848.0	660.1	496.9	535.4	652.4	422.2	319.1	29.0	274.8
1988	4,272.1	2,452.7	2,001.8	706.7	529.9	575.1	720.1	450.9	336.5	26.0	312.7
1989	4,599.8	2,596.8	2,117.1	732.2	547.9	606.5	778.5	479.7	360.5	32.2	329.6
1990	4,903.2	2,754.6	2,237.9	754.4	561.4	633.6	849.9	516.7	390.0	31.1	349.9
1991	5,085.4	2,824.2	2,278.6	746.3	562.5	646.3	886.0	545.6	415.6	26.4	357.8
1992	5,390.4	2,982.6	2,414.9	765.7	583.5	680.2	969.0	567.7	449.5	32.7	401.7
1993	5,610.0	3,085.2	2,500.3	780.6	592.4	697.3	1,022.4	584.9	482.8	30.1	431.7
1994	5,888.0	3,236.7	2,632.8	824.0	620.3	738.4	1,070.4	603.9	507.5	31.9	444.6
1995	6,200.9	3,424.7	2,802.0	863.6	647.5	782.1	1,156.3	622.7	497.0	22.2	475.5
1996	6,547.4	3,626.5	2,985.5	908.2	673.7	822.4	1,254.9	641.0	490.0	34.3	510.5
1997	6,937.0	3,888.9	3,224.7	975.1	718.4	879.6	1,369.9	664.3	475.4	29.7	551.5
1998	7,426.0	4,192.8	3,500.1	1,038.5	756.6	948.9	1,512.7	692.7	490.6	25.6	598.2
1999	7,786.5	4,470.4	3,746.3	1,088.6	782.0	1,020.8	1,636.9	724.2	510.2	27.7	650.7
2000	8,406.6	4,836.3	4,067.4	1,163.7	829.4	1,094.8	1,808.9	768.9	544.2	22.6	692.2
2001	8,685.3	4,950.6	4,139.8	1,142.4	789.4	1,109.2	1,888.2	810.8	570.4	19.0	708.8
1998: I	7,254.8	4,085.8	3,404.9	1,021.3	749.4	924.3	1,459.3	680.9	483.3	24.1	582.9
II	7,382.8	4,156.5	3,467.9	1,032.7	754.9	939.1	1,496.1	688.6	488.2	24.9	592.6
III	7,490.7	4,228.4	3,531.6	1,042.6	757.6	957.8	1,531.2	696.8	493.2	25.4	601.6
IV	7,575.8	4,300.5	3,596.0	1,057.3	764.3	974.5	1,564.1	704.6	497.7	27.9	615.8
1999: I	7,655.9	4,389.8	3,676.5	1,073.8	773.1	999.7	1,603.0	713.3	502.6	30.1	629.2
II	7,722.2	4,426.9	3,707.6	1,078.2	774.8	1,009.9	1,619.5	719.3	507.3	29.7	644.5
III	7,807.7	4,487.6	3,759.8	1,092.5	786.3	1,023.1	1,644.2	727.7	512.6	25.7	657.0
IV	7,960.2	4,577.5	3,841.1	1,109.9	793.8	1,050.4	1,680.9	736.4	518.3	25.4	672.0
2000: I	8,211.6	4,757.4	4,001.2	1,166.9	839.0	1,076.8	1,757.4	756.2	530.5	22.3	680.2
II	8,350.2	4,790.8	4,021.5	1,153.1	822.6	1,087.2	1,781.2	769.3	540.0	25.0	693.8
III	8,487.8	4,879.3	4,106.9	1,171.8	835.8	1,105.2	1,829.9	772.4	548.7	21.7	696.9
IV	8,576.6	4,917.8	4,139.9	1,163.0	820.3	1,109.8	1,867.0	777.9	557.4	21.2	698.1
2001: I	8,658.1	4,960.4	4,165.2	1,156.3	807.2	1,115.0	1,893.9	795.2	564.7	19.3	701.9
II	8,676.2	4,956.8	4,151.0	1,150.0	797.1	1,112.3	1,888.8	805.8	568.2	18.4	708.2
III	8,706.2	4,953.7	4,136.6	1,140.0	783.4	1,110.8	1,885.8	817.1	572.4	19.3	713.1
IV	8,700.9	4,931.4	4,106.2	1,123.3	769.9	1,098.6	1,884.3	825.2	576.3	19.2	712.1
2002: I	8,803.4	4,957.8	4,117.4	1,116.9	759.4	1,110.1	1,890.4	840.4	590.8	21.7	726.7
II	8,914.0	4,997.3	4,148.9	1,121.3	765.3	1,115.3	1,912.4	848.4	604.1	7.5	740.0
III	8,993.3	5,043.6	4,186.5	1,126.0	767.0	1,120.3	1,940.2	857.1	617.5	10.7	748.0

[1] The total of wage and salary disbursements and other labor income differs from compensation of employees in Table B-28 in that it excludes employer contributions for social insurance and the excess of wage accruals over wage disbursements.

See next page for continuation of table.

TABLE B–29.—*Sources of personal income, 1959–2002*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Rental income of persons with capital consumption adjustment	Personal dividend income	Personal interest income	Transfer payments to persons						Less: Personal contributions for social insurance
				Total	Old-age, survivors, disability, and health insurance benefits	Government unemployment insurance benefits	Veterans benefits	Family assistance [2]	Other	
1959	15.2	12.6	23.0	24.2	10.2	2.8	4.6	0.9	5.7	6.0
1960	16.2	13.4	25.6	25.7	11.1	3.0	4.6	1.0	6.1	7.2
1961	16.9	13.9	27.3	29.5	12.6	4.3	5.0	1.1	6.5	7.4
1962	17.8	15.0	30.2	30.3	14.3	3.1	4.7	1.3	7.0	7.9
1963	18.5	16.2	33.0	32.0	15.2	3.0	4.8	1.4	7.6	9.3
1964	18.6	18.2	36.9	33.2	16.0	2.7	4.7	1.5	8.2	9.8
1965	19.2	20.2	40.8	35.9	18.1	2.3	4.9	1.7	9.0	10.3
1966	19.9	20.7	45.3	39.6	20.8	1.9	4.9	1.9	10.2	14.5
1967	20.4	21.5	49.4	47.6	25.5	2.2	5.6	2.3	12.1	16.8
1968	20.2	23.5	54.1	55.6	30.2	2.1	5.9	2.8	14.5	18.7
1969	20.3	24.2	62.3	61.6	32.9	2.2	6.7	3.5	16.2	21.4
1970	20.3	24.3	71.5	74.3	38.5	4.0	7.7	4.8	19.4	22.5
1971	21.2	25.0	77.5	88.2	44.5	5.8	8.8	6.2	23.0	24.7
1972	21.6	26.8	84.2	98.0	49.6	5.7	9.7	6.9	26.1	28.0
1973	23.1	29.9	97.6	111.9	60.4	4.4	10.4	7.2	29.5	35.7
1974	23.0	33.2	116.1	132.3	70.1	6.8	11.8	8.0	35.6	40.5
1975	22.0	32.9	128.0	167.5	81.4	17.6	14.5	9.3	44.7	42.6
1976	21.5	39.0	140.5	182.3	92.9	15.8	14.4	10.1	49.2	46.9
1977	20.4	44.7	161.9	194.6	104.9	12.7	13.8	10.6	52.5	52.0
1978	22.4	50.7	191.3	209.3	116.2	9.7	13.9	10.8	58.7	59.7
1979	24.5	57.4	233.5	234.2	131.8	9.8	14.4	11.1	67.1	70.2
1980	31.3	64.0	286.4	279.0	154.2	16.1	15.0	12.5	81.3	77.2
1981	39.6	73.6	352.7	317.2	182.0	15.9	16.1	13.1	90.2	92.1
1982	39.6	76.1	401.6	354.2	204.5	25.2	16.4	12.9	95.2	99.1
1983	36.9	83.5	431.6	382.2	221.7	26.3	16.6	13.8	103.8	106.1
1984	39.5	90.8	505.3	393.4	235.7	15.9	16.4	14.5	111.0	118.4
1985	39.1	97.5	546.4	420.9	253.4	15.7	16.7	15.2	119.9	133.6
1986	32.2	106.1	579.2	449.0	269.2	16.3	16.7	16.1	130.6	145.6
1987	35.8	112.1	609.7	468.6	282.9	14.5	16.6	16.4	138.2	156.8
1988	44.1	129.4	650.5	496.9	300.5	13.2	16.9	16.9	149.5	176.8
1989	40.5	154.8	736.5	540.4	325.2	14.3	17.3	17.5	166.1	191.6
1990	49.1	165.4	772.4	594.4	352.1	18.0	17.8	19.2	187.3	203.7
1991	56.4	178.3	771.8	669.9	382.4	26.6	18.3	21.1	221.5	215.1
1992	63.3	185.3	750.1	751.7	414.0	38.9	19.3	22.2	257.3	226.6
1993	90.9	203.0	725.5	798.6	444.4	34.1	20.1	22.8	277.2	237.8
1994	110.3	234.7	742.4	833.9	473.0	23.6	20.1	23.2	294.0	254.1
1995	117.9	254.0	792.5	885.9	508.0	21.5	20.9	22.6	313.0	268.8
1996	129.7	297.4	810.6	928.8	537.6	22.1	21.7	20.3	327.1	280.4
1997	128.3	334.9	864.0	962.2	565.8	19.9	22.5	17.7	336.3	297.9
1998	138.6	348.3	964.4	983.7	578.1	19.5	23.4	17.0	345.7	316.3
1999	149.1	328.0	969.2	1,018.5	588.0	20.3	24.3	17.7	368.3	337.4
2000	146.6	375.7	1,077.0	1,070.3	617.2	20.5	25.1	18.3	389.2	358.4
2001	137.9	409.2	1,091.3	1,170.4	664.3	31.9	26.7	19.2	428.3	372.3
1998: I	127.7	349.0	933.5	979.1	577.5	19.1	23.2	17.0	342.1	310.3
II	136.1	350.1	967.5	981.0	577.9	19.0	23.3	17.0	343.9	314.2
III	144.2	347.9	982.6	985.7	579.1	20.0	23.4	17.0	346.1	318.3
IV	146.5	346.3	974.2	989.1	577.8	19.8	23.6	17.1	350.7	322.4
1999: I	148.9	331.7	948.8	1,007.3	584.4	20.5	24.1	17.4	360.9	332.4
II	149.9	323.4	960.8	1,014.8	586.6	20.6	24.2	17.6	365.8	335.1
III	145.8	324.0	971.5	1,022.1	589.0	20.0	24.3	17.8	370.9	338.6
IV	152.0	333.1	995.8	1,029.6	591.9	20.0	24.4	18.0	375.3	343.6
2000: I	151.4	350.8	1,028.7	1,044.8	602.3	20.1	25.0	18.0	379.5	354.5
II	146.7	369.3	1,074.3	1,065.5	617.7	19.8	25.0	18.2	384.9	355.3
III	144.9	385.7	1,094.6	1,076.6	621.2	20.3	25.1	18.4	391.6	360.6
IV	143.5	397.2	1,110.3	1,094.2	627.7	22.0	25.3	18.6	400.6	363.1
2001: I	137.0	402.5	1,108.4	1,135.0	652.9	24.2	26.0	19.0	413.0	371.1
II	134.3	406.0	1,097.2	1,159.1	660.2	29.2	26.4	19.2	424.1	372.2
III	140.8	411.0	1,086.4	1,182.5	670.1	33.1	26.7	19.3	433.3	373.1
IV	139.3	417.3	1,072.9	1,205.0	674.0	41.0	27.7	19.4	443.0	372.7
2002: I	141.3	423.7	1,069.9	1,252.0	690.2	52.3	28.5	19.3	461.7	380.5
II	153.5	430.3	1,082.3	1,282.6	696.3	67.3	29.3	19.3	470.4	383.6
III	144.1	437.3	1,080.7	1,298.4	701.9	67.6	30.0	19.3	479.6	387.0

[2] Consists of aid to families with dependent children and, beginning with 1996, assistance programs operating under the Personal Responsibility and Work Opportunity Reconciliation Act of 1996.

Note.—The industry classification of wage and salary disbursements and proprietors' income is on an establishment basis and is based on the 1987 Standard Industrial Classification (SIC) beginning 1987 and on the 1972 SIC for earlier years shown.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–30.—*Disposition of personal income, 1959–2002*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal income	Less: Personal tax and nontax payments	Equals: Disposable personal income	Less: Personal outlays				Equals: Personal saving	Percent of disposable personal income [1]		
				Total	Personal consumption expenditures	Interest paid by persons	Personal transfer payments to rest of the world (net)		Personal outlays		Personal saving
									Total	Personal consumption expenditures	
1959	394.0	42.8	351.2	324.7	318.1	6.1	0.5	26.5	92.4	90.6	7.6
1960	412.7	46.6	366.2	339.8	332.3	7.0	.5	26.4	92.8	90.7	7.2
1961	430.3	47.9	382.4	350.5	342.7	7.3	.5	31.9	91.7	89.6	8.3
1962	457.9	52.3	405.6	372.2	363.8	7.8	.5	33.5	91.7	89.7	8.3
1963	481.0	55.3	425.8	392.7	383.1	8.9	.7	33.1	92.2	90.0	7.8
1964	515.8	52.8	463.0	422.4	411.7	10.0	.7	40.5	91.2	88.9	8.8
1965	557.4	58.4	498.9	456.2	444.3	11.1	.8	42.7	91.4	89.0	8.6
1966	606.4	67.3	539.1	494.6	481.8	12.0	.8	44.5	91.7	89.4	8.3
1967	650.4	74.2	576.2	522.3	508.7	12.5	1.0	54.0	90.6	88.3	9.4
1968	714.5	88.3	626.2	573.6	558.7	13.8	1.0	52.7	91.6	89.2	8.4
1969	780.8	105.9	675.0	622.3	605.5	15.7	1.1	52.6	92.2	89.7	7.8
1970	841.1	104.6	736.5	667.0	648.9	16.8	1.3	69.5	90.6	88.1	9.4
1971	905.1	103.4	801.7	721.6	702.4	17.8	1.3	80.1	90.0	87.6	10.0
1972	994.3	125.6	868.6	791.7	770.7	19.6	1.4	76.9	91.1	88.7	8.9
1973	1,113.4	134.5	979.0	876.5	852.5	22.4	1.5	102.5	89.5	87.1	10.5
1974	1,225.6	153.3	1,072.3	957.9	932.4	24.2	1.3	114.3	89.3	87.0	10.7
1975	1,331.7	150.3	1,181.4	1,056.2	1,030.3	24.5	1.3	125.2	89.4	87.2	10.6
1976	1,475.4	175.5	1,299.9	1,177.8	1,149.8	26.6	1.3	122.1	90.6	88.5	9.4
1977	1,637.1	201.2	1,436.0	1,310.4	1,278.4	30.7	1.3	125.6	91.3	89.0	8.7
1978	1,848.3	233.5	1,614.8	1,469.4	1,430.4	37.5	1.5	145.4	91.0	88.6	9.0
1979	2,081.5	273.3	1,808.2	1,642.4	1,596.3	44.5	1.6	165.8	90.8	88.3	9.2
1980	2,323.9	304.2	2,019.8	1,814.1	1,762.9	49.4	1.8	205.6	89.8	87.3	10.2
1981	2,599.4	351.5	2,247.9	2,004.2	1,944.2	54.6	5.5	243.7	89.2	86.5	10.8
1982	2,768.4	361.6	2,406.8	2,144.6	2,079.3	58.8	6.5	262.2	89.1	86.4	10.9
1983	2,946.9	360.9	2,586.0	2,358.2	2,286.4	65.0	6.8	227.8	91.2	88.4	8.8
1984	3,274.8	387.2	2,887.6	2,581.1	2,498.4	75.0	7.7	306.5	89.4	86.5	10.6
1985	3,515.0	428.5	3,086.5	2,803.9	2,712.6	83.2	8.1	282.6	90.8	87.9	9.2
1986	3,712.4	449.9	3,262.5	2,994.7	2,895.2	90.6	9.0	267.8	91.8	88.7	8.2
1987	3,962.5	503.0	3,459.5	3,206.7	3,105.3	91.5	9.9	252.8	92.7	89.8	7.3
1988	4,272.1	519.7	3,752.4	3,460.1	3,356.6	92.9	10.6	292.3	92.2	89.5	7.8
1989	4,599.8	583.5	4,016.3	3,714.4	3,596.7	106.4	11.4	301.8	92.5	89.6	7.5
1990	4,903.2	609.6	4,293.6	3,959.3	3,831.5	115.8	12.0	334.3	92.2	89.2	7.8
1991	5,085.4	610.5	4,474.8	4,103.2	3,971.2	118.9	13.0	371.7	91.7	88.7	8.3
1992	5,390.4	635.8	4,754.6	4,340.9	4,209.7	118.7	12.5	413.7	91.3	88.5	8.7
1993	5,610.0	674.6	4,935.3	4,584.5	4,454.7	115.4	14.4	350.8	92.9	90.3	7.1
1994	5,888.0	722.6	5,165.4	4,849.9	4,716.4	117.9	15.6	315.5	93.9	91.3	6.1
1995	6,200.9	778.3	5,422.6	5,120.2	4,969.0	134.7	16.5	302.4	94.4	91.6	5.6
1996	6,547.4	869.7	5,677.7	5,405.6	5,237.5	149.9	18.2	272.1	95.2	92.2	4.8
1997	6,937.0	968.8	5,968.2	5,715.3	5,529.3	164.8	21.2	252.9	95.8	92.6	4.2
1998	7,426.0	1,070.4	6,355.6	6,054.1	5,856.0	173.7	24.3	301.5	95.3	92.1	4.7
1999	7,786.5	1,159.1	6,627.4	6,453.3	6,246.5	179.5	27.3	174.0	97.4	94.3	2.6
2000	8,406.6	1,286.4	7,120.2	6,918.6	6,683.7	205.4	29.5	201.5	97.2	93.9	2.8
2001	8,685.3	1,292.1	7,393.2	7,223.5	6,987.0	205.4	31.1	169.7	97.7	94.5	2.3
1998: I	7,254.8	1,034.0	6,220.8	5,912.9	5,719.9	170.1	22.9	307.9	95.1	91.9	4.9
II	7,382.8	1,055.4	6,327.4	6,018.2	5,820.0	173.9	24.3	309.1	95.1	92.0	4.9
III	7,490.7	1,083.7	6,407.0	6,095.6	5,895.1	176.2	24.2	311.4	95.1	92.0	4.9
IV	7,575.8	1,108.5	6,467.3	6,189.7	5,989.1	174.7	25.8	277.6	95.7	92.6	4.3
1999: I	7,655.9	1,125.5	6,530.3	6,276.4	6,076.6	173.5	26.3	253.9	96.1	93.1	3.9
II	7,722.2	1,142.0	6,580.2	6,400.3	6,195.6	177.5	27.2	179.9	97.3	94.2	2.7
III	7,807.7	1,167.2	6,640.5	6,507.2	6,299.4	180.1	27.6	133.3	98.0	94.9	2.0
IV	7,960.2	1,201.8	6,758.4	6,629.4	6,414.5	186.8	28.2	129.0	98.1	94.9	1.9
2000: I	8,211.6	1,256.3	6,955.3	6,775.9	6,552.2	195.6	28.2	179.4	97.4	94.2	2.6
II	8,350.2	1,273.0	7,077.2	6,869.8	6,638.7	202.0	29.0	207.5	97.1	93.8	2.9
III	8,487.8	1,299.6	7,188.2	6,976.7	6,736.1	210.6	30.0	211.5	97.1	93.7	2.9
IV	8,576.6	1,316.7	7,259.8	7,052.1	6,808.0	213.2	30.9	207.7	97.1	93.8	2.9
2001: I	8,658.1	1,340.6	7,317.5	7,143.9	6,904.7	208.3	30.9	173.7	97.6	94.4	2.4
II	8,676.2	1,336.1	7,340.0	7,198.5	6,959.8	207.7	30.9	141.6	98.1	94.8	1.9
III	8,706.2	1,181.9	7,524.2	7,222.0	6,983.7	206.5	31.8	302.2	96.0	92.8	4.0
IV	8,700.9	1,309.7	7,391.2	7,329.6	7,099.9	199.1	30.6	61.5	99.2	96.1	.8
2002: I	8,803.4	1,136.8	7,666.7	7,396.3	7,174.2	190.6	31.5	270.4	96.5	93.6	3.5
II	8,914.0	1,121.8	7,792.2	7,477.9	7,254.7	191.3	31.9	314.3	96.0	93.1	4.0
III	8,993.3	1,107.3	7,886.0	7,583.0	7,360.7	189.3	32.9	303.0	96.2	93.3	3.8

[1] Percents based on data in millions of dollars.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–31.—*Total and per capita disposable personal income and personal consumption expenditures, and per capita gross domestic product, in current and real dollars, 1959–2002*

[Quarterly data at seasonally adjusted annual rates, except as noted]

Year or quarter	Disposable personal income				Personal consumption expenditures				Gross domestic product per capita (dollars)		Population (thousands)[1]
	Total (billions of dollars)		Per capita (dollars)		Total (billions of dollars)		Per capita (dollars)				
	Current dollars	Chained (1996) dollars	Current dollars	Chained (1996) dollars	Current dollars	Chained (1996) dollars	Current dollars	Chained (1996) dollars	Current dollars	Chained (1996) dollars	
1959	351.2	1,623.8	1,983	9,167	318.1	1,470.7	1,796	8,303	2,865	13,092	177,130
1960	366.2	1,664.8	2,026	9,210	332.3	1,510.8	1,838	8,358	2,918	13,148	180,760
1961	382.4	1,720.0	2,081	9,361	342.7	1,541.2	1,865	8,388	2,970	13,236	183,742
1962	405.6	1,803.5	2,174	9,666	363.8	1,617.3	1,950	8,668	3,143	13,821	186,590
1963	425.8	1,871.5	2,249	9,886	383.1	1,684.0	2,024	8,896	3,268	14,212	189,300
1964	463.0	2,006.9	2,412	10,456	411.7	1,784.8	2,145	9,300	3,462	14,831	191,927
1965	498.9	2,131.0	2,567	10,965	444.3	1,897.6	2,286	9,764	3,705	15,583	194,347
1966	539.1	2,244.6	2,742	11,417	481.8	2,006.1	2,451	10,204	4,015	16,416	196,599
1967	576.2	2,340.5	2,899	11,776	508.7	2,066.2	2,559	10,396	4,197	16,646	198,752
1968	626.2	2,448.2	3,119	12,196	558.7	2,184.2	2,783	10,881	4,540	17,266	200,745
1969	675.0	2,524.3	3,329	12,451	605.5	2,264.8	2,987	11,171	4,860	17,616	202,736
1970	736.5	2,630.0	3,591	12,823	648.9	2,317.5	3,164	11,300	5,069	17,446	205,089
1971	801.7	2,745.3	3,860	13,218	702.4	2,405.2	3,382	11,581	5,434	17,804	207,692
1972	868.6	2,874.3	4,138	13,692	770.7	2,550.5	3,671	12,149	5,909	18,570	209,924
1973	979.0	3,072.3	4,619	14,496	852.5	2,675.9	4,022	12,626	6,537	19,456	211,939
1974	1,072.3	3,051.9	5,013	14,268	932.4	2,653.7	4,359	12,407	7,017	19,163	213,898
1975	1,181.4	3,108.5	5,470	14,393	1,030.3	2,710.9	4,771	12,551	7,571	18,911	215,981
1976	1,299.9	3,243.5	5,960	14,873	1,149.8	2,868.9	5,272	13,155	8,363	19,771	218,086
1977	1,436.0	3,360.7	6,519	15,256	1,278.4	2,992.1	5,803	13,583	9,221	20,481	220,289
1978	1,614.8	3,527.5	7,253	15,845	1,430.4	3,124.7	6,425	14,035	10,313	21,383	222,629
1979	1,808.2	3,628.6	8,033	16,120	1,596.3	3,203.2	7,091	14,230	11,401	21,821	225,106
1980	2,019.8	3,658.0	8,869	16,063	1,762.9	3,193.0	7,741	14,021	12,276	21,521	227,726
1981	2,247.9	3,741.1	9,773	16,265	1,944.2	3,236.0	8,453	14,069	13,614	21,830	230,008
1982	2,406.8	3,791.7	10,364	16,328	2,079.3	3,275.5	8,954	14,105	14,035	21,184	232,218
1983	2,586.0	3,906.9	11,036	16,673	2,286.4	3,454.3	9,757	14,741	15,085	21,902	234,332
1984	2,887.6	4,207.6	12,215	17,799	2,498.4	3,640.6	10,569	15,401	16,636	23,288	236,394
1985	3,086.5	4,347.8	12,941	18,229	2,712.6	3,820.9	11,373	16,020	17,664	23,970	238,506
1986	3,262.5	4,486.6	13,555	18,641	2,895.2	3,981.2	12,029	16,541	18,501	24,565	240,682
1987	3,459.5	4,582.5	14,246	18,870	3,105.3	4,113.4	12,787	16,938	19,529	25,174	242,842
1988	3,752.4	4,784.1	15,312	19,522	3,356.6	4,279.5	13,697	17,463	20,845	25,987	245,061
1989	4,016.3	4,906.5	16,235	19,833	3,596.7	4,393.7	14,539	17,760	22,188	26,646	247,387
1990	4,293.6	5,014.2	17,176	20,058	3,831.5	4,474.5	15,327	17,899	23,215	26,834	249,983
1991	4,474.8	5,033.0	17,669	19,873	3,971.2	4,466.6	15,681	17,637	23,637	26,363	253,253
1992	4,754.6	5,189.3	18,527	20,220	4,209.7	4,594.5	16,403	17,903	24,622	26,809	256,634
1993	4,935.3	5,261.3	18,981	20,235	4,454.7	4,748.9	17,133	18,264	25,546	27,163	260,011
1994	5,165.4	5,397.2	19,626	20,507	4,716.4	4,928.1	17,920	18,724	26,803	27,918	263,194
1995	5,422.6	5,539.1	20,361	20,798	4,969.0	5,075.6	18,657	19,058	27,787	28,325	266,327
1996	5,677.7	5,677.7	21,072	21,072	5,237.5	5,237.5	19,438	19,438	28,997	28,997	269,448
1997	5,968.2	5,854.5	21,887	21,470	5,529.3	5,423.9	20,277	19,891	30,505	29,922	272,687
1998	6,355.6	6,168.6	23,037	22,359	5,856.0	5,683.7	21,226	20,601	31,830	30,842	275,891
1999	6,627.4	6,328.4	23,749	22,678	6,246.5	5,964.5	22,384	21,373	33,234	31,746	279,062
2000	7,120.2	6,630.3	25,237	23,501	6,683.7	6,223.9	23,690	22,061	34,823	32,579	282,128
2001	7,393.2	6,748.0	25,957	23,692	6,987.0	6,377.2	24,531	22,390	35,398	32,352	284,822
1998: I	6,220.8	6,064.5	22,644	22,075	5,719.9	5,576.3	20,821	20,298	31,405	30,563	274,725
II	6,327.4	6,153.6	22,972	22,341	5,820.0	5,660.2	21,130	20,550	31,576	30,653	275,437
III	6,407.0	6,209.9	23,191	22,478	5,895.1	5,713.7	21,338	20,682	31,913	30,870	276,269
IV	6,467.3	6,246.6	23,336	22,540	5,989.1	5,784.7	21,611	20,873	32,419	31,277	277,134
1999: I	6,530.3	6,288.4	23,500	22,630	6,076.6	5,851.4	21,868	21,057	32,722	31,428	277,881
II	6,580.2	6,301.0	23,620	22,618	6,195.6	5,932.8	22,239	21,296	32,922	31,500	278,589
III	6,640.5	6,325.0	23,763	22,634	6,299.4	6,000.1	22,542	21,471	33,339	31,802	279,449
IV	6,758.4	6,399.3	24,109	22,828	6,414.5	6,073.6	22,882	21,666	33,947	32,248	280,328
2000: I	6,955.3	6,530.4	24,745	23,234	6,552.2	6,151.9	23,311	21,887	34,330	32,366	281,076
II	7,077.2	6,607.6	25,118	23,451	6,638.7	6,198.2	23,562	21,998	34,855	32,672	281,758
III	7,188.2	6,676.8	25,447	23,637	6,736.1	6,256.8	23,847	22,150	34,958	32,635	282,476
IV	7,259.8	6,706.2	25,635	23,680	6,808.0	6,288.8	24,039	22,206	35,147	32,640	283,202
2001: I	7,317.5	6,704.3	25,785	23,624	6,904.7	6,326.0	24,330	22,291	35,336	32,523	283,794
II	7,340.0	6,694.8	25,805	23,537	6,959.8	6,348.0	24,468	22,317	35,332	32,320	284,442
III	7,524.2	6,864.0	26,387	24,071	6,983.7	6,370.9	24,491	22,342	35,412	32,216	285,154
IV	7,391.2	6,729.1	25,853	23,537	7,099.9	6,464.0	24,834	22,609	35,512	32,350	285,898
2002: I	7,666.7	6,961.0	26,759	24,296	7,174.2	6,513.8	25,040	22,735	35,996	32,681	286,507
II	7,792.2	7,027.2	27,144	24,479	7,254.7	6,542.4	25,271	22,790	36,147	32,718	287,072
III	7,886.0	7,081.6	27,404	24,609	7,360.7	6,609.9	25,579	22,969	36,509	32,962	287,770

[1] Population of the United States including Armed Forces overseas; includes Alaska and Hawaii beginning 1960. Annual data are averages of quarterly data. Quarterly data are averages for the period.

Source: Department of Commerce (Bureau of Economic Analysis and Bureau of the Census).

TABLE B–32.—*Gross saving and investment, 1959–2002*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross saving													
		Gross private saving						Gross government saving						
				Gross business saving					Federal			State and local		
	Total	Total	Personal saving	Total [1]	Undistributed corporate profits [2]	Corporate consumption of fixed capital	Noncorporate consumption of fixed capital	Total	Total	Consumption of fixed capital	Current surplus or deficit (–)	Total	Consumption of fixed capital	Current surplus or deficit (–)
1959	105.8	84.2	26.5	57.7	17.5	23.7	16.5	21.6	13.6	10.4	3.2	8.0	4.2	3.8
1960	110.9	84.4	26.4	58.1	16.3	24.7	17.1	26.5	17.8	10.7	7.1	8.7	4.4	4.3
1961	113.9	91.5	31.9	59.6	16.8	25.2	17.6	22.5	13.5	11.0	2.5	9.0	4.7	4.3
1962	124.6	100.4	33.5	66.9	22.6	26.2	18.1	24.2	14.0	11.6	2.4	10.2	5.0	5.2
1963	132.8	104.3	33.1	71.2	25.2	27.2	18.7	28.5	17.5	12.3	5.2	11.0	5.4	5.7
1964	143.0	117.6	40.5	77.1	28.6	28.7	19.7	25.5	13.4	12.5	.8	12.1	5.7	6.4
1965	158.1	129.4	42.7	86.6	34.9	30.8	21.0	28.8	16.0	12.8	3.2	12.7	6.2	6.5
1966	169.1	138.5	44.5	94.0	37.6	33.7	22.6	30.7	16.1	13.3	2.7	14.6	6.9	7.7
1967	171.1	150.8	54.0	96.9	35.4	37.1	24.3	20.3	5.8	14.2	–8.3	14.5	7.5	7.0
1968	183.3	153.7	52.7	101.1	33.6	41.1	26.4	29.6	13.8	15.1	–1.3	15.8	8.3	7.5
1969	199.8	157.0	52.6	104.3	29.8	45.6	29.0	42.8	25.5	15.9	9.6	17.3	9.3	8.0
1970	194.3	174.3	69.5	104.8	23.0	50.5	31.4	20.0	2.3	16.7	–14.4	17.6	10.6	7.1
1971	211.4	202.6	80.1	122.5	32.4	55.4	34.4	8.8	–9.5	17.4	–26.8	18.2	11.8	6.4
1972	241.6	217.0	76.9	140.1	41.1	60.9	38.5	24.6	–3.8	18.7	–22.5	28.4	12.9	15.6
1973	294.6	256.4	102.5	153.9	44.8	66.8	42.3	38.2	8.3	19.5	–11.2	30.0	14.3	15.7
1974	304.0	270.7	114.3	156.4	29.5	78.5	48.4	33.3	6.4	20.2	–13.9	27.0	17.7	9.3
1975	298.4	323.5	125.2	198.3	49.1	94.0	55.2	–25.1	–47.7	21.6	–69.3	22.7	20.2	2.4
1976	342.7	344.0	122.1	221.9	57.3	104.5	60.0	–1.3	–29.9	23.2	–53.0	28.6	21.3	7.3
1977	398.2	383.1	125.6	257.5	73.1	117.5	66.9	15.1	–20.6	24.6	–45.2	35.7	22.6	13.1
1978	481.6	439.1	145.4	293.6	82.9	134.5	76.2	42.5	–.6	26.3	–26.9	43.1	24.4	18.7
1979	544.9	487.8	165.8	321.9	77.0	156.4	88.5	57.1	16.6	28.0	–11.4	40.5	27.4	13.0
1980	555.5	537.8	205.6	332.2	49.6	181.1	101.5	17.7	–22.8	30.9	–53.8	40.6	31.7	8.8
1981	656.5	631.7	243.7	387.9	64.1	210.1	113.7	24.8	–18.9	34.7	–53.7	43.8	36.3	7.5
1982	625.7	681.6	262.2	419.4	61.9	233.4	124.0	–55.9	–93.1	39.5	–132.6	37.2	39.5	–2.3
1983	608.0	693.8	227.8	466.0	93.2	244.4	128.3	–85.7	–131.5	42.4	–173.9	45.7	40.9	4.8
1984	769.4	824.8	306.5	518.3	124.7	260.2	133.4	–55.4	–121.6	46.4	–168.1	66.2	42.4	23.8
1985	772.5	833.4	282.6	550.8	128.3	280.9	141.7	–60.9	–127.9	49.3	–177.1	67.0	44.7	22.3
1986	735.9	806.5	267.8	538.7	88.0	302.1	148.7	–70.5	–139.2	52.9	–192.1	68.7	47.9	20.8
1987	810.4	838.3	252.8	585.5	107.3	320.8	157.4	–27.9	–91.6	56.3	–147.9	63.7	51.5	12.2
1988	936.2	943.0	292.3	650.6	138.3	344.3	168.1	–6.7	–77.2	60.2	–137.4	70.5	54.9	15.6
1989	967.6	955.1	301.8	653.2	99.2	370.6	183.4	12.5	–65.6	64.4	–130.0	78.1	58.8	19.3
1990	977.7	1,016.2	334.3	681.9	102.4	391.1	188.4	–38.6	–104.3	68.7	–173.0	65.7	63.1	2.6
1991	1,015.8	1,098.9	371.7	727.3	119.2	411.2	196.8	–83.2	–142.3	73.0	–215.3	59.1	66.9	–7.8
1992	1,007.4	1,164.6	413.7	750.9	124.4	427.9	214.3	–157.2	–222.2	75.4	–297.5	65.0	69.9	–4.9
1993	1,039.4	1,159.4	350.8	808.6	142.0	448.5	211.6	–120.0	–195.4	78.7	–274.1	75.4	73.9	1.5
1994	1,155.9	1,199.3	315.5	883.8	151.6	482.7	231.9	–43.4	–130.9	81.4	–212.3	87.5	78.9	8.6
1995	1,257.5	1,266.0	302.4	963.6	203.6	512.1	231.5	–8.5	–108.0	84.0	–192.0	99.4	84.1	15.3
1996	1,349.3	1,290.4	272.1	1,018.3	232.7	543.5	238.5	58.9	–51.5	85.3	–136.8	110.4	88.9	21.4
1997	1,502.3	1,343.7	252.9	1,090.8	261.3	581.5	250.9	158.6	33.4	86.8	–53.3	125.1	94.2	31.0
1998	1,647.2	1,375.0	301.5	1,073.5	189.9	620.2	264.2	272.2	132.0	88.2	43.8	140.2	99.5	40.7
1999	1,704.1	1,356.1	174.0	1,182.0	229.6	665.5	281.8	348.1	203.4	91.5	111.9	144.7	106.4	38.3
2000	1,807.9	1,372.1	201.5	1,170.5	152.6	721.1	296.8	435.8	302.8	95.9	206.9	133.0	115.0	18.0
2001	1,662.4	1,399.3	169.7	1,229.5	122.7	789.1	317.7	263.1	170.7	98.7	72.0	92.4	123.7	–31.3
1998: I	1,610.0	1,369.0	307.9	1,061.0	198.1	605.1	258.5	241.1	107.0	87.4	19.6	134.1	97.4	36.7
II	1,617.2	1,366.0	309.1	1,056.9	181.4	614.2	262.0	251.2	120.7	87.8	33.0	130.5	98.4	32.0
III	1,681.7	1,391.8	311.4	1,080.4	190.0	625.1	266.0	289.9	154.1	88.5	65.7	135.8	100.2	35.6
IV	1,679.8	1,373.4	277.6	1,095.8	190.1	636.2	270.2	306.4	146.1	89.1	57.0	160.3	101.9	58.4
1999: I	1,743.0	1,412.5	253.9	1,158.6	233.1	646.4	274.0	330.5	178.6	89.9	88.7	151.9	103.5	48.4
II	1,692.7	1,352.2	179.9	1,172.3	232.3	657.1	277.7	340.6	203.8	90.9	112.9	136.8	105.5	31.3
III	1,671.2	1,320.8	133.3	1,187.5	217.4	675.0	290.0	350.4	209.4	92.0	117.4	141.0	107.2	33.8
IV	1,709.7	1,338.8	129.0	1,209.8	235.6	683.4	285.7	370.9	221.9	93.2	128.8	149.0	109.3	39.6
2000: I	1,815.7	1,353.7	179.4	1,174.3	185.7	698.6	290.0	462.0	317.7	94.5	223.2	144.2	111.5	32.7
II	1,813.6	1,386.5	207.5	1,179.0	170.4	714.1	294.6	427.1	292.8	95.5	197.2	134.3	114.1	20.2
III	1,828.9	1,383.7	211.5	1,172.2	144.2	728.9	299.1	445.2	309.7	96.5	213.2	135.4	116.3	19.2
IV	1,773.4	1,364.4	207.7	1,156.7	110.2	742.8	303.7	409.0	291.0	97.2	193.8	118.0	118.1	–.2
2001: I	1,699.0	1,324.1	173.7	1,150.4	86.3	755.9	308.2	374.9	271.5	97.7	173.8	103.4	119.9	–16.5
II	1,670.6	1,338.4	141.6	1,196.8	101.9	772.3	322.6	332.2	243.0	98.6	144.4	89.2	121.5	–32.3
III	1,665.6	1,535.6	302.2	1,233.4	79.5	835.6	318.2	130.0	47.3	99.0	–51.7	82.7	128.9	–46.2
IV	1,614.4	1,399.0	61.5	1,337.5	223.0	792.6	321.9	215.3	121.1	99.7	21.3	94.3	124.5	–30.2
2002: I	1,603.2	1,578.3	270.4	1,307.9	171.0	808.3	328.6	24.9	–45.2	100.6	–145.8	70.1	125.9	–55.8
II	1,604.0	1,616.1	314.3	1,301.8	140.5	826.1	335.1	–12.1	–94.3	101.3	–195.6	82.2	127.3	–45.1
III	1,573.7	1,596.4	303.0	1,293.4	118.6	836.1	338.7	–22.7	–98.4	102.2	–200.7	75.8	128.3	–52.5

[1] Includes private wage accruals less disbursements not shown separately.
[2] With inventory valuation and capital consumption adjustments.

See next page for continuation of table.

TABLE B–32.—*Gross saving and investment, 1959–2002*—Continued

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross investment				Statistical discrepancy	Addenda:	
	Total	Gross private domestic investment	Gross government investment [3]	Net foreign investment [4]		Gross saving as a percent of gross national product	Personal saving as a percent of disposable personal income
1959	106.7	78.5	29.3	–1.2	0.8	20.7	7.6
1960	110.4	78.9	28.3	3.2	–.6	20.9	7.2
1961	113.8	78.2	31.3	4.3	–.2	20.7	8.3
1962	125.3	88.1	33.3	3.9	.7	21.1	8.3
1963	132.4	93.8	33.6	5.0	–.4	21.3	7.8
1964	144.2	102.1	34.6	7.5	1.2	21.4	8.8
1965	160.0	118.2	35.6	6.2	1.9	21.8	8.6
1966	175.6	131.3	40.4	3.9	6.4	21.3	8.3
1967	175.9	128.6	43.8	3.5	4.8	20.4	9.4
1968	187.6	141.2	44.7	1.7	4.3	20.0	8.4
1969	202.7	156.4	44.4	1.8	2.9	20.1	7.8
1970	201.2	152.4	44.8	4.0	6.9	18.6	9.4
1971	222.7	178.2	44.0	.6	11.3	18.6	10.0
1972	250.3	207.6	46.3	–3.6	8.7	19.3	8.9
1973	302.6	244.5	49.4	8.7	8.0	21.1	10.5
1974	314.0	249.4	57.4	7.1	10.0	20.0	10.7
1975	316.1	230.2	64.5	21.4	17.7	18.1	10.6
1976	367.2	292.0	66.4	8.9	24.5	18.6	9.4
1977	419.8	361.3	67.5	–9.0	21.6	19.4	8.7
1978	502.6	436.0	77.1	–10.4	21.0	20.8	9.0
1979	580.6	490.6	88.5	1.4	35.7	21.0	9.2
1980	589.5	477.9	100.3	11.4	33.9	19.6	10.2
1981	684.0	570.8	106.9	6.3	27.5	20.7	10.8
1982	628.2	516.1	112.3	–.2	2.5	19.0	10.9
1983	655.0	564.2	122.8	–32.0	47.0	17.0	8.8
1984	787.9	735.5	139.4	–87.0	18.6	19.4	10.6
1985	784.2	736.3	158.8	–110.9	11.7	18.2	9.2
1986	779.8	747.2	173.2	–140.6	43.9	16.5	8.2
1987	813.8	781.5	184.3	–152.0	3.3	17.0	7.3
1988	894.0	821.1	186.2	–113.2	–42.2	18.3	7.8
1989	983.9	872.9	197.7	–86.7	16.3	17.6	7.5
1990	1,008.2	861.7	215.8	–69.2	30.6	16.8	7.8
1991	1,035.4	800.2	220.3	14.9	19.6	16.9	8.3
1992	1,051.1	866.6	223.1	–38.7	43.7	15.9	8.7
1993	1,103.2	955.1	220.9	–72.9	63.8	15.6	7.1
1994	1,214.4	1,097.1	225.6	–108.3	58.5	16.3	6.1
1995	1,284.0	1,143.8	238.2	–98.0	26.5	16.9	5.6
1996	1,382.1	1,242.7	250.1	–110.7	32.8	17.2	4.8
1997	1,532.1	1,390.5	264.6	–123.1	29.7	18.0	4.2
1998	1,616.2	1,538.7	277.1	–199.7	–31.0	18.8	4.7
1999	1,665.4	1,636.7	304.7	–276.0	–38.8	18.3	2.6
2000	1,679.4	1,755.4	319.8	–395.8	–128.5	18.4	2.8
2001	1,545.1	1,586.0	335.8	–376.7	–117.3	16.5	2.3
1998: I	1,638.5	1,528.7	265.3	–155.5	28.5	18.6	4.9
II	1,580.0	1,498.4	274.1	–192.5	–37.2	18.6	4.9
III	1,600.0	1,538.6	284.1	–222.7	–81.7	19.1	4.9
IV	1,646.2	1,589.3	284.9	–228.0	–33.6	18.7	4.3
1999: I	1,689.7	1,618.0	292.7	–221.0	–53.3	19.1	3.9
II	1,636.5	1,597.8	302.9	–264.2	–56.2	18.4	2.7
III	1,639.7	1,637.9	306.1	–304.2	–31.5	17.9	2.0
IV	1,695.6	1,693.2	317.1	–314.7	–14.1	17.9	1.9
2000: I	1,677.0	1,711.4	322.5	–356.9	–138.7	18.8	2.6
II	1,726.8	1,786.3	317.5	–377.1	–86.8	18.4	2.9
III	1,664.9	1,766.4	317.7	–419.1	–164.0	18.5	2.9
IV	1,648.9	1,757.4	321.5	–430.0	–124.5	17.8	2.9
2001: I	1,593.2	1,671.1	331.6	–409.5	–105.7	16.9	2.4
II	1,557.7	1,597.2	343.0	–382.5	–112.9	16.6	1.9
III	1,547.8	1,574.9	323.7	–350.8	–117.8	16.5	4.0
IV	1,481.8	1,500.7	345.0	–363.9	–132.6	15.8	.8
2002: I	1,493.2	1,559.4	355.5	–421.7	–110.0	15.5	3.5
II	1,439.0	1,588.0	348.2	–497.2	–165.0	15.5	4.0
III	1,453.4	1,597.3	351.7	–495.6	–120.3	15.0	3.8

[3] For details on government investment, see Table B-20.

[4] Net exports of goods and services plus net income receipts from rest of the world less net transfers.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–33.—*Median money income (in 2001 dollars) and poverty status of families and persons, by race, selected years, 1984–2001*

Year	Families[1]						Persons below poverty level		Median money income (in 2001 dollars) of persons 15 years old and over with income[2]			
			Below poverty level						Males		Females	
	Number (millions)	Median money income (in 2001 dollars)[2]	Total		Female householder		Number (millions)	Percent	All persons	Year-round full-time workers	All persons	Year-round full-time workers
			Number (millions)	Percent	Number (millions)	Percent						
ALL RACES												
1984	62.7	$42,858	7.3	11.6	3.5	34.5	33.7	14.4	$25,294	$38,920	$11,136	$25,005
1985	63.6	43,518	7.2	11.4	3.5	34.0	33.1	14.0	25,593	39,225	11,324	25,501
1986	64.5	45,393	7.0	10.9	3.6	34.6	32.4	13.6	26,372	39,901	11,727	25,954
1987[3]	65.2	46,151	7.0	10.7	3.7	34.2	32.2	13.4	26,504	39,759	12,361	26,173
1988	65.8	46,285	6.9	10.4	3.6	33.4	31.7	13.0	27,186	39,313	12,774	26,664
1989	66.1	47,166	6.8	10.3	3.5	32.2	31.5	12.8	27,425	39,179	13,268	27,073
1990	66.3	46,429	7.1	10.7	3.8	33.4	33.6	13.5	26,651	38,058	13,225	27,042
1991	67.2	45,551	7.7	11.5	4.2	35.6	35.7	14.2	25,944	38,443	13,278	26,927
1992[4]	68.2	45,221	8.1	11.9	4.3	35.4	38.0	14.8	25,292	38,122	13,247	27,317
1993	68.5	44,586	8.4	12.3	4.4	35.6	39.3	15.1	25,457	37,490	13,325	27,106
1994	69.3	45,820	8.1	11.6	4.2	34.6	38.1	14.5	25,662	37,349	13,547	27,487
1995	69.6	46,843	7.5	10.8	4.1	32.4	36.4	13.8	26,025	37,141	13,992	27,426
1996	70.2	47,516	7.7	11.0	4.2	32.6	36.5	13.7	26,773	37,674	14,395	28,010
1997	70.9	49,017	7.3	10.3	4.0	31.6	35.6	13.3	27,729	38,767	15,071	28,627
1998	71.6	50,689	7.2	10.0	3.8	29.9	34.5	12.7	28,732	39,317	15,650	29,126
1999	72.0	51,996	6.7	9.3	3.5	27.8	32.3	11.8	28,972	39,912	16,264	29,073
2000[5]	72.4	52,310	6.2	8.6	3.1	24.7	31.1	11.3	29,058	40,109	16,640	29,624
2000[6]	73.8	52,148	6.4	8.7	3.3	25.4	31.6	11.3	29,134	39,976	16,511	29,936
2001	74.3	51,407	6.8	9.2	3.5	26.4	32.9	11.7	29,101	40,136	16,614	30,420
WHITE												
1984	54.4	44,890	4.9	9.1	1.9	27.1	23.0	11.5	26,699	40,252	11,267	25,253
1985	55.0	45,742	5.0	9.1	2.0	27.4	22.9	11.4	26,849	40,314	11,544	25,862
1986	55.7	47,475	4.8	8.6	2.0	28.2	22.2	11.0	27,829	41,015	11,958	26,352
1987[3]	56.1	48,259	4.6	8.1	2.0	26.9	21.2	10.4	28,172	40,686	12,677	26,658
1988	56.5	48,763	4.5	7.9	1.9	26.5	20.7	10.1	28,697	40,635	13,088	27,064
1989	56.6	49,595	4.4	7.8	1.9	25.4	20.8	10.0	28,762	40,906	13,527	27,394
1990	56.8	48,480	4.6	8.1	2.0	26.8	22.3	10.7	27,802	39,505	13,549	27,368
1991	57.2	47,888	5.0	8.8	2.2	28.4	23.7	11.3	27,117	39,231	13,588	27,320
1992[4]	57.7	47,814	5.3	9.1	2.2	28.5	25.3	11.9	26,467	39,029	13,555	27,633
1993	57.9	47,410	5.5	9.4	2.4	29.2	26.2	12.2	26,517	38,401	13,591	27,721
1994	58.4	48,304	5.3	9.1	2.3	29.0	25.4	11.7	26,783	38,327	13,741	28,230
1995	58.9	49,191	5.0	8.5	2.2	26.6	24.4	11.2	27,562	38,658	14,206	27,988
1996	58.9	50,275	5.1	8.6	2.3	27.3	24.7	11.2	28,025	39,025	14,559	28,485
1997	59.5	51,421	5.0	8.4	2.3	27.7	24.4	11.0	28,722	39,724	15,169	29,112
1998	60.1	53,168	4.8	8.0	2.1	24.9	23.5	10.5	29,984	40,341	15,853	29,613
1999	60.3	54,411	4.4	7.3	1.9	22.5	21.9	9.8	30,341	41,778	16,318	29,766
2000[5]	60.2	54,742	4.2	6.9	1.7	20.0	21.2	9.4	30,525	41,476	16,669	30,489
2000[6]	61.3	54,509	4.3	7.1	1.8	21.2	21.6	9.5	30,629	41,376	16,528	30,787
2001	61.6	54,067	4.6	7.4	1.9	22.4	22.7	9.9	30,240	40,790	16,652	30,849
BLACK												
1984	6.8	25,020	2.1	30.9	1.5	51.7	9.5	33.8	15,319	27,471	9,994	22,758
1985	6.9	26,339	2.0	28.7	1.5	50.5	8.9	31.3	16,896	28,198	9,849	22,893
1986	7.1	27,127	2.0	28.0	1.5	50.1	9.0	31.1	16,676	28,917	10,118	23,059
1987[3]	7.2	27,428	2.1	29.4	1.6	51.1	9.5	32.4	16,712	29,091	10,355	23,810
1988	7.4	27,792	2.1	28.2	1.6	49.0	9.4	31.3	17,317	29,786	10,566	24,252
1989	7.5	27,860	2.1	27.8	1.5	46.5	9.3	30.7	17,383	28,543	10,857	24,637
1990	7.5	28,135	2.2	29.3	1.6	48.1	9.8	31.9	16,899	28,211	10,937	24,354
1991	7.7	27,311	2.3	30.4	1.8	51.2	10.2	32.7	16,429	28,680	11,174	24,251
1992[4]	8.0	26,093	2.5	31.1	1.9	50.2	10.8	33.4	16,153	28,427	10,988	25,048
1993	8.0	25,987	2.5	31.3	1.9	49.9	10.9	33.1	17,619	28,429	11,470	24,507
1994	8.1	29,180	2.2	27.3	1.7	46.2	10.2	30.6	17,701	28,834	12,458	24,372
1995	8.1	29,956	2.1	26.4	1.7	45.1	9.9	29.3	18,462	28,604	12,643	24,314
1996	8.5	29,792	2.2	26.1	1.7	43.7	9.7	28.4	18,525	30,482	13,224	24,702
1997	8.4	31,457	2.0	23.6	1.6	39.8	9.1	26.5	19,903	29,582	14,351	25,037
1998	8.5	31,890	2.0	23.4	1.6	40.8	9.1	26.1	20,955	29,795	14,248	25,882
1999	8.7	33,755	1.9	21.9	1.5	39.3	8.4	23.6	21,859	32,182	15,690	26,706
2000[5]	8.8	35,146	1.7	19.1	1.3	34.6	7.9	22.0	22,264	31,748	16,533	26,454
2000[6]	8.7	34,616	1.7	19.3	1.3	34.3	8.0	22.5	21,939	31,340	16,324	26,469
2001	8.8	33,598	1.8	20.7	1.4	35.2	8.1	22.7	21,466	31,921	16,282	27,297

[1] The term "family" refers to a group of two or more persons related by birth, marriage, or adoption and residing together. Every family must include a reference person. Beginning 1979, based on householder concept and restricted to primary families.

[2] Current dollar median money income adjusted by CPI–U–RS.

[3] Based on revised methodology; comparable with succeeding years.

[4] Based on 1990 census adjusted population controls; comparable with succeeding years.

[5] Reflects November 2001 weighting correction.

[6] Reflects implementation of Census 2000-based population controls and household sample expansion; comparable with succeeding years.

Note.—Poverty rates (percent of persons below poverty level) for all races for years not shown above are: 1959, 22.4; 1960, 22.2; 1961, 21.9; 1962, 21.0; 1963, 19.5; 1964, 19.0; 1965, 17.3; 1966, 14.7; 1967, 14.2; 1968, 12.8; 1969, 12.1; 1970, 12.6; 1971, 12.5; 1972, 11.9; 1973, 11.1; 1974, 11.2; 1975, 12.3; 1976, 11.8; 1977, 11.6; 1978, 11.4; 1979, 11.7; 1980, 13.0; 1981, 14.0; 1982, 15.0; and 1983, 15.2.

Poverty thresholds are updated each year to reflect changes in the consumer price index (CPI–U).

For details see "Current Population Reports," Series P–60.

Source: Department of Commerce, Bureau of the Census.

TABLE B–34.—*Population by age group, 1929–2002*

[Thousands of persons]

July 1	Total	Age (years)						
		Under 5	5-15	16-19	20-24	25-44	45-64	65 and over
1929	121,767	11,734	26,800	9,127	10,694	35,862	21,076	6,474
1933	125,579	10,612	26,897	9,302	11,152	37,319	22,933	7,363
1939	130,880	10,418	25,179	9,822	11,519	39,354	25,823	8,764
1940	132,122	10,579	24,811	9,895	11,690	39,868	26,249	9,031
1941	133,402	10,850	24,516	9,840	11,807	40,383	26,718	9,288
1942	134,860	11,301	24,231	9,730	11,955	40,861	27,196	9,584
1943	136,739	12,016	24,093	9,607	12,064	41,420	27,671	9,867
1944	138,397	12,524	23,949	9,561	12,062	42,016	28,138	10,147
1945	139,928	12,979	23,907	9,361	12,036	42,521	28,630	10,494
1946	141,389	13,244	24,103	9,119	12,004	43,027	29,064	10,828
1947	144,126	14,406	24,468	9,097	11,814	43,657	29,498	11,185
1948	146,631	14,919	25,209	8,952	11,794	44,288	29,931	11,538
1949	149,188	15,607	25,852	8,788	11,700	44,916	30,405	11,921
1950	152,271	16,410	26,721	8,542	11,680	45,672	30,849	12,397
1951	154,878	17,333	27,279	8,446	11,552	46,103	31,362	12,803
1952	157,553	17,312	28,894	8,414	11,350	46,495	31,884	13,203
1953	160,184	17,638	30,227	8,460	11,062	46,786	32,394	13,617
1954	163,026	18,057	31,480	8,637	10,832	47,001	32,942	14,076
1955	165,931	18,566	32,682	8,744	10,714	47,194	33,506	14,525
1956	168,903	19,003	33,994	8,916	10,616	47,379	34,057	14,938
1957	171,984	19,494	35,272	9,195	10,603	47,440	34,591	15,388
1958	174,882	19,887	36,445	9,543	10,756	47,337	35,109	15,806
1959	177,830	20,175	37,368	10,215	10,969	47,192	35,663	16,248
1960	180,671	20,341	38,494	10,683	11,134	47,140	36,203	16,675
1961	183,691	20,522	39,765	11,025	11,483	47,084	36,722	17,089
1962	186,538	20,469	41,205	11,180	11,959	47,013	37,255	17,457
1963	189,242	20,342	41,626	12,007	12,714	46,994	37,782	17,778
1964	191,889	20,165	42,297	12,736	13,269	46,958	38,338	18,127
1965	194,303	19,824	42,938	13,516	13,746	46,912	38,916	18,451
1966	196,560	19,208	43,702	14,311	14,050	47,001	39,534	18,755
1967	198,712	18,563	44,244	14,200	15,248	47,194	40,193	19,071
1968	200,706	17,913	44,622	14,452	15,786	47,721	40,846	19,365
1969	202,677	17,376	44,840	14,800	16,480	48,064	41,437	19,680
1970	205,052	17,166	44,816	15,289	17,202	48,473	41,999	20,107
1971	207,661	17,244	44,591	15,688	18,159	48,936	42,482	20,561
1972	209,896	17,101	44,203	16,039	18,153	50,482	42,898	21,020
1973	211,909	16,851	43,582	16,446	18,521	51,749	43,235	21,525
1974	213,854	16,487	42,989	16,769	18,975	53,051	43,522	22,061
1975	215,973	16,121	42,508	17,017	19,527	54,302	43,801	22,696
1976	218,035	15,617	42,099	17,194	19,986	55,852	44,008	23,278
1977	220,239	15,564	41,298	17,276	20,499	57,561	44,150	23,892
1978	222,585	15,735	40,428	17,288	20,946	59,400	44,286	24,502
1979	225,055	16,063	39,552	17,242	21,297	61,379	44,390	25,134
1980	227,726	16,451	38,838	17,167	21,590	63,470	44,504	25,707
1981	229,966	16,893	38,144	16,812	21,869	65,528	44,500	26,221
1982	232,188	17,228	37,784	16,332	21,902	67,692	44,462	26,787
1983	234,307	17,547	37,526	15,823	21,844	69,733	44,474	27,361
1984	236,348	17,695	37,461	15,295	21,737	71,735	44,547	27,878
1985	238,466	17,842	37,450	15,005	21,478	73,673	44,602	28,416
1986	240,651	17,963	37,404	15,024	20,942	75,651	44,660	29,008
1987	242,804	18,052	37,333	15,215	20,385	77,338	44,854	29,626
1988	245,021	18,195	37,593	15,198	19,846	78,595	45,471	30,124
1989	247,342	18,508	37,972	14,913	19,442	79,943	45,882	30,682
1990	250,132	18,856	38,632	14,466	19,323	81,291	46,316	31,247
1991	253,493	19,208	39,349	13,992	19,414	82,844	46,874	31,812
1992	256,894	19,528	40,161	13,781	19,314	83,201	48,553	32,356
1993	260,255	19,729	40,904	13,953	19,101	83,766	49,899	32,902
1994	263,436	19,777	41,689	14,228	18,758	84,334	51,318	33,331
1995	266,557	19,627	42,510	14,522	18,391	84,933	52,806	33,769
1996	269,667	19,408	43,172	15,057	17,965	85,527	54,396	34,143
1997	272,912	19,233	43,833	15,433	17,992	85,737	56,283	34,402
1998	276,115	19,145	44,332	15,856	18,250	85,663	58,249	34,619
1999	279,295	19,136	44,755	16,164	18,672	85,408	60,362	34,798
2000 [1]	282,434	.....	.....	.....	.....	.....	.....	.....
2001	285,545	.....	.....	.....	.....	.....	.....	.....
2002	288,600	.....	.....	.....	.....	.....	.....	.....

[1] Data for age groups are available for April 1, 2000: Total, 281,674; under 5, 19,176; 5–15, 45,097; 16–19, 16,215; 20–24, 19,045; 25–44, 85,190; 45–64, 61,959; and 65 and over, 34,992.

Note.—Includes Armed Forces overseas beginning 1940. Includes Alaska and Hawaii beginning 1950.
Data beginning 2000 are based on the 2000 census.
All estimates are consistent with decennial census enumerations.

Source: Department of Commerce, Bureau of the Census.

TABLE B–35.—*Civilian population and labor force, 1929–2002*

[Monthly data seasonally adjusted, except as noted]

Year or month	Civilian noninstitutional population[1]	Civilian labor force					Not in labor force	Civilian labor force participation rate[2]	Civilian employment/population ratio[3]	Unemployment rate, civilian workers[4]
		Total	Employment			Unemployment				
			Total	Agricultural	Nonagricultural					
	Thousands of persons 14 years of age and over							Percent		
1929	.....	49,180	47,630	10,450	37,180	1,550	.....	.....	.....	3.2
1933	.....	51,590	38,760	10,090	28,670	12,830	.....	.....	.....	24.9
1939	.....	55,230	45,750	9,610	36,140	9,480	.....	.....	.....	17.2
1940	99,840	55,640	47,520	9,540	37,980	8,120	44,200	55.7	47.6	14.6
1941	99,900	55,910	50,350	9,100	41,250	5,560	43,990	56.0	50.4	9.9
1942	98,640	56,410	53,750	9,250	44,500	2,660	42,230	57.2	54.5	4.7
1943	94,640	55,540	54,470	9,080	45,390	1,070	39,100	58.7	57.6	1.9
1944	93,220	54,630	53,960	8,950	45,010	670	38,590	58.6	57.9	1.2
1945	94,090	53,860	52,820	8,580	44,240	1,040	40,230	57.2	56.1	1.9
1946	103,070	57,520	55,250	8,320	46,930	2,270	45,550	55.8	53.6	3.9
1947	106,018	60,168	57,812	8,256	49,557	2,356	45,850	56.8	54.5	3.9
	Thousands of persons 16 years of age and over									
1947	101,827	59,350	57,038	7,890	49,148	2,311	42,477	58.3	56.0	3.9
1948	103,068	60,621	58,343	7,629	50,714	2,276	42,447	58.8	56.6	3.8
1949	103,994	61,286	57,651	7,658	49,993	3,637	42,708	58.9	55.4	5.9
1950	104,995	62,208	58,918	7,160	51,758	3,288	42,787	59.2	56.1	5.3
1951	104,621	62,017	59,961	6,726	53,235	2,055	42,604	59.2	57.3	3.3
1952	105,231	62,138	60,250	6,500	53,749	1,883	43,093	59.0	57.3	3.0
1953[5]	107,056	63,015	61,179	6,260	54,919	1,834	44,041	58.9	57.1	2.9
1954	108,321	63,643	60,109	6,205	53,904	3,532	44,678	58.8	55.5	5.5
1955	109,683	65,023	62,170	6,450	55,722	2,852	44,660	59.3	56.7	4.4
1956	110,954	66,552	63,799	6,283	57,514	2,750	44,402	60.0	57.5	4.1
1957	112,265	66,929	64,071	5,947	58,123	2,859	45,336	59.6	57.1	4.3
1958	113,727	67,639	63,036	5,586	57,450	4,602	46,088	59.5	55.4	6.8
1959	115,329	68,369	64,630	5,565	59,065	3,740	46,960	59.3	56.0	5.5
1960[5]	117,245	69,628	65,778	5,458	60,318	3,852	47,617	59.4	56.1	5.5
1961	118,771	70,459	65,746	5,200	60,546	4,714	48,312	59.3	55.4	6.7
1962[5]	120,153	70,614	66,702	4,944	61,759	3,911	49,539	58.8	55.5	5.5
1963	122,416	71,833	67,762	4,687	63,076	4,070	50,583	58.7	55.4	5.7
1964	124,485	73,091	69,305	4,523	64,782	3,786	51,394	58.7	55.7	5.2
1965	126,513	74,455	71,088	4,361	66,726	3,366	52,058	58.9	56.2	4.5
1966	128,058	75,770	72,895	3,979	68,915	2,875	52,288	59.2	56.9	3.8
1967	129,874	77,347	74,372	3,844	70,527	2,975	52,527	59.6	57.3	3.8
1968	132,028	78,737	75,920	3,817	72,103	2,817	53,291	59.6	57.5	3.6
1969	134,335	80,734	77,902	3,606	74,296	2,832	53,602	60.1	58.0	3.5
1970	137,085	82,771	78,678	3,463	75,215	4,093	54,315	60.4	57.4	4.9
1971	140,216	84,382	79,367	3,394	75,972	5,016	55,834	60.2	56.6	5.9
1972[5]	144,126	87,034	82,153	3,484	78,669	4,882	57,091	60.4	57.0	5.6
1973[5]	147,096	89,429	85,064	3,470	81,594	4,365	57,667	60.8	57.8	4.9
1974	150,120	91,949	86,794	3,515	83,279	5,156	58,171	61.3	57.8	5.6
1975	153,153	93,775	85,846	3,408	82,438	7,929	59,377	61.2	56.1	8.5
1976	156,150	96,158	88,752	3,331	85,421	7,406	59,991	61.6	56.8	7.7
1977	159,033	99,009	92,017	3,283	88,734	6,991	60,025	62.3	57.9	7.1
1978[5]	161,910	102,251	96,048	3,387	92,661	6,202	59,659	63.2	59.3	6.1
1979	164,863	104,962	98,824	3,347	95,477	6,137	59,900	63.7	59.9	5.8
1980	167,745	106,940	99,303	3,364	95,938	7,637	60,806	63.8	59.2	7.1
1981	170,130	108,670	100,397	3,368	97,030	8,273	61,460	63.9	59.0	7.6
1982	172,271	110,204	99,526	3,401	96,125	10,678	62,067	64.0	57.8	9.7
1983	174,215	111,550	100,834	3,383	97,450	10,717	62,665	64.0	57.9	9.6
1984	176,383	113,544	105,005	3,321	101,685	8,539	62,839	64.4	59.5	7.5
1985	178,206	115,461	107,150	3,179	103,971	8,312	62,744	64.8	60.1	7.2
1986[5]	180,587	117,834	109,597	3,163	106,434	8,237	62,752	65.3	60.7	7.0
1987	182,753	119,865	112,440	3,208	109,232	7,425	62,888	65.6	61.5	6.2
1988	184,613	121,669	114,968	3,169	111,800	6,701	62,944	65.9	62.3	5.5
1989	186,393	123,869	117,342	3,199	114,142	6,528	62,523	66.5	63.0	5.3

[1] Not seasonally adjusted.
[2] Civilian labor force as percent of civilian noninstitutional population.
[3] Civilian employment as percent of civilian noninstitutional population.
[4] Unemployed as percent of civilian labor force.

See next page for continuation of table.

TABLE B–35.—*Civilian population and labor force, 1929–2002*—Continued

[Monthly data seasonally adjusted, except as noted]

Year or month	Civilian noninstitutional population[1]	Civilian labor force					Not in labor force	Civilian labor force participation rate[2]	Civilian employment/population ratio[3]	Unemployment rate, civilian workers[4]
		Total	Employment			Unemployment				
			Total	Agricultural	Nonagricultural					
	Thousands of persons 16 years of age and over							Percent		
1990[5]	189,164	125,840	118,793	3,223	115,570	7,047	63,324	66.5	62.8	5.6
1991	190,925	126,346	117,718	3,269	114,449	8,628	64,578	66.2	61.7	6.8
1992	192,805	128,105	118,492	3,247	115,245	9,613	64,700	66.4	61.5	7.5
1993	194,838	129,200	120,259	3,115	117,144	8,940	65,638	66.3	61.7	6.9
1994[5]	196,814	131,056	123,060	3,409	119,651	7,996	65,758	66.6	62.5	6.1
1995	198,584	132,304	124,900	3,440	121,460	7,404	66,280	66.6	62.9	5.6
1996	200,591	133,943	126,708	3,443	123,264	7,236	66,647	66.8	63.2	5.4
1997[5]	203,133	136,297	129,558	3,399	126,159	6,739	66,837	67.1	63.8	4.9
1998[5]	205,220	137,673	131,463	3,378	128,085	6,210	67,547	67.1	64.1	4.5
1999[5]	207,753	139,368	133,488	3,281	130,207	5,880	68,385	67.1	64.3	4.2
2000[5]	209,699	140,863	135,208	3,305	131,903	5,655	68,836	67.2	64.5	4.0
2001[5]	211,864	141,815	135,073	3,144	131,929	6,742	70,050	66.9	63.8	4.8
2002	213,977	142,535	134,269	3,248	131,020	8,266	71,442	66.6	62.7	5.8
1999: Jan[5]	206,719	138,912	132,959	3,278	129,681	5,953	67,807	67.2	64.3	4.3
Feb	206,873	138,869	132,845	3,309	129,536	6,024	68,004	67.1	64.2	4.3
Mar	207,036	138,679	132,899	3,276	129,623	5,780	68,357	67.0	64.2	4.2
Apr	207,236	138,982	132,928	3,331	129,597	6,054	68,254	67.1	64.1	4.4
May	207,427	139,180	133,371	3,294	130,077	5,809	68,247	67.1	64.3	4.2
June	207,632	139,358	133,415	3,361	130,054	5,943	68,274	67.1	64.3	4.3
July	207,828	139,466	133,434	3,293	130,141	6,032	68,362	67.1	64.2	4.3
Aug	208,038	139,455	133,616	3,229	130,387	5,839	68,583	67.0	64.2	4.2
Sept	208,265	139,600	133,694	3,152	130,542	5,906	68,665	67.0	64.2	4.2
Oct	208,483	139,858	134,065	3,239	130,826	5,793	68,625	67.1	64.3	4.1
Nov	208,666	140,038	134,299	3,345	130,954	5,739	68,628	67.1	64.4	4.1
Dec	208,832	140,213	134,513	3,287	131,226	5,700	68,619	67.1	64.4	4.1
2000: Jan[5]	208,782	140,500	134,881	3,352	131,529	5,619	68,282	67.3	64.6	4.0
Feb	208,907	140,750	135,049	3,375	131,674	5,701	68,157	67.4	64.6	4.1
Mar	209,053	140,718	135,055	3,339	131,716	5,663	68,335	67.3	64.6	4.0
Apr	209,216	141,080	135,549	3,336	132,213	5,531	68,136	67.4	64.8	3.9
May	209,371	140,715	134,954	3,296	131,658	5,761	68,656	67.2	64.5	4.1
June	209,543	140,837	135,235	3,361	131,874	5,602	68,706	67.2	64.5	4.0
July	209,727	140,507	134,777	3,321	131,456	5,730	69,220	67.0	64.3	4.1
Aug	209,935	140,831	135,016	3,339	131,677	5,815	69,104	67.1	64.3	4.1
Sept	210,161	140,752	135,167	3,310	131,857	5,585	69,409	67.0	64.3	4.0
Oct	210,378	141,013	135,485	3,223	132,262	5,528	69,365	67.0	64.4	3.9
Nov	210,577	141,215	135,573	3,202	132,371	5,642	69,362	67.1	64.4	4.0
Dec	210,743	141,544	135,888	3,230	132,658	5,656	69,199	67.2	64.5	4.0
2001: Jan[5]	210,889	141,757	135,870	3,169	132,701	5,887	69,132	67.2	64.4	4.2
Feb	211,026	141,622	135,734	3,133	132,601	5,888	69,404	67.1	64.3	4.2
Mar	211,171	141,869	135,808	3,163	132,645	6,061	69,302	67.2	64.3	4.3
Apr	211,348	141,734	135,424	3,167	132,257	6,310	69,614	67.1	64.1	4.5
May	211,525	141,445	135,235	3,193	132,042	6,210	70,080	66.9	63.9	4.4
June	211,725	141,468	135,003	3,044	131,959	6,465	70,257	66.8	63.8	4.6
July	211,921	141,651	135,106	3,055	132,051	6,545	70,270	66.8	63.8	4.6
Aug	212,135	141,380	134,408	3,126	131,282	6,972	70,755	66.6	63.4	4.9
Sept	212,357	142,068	135,004	3,181	131,823	7,064	70,289	66.9	63.6	5.0
Oct	212,581	142,280	134,615	3,203	131,412	7,665	70,301	66.9	63.3	5.4
Nov	212,767	142,279	134,253	3,154	131,099	8,026	70,488	66.9	63.1	5.6
Dec	212,927	142,314	134,055	3,246	130,809	8,259	70,613	66.8	63.0	5.8
2002: Jan	213,089	141,390	133,468	3,273	130,195	7,922	71,699	66.4	62.6	5.6
Feb	213,206	142,211	134,319	3,246	131,073	7,891	70,995	66.7	63.0	5.5
Mar	213,334	142,005	133,894	3,126	130,768	8,111	71,329	66.6	62.8	5.7
Apr	213,492	142,570	133,976	3,154	130,823	8,594	70,922	66.8	62.8	6.0
May	213,658	142,769	134,417	3,097	131,320	8,351	70,889	66.8	62.9	5.8
June	213,842	142,476	134,053	3,110	130,942	8,424	71,366	66.6	62.7	5.9
July	214,023	142,390	134,045	3,282	130,763	8,345	71,633	66.5	62.6	5.9
Aug	214,225	142,616	134,474	3,188	131,286	8,142	71,609	66.6	62.8	5.7
Sept	214,429	143,277	135,185	3,298	131,887	8,092	71,152	66.8	63.0	5.6
Oct	214,643	143,123	134,914	3,525	131,389	8,209	71,519	66.7	62.9	5.7
Nov	214,819	142,733	134,225	3,357	130,867	8,508	72,087	66.4	62.5	6.0
Dec	214,968	142,542	133,952	3,311	130,640	8,590	72,425	66.3	62.3	6.0

[5] Not strictly comparable with earlier data due to population adjustments or other changes. See *Employment and Earnings* for details on breaks in series.

Note.—Labor force data in Tables B-35 through B-44 are based on household interviews and relate to the calendar week including the 12th of the month. For definitions of terms, area samples used, historical comparability of the data, comparability with other series, etc., see *Employment and Earnings*.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–36.—*Civilian employment and unemployment by sex and age, 1955–2002*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	Civilian employment							Unemployment						
	Total	Males			Females			Total	Males			Females		
		Total	16-19 years	20 years and over	Total	16-19 years	20 years and over		Total	16-19 years	20 years and over	Total	16-19 years	20 years and over
1955	62,170	42,621	2,095	40,526	19,551	1,547	18,002	2,852	1,854	274	1,580	998	176	823
1956	63,799	43,379	2,164	41,216	20,419	1,654	18,767	2,750	1,711	269	1,442	1,039	209	832
1957	64,071	43,357	2,115	41,239	20,714	1,663	19,052	2,859	1,841	300	1,541	1,018	197	821
1958	63,036	42,423	2,012	40,411	20,613	1,570	19,043	4,602	3,098	416	2,681	1,504	262	1,242
1959	64,630	43,466	2,198	41,267	21,164	1,640	19,524	3,740	2,420	398	2,022	1,320	256	1,063
1960	65,778	43,904	2,361	41,543	21,874	1,768	20,105	3,852	2,486	426	2,060	1,366	286	1,080
1961	65,746	43,656	2,315	41,342	22,090	1,793	20,296	4,714	2,997	479	2,518	1,717	349	1,368
1962	66,702	44,177	2,362	41,815	22,525	1,833	20,693	3,911	2,423	408	2,016	1,488	313	1,175
1963	67,762	44,657	2,406	42,251	23,105	1,849	21,257	4,070	2,472	501	1,971	1,598	383	1,216
1964	69,305	45,474	2,587	42,886	23,831	1,929	21,903	3,786	2,205	487	1,718	1,581	385	1,195
1965	71,088	46,340	2,918	43,422	24,748	2,118	22,630	3,366	1,914	479	1,435	1,452	395	1,056
1966	72,895	46,919	3,253	43,668	25,976	2,468	23,510	2,875	1,551	432	1,120	1,324	405	921
1967	74,372	47,479	3,186	44,294	26,893	2,496	24,397	2,975	1,508	448	1,060	1,468	391	1,078
1968	75,920	48,114	3,255	44,859	27,807	2,526	25,281	2,817	1,419	426	993	1,397	412	985
1969	77,902	48,818	3,430	45,388	29,084	2,687	26,397	2,832	1,403	440	963	1,429	413	1,015
1970	78,678	48,990	3,409	45,581	29,688	2,735	26,952	4,093	2,238	599	1,638	1,855	506	1,349
1971	79,367	49,390	3,478	45,912	29,976	2,730	27,246	5,016	2,789	693	2,097	2,227	568	1,658
1972	82,153	50,896	3,765	47,130	31,257	2,980	28,276	4,882	2,659	711	1,948	2,222	598	1,625
1973	85,064	52,349	4,039	48,310	32,715	3,231	29,484	4,365	2,275	653	1,624	2,089	583	1,507
1974	86,794	53,024	4,103	48,922	33,769	3,345	30,424	5,156	2,714	757	1,957	2,441	665	1,777
1975	85,846	51,857	3,839	48,018	33,989	3,263	30,726	7,929	4,442	966	3,476	3,486	802	2,684
1976	88,752	53,138	3,947	49,190	35,615	3,389	32,226	7,406	4,036	939	3,098	3,369	780	2,588
1977	92,017	54,728	4,174	50,555	37,289	3,514	33,775	6,991	3,667	874	2,794	3,324	789	2,535
1978	96,048	56,479	4,336	52,143	39,569	3,734	35,836	6,202	3,142	813	2,328	3,061	769	2,292
1979	98,824	57,607	4,300	53,308	41,217	3,783	37,434	6,137	3,120	811	2,308	3,018	743	2,276
1980	99,303	57,186	4,085	53,101	42,117	3,625	38,492	7,637	4,267	913	3,353	3,370	755	2,615
1981	100,397	57,397	3,815	53,582	43,000	3,411	39,590	8,273	4,577	962	3,615	3,696	800	2,895
1982	99,526	56,271	3,379	52,891	43,256	3,170	40,086	10,678	6,179	1,090	5,089	4,499	886	3,613
1983	100,834	56,787	3,300	53,487	44,047	3,043	41,004	10,717	6,260	1,003	5,257	4,457	825	3,632
1984	105,005	59,091	3,322	55,769	45,915	3,122	42,793	8,539	4,744	812	3,932	3,794	687	3,107
1985	107,150	59,891	3,328	56,562	47,259	3,105	44,154	8,312	4,521	806	3,715	3,791	661	3,129
1986	109,597	60,892	3,323	57,569	48,706	3,149	45,556	8,237	4,530	779	3,751	3,707	675	3,032
1987	112,440	62,107	3,381	58,726	50,334	3,260	47,074	7,425	4,101	732	3,369	3,324	616	2,709
1988	114,968	63,273	3,492	59,781	51,696	3,313	48,383	6,701	3,655	667	2,987	3,046	558	2,487
1989	117,342	64,315	3,477	60,837	53,027	3,282	49,745	6,528	3,525	658	2,867	3,003	536	2,467
1990	118,793	65,104	3,427	61,678	53,689	3,154	50,535	7,047	3,906	667	3,239	3,140	544	2,596
1991	117,718	64,223	3,044	61,178	53,496	2,862	50,634	8,628	4,946	751	4,195	3,683	608	3,074
1992	118,492	64,440	2,944	61,496	54,052	2,724	51,328	9,613	5,523	806	4,717	4,090	621	3,469
1993	120,259	65,349	2,994	62,355	54,910	2,811	52,099	8,940	5,055	768	4,287	3,885	597	3,288
1994	123,060	66,450	3,156	63,294	56,610	3,005	53,606	7,996	4,367	740	3,627	3,629	580	3,049
1995	124,900	67,377	3,292	64,085	57,523	3,127	54,396	7,404	3,983	744	3,239	3,421	602	2,819
1996	126,708	68,207	3,310	64,897	58,501	3,190	55,311	7,236	3,880	733	3,146	3,356	573	2,783
1997	129,558	69,685	3,401	66,284	59,873	3,260	56,613	6,739	3,577	694	2,882	3,162	577	2,585
1998	131,463	70,693	3,558	67,135	60,771	3,493	57,278	6,210	3,266	686	2,580	2,944	519	2,424
1999	133,488	71,446	3,685	67,761	62,042	3,487	58,555	5,880	3,066	633	2,433	2,814	529	2,285
2000	135,208	72,293	3,713	68,580	62,915	3,563	59,352	5,655	2,954	604	2,350	2,701	489	2,212
2001	135,073	72,080	3,493	68,587	62,992	3,396	59,596	6,742	3,663	660	3,003	3,079	527	2,551
2002	134,269	71,530	3,218	68,312	62,739	3,234	59,505	8,266	4,523	708	3,815	3,743	564	3,179
2001: Jan	135,870	72,492	3,667	68,825	63,378	3,509	59,869	5,887	3,186	637	2,549	2,701	499	2,202
Feb	135,734	72,348	3,582	68,766	63,386	3,517	59,869	5,888	3,154	631	2,523	2,734	473	2,261
Mar	135,808	72,271	3,652	68,619	63,537	3,448	60,089	6,061	3,292	611	2,681	2,769	527	2,242
Apr	135,424	72,272	3,552	68,720	63,152	3,394	59,758	6,310	3,451	630	2,821	2,859	515	2,344
May	135,235	72,131	3,433	68,698	63,104	3,388	59,716	6,210	3,393	623	2,770	2,817	465	2,352
June	135,003	72,012	3,477	68,535	62,991	3,436	59,555	6,465	3,546	652	2,894	2,919	513	2,406
July	135,106	72,093	3,483	68,610	63,013	3,373	59,640	6,545	3,533	643	2,890	3,012	549	2,463
Aug	134,408	71,705	3,317	68,388	62,703	3,177	59,526	6,972	3,833	698	3,135	3,139	523	2,616
Sept	135,004	72,177	3,481	68,696	62,827	3,364	59,463	7,064	3,774	665	3,109	3,290	531	2,759
Oct	134,615	71,871	3,385	68,486	62,744	3,442	59,302	7,665	4,156	702	3,454	3,509	542	2,967
Nov	134,253	71,570	3,366	68,204	62,683	3,395	59,288	8,026	4,453	722	3,731	3,573	540	3,033
Dec	134,055	71,577	3,301	68,276	62,478	3,273	59,205	8,259	4,399	687	3,712	3,860	584	3,276
2002: Jan	133,468	71,114	3,295	67,818	62,354	3,252	59,102	7,922	4,356	640	3,716	3,566	612	2,954
Feb	134,319	71,457	3,300	68,157	62,862	3,275	59,588	7,891	4,228	668	3,560	3,663	547	3,116
Mar	133,894	71,299	3,287	68,013	62,595	3,368	59,227	8,111	4,457	747	3,710	3,654	561	3,093
Apr	133,976	71,397	3,204	68,193	62,579	3,245	59,333	8,594	4,611	707	3,905	3,982	592	3,391
May	134,417	71,894	3,247	68,647	62,524	3,187	59,337	8,351	4,521	740	3,781	3,830	570	3,260
June	134,053	71,524	3,135	68,390	62,528	3,212	59,316	8,424	4,665	766	3,899	3,759	594	3,165
July	134,045	71,509	3,104	68,405	62,536	3,172	59,364	8,345	4,532	765	3,767	3,813	587	3,226
Aug	134,474	71,552	3,105	68,447	62,922	3,212	59,710	8,142	4,536	780	3,757	3,605	532	3,073
Sept	135,185	72,004	3,293	68,711	63,181	3,345	59,835	8,092	4,476	714	3,762	3,616	522	3,094
Oct	134,914	71,854	3,308	68,545	63,061	3,297	59,764	8,209	4,408	612	3,796	3,801	520	3,281
Nov	134,225	71,348	3,249	68,099	62,877	3,111	59,765	8,508	4,784	697	4,087	3,724	584	3,140
Dec	133,952	71,173	3,138	68,035	62,779	3,128	59,652	8,590	4,680	648	4,032	3,910	557	3,353

Note.—See footnote 5 and Note, Table B-35.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–37.—*Civilian employment by demographic characteristic, 1955–2002*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	All civilian workers	White				Black and other				Black			
		Total	Males	Females	Both sexes 16-19	Total	Males	Females	Both sexes 16-19	Total	Males	Females	Both sexes 16-19
1955	62,170	55,833	38,719	17,114	3,225	6,341	3,904	2,437	418	.....	.....	.....	.....
1956	63,799	57,269	39,368	17,901	3,389	6,534	4,013	2,521	430	.....	.....	.....	.....
1957	64,071	57,465	39,349	18,116	3,374	6,604	4,006	2,598	407	.....	.....	.....	.....
1958	63,036	56,613	38,591	18,022	3,216	6,423	3,833	2,590	365	.....	.....	.....	.....
1959	64,630	58,006	39,494	18,512	3,475	6,623	3,971	2,652	362	.....	.....	.....	.....
1960	65,778	58,850	39,755	19,095	3,700	6,928	4,149	2,779	430	.....	.....	.....	.....
1961	65,746	58,913	39,588	19,325	3,693	6,833	4,068	2,765	414	.....	.....	.....	.....
1962	66,702	59,698	40,016	19,682	3,774	7,003	4,160	2,843	420	.....	.....	.....	.....
1963	67,762	60,622	40,428	20,194	3,851	7,140	4,229	2,911	404	.....	.....	.....	.....
1964	69,305	61,922	41,115	20,807	4,076	7,383	4,359	3,024	440	.....	.....	.....	.....
1965	71,088	63,446	41,844	21,602	4,562	7,643	4,496	3,147	474	.....	.....	.....	.....
1966	72,895	65,021	42,331	22,690	5,176	7,877	4,588	3,289	545	.....	.....	.....	.....
1967	74,372	66,361	42,833	23,528	5,114	8,011	4,646	3,365	568	.....	.....	.....	.....
1968	75,920	67,750	43,411	24,339	5,195	8,169	4,702	3,467	584	.....	.....	.....	.....
1969	77,902	69,518	44,048	25,470	5,508	8,384	4,770	3,614	609	.....	.....	.....	.....
1970	78,678	70,217	44,178	26,039	5,571	8,464	4,813	3,650	574	.....	.....	.....	.....
1971	79,367	70,878	44,595	26,283	5,670	8,488	4,796	3,692	538	.....	.....	.....	.....
1972	82,153	73,370	45,944	27,426	6,173	8,783	4,952	3,832	573	7,802	4,368	3,433	509
1973	85,064	75,708	47,085	28,623	6,623	9,356	5,265	4,092	647	8,128	4,527	3,601	570
1974	86,794	77,184	47,674	29,511	6,796	9,610	5,352	4,258	652	8,203	4,527	3,677	554
1975	85,846	76,411	46,697	29,714	6,487	9,435	5,161	4,275	615	7,894	4,275	3,618	507
1976	88,752	78,853	47,775	31,078	6,724	9,899	5,363	4,536	611	8,227	4,404	3,823	508
1977	92,017	81,700	49,150	32,550	7,068	10,317	5,579	4,739	619	8,540	4,565	3,975	508
1978	96,048	84,936	50,544	34,392	7,367	11,112	5,936	5,177	703	9,102	4,796	4,307	571
1979	98,824	87,259	51,452	35,807	7,356	11,565	6,156	5,409	727	9,359	4,923	4,436	579
1980	99,303	87,715	51,127	36,587	7,021	11,588	6,059	5,529	689	9,313	4,798	4,515	547
1981	100,397	88,709	51,315	37,394	6,588	11,688	6,083	5,606	637	9,355	4,794	4,561	505
1982	99,526	87,903	50,287	37,615	5,984	11,624	5,983	5,641	565	9,189	4,637	4,552	428
1983	100,834	88,893	50,621	38,272	5,799	11,941	6,166	5,775	543	9,375	4,753	4,622	416
1984	105,005	92,120	52,462	39,659	5,836	12,885	6,629	6,256	607	10,119	5,124	4,995	474
1985	107,150	93,736	53,046	40,690	5,768	13,414	6,845	6,569	666	10,501	5,270	5,231	532
1986	109,597	95,660	53,785	41,876	5,792	13,937	7,107	6,830	681	10,814	5,428	5,386	536
1987	112,440	97,789	54,647	43,142	5,898	14,652	7,459	7,192	742	11,309	5,661	5,648	587
1988	114,968	99,812	55,550	44,262	6,030	15,156	7,722	7,434	774	11,658	5,824	5,834	601
1989	117,342	101,584	56,352	45,232	5,946	15,757	7,963	7,795	813	11,953	5,928	6,025	625
1990	118,793	102,261	56,703	45,558	5,779	16,533	8,401	8,131	801	12,175	5,995	6,180	598
1991	117,718	101,182	55,797	45,385	5,216	16,536	8,426	8,110	690	12,074	5,961	6,113	494
1992	118,492	101,669	55,959	45,710	4,985	16,823	8,482	8,342	684	12,151	5,930	6,221	492
1993	120,259	103,045	56,656	46,390	5,113	17,214	8,693	8,521	691	12,382	6,047	6,334	494
1994	123,060	105,190	57,452	47,738	5,398	17,870	8,998	8,872	763	12,835	6,241	6,595	552
1995	124,900	106,490	58,146	48,344	5,593	18,409	9,231	9,179	826	13,279	6,422	6,857	586
1996	126,708	107,808	58,888	48,920	5,667	18,900	9,319	9,580	832	13,542	6,456	7,086	613
1997	129,558	109,856	59,998	49,859	5,807	19,701	9,687	10,014	853	13,969	6,607	7,362	631
1998	131,463	110,931	60,604	50,327	6,089	20,532	10,089	10,443	962	14,556	6,871	7,685	736
1999	133,488	112,235	61,139	51,096	6,204	21,253	10,307	10,945	968	15,056	7,027	8,029	691
2000	135,208	113,475	61,696	51,780	6,270	21,733	10,597	11,135	1,006	15,334	7,180	8,154	729
2001	135,073	113,220	61,411	51,810	5,969	21,852	10,670	11,182	921	15,270	7,127	8,143	663
2002	134,269	112,511	60,840	51,671	5,575	21,758	10,690	11,068	877	15,106	7,115	7,991	630
2001: Jan	135,870	113,857	61,723	52,134	6,167	21,983	10,805	11,178	1,022	15,387	7,265	8,122	723
Feb	135,734	113,779	61,699	52,080	6,165	22,005	10,710	11,295	985	15,407	7,182	8,225	702
Mar	135,808	113,810	61,579	52,231	6,146	21,956	10,661	11,295	941	15,341	7,110	8,231	689
Apr	135,424	113,464	61,591	51,873	6,043	21,902	10,643	11,259	890	15,304	7,074	8,230	661
May	135,235	113,173	61,364	51,809	5,848	21,909	10,617	11,292	945	15,311	7,069	8,242	697
June	135,003	113,126	61,356	51,770	5,998	21,871	10,629	11,242	906	15,330	7,071	8,259	679
July	135,106	113,176	61,403	51,773	5,952	21,959	10,693	11,266	922	15,337	7,106	8,231	663
Aug	134,408	112,740	61,189	51,551	5,625	21,783	10,619	11,164	854	15,210	7,077	8,133	612
Sept	135,004	113,147	61,490	51,657	5,972	21,949	10,788	11,161	898	15,339	7,227	8,112	651
Oct	134,615	112,878	61,229	51,649	5,896	21,730	10,624	11,106	909	15,144	7,077	8,067	659
Nov	134,253	112,652	60,979	51,673	5,896	21,617	10,586	11,031	874	15,040	7,057	7,983	632
Dec	134,055	112,388	60,947	51,441	5,746	21,655	10,613	11,042	836	15,122	7,123	7,999	591
2002: Jan	133,468	111,876	60,501	51,375	5,656	21,619	10,661	10,957	891	15,119	7,195	7,925	619
Feb	134,319	112,632	60,874	51,758	5,639	21,724	10,633	11,092	957	15,131	7,141	7,990	680
Mar	133,894	112,286	60,626	51,661	5,728	21,600	10,681	10,919	903	14,969	7,109	7,860	630
Apr	133,976	112,426	60,711	51,714	5,596	21,586	10,688	10,898	845	15,045	7,127	7,918	617
May	134,417	112,563	60,950	51,613	5,522	21,696	10,794	10,901	883	15,168	7,239	7,929	637
June	134,053	112,382	60,806	51,577	5,458	21,648	10,667	10,981	881	15,027	7,090	7,937	639
July	134,045	112,446	60,831	51,615	5,425	21,619	10,681	10,938	845	14,976	7,100	7,876	575
Aug	134,474	112,844	60,970	51,874	5,437	21,835	10,743	11,092	858	15,142	7,133	8,009	589
Sept	135,185	113,010	61,181	51,829	5,685	22,250	10,920	11,330	959	15,420	7,248	8,172	677
Oct	134,914	112,882	61,044	51,838	5,610	22,040	10,831	11,209	978	15,275	7,186	8,089	702
Nov	134,225	112,562	60,854	51,708	5,586	21,656	10,491	11,165	784	14,974	6,919	8,055	623
Dec	133,952	112,165	60,646	51,519	5,518	21,787	10,521	11,266	758	15,006	6,913	8,093	583

Note.—See footnote 5 and Note, Table B-35.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–38.—*Unemployment by demographic characteristic, 1955–2002*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	All civilian workers	White				Black and other				Black			
		Total	Males	Females	Both sexes 16-19	Total	Males	Females	Both sexes 16-19	Total	Males	Females	Both sexes 16-19
1955	2,852	2,252	1,478	774	373	601	376	225	77	.....	.....	.....	.....
1956	2,750	2,159	1,366	793	382	591	345	246	95	.....	.....	.....	.....
1957	2,859	2,289	1,477	812	401	570	364	206	96	.....	.....	.....	.....
1958	4,602	3,680	2,489	1,191	541	923	610	313	138	.....	.....	.....	.....
1959	3,740	2,946	1,903	1,043	525	793	517	276	128	.....	.....	.....	.....
1960	3,852	3,065	1,988	1,077	575	788	498	290	138	.....	.....	.....	.....
1961	4,714	3,743	2,398	1,345	669	971	599	372	159	.....	.....	.....	.....
1962	3,911	3,052	1,915	1,137	580	861	509	352	142	.....	.....	.....	.....
1963	4,070	3,208	1,976	1,232	708	863	496	367	176	.....	.....	.....	.....
1964	3,786	2,999	1,779	1,220	708	787	426	361	165	.....	.....	.....	.....
1965	3,366	2,691	1,556	1,135	705	678	360	318	171	.....	.....	.....	.....
1966	2,875	2,255	1,241	1,014	651	622	310	312	186	.....	.....	.....	.....
1967	2,975	2,338	1,208	1,130	635	638	300	338	203	.....	.....	.....	.....
1968	2,817	2,226	1,142	1,084	644	590	277	313	194	.....	.....	.....	.....
1969	2,832	2,260	1,137	1,123	660	571	267	304	193	.....	.....	.....	.....
1970	4,093	3,339	1,857	1,482	871	754	380	374	235	.....	.....	.....	.....
1971	5,016	4,085	2,309	1,777	1,011	930	481	450	249	.....	.....	.....	.....
1972	4,882	3,906	2,173	1,733	1,021	977	486	491	288	906	448	458	279
1973	4,365	3,442	1,836	1,606	955	924	440	484	280	846	395	451	262
1974	5,156	4,097	2,169	1,927	1,104	1,058	544	514	318	965	494	470	297
1975	7,929	6,421	3,627	2,794	1,413	1,507	815	692	355	1,369	741	629	330
1976	7,406	5,914	3,258	2,656	1,364	1,492	779	713	355	1,334	698	637	330
1977	6,991	5,441	2,883	2,558	1,284	1,550	784	766	379	1,393	698	695	354
1978	6,202	4,698	2,411	2,287	1,189	1,505	731	774	394	1,330	641	690	360
1979	6,137	4,664	2,405	2,260	1,193	1,473	714	759	362	1,319	636	683	333
1980	7,637	5,884	3,345	2,540	1,291	1,752	922	830	377	1,553	815	738	343
1981	8,273	6,343	3,580	2,762	1,374	1,930	997	933	388	1,731	891	840	357
1982	10,678	8,241	4,846	3,395	1,534	2,437	1,334	1,104	443	2,142	1,167	975	396
1983	10,717	8,128	4,859	3,270	1,387	2,588	1,401	1,187	441	2,272	1,213	1,059	392
1984	8,539	6,372	3,600	2,772	1,116	2,167	1,144	1,022	384	1,914	1,003	911	353
1985	8,312	6,191	3,426	2,765	1,074	2,121	1,095	1,026	394	1,864	951	913	357
1986	8,237	6,140	3,433	2,708	1,070	2,097	1,097	999	383	1,840	946	894	347
1987	7,425	5,501	3,132	2,369	995	1,924	969	955	353	1,684	826	858	312
1988	6,701	4,944	2,766	2,177	910	1,757	888	869	316	1,547	771	776	288
1989	6,528	4,770	2,636	2,135	863	1,757	889	868	331	1,544	773	772	300
1990	7,047	5,186	2,935	2,251	903	1,860	971	889	308	1,565	806	758	268
1991	8,628	6,560	3,859	2,701	1,029	2,068	1,087	981	330	1,723	890	833	280
1992	9,613	7,169	4,209	2,959	1,037	2,444	1,314	1,130	390	2,011	1,067	944	324
1993	8,940	6,655	3,828	2,827	992	2,285	1,227	1,058	373	1,844	971	872	313
1994	7,996	5,892	3,275	2,617	960	2,104	1,092	1,011	360	1,666	848	818	300
1995	7,404	5,459	2,999	2,460	952	1,945	984	961	394	1,538	762	777	325
1996	7,236	5,300	2,896	2,404	939	1,936	984	952	367	1,592	808	784	310
1997	6,739	4,836	2,641	2,195	912	1,903	935	967	359	1,560	747	813	302
1998	6,210	4,484	2,431	2,053	876	1,726	835	891	329	1,426	671	756	281
1999	5,880	4,273	2,274	1,999	844	1,606	792	814	318	1,309	626	684	268
2000	5,655	4,099	2,165	1,934	805	1,556	789	767	288	1,269	636	633	239
2001	6,742	4,923	2,730	2,193	866	1,819	933	886	321	1,450	731	719	271
2002	8,266	6,058	3,401	2,657	943	2,208	1,122	1,086	329	1,727	856	871	268
2001: Jan	5,887	4,240	2,367	1,873	815	1,662	817	845	318	1,367	655	712	274
Feb	5,888	4,364	2,359	2,005	781	1,571	819	752	355	1,253	640	613	274
Mar	6,061	4,384	2,417	1,967	814	1,697	894	803	323	1,409	740	669	272
Apr	6,310	4,640	2,535	2,105	819	1,684	903	781	324	1,374	746	628	290
May	6,210	4,541	2,495	2,046	801	1,663	880	783	271	1,333	695	638	241
June	6,465	4,728	2,662	2,066	869	1,738	889	849	300	1,409	710	699	264
July	6,545	4,810	2,617	2,193	905	1,719	912	807	290	1,348	707	641	240
Aug	6,972	5,073	2,839	2,234	902	1,915	1,002	913	307	1,510	799	711	264
Sept	7,064	5,127	2,807	2,320	871	1,921	961	960	318	1,488	724	764	259
Oct	7,665	5,628	3,178	2,450	891	2,035	997	1,038	350	1,604	751	853	285
Nov	8,026	5,914	3,406	2,508	920	2,087	1,039	1,048	347	1,647	793	854	299
Dec	8,259	6,015	3,319	2,696	913	2,156	1,060	1,096	358	1,711	826	885	296
2002: Jan	7,922	5,883	3,267	2,616	932	2,057	1,080	977	319	1,650	827	823	274
Feb	7,891	5,840	3,176	2,664	920	2,107	1,075	1,032	329	1,616	792	824	263
Mar	8,111	5,873	3,279	2,594	971	2,266	1,203	1,062	335	1,789	938	851	282
Apr	8,594	6,236	3,455	2,781	908	2,389	1,139	1,250	385	1,896	873	1,022	338
May	8,351	6,179	3,432	2,747	961	2,182	1,086	1,096	334	1,718	831	887	276
June	8,424	6,148	3,473	2,675	1,006	2,273	1,194	1,079	356	1,794	924	870	276
July	8,345	6,233	3,532	2,701	1,060	2,123	1,034	1,089	292	1,642	750	892	223
Aug	8,142	6,075	3,467	2,608	945	2,114	1,097	1,017	355	1,611	789	822	258
Sept	8,092	6,011	3,395	2,615	911	2,077	1,087	990	321	1,633	869	763	259
Oct	8,209	6,087	3,355	2,732	888	2,132	1,083	1,050	241	1,665	856	810	211
Nov	8,508	6,149	3,588	2,561	953	2,353	1,198	1,155	337	1,846	940	907	275
Dec	8,590	6,086	3,449	2,636	867	2,458	1,233	1,224	336	1,952	931	1,021	288

Note.—See footnote 5 and Note, Table B-35.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–39.—*Civilian labor force participation rate and employment/population ratio, 1955–2002*

[Percent;[1] monthly data seasonally adjusted]

Year or month	Labor force participation rate							Employment/population ratio						
	All civilian workers	Males	Females	Both sexes 16–19 years	White	Black and other	Black	All civilian workers	Males	Females	Both sexes 16–19 years	White	Black and other	Black
1955	59.3	85.4	35.7	48.9	58.7	64.2	.....	56.7	81.8	34.0	43.5	56.5	58.7	.....
1956	60.0	85.5	36.9	50.9	59.4	64.9	.....	57.5	82.3	35.1	45.3	57.3	59.5	.....
1957	59.6	84.8	36.9	49.6	59.1	64.4	.....	57.1	81.3	35.1	43.9	56.8	59.3	.....
1958	59.5	84.2	37.1	47.4	58.9	64.8	.....	55.4	78.5	34.5	39.9	55.3	56.7	.....
1959	59.3	83.7	37.1	46.7	58.7	64.3	.....	56.0	79.3	35.0	39.9	55.9	57.5	.....
1960	59.4	83.3	37.7	47.5	58.8	64.5	.....	56.1	78.9	35.5	40.5	55.9	57.9	.....
1961	59.3	82.9	38.1	46.9	58.8	64.1	.....	55.4	77.6	35.4	39.1	55.3	56.2	.....
1962	58.8	82.0	37.9	46.1	58.3	63.2	.....	55.5	77.7	35.6	39.4	55.4	56.3	.....
1963	58.7	81.4	38.3	45.2	58.2	63.0	.....	55.4	77.1	35.8	37.4	55.3	56.2	.....
1964	58.7	81.0	38.7	44.5	58.2	63.1	.....	55.7	77.3	36.3	37.3	55.5	57.0	.....
1965	58.9	80.7	39.3	45.7	58.4	62.9	.....	56.2	77.5	37.1	38.9	56.0	57.8	.....
1966	59.2	80.4	40.3	48.2	58.7	63.0	.....	56.9	77.9	38.3	42.1	56.8	58.4	.....
1967	59.6	80.4	41.1	48.4	59.2	62.8	.....	57.3	78.0	39.0	42.2	57.2	58.2	.....
1968	59.6	80.1	41.6	48.3	59.3	62.2	.....	57.5	77.8	39.6	42.2	57.4	58.0	.....
1969	60.1	79.8	42.7	49.4	59.9	62.1	.....	58.0	77.6	40.7	43.4	58.0	58.1	.....
1970	60.4	79.7	43.3	49.9	60.2	61.8	.....	57.4	76.2	40.8	42.3	57.5	56.8	.....
1971	60.2	79.1	43.4	49.7	60.1	60.9	.....	56.6	74.9	40.4	41.3	56.8	54.9	.....
1972	60.4	78.9	43.9	51.9	60.4	60.2	59.9	57.0	75.0	41.0	43.5	57.4	54.1	53.7
1973	60.8	78.8	44.7	53.7	60.8	60.5	60.2	57.8	75.5	42.0	45.9	58.2	55.0	54.5
1974	61.3	78.7	45.7	54.8	61.4	60.3	59.8	57.8	74.9	42.6	46.0	58.3	54.3	53.5
1975	61.2	77.9	46.3	54.0	61.5	59.6	58.8	56.1	71.7	42.0	43.3	56.7	51.4	50.1
1976	61.6	77.5	47.3	54.5	61.8	59.8	59.0	56.8	72.0	43.2	44.2	57.5	52.0	50.8
1977	62.3	77.7	48.4	56.0	62.5	60.4	59.8	57.9	72.8	44.5	46.1	58.6	52.5	51.4
1978	63.2	77.9	50.0	57.8	63.3	62.2	61.5	59.3	73.8	46.4	48.3	60.0	54.7	53.6
1979	63.7	77.8	50.9	57.9	63.9	62.2	61.4	59.9	73.8	47.5	48.5	60.6	55.2	53.8
1980	63.8	77.4	51.5	56.7	64.1	61.7	61.0	59.2	72.0	47.7	46.6	60.0	53.6	52.3
1981	63.9	77.0	52.1	55.4	64.3	61.3	60.8	59.0	71.3	48.0	44.6	60.0	52.6	51.3
1982	64.0	76.6	52.6	54.1	64.3	61.6	61.0	57.8	69.0	47.7	41.5	58.8	50.9	49.4
1983	64.0	76.4	52.9	53.5	64.3	62.1	61.5	57.9	68.8	48.0	41.5	58.9	51.0	49.5
1984	64.4	76.4	53.6	53.9	64.6	62.6	62.2	59.5	70.7	49.5	43.7	60.5	53.6	52.3
1985	64.8	76.3	54.5	54.5	65.0	63.3	62.9	60.1	70.9	50.4	44.4	61.0	54.7	53.4
1986	65.3	76.3	55.3	54.7	65.5	63.7	63.3	60.7	71.0	51.4	44.6	61.5	55.4	54.1
1987	65.6	76.2	56.0	54.7	65.8	64.3	63.8	61.5	71.5	52.5	45.5	62.3	56.8	55.6
1988	65.9	76.2	56.6	55.3	66.2	64.0	63.8	62.3	72.0	53.4	46.8	63.1	57.4	56.3
1989	66.5	76.4	57.4	55.9	66.7	64.7	64.2	63.0	72.5	54.3	47.5	63.8	58.2	56.9
1990	66.5	76.4	57.5	53.7	66.9	64.4	64.0	62.8	72.0	54.3	45.3	63.7	57.9	56.7
1991	66.2	75.8	57.4	51.6	66.6	63.8	63.3	61.7	70.4	53.7	42.0	62.6	56.7	55.4
1992	66.4	75.8	57.8	51.3	66.8	64.6	63.9	61.5	69.8	53.8	41.0	62.4	56.4	54.9
1993	66.3	75.4	57.9	51.5	66.8	63.8	63.2	61.7	70.0	54.1	41.7	62.7	56.3	55.0
1994	66.6	75.1	58.8	52.7	67.1	63.9	63.4	62.5	70.4	55.3	43.4	63.5	57.2	56.1
1995	66.6	75.0	58.9	53.5	67.1	64.3	63.7	62.9	70.8	55.6	44.2	63.8	58.1	57.1
1996	66.8	74.9	59.3	52.3	67.2	64.6	64.1	63.2	70.9	56.0	43.5	64.1	58.6	57.4
1997	67.1	75.0	59.8	51.6	67.5	65.2	64.7	63.8	71.3	56.8	43.4	64.6	59.4	58.2
1998	67.1	74.9	59.8	52.8	67.3	66.0	65.6	64.1	71.6	57.1	45.1	64.7	60.9	59.7
1999	67.1	74.7	60.0	52.0	67.3	65.9	65.8	64.3	71.6	57.4	44.7	64.8	61.3	60.6
2000	67.2	74.7	60.2	52.2	67.4	66.0	65.8	64.5	71.8	57.7	45.4	65.1	61.6	60.8
2001	66.9	74.4	60.1	50.0	67.2	65.8	65.4	63.8	70.8	57.3	42.7	64.4	60.7	59.7
2002	66.6	73.9	59.9	47.6	66.9	65.4	64.9	62.7	69.5	56.5	39.8	63.5	59.3	58.2
2001: Jan	67.2	74.7	60.3	51.7	67.4	66.3	66.0	64.4	71.5	57.9	44.7	65.0	61.7	60.6
Feb	67.1	74.4	60.3	50.9	67.4	66.0	65.6	64.3	71.3	57.8	44.1	64.9	61.6	60.6
Mar	67.2	74.4	60.5	51.1	67.4	66.2	65.8	64.3	71.2	57.9	44.1	64.9	61.4	60.3
Apr	67.1	74.5	60.1	50.4	67.3	65.9	65.5	64.1	71.1	57.5	43.2	64.6	61.2	60.1
May	66.9	74.3	60.0	49.3	67.0	65.7	65.3	63.9	70.9	57.5	42.5	64.4	61.1	60.0
June	66.8	74.2	60.0	50.2	67.0	65.7	65.6	63.8	70.7	57.3	43.0	64.4	60.9	60.0
July	66.8	74.2	60.0	49.8	67.1	65.8	65.3	63.8	70.8	57.3	42.5	64.3	61.0	60.0
Aug	66.6	74.1	59.8	47.7	66.9	65.7	65.3	63.4	70.3	56.9	40.2	64.0	60.4	59.4
Sept	66.9	74.4	60.0	49.7	67.1	66.1	65.6	63.6	70.7	57.0	42.3	64.2	60.7	59.8
Oct	66.9	74.4	60.0	49.8	67.2	65.6	65.2	63.3	70.3	56.9	42.2	64.0	60.0	59.0
Nov	66.9	74.3	60.0	49.4	67.2	65.4	64.9	63.1	69.9	56.8	41.6	63.8	59.6	58.5
Dec	66.8	74.2	60.0	48.2	67.0	65.6	65.4	63.0	69.9	56.5	40.4	63.6	59.6	58.7
2002: Jan	66.4	73.6	59.6	47.8	66.6	65.1	65.0	62.6	69.4	56.4	40.1	63.3	59.4	58.6
Feb	66.7	73.8	60.1	47.8	67.0	65.4	64.9	63.0	69.7	56.8	40.4	63.7	59.6	58.6
Mar	66.6	73.8	59.8	48.9	66.8	65.4	64.9	62.8	69.5	56.5	40.8	63.5	59.2	57.9
Apr	66.8	74.0	60.1	47.7	67.1	65.6	65.5	62.8	69.5	56.5	39.7	63.5	59.1	58.2
May	66.8	74.4	59.8	47.7	67.1	65.3	65.2	62.9	70.0	56.4	39.6	63.6	59.3	58.6
June	66.6	74.1	59.7	47.6	66.9	65.3	64.9	62.7	69.5	56.3	39.2	63.4	59.1	58.0
July	66.5	73.9	59.7	47.1	66.9	64.7	64.0	62.6	69.5	56.3	38.7	63.4	58.9	57.7
Aug	66.6	73.8	59.8	47.1	67.0	65.2	64.4	62.8	69.4	56.6	39.0	63.6	59.4	58.2
Sept	66.8	74.1	60.0	48.6	67.0	66.1	65.5	63.0	69.8	56.8	41.0	63.6	60.5	59.2
Oct	66.7	73.9	60.0	47.7	66.9	65.6	65.0	62.9	69.6	56.6	40.8	63.5	59.8	58.6
Nov	66.4	73.7	59.7	47.3	66.7	65.0	64.4	62.5	69.0	56.4	39.4	63.3	58.7	57.3
Dec	66.3	73.3	59.8	46.3	66.4	65.6	64.9	62.3	68.8	56.3	38.8	63.0	58.9	57.4

[1] Civilian labor force or civilian employment as percent of civilian noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over.
See footnote 5 and Note, Table B-35.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–40.—*Civilian labor force participation rate by demographic characteristic, 1959–2002*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16-19 years	20 years and over	Total	16-19 years	20 years and over		Total	16-19 years	20 years and over	Total	16-19 years	20 years and over
									Black and other						
1959	59.3	58.7	83.8	55.9	86.3	36.0	39.6	35.6	64.3	83.4	55.5	86.7	47.7	28.2	49.8
1960	59.4	58.8	83.4	55.9	86.0	36.5	40.3	36.2	64.5	83.0	57.6	86.2	48.2	32.9	49.9
1961	59.3	58.8	83.0	54.5	85.7	36.9	40.6	36.6	64.1	82.2	55.8	85.5	48.3	32.8	50.1
1962	58.8	58.3	82.1	53.8	84.9	36.7	39.8	36.5	63.2	80.8	53.5	84.2	48.0	33.1	49.6
1963	58.7	58.2	81.5	53.1	84.4	37.2	38.7	37.0	63.0	80.2	51.5	83.9	48.1	32.6	49.9
1964	58.7	58.2	81.1	52.7	84.2	37.5	37.8	37.5	63.1	80.1	49.9	84.1	48.6	31.7	50.7
1965	58.9	58.4	80.8	54.1	83.9	38.1	39.2	38.0	62.9	79.6	51.3	83.7	48.6	29.5	51.1
1966	59.2	58.7	80.6	55.9	83.6	39.2	42.6	38.8	63.0	79.0	51.4	83.3	49.4	33.5	51.6
1967	59.6	59.2	80.6	56.3	83.5	40.1	42.5	39.8	62.8	78.5	51.1	82.9	49.5	35.2	51.6
1968	59.6	59.3	80.4	55.9	83.2	40.7	43.0	40.4	62.2	77.7	49.7	82.2	49.3	34.8	51.4
1969	60.1	59.9	80.2	56.8	83.0	41.8	44.6	41.5	62.1	76.9	49.6	81.4	49.8	34.6	52.0
1970	60.4	60.2	80.0	57.5	82.8	42.6	45.6	42.2	61.8	76.5	47.4	81.4	49.5	34.1	51.8
1971	60.2	60.1	79.6	57.9	82.3	42.6	45.4	42.3	60.9	74.9	44.7	80.0	49.2	31.2	51.8
1972	60.4	60.4	79.6	60.1	82.0	43.2	48.1	42.7	60.2	73.9	46.0	78.6	48.8	32.3	51.2
									Black						
1972	60.4	60.4	79.6	60.1	82.0	43.2	48.1	42.7	59.9	73.6	46.3	78.5	48.7	32.2	51.2
1973	60.8	60.8	79.4	62.0	81.6	44.1	50.1	43.5	60.2	73.4	45.7	78.4	49.3	34.2	51.6
1974	61.3	61.4	79.4	62.9	81.4	45.2	51.7	44.4	59.8	72.9	46.7	77.6	49.0	33.4	51.4
1975	61.2	61.5	78.7	61.9	80.7	45.9	51.5	45.3	58.8	70.9	42.6	76.0	48.8	34.2	51.1
1976	61.6	61.8	78.4	62.3	80.3	46.9	52.8	46.2	59.0	70.0	41.3	75.4	49.8	32.9	52.5
1977	62.3	62.5	78.5	64.0	80.2	48.0	54.5	47.3	59.8	70.6	43.2	75.6	50.8	32.9	53.6
1978	63.2	63.3	78.6	65.0	80.1	49.4	56.7	48.7	61.5	71.5	44.9	76.2	53.1	37.3	55.5
1979	63.7	63.9	78.6	64.8	80.1	50.5	57.4	49.8	61.4	71.3	43.6	76.3	53.1	36.8	55.4
1980	63.8	64.1	78.2	63.7	79.8	51.2	56.2	50.6	61.0	70.3	43.2	75.1	53.1	34.9	55.6
1981	63.9	64.3	77.9	62.4	79.5	51.9	55.4	51.5	60.8	70.0	41.6	74.5	53.5	34.0	56.0
1982	64.0	64.3	77.4	60.0	79.2	52.4	55.0	52.2	61.0	70.1	39.8	74.7	53.7	33.5	56.2
1983	64.0	64.3	77.1	59.4	78.9	52.7	54.5	52.5	61.5	70.6	39.9	75.2	54.2	33.0	56.8
1984	64.4	64.6	77.1	59.0	78.7	53.3	55.4	53.1	62.2	70.8	41.7	74.8	55.2	35.0	57.6
1985	64.8	65.0	77.0	59.7	78.5	54.1	55.2	54.0	62.9	70.8	44.6	74.4	56.5	37.9	58.6
1986	65.3	65.5	76.9	59.3	78.5	55.0	56.3	54.9	63.3	71.2	43.7	74.8	56.9	39.1	58.9
1987	65.6	65.8	76.8	59.0	78.4	55.7	56.5	55.6	63.8	71.1	43.6	74.7	58.0	39.6	60.0
1988	65.9	66.2	76.9	60.0	78.3	56.4	57.2	56.3	63.8	71.0	43.8	74.6	58.0	37.9	60.1
1989	66.5	66.7	77.1	61.0	78.5	57.2	57.1	57.2	64.2	71.0	44.6	74.4	58.7	40.4	60.6
1990	66.5	66.9	77.1	59.6	78.5	57.4	55.3	57.6	64.0	71.0	40.7	75.0	58.3	36.8	60.6
1991	66.2	66.6	76.5	57.3	78.0	57.4	54.1	57.6	63.3	70.4	37.3	74.6	57.5	33.5	60.0
1992	66.4	66.8	76.5	56.9	78.0	57.7	52.5	58.1	63.9	70.7	40.6	74.3	58.5	35.2	60.8
1993	66.3	66.8	76.2	56.6	77.7	58.0	53.5	58.3	63.2	69.6	39.5	73.2	57.9	34.6	60.2
1994	66.6	67.1	75.9	57.7	77.3	58.9	55.1	59.2	63.4	69.1	40.8	72.5	58.7	36.3	60.9
1995	66.6	67.1	75.7	58.5	77.1	59.0	55.5	59.2	63.7	69.0	40.1	72.5	59.5	39.8	61.4
1996	66.8	67.2	75.8	57.1	77.3	59.1	54.7	59.4	64.1	68.7	39.5	72.3	60.4	38.9	62.6
1997	67.1	67.5	75.9	56.1	77.5	59.5	54.1	59.9	64.7	68.3	37.4	72.2	61.7	39.9	64.0
1998	67.1	67.3	75.6	56.6	77.2	59.4	55.4	59.7	65.6	69.0	40.7	72.5	62.8	42.5	64.8
1999	67.1	67.3	75.6	56.4	77.2	59.6	54.5	59.9	65.8	68.7	38.6	72.4	63.5	38.8	66.1
2000	67.2	67.4	75.4	56.6	77.0	59.8	54.7	60.2	65.8	69.0	39.0	72.6	63.2	39.4	65.6
2001	66.9	67.2	75.1	54.1	76.8	59.7	52.8	60.2	65.4	68.5	38.0	72.1	62.9	37.4	65.4
2002	66.6	66.9	74.6	50.4	76.6	59.6	51.0	60.2	64.9	68.4	37.1	72.1	62.0	34.9	64.6
2001: Jan	67.2	67.4	75.3	56.1	76.9	59.9	53.9	60.3	66.0	69.6	41.5	72.9	63.1	39.7	65.4
Feb	67.1	67.4	75.2	55.7	76.9	60.0	53.6	60.4	65.6	68.6	40.2	72.0	63.1	39.1	65.4
Mar	67.2	67.4	75.1	55.7	76.7	60.1	53.6	60.5	65.8	68.8	38.3	72.4	63.4	39.6	65.8
Apr	67.1	67.3	75.2	54.8	76.9	59.8	52.7	60.3	65.5	68.4	37.6	72.1	63.1	39.3	65.4
May	66.9	67.0	74.9	52.2	76.7	59.6	51.9	60.2	65.3	67.9	37.8	71.4	63.2	37.9	65.6
June	66.8	67.0	75.0	54.2	76.7	59.5	53.1	60.0	65.6	67.9	36.3	71.7	63.6	39.7	66.0
July	66.8	67.1	74.9	54.2	76.7	59.6	52.9	60.1	65.3	68.1	35.3	72.0	62.9	37.4	65.5
Aug	66.6	66.9	74.9	51.9	76.8	59.4	49.9	60.1	65.3	68.6	37.5	72.2	62.7	33.1	65.6
Sept	66.9	67.1	75.1	54.1	76.9	59.6	52.6	60.1	65.6	69.1	38.0	72.8	62.8	35.2	65.5
Oct	66.9	67.2	75.2	52.6	77.0	59.6	53.2	60.1	65.2	67.9	38.7	71.4	63.0	37.1	65.6
Nov	66.9	67.2	75.1	53.1	76.9	59.7	53.0	60.2	64.9	68.0	37.9	71.6	62.3	36.8	64.9
Dec	66.8	67.0	74.9	51.6	76.8	59.6	52.0	60.2	65.4	68.8	37.4	72.5	62.6	33.7	65.4
2002: Jan	66.4	66.6	74.3	50.1	76.3	59.4	52.3	59.9	65.0	69.3	38.7	72.9	61.6	32.9	64.4
Feb	66.7	67.0	74.6	50.8	76.5	59.9	51.3	60.5	64.9	68.5	39.9	71.8	62.0	35.7	64.5
Mar	66.6	66.8	74.4	51.5	76.3	59.7	52.8	60.2	64.9	69.4	38.2	73.0	61.2	35.0	63.7
Apr	66.8	67.1	74.6	50.3	76.6	59.9	51.1	60.5	65.5	68.9	38.5	72.5	62.7	38.1	65.1
May	66.8	67.1	74.8	50.1	76.9	59.7	50.9	60.4	65.2	69.4	40.5	72.8	61.8	32.7	64.6
June	66.6	66.9	74.6	49.8	76.7	59.5	50.8	60.2	64.9	68.8	38.4	72.4	61.6	35.0	64.3
July	66.5	66.9	74.7	50.2	76.7	59.6	50.8	60.2	64.0	67.3	30.8	71.6	61.3	33.1	64.1
Aug	66.6	67.0	74.7	48.7	76.9	59.7	50.7	60.4	64.4	67.8	34.9	71.7	61.7	32.8	64.5
Sept	66.8	67.0	74.8	51.2	76.7	59.6	51.4	60.2	65.5	69.4	37.8	73.1	62.3	37.0	64.8
Oct	66.7	66.9	74.5	50.2	76.5	59.7	50.9	60.4	65.0	68.6	38.6	72.2	61.9	34.5	64.6
Nov	66.4	66.7	74.5	51.6	76.4	59.4	50.2	60.0	64.4	67.0	37.2	70.5	62.3	34.5	65.0
Dec	66.3	66.4	74.1	50.1	76.1	59.2	49.3	59.9	64.9	66.8	32.3	70.8	63.3	37.1	65.8

[1]Civilian labor force as percent of civilian noninstitutional population in group specified.

Note.—See Note, Table B-39.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–41.—*Civilian employment/population ratio by demographic characteristic, 1959–2002*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White						Black and other or black					
		Total	Males			Females			Total	Males			Females		
			Total	16-19 years	20 years and over	Total	16-19 years	20 years and over		Total	16-19 years	20 years and over	Total	16-19 years	20 years and over
									Black and other						
1959	56.0	55.9	79.9	48.1	82.8	34.0	34.8	34.0	57.5	73.8	41.4	77.6	43.2	20.3	45.7
1960	56.1	55.9	79.4	48.1	82.4	34.6	35.1	34.5	57.9	74.1	43.8	77.9	43.6	24.8	45.8
1961	55.4	55.3	78.2	45.9	81.4	34.5	34.6	34.5	56.2	71.7	41.0	75.5	42.6	23.2	44.8
1962	55.5	55.4	78.4	46.4	81.5	34.7	34.8	34.7	56.3	72.0	41.7	75.7	42.7	23.1	44.9
1963	55.4	55.3	77.7	44.7	81.1	35.0	32.9	35.2	56.2	71.8	37.4	76.2	42.7	21.3	45.2
1964	55.7	55.5	77.8	45.0	81.3	35.5	32.2	35.8	57.0	72.9	37.8	77.7	43.4	21.8	46.1
1965	56.2	56.0	77.9	47.1	81.5	36.2	33.7	36.5	57.8	73.7	39.4	78.7	44.1	20.2	47.3
1966	56.9	56.8	78.3	50.1	81.7	37.5	37.5	37.5	58.4	74.0	40.5	79.2	45.1	23.1	48.2
1967	57.3	57.2	78.4	50.2	81.7	38.3	37.7	38.3	58.2	73.8	38.8	79.4	45.0	24.8	47.9
1968	57.5	57.4	78.3	50.3	81.6	38.9	37.8	39.1	58.0	73.3	38.7	78.9	45.2	24.7	48.2
1969	58.0	58.0	78.2	51.1	81.4	40.1	39.5	40.1	58.1	72.8	39.0	78.4	45.9	25.1	48.9
1970	57.4	57.5	76.8	49.6	80.1	40.3	39.5	40.4	56.8	70.9	35.5	76.8	44.9	22.4	48.2
1971	56.6	56.8	75.7	49.2	79.0	39.9	38.6	40.1	54.9	68.1	31.8	74.2	43.9	20.2	47.3
1972	57.0	57.4	76.0	51.5	79.0	40.7	41.3	40.6	54.1	67.3	32.4	73.2	43.3	19.9	46.7
									Black						
1972	57.0	57.4	76.0	51.5	79.0	40.7	41.3	40.6	53.7	66.8	31.6	73.0	43.0	19.2	46.5
1973	57.8	58.2	76.5	54.3	79.2	41.8	43.6	41.6	54.5	67.5	32.8	73.7	43.8	22.0	47.2
1974	57.8	58.3	75.9	54.4	78.6	42.4	44.3	42.2	53.5	65.8	31.4	71.9	43.5	20.9	46.9
1975	56.1	56.7	73.0	50.6	75.7	42.0	42.5	41.9	50.1	60.6	26.3	66.5	41.6	20.2	44.9
1976	56.8	57.5	73.4	51.5	76.0	43.2	44.2	43.1	50.8	60.6	25.8	66.8	42.8	19.2	46.4
1977	57.9	58.6	74.1	54.4	76.5	44.5	45.9	44.4	51.4	61.4	26.4	67.5	43.3	18.5	47.0
1978	59.3	60.0	75.0	56.3	77.2	46.3	48.5	46.1	53.6	63.3	28.5	69.1	45.8	22.1	49.3
1979	59.9	60.6	75.1	55.7	77.3	47.5	49.4	47.3	53.8	63.4	28.7	69.1	46.0	22.4	49.3
1980	59.2	60.0	73.4	53.4	75.6	47.8	47.9	47.8	52.3	60.4	27.0	65.8	45.7	21.0	49.1
1981	59.0	60.0	72.8	51.3	75.1	48.3	46.2	48.5	51.3	59.1	24.6	64.5	45.1	19.7	48.5
1982	57.8	58.8	70.6	47.0	73.0	48.1	44.6	48.4	49.4	56.0	20.3	61.4	44.2	17.7	47.5
1983	57.9	58.9	70.4	47.4	72.6	48.5	44.5	48.9	49.5	56.3	20.4	61.6	44.1	17.0	47.4
1984	59.5	60.5	72.1	49.1	74.3	49.8	47.0	50.0	52.3	59.2	23.9	64.1	46.7	20.1	49.8
1985	60.1	61.0	72.3	49.9	74.3	50.7	47.1	51.0	53.4	60.0	26.3	64.6	48.1	23.1	50.9
1986	60.7	61.5	72.3	49.6	74.3	51.7	47.9	52.0	54.1	60.6	26.5	65.1	48.8	23.8	51.6
1987	61.5	62.3	72.7	49.9	74.7	52.8	49.0	53.1	55.6	62.0	28.5	66.4	50.3	25.8	53.0
1988	62.3	63.1	73.2	51.7	75.1	53.8	50.2	54.0	56.3	62.7	29.4	67.1	51.2	25.8	53.9
1989	63.0	63.8	73.7	52.6	75.4	54.6	50.5	54.9	56.9	62.8	30.4	67.0	52.0	27.1	54.6
1990	62.8	63.7	73.3	51.0	75.1	54.7	48.3	55.2	56.7	62.6	27.7	67.1	51.9	25.8	54.7
1991	61.7	62.6	71.6	47.2	73.5	54.2	45.9	54.8	55.4	61.3	23.8	65.9	50.6	21.5	53.6
1992	61.5	62.4	71.1	46.4	73.1	54.2	44.2	54.9	54.9	59.9	23.6	64.3	50.8	22.1	53.6
1993	61.7	62.7	71.4	46.6	73.3	54.6	45.7	55.2	55.0	60.0	23.6	64.3	50.9	21.6	53.8
1994	62.5	63.5	71.8	48.3	73.6	55.8	47.5	56.4	56.1	60.8	25.4	65.0	52.3	24.5	55.0
1995	62.9	63.8	72.0	49.4	73.8	56.1	48.1	56.7	57.1	61.7	25.2	66.1	53.4	26.1	56.1
1996	63.2	64.1	72.3	48.2	74.2	56.3	47.6	57.0	57.4	61.1	24.9	65.5	54.4	27.1	57.1
1997	63.8	64.6	72.7	48.1	74.7	57.0	47.2	57.8	58.2	61.4	23.7	66.1	55.6	28.5	58.4
1998	64.1	64.7	72.7	48.6	74.7	57.1	49.3	57.7	59.7	62.9	28.4	67.1	57.2	31.8	59.7
1999	64.3	64.8	72.8	49.3	74.8	57.3	48.3	58.0	60.6	63.1	26.7	67.5	58.6	29.0	61.5
2000	64.5	65.1	72.9	49.7	74.8	57.7	49.0	58.3	60.8	63.4	28.7	67.6	58.7	30.3	61.5
2001	63.8	64.4	71.9	46.6	74.0	57.3	46.8	58.0	59.7	62.1	26.4	66.4	57.8	27.1	60.8
2002	62.7	63.5	70.6	42.4	72.9	56.7	44.4	57.6	58.2	61.0	25.4	65.2	55.9	25.0	58.9
2001: Jan	64.4	65.0	72.5	48.8	74.5	57.8	48.5	58.5	60.6	63.8	30.2	67.8	58.0	28.7	60.9
Feb	64.3	64.9	72.5	48.6	74.5	57.7	48.4	58.4	60.6	63.0	27.7	67.2	58.7	29.3	61.6
Mar	64.3	64.9	72.3	48.8	74.2	57.9	47.7	58.6	60.3	62.3	27.3	66.5	58.7	28.5	61.6
Apr	64.1	64.6	72.3	47.7	74.3	57.4	47.0	58.2	60.1	61.9	25.0	66.3	58.6	28.4	61.6
May	63.9	64.4	71.9	45.3	74.2	57.3	46.3	58.2	60.0	61.8	26.5	66.0	58.6	29.8	61.5
June	63.8	64.4	71.9	46.5	74.0	57.3	47.3	58.0	60.0	61.7	25.2	66.1	58.7	29.5	61.5
July	63.8	64.3	71.9	46.7	74.0	57.2	46.2	58.0	60.0	62.0	25.4	66.3	58.4	27.9	61.4
Aug	63.4	64.0	71.6	44.0	73.8	56.9	43.8	57.9	59.4	61.6	25.7	65.9	57.6	23.6	61.0
Sept	63.6	64.2	71.8	46.7	73.9	57.0	46.4	57.8	59.8	62.8	26.3	67.1	57.4	26.0	60.5
Oct	63.3	64.0	71.5	44.9	73.7	56.9	47.1	57.7	59.0	61.4	26.6	65.5	57.0	26.3	60.0
Nov	63.1	63.8	71.1	44.7	73.3	56.9	47.1	57.7	58.5	61.1	25.9	65.3	56.3	24.8	59.4
Dec	63.0	63.6	71.0	44.1	73.3	56.6	45.3	57.5	58.7	61.6	25.4	65.9	56.4	22.0	59.7
2002: Jan	62.6	63.3	70.5	43.2	72.7	56.5	44.7	57.4	58.6	62.1	26.3	66.4	55.8	23.4	58.9
Feb	63.0	63.7	70.9	42.9	73.2	56.9	44.8	57.8	58.6	61.6	27.9	65.6	56.2	26.6	59.1
Mar	62.8	63.5	70.6	43.1	72.8	56.8	46.1	57.6	57.9	61.3	24.1	65.7	55.2	26.4	58.0
Apr	62.8	63.5	70.6	42.5	72.9	56.8	44.7	57.7	58.2	61.4	24.1	65.8	55.6	25.3	58.5
May	62.9	63.6	70.8	42.4	73.2	56.7	43.6	57.7	58.6	62.3	25.6	66.6	55.6	25.4	58.5
June	62.7	63.4	70.6	41.0	73.1	56.6	44.0	57.5	58.0	60.9	26.9	64.9	55.6	24.3	58.6
July	62.6	63.4	70.6	40.6	73.1	56.6	43.9	57.6	57.7	60.9	24.5	65.2	55.1	21.6	58.3
Aug	62.8	63.6	70.7	40.2	73.2	56.9	44.5	57.8	58.2	61.1	24.3	65.4	55.9	22.8	59.1
Sept	63.0	63.6	70.9	43.4	73.1	56.8	45.1	57.6	59.2	62.0	24.7	66.4	57.0	29.3	59.7
Oct	62.9	63.5	70.7	43.0	72.9	56.7	44.3	57.6	58.6	61.3	29.0	65.1	56.3	27.2	59.1
Nov	62.5	63.3	70.4	43.4	72.6	56.6	43.5	57.5	57.3	59.0	26.1	62.8	56.0	23.6	59.2
Dec	62.3	63.0	70.1	42.8	72.3	56.3	43.2	57.3	57.4	58.8	21.2	63.3	56.2	25.2	59.2

[1] Civilian employment as percent of civilian noninstitutional population in group specified.

Note.—See Note, Table B–39.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–42.—*Civilian unemployment rate, 1955–2002*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	Males			Females			Both sexes 16–19 years	White	Black and other	Black	Experienced wage and salary workers	Married men, spouse present	Women who maintain families
		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over							
1955	4.4	4.2	11.6	3.8	4.9	10.2	4.4	11.0	3.9	8.7	.....	4.8	2.6	.....
1956	4.1	3.8	11.1	3.4	4.8	11.2	4.2	11.1	3.6	8.3	.....	4.4	2.3	.....
1957	4.3	4.1	12.4	3.6	4.7	10.6	4.1	11.6	3.8	7.9	.....	4.6	2.8	.....
1958	6.8	6.8	17.1	6.2	6.8	14.3	6.1	15.9	6.1	12.6	.....	7.3	5.1	.....
1959	5.5	5.2	15.3	4.7	5.9	13.5	5.2	14.6	4.8	10.7	.....	5.7	3.6	.....
1960	5.5	5.4	15.3	4.7	5.9	13.9	5.1	14.7	5.0	10.2	.....	5.7	3.7	.....
1961	6.7	6.4	17.1	5.7	7.2	16.3	6.3	16.8	6.0	12.4	.....	6.8	4.6	.....
1962	5.5	5.2	14.7	4.6	6.2	14.6	5.4	14.7	4.9	10.9	.....	5.6	3.6	.....
1963	5.7	5.2	17.2	4.5	6.5	17.2	5.4	17.2	5.0	10.8	.....	5.6	3.4	.....
1964	5.2	4.6	15.8	3.9	6.2	16.6	5.2	16.2	4.6	9.6	.....	5.0	2.8	.....
1965	4.5	4.0	14.1	3.2	5.5	15.7	4.5	14.8	4.1	8.1	.....	4.3	2.4	.....
1966	3.8	3.2	11.7	2.5	4.8	14.1	3.8	12.8	3.4	7.3	.....	3.5	1.9	.....
1967	3.8	3.1	12.3	2.3	5.2	13.5	4.2	12.9	3.4	7.4	.....	3.6	1.8	4.9
1968	3.6	2.9	11.6	2.2	4.8	14.0	3.8	12.7	3.2	6.7	.....	3.4	1.6	4.4
1969	3.5	2.8	11.4	2.1	4.7	13.3	3.7	12.2	3.1	6.4	.....	3.3	1.5	4.4
1970	4.9	4.4	15.0	3.5	5.9	15.6	4.8	15.3	4.5	8.2	.....	4.8	2.6	5.4
1971	5.9	5.3	16.6	4.4	6.9	17.2	5.7	16.9	5.4	9.9	.....	5.7	3.2	7.3
1972	5.6	5.0	15.9	4.0	6.6	16.7	5.4	16.2	5.1	10.0	10.4	5.3	2.8	7.2
1973	4.9	4.2	13.9	3.3	6.0	15.3	4.9	14.5	4.3	9.0	9.4	4.5	2.3	7.1
1974	5.6	4.9	15.6	3.8	6.7	16.6	5.5	16.0	5.0	9.9	10.5	5.3	2.7	7.0
1975	8.5	7.9	20.1	6.8	9.3	19.7	8.0	19.9	7.8	13.8	14.8	8.2	5.1	10.0
1976	7.7	7.1	19.2	5.9	8.6	18.7	7.4	19.0	7.0	13.1	14.0	7.3	4.2	10.1
1977	7.1	6.3	17.3	5.2	8.2	18.3	7.0	17.8	6.2	13.1	14.0	6.6	3.6	9.4
1978	6.1	5.3	15.8	4.3	7.2	17.1	6.0	16.4	5.2	11.9	12.8	5.6	2.8	8.5
1979	5.8	5.1	15.9	4.2	6.8	16.4	5.7	16.1	5.1	11.3	12.3	5.5	2.8	8.3
1980	7.1	6.9	18.3	5.9	7.4	17.2	6.4	17.8	6.3	13.1	14.3	6.9	4.2	9.2
1981	7.6	7.4	20.1	6.3	7.9	19.0	6.8	19.6	6.7	14.2	15.6	7.3	4.3	10.4
1982	9.7	9.9	24.4	8.8	9.4	21.9	8.3	23.2	8.6	17.3	18.9	9.3	6.5	11.7
1983	9.6	9.9	23.3	8.9	9.2	21.3	8.1	22.4	8.4	17.8	19.5	9.2	6.5	12.2
1984	7.5	7.4	19.6	6.6	7.6	18.0	6.8	18.9	6.5	14.4	15.9	7.1	4.6	10.3
1985	7.2	7.0	19.5	6.2	7.4	17.6	6.6	18.6	6.2	13.7	15.1	6.8	4.3	10.4
1986	7.0	6.9	19.0	6.1	7.1	17.6	6.2	18.3	6.0	13.1	14.5	6.6	4.4	9.8
1987	6.2	6.2	17.8	5.4	6.2	15.9	5.4	16.9	5.3	11.6	13.0	5.8	3.9	9.2
1988	5.5	5.5	16.0	4.8	5.6	14.4	4.9	15.3	4.7	10.4	11.7	5.2	3.3	8.1
1989	5.3	5.2	15.9	4.5	5.4	14.0	4.7	15.0	4.5	10.0	11.4	5.0	3.0	8.1
1990	5.6	5.7	16.3	5.0	5.5	14.7	4.9	15.5	4.8	10.1	11.4	5.3	3.4	8.3
1991	6.8	7.2	19.8	6.4	6.4	17.5	5.7	18.7	6.1	11.1	12.5	6.6	4.4	9.3
1992	7.5	7.9	21.5	7.1	7.0	18.6	6.3	20.1	6.6	12.7	14.2	7.2	5.1	10.0
1993	6.9	7.2	20.4	6.4	6.6	17.5	5.9	19.0	6.1	11.7	13.0	6.6	4.4	9.7
1994	6.1	6.2	19.0	5.4	6.0	16.2	5.4	17.6	5.3	10.5	11.5	5.9	3.7	8.9
1995	5.6	5.6	18.4	4.8	5.6	16.1	4.9	17.3	4.9	9.6	10.4	5.4	3.3	8.0
1996	5.4	5.4	18.1	4.6	5.4	15.2	4.8	16.7	4.7	9.3	10.5	5.2	3.0	8.2
1997	4.9	4.9	16.9	4.2	5.0	15.0	4.4	16.0	4.2	8.8	10.0	4.7	2.7	8.1
1998	4.5	4.4	16.2	3.7	4.6	12.9	4.1	14.6	3.9	7.8	8.9	4.3	2.4	7.2
1999	4.2	4.1	14.7	3.5	4.3	13.2	3.8	13.9	3.7	7.0	8.0	4.0	2.2	6.4
2000	4.0	3.9	14.0	3.3	4.1	12.1	3.6	13.1	3.5	6.7	7.6	3.9	2.0	5.9
2001	4.8	4.8	15.9	4.2	4.7	13.4	4.1	14.7	4.2	7.7	8.7	4.6	2.7	6.6
2002	5.8	5.9	18.0	5.3	5.6	14.8	5.1	16.5	5.1	9.2	10.3	5.7	3.6	8.0
2001: Jan	4.2	4.2	14.8	3.6	4.1	12.5	3.5	13.7	3.6	7.0	8.2	4.0	2.3	6.4
Feb	4.2	4.2	15.0	3.5	4.1	11.9	3.6	13.5	3.7	6.7	7.5	4.1	2.3	6.0
Mar	4.3	4.4	14.3	3.8	4.2	13.3	3.6	13.8	3.7	7.2	8.4	4.2	2.4	6.1
Apr	4.5	4.6	15.1	3.9	4.3	13.2	3.8	14.2	3.9	7.1	8.2	4.3	2.5	6.3
May	4.4	4.5	15.4	3.9	4.3	12.1	3.8	13.8	3.9	7.1	8.0	4.3	2.6	6.2
June	4.6	4.7	15.8	4.1	4.4	13.0	3.9	14.4	4.0	7.4	8.4	4.5	2.6	6.3
July	4.6	4.7	15.6	4.0	4.6	14.0	4.0	14.8	4.1	7.3	8.1	4.5	2.7	6.3
Aug	4.9	5.1	17.4	4.4	4.8	14.1	4.2	15.8	4.3	8.1	9.0	4.8	2.8	6.8
Sept	5.0	5.0	16.0	4.3	5.0	13.6	4.4	14.9	4.3	8.0	8.8	4.8	2.8	7.1
Oct	5.4	5.5	17.2	4.8	5.3	13.6	4.8	15.4	4.7	8.6	9.6	5.3	3.1	6.8
Nov	5.6	5.9	17.7	5.2	5.4	13.7	4.9	15.7	5.0	8.8	9.9	5.5	3.3	8.0
Dec	5.8	5.8	17.2	5.2	5.8	15.1	5.2	16.2	5.1	9.1	10.2	5.7	3.4	8.0
2002: Jan	5.6	5.8	16.3	5.2	5.4	15.8	4.8	16.1	5.0	8.7	9.8	5.5	3.5	7.9
Feb	5.5	5.6	16.8	5.0	5.5	14.3	5.0	15.6	4.9	8.8	9.6	5.5	3.4	8.0
Mar	5.7	5.9	18.5	5.2	5.5	14.3	5.0	16.4	5.0	9.5	10.7	5.7	3.4	7.3
Apr	6.0	6.1	18.1	5.4	6.0	15.4	5.4	16.8	5.3	10.0	11.2	5.9	3.9	8.6
May	5.8	5.9	18.6	5.2	5.8	15.2	5.2	16.9	5.2	9.1	10.2	5.8	3.6	8.1
June	5.9	6.1	19.6	5.4	5.7	15.6	5.1	17.6	5.2	9.5	10.7	5.7	4.1	8.2
July	5.9	6.0	19.8	5.2	5.7	15.6	5.2	17.7	5.3	8.9	9.9	5.7	3.5	8.4
Aug	5.7	6.0	20.1	5.2	5.4	14.2	4.9	17.2	5.1	8.8	9.6	5.5	3.4	7.3
Sept	5.6	5.9	17.8	5.2	5.4	13.5	4.9	15.7	5.1	8.5	9.6	5.5	3.6	7.2
Oct	5.7	5.8	15.6	5.2	5.7	13.6	5.2	14.6	5.1	8.8	9.8	5.7	3.4	8.0
Nov	6.0	6.3	17.7	5.7	5.6	15.8	5.0	16.8	5.2	9.8	11.0	5.7	3.6	8.3
Dec	6.0	6.2	17.1	5.6	5.9	15.1	5.3	16.1	5.1	10.1	11.5	5.9	3.6	8.7

[1] Unemployed as percent of civilian labor force in group specified.

Note.—Data relate to persons 16 years of age and over.
See footnote 5 and Note, Table B-35.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–43.—*Civilian unemployment rate by demographic characteristic, 1959–2002*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16-19 years	20 years and over	Total	16-19 years	20 years and over		Total	16-19 years	20 years and over	Total	16-19 years	20 years and over
									Black and other						
1959	5.5	4.8	4.6	14.0	4.1	5.3	12.0	4.7	10.7	11.5	25.2	10.5	9.4	27.7	8.3
1960	5.5	5.0	4.8	14.0	4.2	5.3	12.7	4.6	10.2	10.7	24.0	9.6	9.4	24.8	8.3
1961	6.7	6.0	5.7	15.7	5.1	6.5	14.8	5.7	12.4	12.8	26.8	11.7	11.9	29.2	10.6
1962	5.5	4.9	4.6	13.7	4.0	5.5	12.8	4.7	10.9	10.9	22.0	10.0	11.0	30.2	9.6
1963	5.7	5.0	4.7	15.9	3.9	5.8	15.1	4.8	10.8	10.5	27.3	9.2	11.2	34.7	9.4
1964	5.2	4.6	4.1	14.7	3.4	5.5	14.9	4.6	9.6	8.9	24.3	7.7	10.7	31.6	9.0
1965	4.5	4.1	3.6	12.9	2.9	5.0	14.0	4.0	8.1	7.4	23.3	6.0	9.2	31.7	7.5
1966	3.8	3.4	2.8	10.5	2.2	4.3	12.1	3.3	7.3	6.3	21.3	4.9	8.7	31.3	6.6
1967	3.8	3.4	2.7	10.7	2.1	4.6	11.5	3.8	7.4	6.0	23.9	4.3	9.1	29.6	7.1
1968	3.6	3.2	2.6	10.1	2.0	4.3	12.1	3.4	6.7	5.6	22.1	3.9	8.3	28.7	6.3
1969	3.5	3.1	2.5	10.0	1.9	4.2	11.5	3.4	6.4	5.3	21.4	3.7	7.8	27.6	5.8
1970	4.9	4.5	4.0	13.7	3.2	5.4	13.4	4.4	8.2	7.3	25.0	5.6	9.3	34.5	6.9
1971	5.9	5.4	4.9	15.1	4.0	6.3	15.1	5.3	9.9	9.1	28.8	7.3	10.9	35.4	8.7
1972	5.6	5.1	4.5	14.2	3.6	5.9	14.2	4.9	10.0	8.9	29.7	6.9	11.4	38.4	8.8
									Black						
1972	5.6	5.1	4.5	14.2	3.6	5.9	14.2	4.9	10.4	9.3	31.7	7.0	11.8	40.5	9.0
1973	4.9	4.3	3.8	12.3	3.0	5.3	13.0	4.3	9.4	8.0	27.8	6.0	11.1	36.1	8.6
1974	5.6	5.0	4.4	13.5	3.5	6.1	14.5	5.1	10.5	9.8	33.1	7.4	11.3	37.4	8.8
1975	8.5	7.8	7.2	18.3	6.2	8.6	17.4	7.5	14.8	14.8	38.1	12.5	14.8	41.0	12.2
1976	7.7	7.0	6.4	17.3	5.4	7.9	16.4	6.8	14.0	13.7	37.5	11.4	14.3	41.6	11.7
1977	7.1	6.2	5.5	15.0	4.7	7.3	15.9	6.2	14.0	13.3	39.2	10.7	14.9	43.4	12.3
1978	6.1	5.2	4.6	13.5	3.7	6.2	14.4	5.2	12.8	11.8	36.7	9.3	13.8	40.8	11.2
1979	5.8	5.1	4.5	13.9	3.6	5.9	14.0	5.0	12.3	11.4	34.2	9.3	13.3	39.1	10.9
1980	7.1	6.3	6.1	16.2	5.3	6.5	14.8	5.6	14.3	14.5	37.5	12.4	14.0	39.8	11.9
1981	7.6	6.7	6.5	17.9	5.6	6.9	16.6	5.9	15.6	15.7	40.7	13.5	15.6	42.2	13.4
1982	9.7	8.6	8.8	21.7	7.8	8.3	19.0	7.3	18.9	20.1	48.9	17.8	17.6	47.1	15.4
1983	9.6	8.4	8.8	20.2	7.9	7.9	18.3	6.9	19.5	20.3	48.8	18.1	18.6	48.2	16.5
1984	7.5	6.5	6.4	16.8	5.7	6.5	15.2	5.8	15.9	16.4	42.7	14.3	15.4	42.6	13.5
1985	7.2	6.2	6.1	16.5	5.4	6.4	14.8	5.7	15.1	15.3	41.0	13.2	14.9	39.2	13.1
1986	7.0	6.0	6.0	16.3	5.3	6.1	14.9	5.4	14.5	14.8	39.3	12.9	14.2	39.2	12.4
1987	6.2	5.3	5.4	15.5	4.8	5.2	13.4	4.6	13.0	12.7	34.4	11.1	13.2	34.9	11.6
1988	5.5	4.7	4.7	13.9	4.1	4.7	12.3	4.1	11.7	11.7	32.7	10.1	11.7	32.0	10.4
1989	5.3	4.5	4.5	13.7	3.9	4.5	11.5	4.0	11.4	11.5	31.9	10.0	11.4	33.0	9.8
1990	5.6	4.8	4.9	14.3	4.3	4.7	12.6	4.1	11.4	11.9	31.9	10.4	10.9	29.9	9.7
1991	6.8	6.1	6.5	17.6	5.8	5.6	15.2	5.0	12.5	13.0	36.3	11.5	12.0	36.0	10.6
1992	7.5	6.6	7.0	18.5	6.4	6.1	15.8	5.5	14.2	15.2	42.0	13.5	13.2	37.2	11.8
1993	6.9	6.1	6.3	17.7	5.7	5.7	14.7	5.2	13.0	13.8	40.1	12.1	12.1	37.4	10.7
1994	6.1	5.3	5.4	16.3	4.8	5.2	13.8	4.6	11.5	12.0	37.6	10.3	11.0	32.6	9.8
1995	5.6	4.9	4.9	15.6	4.3	4.8	13.4	4.3	10.4	10.6	37.1	8.8	10.2	34.3	8.6
1996	5.4	4.7	4.7	15.5	4.1	4.7	12.9	4.1	10.5	11.1	36.9	9.4	10.0	30.3	8.7
1997	4.9	4.2	4.2	14.3	3.6	4.2	12.8	3.7	10.0	10.2	36.5	8.5	9.9	28.7	8.8
1998	4.5	3.9	3.9	14.1	3.2	3.9	10.9	3.4	8.9	8.9	30.1	7.4	9.0	25.3	7.9
1999	4.2	3.7	3.6	12.6	3.0	3.8	11.3	3.3	8.0	8.2	30.9	6.7	7.8	25.1	6.8
2000	4.0	3.5	3.4	12.3	2.8	3.6	10.4	3.1	7.6	8.1	26.4	7.0	7.2	23.0	6.3
2001	4.8	4.2	4.3	13.8	3.7	4.1	11.4	3.6	8.7	9.3	30.5	8.0	8.1	27.5	7.0
2002	5.8	5.1	5.3	15.9	4.7	4.9	13.0	4.4	10.3	10.7	31.5	9.5	9.8	28.2	8.9
2001: Jan	4.2	3.6	3.7	13.1	3.1	3.5	10.2	3.0	8.2	8.3	27.3	7.0	8.1	27.6	6.9
Feb	4.2	3.7	3.7	12.7	3.1	3.7	9.6	3.3	7.5	8.2	31.1	6.7	6.9	25.1	5.9
Mar	4.3	3.7	3.8	12.3	3.3	3.6	11.0	3.1	8.4	9.4	28.7	8.2	7.5	28.0	6.3
Apr	4.5	3.9	4.0	12.9	3.4	3.9	10.9	3.4	8.2	9.5	33.5	8.1	7.1	27.7	5.9
May	4.4	3.9	3.9	13.3	3.4	3.8	10.7	3.4	8.0	9.0	30.0	7.6	7.2	21.5	6.4
June	4.6	4.0	4.2	14.3	3.6	3.8	11.0	3.4	8.4	9.1	30.5	7.8	7.8	25.7	6.7
July	4.6	4.1	4.1	13.8	3.5	4.1	12.6	3.5	8.1	9.0	28.1	7.9	7.2	25.2	6.2
Aug	4.9	4.3	4.4	15.1	3.8	4.2	12.4	3.6	9.0	10.1	31.4	8.8	8.0	28.7	7.0
Sept	5.0	4.3	4.4	13.6	3.8	4.3	11.7	3.8	8.8	9.1	30.8	7.8	8.6	26.1	7.7
Oct	5.4	4.7	4.9	14.7	4.4	4.5	11.5	4.1	9.6	9.6	31.2	8.2	9.6	29.1	8.5
Nov	5.6	5.0	5.3	15.8	4.7	4.6	11.1	4.2	9.9	10.1	31.6	8.7	9.7	32.6	8.4
Dec	5.8	5.1	5.2	14.6	4.6	5.0	12.8	4.5	10.2	10.4	32.0	9.1	10.0	34.8	8.7
2002: Jan	5.6	5.0	5.1	13.7	4.7	4.8	14.6	4.2	9.8	10.3	32.1	8.9	9.4	29.0	8.4
Feb	5,5	4,9	5,0	15.4	4.4	4.9	12.6	4.4	9.6	10.0	30.0	8.7	9.3	25.6	8.5
Mar	5.7	5.0	5.1	16.3	4.5	4.8	12.7	4.3	10.7	11.7	36.9	10.1	9.8	24.7	9.0
Apr	6.0	5.3	5.4	15.4	4.8	5.1	12.5	4.6	11.2	10.9	37.3	9.3	11.4	33.5	10.2
May	5.8	5.2	5.3	15.4	4.8	5.1	14.2	4.5	10.2	10.3	36.8	8.6	10.1	22.3	9.5
June	5.9	5.2	5.4	17.7	4.7	4.9	13.4	4.4	10.7	11.5	30.0	10.4	9.9	30.4	8.8
July	5.9	5.3	5.5	19.1	4.8	5.0	13.6	4.4	9.9	9.6	20.5	9.0	10.2	34.8	8.9
Aug	5.7	5.1	5.4	17.5	4.7	4.8	12.1	4.3	9.6	10.0	30.5	8.8	9.3	30.4	8.3
Sept	5.6	5.1	5.3	15.3	4.7	4.8	12.3	4.3	9.6	10.7	34.7	9.3	8.5	20.8	7.9
Oct	5.7	5.1	5.2	14.4	4.7	5.0	13.0	4.5	9.8	10.6	24.8	9.7	9.1	21.3	8.5
Nov	6.0	5.2	5.6	15.8	5.0	4.7	13.3	4.2	11.0	12.0	29.7	10.9	10.1	31.6	9.0
Dec	6.0	5.1	5.4	14.6	4.9	4.9	12.5	4.4	11.5	11.9	34.4	10.7	11.2	32.0	10.1

[1] Unemployed as percent of civilian labor force in group specified.

Note.—See Note, Table B-42.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–44.—*Unemployment by duration and reason, 1955–2002*

[Thousands of persons, except as noted; monthly data seasonally adjusted[1]]

Year or month	Unemployment	Duration of unemployment						Reason for unemployment					
		Less than 5 weeks	5-14 weeks	15-26 weeks	27 weeks and over	Average (mean) duration (weeks)	Median duration (weeks)	Job losers[3]			Job leavers	Reentrants	New entrants
								Total	On layoff	Other			
1955	2,852	1,335	815	366	336	13.0	.....	.....	.....	.....	.....	.....	.....
1956	2,750	1,412	805	301	232	11.3	.....	.....	.....	.....	.....	.....	.....
1957	2,859	1,408	891	321	239	10.5	.....	.....	.....	.....	.....	.....	.....
1958	4,602	1,753	1,396	785	667	13.9	.....	.....	.....	.....	.....	.....	.....
1959	3,740	1,585	1,114	469	571	14.4	.....	.....	.....	.....	.....	.....	.....
1960	3,852	1,719	1,176	503	454	12.8	.....	.....	.....	.....	.....	.....	.....
1961	4,714	1,806	1,376	728	804	15.6	.....	.....	.....	.....	.....	.....	.....
1962	3,911	1,663	1,134	534	585	14.7	.....	.....	.....	.....	.....	.....	.....
1963	4,070	1,751	1,231	535	553	14.0	.....	.....	.....	.....	.....	.....	.....
1964	3,786	1,697	1,117	491	482	13.3	.....	.....	.....	.....	.....	.....	.....
1965	3,366	1,628	983	404	351	11.8	.....	.....	.....	.....	.....	.....	.....
1966	2,875	1,573	779	287	239	10.4	.....	.....	.....	.....	.....	.....	.....
1967[2]	2,975	1,634	893	271	177	8.7	2.3	1,229	394	836	438	945	396
1968	2,817	1,594	810	256	156	8.4	4.5	1,070	334	736	431	909	407
1969	2,832	1,629	827	242	133	7.8	4.4	1,017	339	678	436	965	413
1970	4,093	2,139	1,290	428	235	8.6	4.9	1,811	675	1,137	550	1,228	504
1971	5,016	2,245	1,585	668	519	11.3	6.3	2,323	735	1,588	590	1,472	630
1972	4,882	2,242	1,472	601	566	12.0	6.2	2,108	582	1,526	641	1,456	677
1973	4,365	2,224	1,314	483	343	10.0	5.2	1,694	472	1,221	683	1,340	649
1974	5,156	2,604	1,597	574	381	9.8	5.2	2,242	746	1,495	768	1,463	681
1975	7,929	2,940	2,484	1,303	1,203	14.2	8.4	4,386	1,671	2,714	827	1,892	823
1976	7,406	2,844	2,196	1,018	1,348	15.8	8.2	3,679	1,050	2,628	903	1,928	895
1977	6,991	2,919	2,132	913	1,028	14.3	7.0	3,166	865	2,300	909	1,963	953
1978	6,202	2,865	1,923	766	648	11.9	5.9	2,585	712	1,873	874	1,857	885
1979	6,137	2,950	1,946	706	535	10.8	5.4	2,635	851	1,784	880	1,806	817
1980	7,637	3,295	2,470	1,052	820	11.9	6.5	3,947	1,488	2,459	891	1,927	872
1981	8,273	3,449	2,539	1,122	1,162	13.7	6.9	4,267	1,430	2,837	923	2,102	981
1982	10,678	3,883	3,311	1,708	1,776	15.6	8.7	6,268	2,127	4,141	840	2,384	1,185
1983	10,717	3,570	2,937	1,652	2,559	20.0	10.1	6,258	1,780	4,478	830	2,412	1,216
1984	8,539	3,350	2,451	1,104	1,634	18.2	7.9	4,421	1,171	3,250	823	2,184	1,110
1985	8,312	3,498	2,509	1,025	1,280	15.6	6.8	4,139	1,157	2,982	877	2,256	1,039
1986	8,237	3,448	2,557	1,045	1,187	15.0	6.9	4,033	1,090	2,943	1,015	2,160	1,029
1987	7,425	3,246	2,196	943	1,040	14.5	6.5	3,566	943	2,623	965	1,974	920
1988	6,701	3,084	2,007	801	809	13.5	5.9	3,092	851	2,241	983	1,809	816
1989	6,528	3,174	1,978	730	646	11.9	4.8	2,983	850	2,133	1,024	1,843	677
1990	7,047	3,265	2,257	822	703	12.0	5.3	3,387	1,028	2,359	1,041	1,930	688
1991	8,628	3,480	2,791	1,246	1,111	13.7	6.8	4,694	1,292	3,402	1,004	2,139	792
1992	9,613	3,376	2,830	1,453	1,954	17.7	8.7	5,389	1,260	4,129	1,002	2,285	937
1993	8,940	3,262	2,584	1,297	1,798	18.0	8.3	4,848	1,115	3,733	976	2,198	919
1994	7,996	2,728	2,408	1,237	1,623	18.8	9.2	3,815	977	2,838	791	2,786	604
1995	7,404	2,700	2,342	1,085	1,278	16.6	8.3	3,476	1,030	2,446	824	2,525	579
1996	7,236	2,633	2,287	1,053	1,262	16.7	8.3	3,370	1,021	2,349	774	2,512	580
1997	6,739	2,538	2,138	995	1,067	15.8	8.0	3,037	931	2,106	795	2,338	569
1998	6,210	2,622	1,950	763	875	14.5	6.7	2,822	866	1,957	734	2,132	520
1999	5,880	2,568	1,832	755	725	13.4	6.4	2,622	848	1,774	783	2,005	469
2000	5,655	2,543	1,803	665	644	12.6	5.9	2,492	842	1,650	775	1,957	431
2001	6,742	2,833	2,163	949	797	13.2	6.8	3,428	1,049	2,379	832	2,029	453
2002	8,266	2,858	2,547	1,346	1,515	16.6	9.1	4,522	1,097	3,424	859	2,352	533
2001: Jan	5,887	2,631	1,940	709	648	12.6	5.9	2,762	1,002	1,760	813	1,921	439
Feb	5,888	2,749	1,737	778	688	12.8	6.0	2,856	950	1,906	815	1,900	387
Mar	6,061	2,698	1,967	814	696	12.8	6.4	2,995	988	2,007	803	1,908	410
Apr	6,310	2,822	1,976	781	726	12.6	6.0	3,020	1,023	1,997	776	1,991	456
May	6,210	2,714	2,021	862	641	12.4	6.4	3,132	1,055	2,077	818	1,827	467
June	6,465	2,809	2,098	843	728	12.9	6.3	3,249	990	2,259	807	1,921	470
July	6,545	2,647	2,170	948	682	12.7	6.7	3,294	1,020	2,274	791	1,948	442
Aug	6,972	2,953	2,152	980	818	13.2	6.6	3,438	1,071	2,367	877	2,162	488
Sept	7,064	2,807	2,366	1,084	823	13.3	7.3	3,595	1,114	2,481	819	2,102	466
Oct	7,665	3,084	2,522	1,136	906	13.0	7.4	4,297	1,288	3,009	880	2,113	466
Nov	8,026	3,090	2,573	1,207	1,110	14.4	7.6	4,501	1,157	3,344	848	2,197	497
Dec	8,259	3,024	2,724	1,295	1,115	14.5	8.2	4,492	1,107	3,385	908	2,361	495
2002: Jan	7,922	2,978	2,586	1,418	1,127	14.6	8.8	4,354	1,124	3,231	879	2,191	479
Feb	7,891	2,828	2,515	1,383	1,178	15.0	8.1	4,326	1,106	3,220	877	2,268	485
Mar	8,111	3,078	2,411	1,355	1,333	15.4	8.1	4,270	1,066	3,204	862	2,471	557
Apr	8,594	2,793	2,818	1,360	1,494	16.6	8.9	4,525	1,095	3,430	1,017	2,450	519
May	8,351	2,876	2,531	1,316	1,636	17.1	9.8	4,598	1,091	3,506	902	2,433	499
June	8,424	2,729	2,784	1,434	1,669	17.3	11.7	4,579	1,061	3,518	836	2,360	584
July	8,345	2,896	2,464	1,349	1,533	16.4	8.6	4,580	1,224	3,356	818	2,375	571
Aug	8,142	2,880	2,431	1,309	1,474	16.2	8.4	4,560	1,151	3,410	824	2,270	619
Sept	8,092	2,708	2,511	1,315	1,585	17.8	9.5	4,535	999	3,536	781	2,263	526
Oct	8,209	2,715	2,471	1,324	1,656	17.5	9.6	4,737	1,054	3,682	838	2,344	469
Nov	8,508	2,904	2,490	1,288	1,734	17.7	9.3	4,651	1,031	3,619	822	2,376	588
Dec	8,590	2,783	2,496	1,369	1,856	18.5	9.6	4,633	1,085	3,547	868	2,475	515

[1] Because of independent seasonal adjustment of the various series, detail will not add to totals.
[2] Data for 1967 by reason for unemployment are not equal to total unemployment.
[3] Beginning January 1994, job losers and persons who completed temporary jobs.

Note.—Data relate to persons 16 years of age and over.
See footnote 5 and Note, Table B-35.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–45.—*Unemployment insurance programs, selected data, 1972–2002*

Year or month	All programs			State programs					
	Covered employment[1]	Insured unemployment (weekly average)[2 3]	Total benefits paid (millions of dollars)[2 4]	Insured unemployment[3]	Initial claims	Exhaustions[5]	Insured unemployment as percent of covered employment	Benefits paid: Total (millions of dollars)[4]	Benefits paid: Average weekly check (dollars)[6]
	Thousands			Weekly average; thousands					
1972	66,458	2,192	5,491	1,848	261	35	3.5	4,471	56.76
1973	69,897	1,793	4,517	1,632	247	29	2.7	4,008	59.00
1974	72,451	2,558	6,934	2,262	363	37	3.5	5,975	64.25
1975	71,037	4,937	16,802	3,986	478	81	6.0	11,755	70.23
1976	73,459	3,846	12,345	2,991	386	63	4.6	8,975	75.16
1977	76,419	3,308	10,999	2,655	375	55	3.9	8,357	78.79
1978	88,804	2,645	9,007	2,359	346	39	3.3	7,717	83.67
1979	92,062	2,592	9,401	2,434	388	39	2.9	8,613	89.67
1980	92,659	3,837	16,175	3,350	488	59	3.9	13,761	98.95
1981	93,300	3,410	15,287	3,047	460	57	3.5	13,262	106.70
1982	91,628	4,592	24,491	4,059	583	80	4.6	20,649	119.34
1983	91,898	3,774	20,968	3,395	438	80	3.9	18,549	123.59
1984	96,474	2,560	13,739	2,475	377	50	2.8	13,237	123.47
1985	99,186	2,699	15,217	2,617	397	49	2.9	14,707	128.11
1986	101,099	2,739	16,563	2,643	378	52	2.8	15,950	135.65
1987	103,936	2,369	14,684	2,300	328	46	2.4	14,211	140.39
1988	107,156	2,135	13,481	2,081	310	38	2.0	13,086	144.74
1989	109,929	2,205	14,569	2,158	330	37	2.1	14,205	151.43
1990	111,500	2,575	18,387	2,522	388	45	2.4	17,932	161.20
1991	109,606	3,406	26,327	3,342	447	67	3.2	25,479	169.56
1992	110,167	3,348	[7] 26,035	3,245	408	74	3.1	25,056	173.38
1993	112,146	2,845	[7] 22,629	2,751	341	62	2.6	21,661	179.41
1994	115,255	2,746	22,508	2,670	340	57	2.4	21,537	181.91
1995	118,068	2,639	21,991	2,572	357	51	2.3	21,226	187.04
1996	120,567	2,656	22,495	2,595	356	53	2.2	21,820	189.27
1997	121,044	2,370	20,324	2,323	323	48	1.9	19,735	192.84
1998	124,184	2,260	19,941	2,222	321	44	1.8	19,431	200.58
1999	127,042	2,223	21,020	2,188	298	44	1.7	20,559	212.10
2000	129,926	2,146	20,955	2,110	301	41	1.6	20,479	221.01
2001	129,636	3,012	32,179	2,974	404	54	2.3	31,631	238.07
2002 *p*	.....	3,624	.....	3,585	407	.....	.....	.....	.....
				**	**		**		
2001: Jan	.....	3,117	2,809.5	2,371	342	50	1.9	2,751.0	231.51
Feb	.....	3,059	2,503.8	2,479	370	45	2.0	2,454.4	228.36
Mar	.....	2,837	2,580.3	2,600	390	44	2.0	2,532.1	235.21
Apr	.....	2,972	2,458.4	2,733	402	52	2.1	2,415.6	234.05
May	.....	2,537	2,417.4	2,891	402	48	2.3	2,379.4	234.99
June	.....	2,646	2,273.4	2,982	400	47	2.3	2,241.0	235.19
July	.....	3,175	2,751.1	3,035	397	58	2.4	2,712.6	235.37
Aug	.....	2,731	2,657.1	3,150	403	54	2.5	2,617.6	236.84
Sept	.....	2,856	2,352.2	3,318	453	57	2.6	2,316.1	241.77
Oct	.....	3,030	2,924.8	3,562	465	63	2.8	2,879.4	245.32
Nov	.....	3,142	2,934.6	3,603	439	61	2.8	2,890.8	246.16
Dec	.....	3,945	3,527.1	3,540	410	71	2.8	3,477.0	248.25
2002: Jan	.....	4,321	4,398.6	3,475	401	81	2.7	4,318.9	251.13
Feb	.....	4,308	3,948.1	3,522	391	77	2.7	3,860.9	254.62
Mar	.....	4,146	3,969.6	3,619	422	88	2.8	3,896.9	256.64
Apr	.....	3,953	3,887.1	3,757	435	101	2.9	3,838.8	256.85
May	.....	3,254	3,442.9	3,797	412	85	3.0	3,401.7	259.10
June	.....	3,542	3,105.7	3,672	393	85	2.9	3,068.8	257.89
July	.....	3,527	3,595.9	3,513	386	93	2.7	3,551.2	255.51
Aug	.....	3,126	3,188.7	3,532	399	82	2.8	3,144.2	254.86
Sept	.....	3,270	3,009.3	3,627	423	82	2.8	2,952.1	259.43
Oct	.....	2,939	3,258.3	3,597	401	79	2.8	3,191.3	260.92
Nov	.....	3,086	2,860.0	3,483	378	75	2.7	2,790.1	258.29
Dec *p*	.....	3,904	.....	3,438	418	.....	2.7	.....	.....

** Monthly data are seasonally adjusted.

[1] Through 1996 includes persons under the State, UCFE (Federal employee, effective January 1955), RRB (Railroad Retirement Board) programs, and UCX (unemployment compensation for ex-servicemembers, effective October 1958) programs. Beginning 1997, covered employment data are State and UCFE programs only. Workers covered by State programs account for about 97 percent of wage and salary earners.

Covered employment data beginning 2001 are based on the North American Industry Classification System (NAICS). Prior data are based on the Standard Industrial Classification (SIC).

[2] Includes State, UCFE, RR, and UCX. Also includes Federal and State extended benefit programs. Does not include FSB (Federal supplemental benefits), SUA (special unemployment assistance), Federal Supplemental Compensation, Emergency Unemployment Compensation programs, and TEUC (Temporary Extended Unemployment Compensation).

[3] Covered workers who have completed at least 1 week of unemployment.

[4] Annual data are net amounts and monthly data are gross amounts.

[5] Individuals receiving final payments in benefit year.

[6] For total unemployment only.

[7] Including Emergency Unemployment Compensation and Federal Supplemental Compensation, total benefits paid for 1992 and 1993 would be approximately (in millions of dollars): for 1992, 39,990 and for 1993, 34,876.

Note.—Insured unemployment and initial claims programs include Puerto Rican sugar cane workers beginning 1963.

Source: Department of Labor, Employment and Training Administration.

TABLE B–46.—*Employees on nonagricultural payrolls, by major industry, 1955–2002*

[Thousands of persons; monthly data seasonally adjusted]

Year or month	Total	Goods-producing industries					
		Total	Mining	Construction	Manufacturing		
					Total	Durable goods	Nondurable goods
1955	50,641	20,513	792	2,839	16,882	9,511	7,370
1956	52,369	21,104	822	3,039	17,243	9,802	7,442
1957	52,855	20,967	828	2,962	17,176	9,825	7,351
1958	51,322	19,513	751	2,817	15,945	8,801	7,144
1959	53,270	20,411	732	3,004	16,675	9,342	7,333
1960	54,189	20,434	712	2,926	16,796	9,429	7,367
1961	53,999	19,857	672	2,859	16,326	9,041	7,285
1962	55,549	20,451	650	2,948	16,853	9,450	7,403
1963	56,653	20,640	635	3,010	16,995	9,586	7,410
1964	58,283	21,005	634	3,097	17,274	9,785	7,489
1965	60,763	21,926	632	3,232	18,062	10,374	7,688
1966	63,901	23,158	627	3,317	19,214	11,250	7,963
1967	65,803	23,308	613	3,248	19,447	11,408	8,039
1968	67,897	23,737	606	3,350	19,781	11,594	8,187
1969	70,384	24,361	619	3,575	20,167	11,862	8,304
1970	70,880	23,578	623	3,588	19,367	11,176	8,190
1971	71,211	22,935	609	3,704	18,623	10,604	8,019
1972	73,675	23,668	628	3,889	19,151	11,022	8,129
1973	76,790	24,893	642	4,097	20,154	11,863	8,291
1974	78,265	24,794	697	4,020	20,077	11,897	8,181
1975	76,945	22,600	752	3,525	18,323	10,662	7,661
1976	79,382	23,352	779	3,576	18,997	11,051	7,946
1977	82,471	24,346	813	3,851	19,682	11,570	8,112
1978	86,697	25,585	851	4,229	20,505	12,245	8,259
1979	89,823	26,461	958	4,463	21,040	12,730	8,310
1980	90,406	25,658	1,027	4,346	20,285	12,159	8,127
1981	91,152	25,497	1,139	4,188	20,170	12,082	8,089
1982	89,544	23,812	1,128	3,904	18,780	11,014	7,766
1983	90,152	23,330	952	3,946	18,432	10,707	7,725
1984	94,408	24,718	966	4,380	19,372	11,476	7,896
1985	97,387	24,842	927	4,668	19,248	11,458	7,790
1986	99,344	24,533	777	4,810	18,947	11,195	7,752
1987	101,958	24,674	717	4,958	18,999	11,154	7,845
1988	105,209	25,125	713	5,098	19,314	11,363	7,951
1989	107,884	25,254	692	5,171	19,391	11,394	7,997
1990	109,403	24,905	709	5,120	19,076	11,109	7,968
1991	108,249	23,745	689	4,650	18,406	10,569	7,837
1992	108,601	23,231	635	4,492	18,104	10,277	7,827
1993	110,713	23,352	610	4,668	18,075	10,221	7,854
1994	114,163	23,908	601	4,986	18,321	10,448	7,873
1995	117,191	24,265	581	5,160	18,524	10,683	7,841
1996	119,608	24,493	580	5,418	18,495	10,789	7,706
1997	122,690	24,962	596	5,691	18,675	11,010	7,665
1998	125,865	25,414	590	6,020	18,805	11,205	7,600
1999	128,916	25,507	539	6,415	18,552	11,111	7,441
2000	131,720	25,669	543	6,653	18,473	11,141	7,332
2001	131,922	24,944	565	6,685	17,695	10,636	7,059
2002 *p*	130,793	23,836	557	6,555	16,725	9,907	6,818
2001: Jan	132,382	25,546	553	6,702	18,291	11,059	7,232
Feb	132,457	25,491	556	6,738	18,197	11,006	7,191
Mar	132,461	25,441	560	6,781	18,100	10,929	7,171
Apr	132,243	25,249	563	6,686	18,000	10,866	7,134
May	132,229	25,147	566	6,714	17,867	10,769	7,098
June	132,108	25,012	567	6,697	17,748	10,684	7,064
July	132,045	24,907	570	6,680	17,657	10,606	7,051
Aug	131,966	24,776	571	6,679	17,526	10,516	7,010
Sept	131,819	24,675	571	6,674	17,430	10,445	6,985
Oct	131,414	24,511	566	6,643	17,302	10,343	6,959
Nov	131,087	24,353	566	6,629	17,158	10,237	6,921
Dec	130,890	24,261	565	6,634	17,062	10,166	6,896
2002: Jan	130,871	24,130	568	6,615	16,947	10,070	6,877
Feb	130,706	24,041	564	6,597	16,880	10,023	6,857
Mar	130,701	23,975	560	6,593	16,822	9,976	6,846
Apr	130,680	23,905	564	6,541	16,800	9,976	6,824
May	130,702	23,870	558	6,541	16,771	9,963	6,808
June	130,736	23,861	555	6,549	16,757	9,944	6,813
July	130,790	23,812	551	6,519	16,742	9,922	6,820
Aug	130,913	23,801	555	6,556	16,690	9,889	6,801
Sept	130,829	23,748	552	6,556	16,640	9,832	6,808
Oct	130,898	23,688	552	6,544	16,592	9,800	6,792
Nov *p*	130,810	23,625	550	6,540	16,535	9,756	6,779
Dec *p*	130,709	23,566	553	6,543	16,470	9,710	6,760

Note.—Data in Tables B-46 and B-47 are based on reports from employing establishments and relate to full- and part-time wage and salary workers in nonagricultural establishments who received pay for any part of the pay period which includes the 12th of the month. Not comparable with labor force data (Tables B-35 through B-44), which include proprietors, self-employed persons, domestic servants,

See next page for continuation of table.

TABLE B–46.—*Employees on nonagricultural payrolls, by major industry, 1955–2002*—Continued

[Thousands of persons; monthly data seasonally adjusted]

Year or month	Service-producing industries								
	Total	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government		
							Total	Federal	State and local
1955	30,128	4,141	2,934	7,601	2,298	6,240	6,914	2,187	4,727
1956	31,264	4,244	3,027	7,831	2,389	6,497	7,278	2,209	5,069
1957	31,889	4,241	3,037	7,848	2,438	6,708	7,616	2,217	5,399
1958	31,811	3,976	2,989	7,761	2,481	6,765	7,839	2,191	5,648
1959	32,857	4,011	3,092	8,035	2,549	7,087	8,083	2,233	5,850
1960	33,755	4,004	3,153	8,238	2,628	7,378	8,353	2,270	6,083
1961	34,142	3,903	3,142	8,195	2,688	7,619	8,594	2,279	6,315
1962	35,098	3,906	3,207	8,359	2,754	7,982	8,890	2,340	6,550
1963	36,013	3,903	3,258	8,520	2,830	8,277	9,225	2,358	6,868
1964	37,278	3,951	3,347	8,812	2,911	8,660	9,596	2,348	7,248
1965	38,839	4,036	3,477	9,239	2,977	9,036	10,074	2,378	7,696
1966	40,743	4,158	3,608	9,637	3,058	9,498	10,784	2,564	8,220
1967	42,495	4,268	3,700	9,906	3,185	10,045	11,391	2,719	8,672
1968	44,158	4,318	3,791	10,308	3,337	10,567	11,839	2,737	9,102
1969	46,023	4,442	3,919	10,785	3,512	11,169	12,195	2,758	9,437
1970	47,302	4,515	4,006	11,034	3,645	11,548	12,554	2,731	9,823
1971	48,276	4,476	4,014	11,338	3,772	11,797	12,881	2,696	10,185
1972	50,007	4,541	4,127	11,822	3,908	12,276	13,334	2,684	10,649
1973	51,897	4,656	4,291	12,315	4,046	12,857	13,732	2,663	11,068
1974	53,471	4,725	4,447	12,539	4,148	13,441	14,170	2,724	11,446
1975	54,345	4,542	4,430	12,630	4,165	13,892	14,686	2,748	11,937
1976	56,030	4,582	4,562	13,193	4,271	14,551	14,871	2,733	12,138
1977	58,125	4,713	4,723	13,792	4,467	15,302	15,127	2,727	12,399
1978	61,113	4,923	4,985	14,556	4,724	16,252	15,672	2,753	12,919
1979	63,363	5,136	5,221	14,972	4,975	17,112	15,947	2,773	13,174
1980	64,748	5,146	5,292	15,018	5,160	17,890	16,241	2,866	13,375
1981	65,655	5,165	5,375	15,171	5,298	18,615	16,031	2,772	13,259
1982	65,732	5,081	5,295	15,158	5,340	19,021	15,837	2,739	13,098
1983	66,821	4,952	5,283	15,587	5,466	19,664	15,869	2,774	13,096
1984	69,690	5,156	5,568	16,512	5,684	20,746	16,024	2,807	13,216
1985	72,544	5,233	5,727	17,315	5,948	21,927	16,394	2,875	13,519
1986	74,811	5,247	5,761	17,880	6,273	22,957	16,693	2,899	13,794
1987	77,284	5,362	5,848	18,422	6,533	24,110	17,010	2,943	14,067
1988	80,084	5,512	6,030	19,023	6,630	25,504	17,386	2,971	14,415
1989	82,630	5,614	6,187	19,475	6,668	26,907	17,779	2,988	14,791
1990	84,497	5,777	6,173	19,601	6,709	27,934	18,304	3,085	15,219
1991	84,504	5,755	6,081	19,284	6,646	28,336	18,402	2,966	15,436
1992	85,370	5,718	5,997	19,356	6,602	29,052	18,645	2,969	15,676
1993	87,361	5,811	5,981	19,773	6,757	30,197	18,841	2,915	15,926
1994	90,256	5,984	6,162	20,507	6,896	31,579	19,128	2,870	16,257
1995	92,925	6,132	6,378	21,187	6,806	33,117	19,305	2,822	16,484
1996	95,115	6,253	6,482	21,597	6,911	34,454	19,419	2,757	16,662
1997	97,727	6,408	6,648	21,966	7,109	36,040	19,557	2,699	16,857
1998	100,451	6,611	6,800	22,295	7,389	37,533	19,823	2,686	17,137
1999	103,409	6,834	6,911	22,848	7,555	39,055	20,206	2,669	17,538
2000	106,051	7,031	6,947	23,337	7,578	40,457	20,702	2,777	17,925
2001	106,978	7,065	6,776	23,522	7,712	40,970	20,933	2,616	18,317
2002 *p*	106,957	6,773	6,671	23,306	7,761	41,184	21,262	2,619	18,643
2001: Jan	106,836	7,138	6,859	23,525	7,644	40,983	20,687	2,617	18,070
Feb	106,966	7,149	6,840	23,559	7,663	40,995	20,760	2,618	18,142
Mar	107,020	7,148	6,820	23,559	7,685	41,015	20,793	2,617	18,176
Apr	106,994	7,137	6,804	23,559	7,697	40,970	20,827	2,618	18,209
May	107,082	7,131	6,794	23,566	7,719	41,018	20,854	2,612	18,242
June	107,096	7,121	6,781	23,581	7,719	40,990	20,904	2,617	18,287
July	107,138	7,110	6,773	23,577	7,718	40,989	20,971	2,622	18,349
Aug	107,190	7,088	6,762	23,553	7,728	41,061	20,998	2,624	18,374
Sept	107,144	7,044	6,747	23,509	7,739	41,062	21,043	2,622	18,421
Oct	106,903	6,974	6,728	23,470	7,743	40,923	21,065	2,622	18,443
Nov	106,734	6,907	6,693	23,449	7,751	40,834	21,100	2,616	18,484
Dec	106,629	6,856	6,702	23,318	7,748	40,883	21,122	2,615	18,507
2002: Jan	106,741	6,850	6,702	23,396	7,748	40,908	21,137	2,609	18,528
Feb	106,665	6,837	6,689	23,331	7,745	40,901	21,162	2,608	18,554
Mar	106,726	6,814	6,681	23,332	7,740	40,963	21,196	2,611	18,585
Apr	106,775	6,799	6,678	23,345	7,743	41,025	21,185	2,610	18,575
May	106,832	6,793	6,681	23,327	7,732	41,093	21,206	2,600	18,606
June	106,875	6,790	6,681	23,308	7,733	41,152	21,211	2,601	18,610
July	106,978	6,780	6,679	23,339	7,737	41,215	21,228	2,607	18,621
Aug	107,112	6,765	6,671	23,295	7,745	41,347	21,289	2,611	18,678
Sept	107,081	6,725	6,663	23,291	7,773	41,336	21,293	2,621	18,672
Oct	107,210	6,727	6,657	23,289	7,803	41,385	21,349	2,649	18,700
Nov *p*	107,185	6,718	6,643	23,249	7,810	41,400	21,365	2,658	18,707
Dec *p*	107,143	6,691	6,637	23,145	7,818	41,473	21,379	2,659	18,720

Note (cont'd).—which count persons as employed when they are not at work because of industrial disputes, bad weather, etc., even if they are not paid for the time off; and which are based on a sample of the working-age population. For description and details of the various establishment data, see *Employment and Earnings*.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–47.—*Hours and earnings in private nonagricultural industries, 1959–2002* [1]

[Monthly data seasonally adjusted]

Year or month	Average weekly hours			Average hourly earnings			Average weekly earnings, total private			
	Total private	Manufacturing		Total private		Manufacturing (current dollars)	Level		Percent change from year earlier	
		Total	Overtime	Current dollars	1982 dollars [2]		Current dollars	1982 dollars [2]	Current dollars	1982 dollars [2]
1959	39.0	40.3	2.7	$2.02	$6.69	$2.19	$78.78	$260.86	4.9	4.2
1960	38.6	39.7	2.5	2.09	6.79	2.26	80.67	261.92	2.4	.4
1961	38.6	39.8	2.4	2.14	6.88	2.32	82.60	265.59	2.4	1.4
1962	38.7	40.4	2.8	2.22	7.07	2.39	85.91	273.60	4.0	3.0
1963	38.8	40.5	2.8	2.28	7.17	2.45	88.46	278.18	3.0	1.7
1964	38.7	40.7	3.1	2.36	7.33	2.53	91.33	283.63	3.2	2.0
1965	38.8	41.2	3.6	2.46	7.52	2.61	95.45	291.90	4.5	2.9
1966	38.6	41.4	3.9	2.56	7.62	2.71	98.82	294.11	3.5	.8
1967	38.0	40.6	3.4	2.68	7.72	2.82	101.84	293.49	3.1	–.2
1968	37.8	40.7	3.6	2.85	7.89	3.01	107.73	298.42	5.8	1.7
1969	37.7	40.6	3.6	3.04	7.98	3.19	114.61	300.81	6.4	.8
1970	37.1	39.8	3.0	3.23	8.03	3.35	119.83	298.08	4.6	–.9
1971	36.9	39.9	2.9	3.45	8.21	3.57	127.31	303.12	6.2	1.7
1972	37.0	40.5	3.5	3.70	8.53	3.82	136.90	315.44	7.5	4.1
1973	36.9	40.7	3.8	3.94	8.55	4.09	145.39	315.38	6.2	–.0
1974	36.5	40.0	3.3	4.24	8.28	4.42	154.76	302.27	6.4	–4.2
1975	36.1	39.5	2.6	4.53	8.12	4.83	163.53	293.06	5.7	–3.0
1976	36.1	40.1	3.1	4.86	8.24	5.22	175.45	297.37	7.3	1.5
1977	36.0	40.3	3.5	5.25	8.36	5.68	189.00	300.96	7.7	1.2
1978	35.8	40.4	3.6	5.69	8.40	6.17	203.70	300.89	7.8	–.0
1979	35.7	40.2	3.3	6.16	8.17	6.70	219.91	291.66	8.0	–3.1
1980	35.3	39.7	2.8	6.66	7.78	7.27	235.10	274.65	6.9	–5.8
1981	35.2	39.8	2.8	7.25	7.69	7.99	255.20	270.63	8.5	–1.5
1982	34.8	38.9	2.3	7.68	7.68	8.49	267.26	267.26	4.7	–1.2
1983	35.0	40.1	3.0	8.02	7.79	8.83	280.70	272.52	5.0	2.0
1984	35.2	40.7	3.4	8.32	7.80	9.19	292.86	274.73	4.3	.8
1985	34.9	40.5	3.3	8.57	7.77	9.54	299.09	271.16	2.1	–1.3
1986	34.8	40.7	3.4	8.76	7.81	9.73	304.85	271.94	1.9	.3
1987	34.8	41.0	3.7	8.98	7.73	9.91	312.50	269.16	2.5	–1.0
1988	34.7	41.1	3.9	9.28	7.69	10.19	322.02	266.79	3.0	–.9
1989	34.6	41.0	3.8	9.66	7.64	10.48	334.24	264.22	3.8	–1.0
1990	34.5	40.8	3.6	10.01	7.52	10.83	345.35	259.47	3.3	–1.8
1991	34.3	40.7	3.6	10.32	7.45	11.18	353.98	255.40	2.5	–1.6
1992	34.4	41.0	3.8	10.57	7.41	11.46	363.61	254.99	2.7	–.2
1993	34.5	41.4	4.1	10.83	7.39	11.74	373.64	254.87	2.8	–.0
1994	34.7	42.0	4.7	11.12	7.40	12.07	385.86	256.73	3.3	.7
1995	34.5	41.6	4.4	11.43	7.39	12.37	394.34	255.07	2.2	–.6
1996	34.4	41.6	4.5	11.82	7.43	12.77	406.61	255.73	3.1	.3
1997	34.6	42.0	4.8	12.28	7.55	13.17	424.89	261.31	4.5	2.2
1998	34.6	41.7	4.6	12.78	7.75	13.49	442.19	268.32	4.1	2.7
1999	34.5	41.7	4.6	13.24	7.86	13.90	456.78	271.25	3.3	1.1
2000	34.5	41.6	4.6	13.76	7.89	14.37	474.72	272.36	3.9	.4
2001	34.2	40.7	3.9	14.31	7.99	14.83	489.40	273.26	3.1	.3
2002 [p]	34.1	40.9	4.1	14.77	8.14	15.30	503.66	277.50	2.9	1.6
2001: Jan	34.3	41.1	4.2	14.04	7.90	14.56	481.57	271.00	3.4	–.3
Feb	34.2	40.9	4.0	14.11	7.92	14.62	482.56	270.95	3.2	–.3
Mar	34.2	40.9	4.0	14.17	7.96	14.67	484.61	272.10	3.4	.5
Apr	34.2	40.9	3.9	14.20	7.94	14.72	485.64	271.46	3.2	–.1
May	34.2	40.8	3.9	14.23	7.92	14.78	486.67	270.97	3.5	–.1
June	34.2	40.7	3.9	14.29	7.94	14.81	488.72	271.66	3.5	.3
July	34.2	40.8	3.9	14.33	7.99	14.86	490.09	273.34	3.5	.9
Aug	34.1	40.7	4.0	14.37	8.01	14.91	490.02	273.30	3.1	.4
Sept	34.1	40.6	3.9	14.43	8.01	14.95	492.06	273.06	3.3	.8
Oct	34.0	40.5	3.8	14.46	8.06	14.99	491.64	273.89	2.7	.7
Nov	34.1	40.4	3.8	14.51	8.09	15.03	494.79	275.96	3.3	1.6
Dec	34.1	40.6	3.8	14.55	8.14	15.08	496.16	277.49	3.5	2.3
2002: Jan	34.1	40.6	3.9	14.58	8.14	15.13	497.18	277.44	3.2	2.4
Feb	34.2	40.7	3.9	14.61	8.13	15.17	499.66	278.21	3.5	2.7
Mar	34.2	41.0	4.1	14.64	8.12	15.19	500.69	277.85	3.3	2.1
Apr	34.2	40.9	4.2	14.66	8.09	15.19	501.37	276.69	3.2	1.9
May	34.2	40.9	4.2	14.69	8.11	15.27	502.40	277.42	3.2	2.4
June	34.3	41.1	4.3	14.74	8.13	15.31	505.58	278.86	3.4	2.7
July	34.0	40.7	4.0	14.76	8.13	15.28	501.84	276.34	2.4	1.1
Aug	34.1	40.9	4.2	14.83	8.14	15.34	505.70	277.70	3.2	1.6
Sept	34.2	40.8	4.1	14.85	8.14	15.35	507.87	278.28	3.2	1.9
Oct	34.2	40.7	4.1	14.90	8.15	15.44	509.58	278.61	3.6	1.7
Nov [p]	34.2	40.6	4.0	14.93	8.15	15.44	510.61	278.87	3.2	1.1
Dec [p]	34.1	40.9	4.2	14.98	8.18	15.49	510.82	278.83	3.0	.5

[1] For production or nonsupervisory workers; total includes private industry groups shown in Table B-46.
[2] Current dollars divided by the consumer price index for urban wage earners and clerical workers on a 1982=100 base.

Note.—See Note, Table B-46.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–48.—*Employment cost index, private industry, 1981–2002*

Year and month	Total private			Goods-producing			Service-producing			Manufacturing			Nonmanufacturing		
	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]	Total compensation	Wages and salaries	Benefits [1]
	Index, June 1989=100; not seasonally adjusted														
December:															
1981	71.2	73.0	66.6	73.3	75.7	68.2	69.5	71.1	65.1	72.5	74.9	67.5	70.4	72.1	66.1
1982	75.8	77.6	71.4	77.8	80.0	73.2	74.1	75.9	69.6	76.9	79.1	72.4	75.1	76.8	70.6
1983	80.1	81.4	76.7	81.6	83.2	78.3	78.9	80.2	75.2	80.8	82.5	77.5	79.6	81.0	76.2
1984	84.0	84.8	81.7	85.4	86.4	83.2	82.9	83.7	80.4	85.0	86.1	82.7	83.4	84.2	81.1
1985	87.3	88.3	84.6	88.2	89.4	85.7	86.6	87.7	83.6	87.8	89.2	85.0	87.0	88.0	84.4
1986	90.1	91.1	87.5	91.0	92.3	88.3	89.3	90.3	86.8	90.7	92.1	87.5	89.7	90.6	87.5
1987	93.1	94.1	90.5	93.8	95.2	90.9	92.6	93.4	90.2	93.4	95.2	89.8	92.9	93.7	91.0
1988	97.6	98.0	96.7	97.9	98.2	97.3	97.3	97.8	96.1	97.6	98.1	96.6	97.5	97.8	96.8
1989	102.3	102.0	102.6	102.1	102.0	102.6	102.3	102.2	102.6	102.0	101.9	102.3	102.3	102.2	102.8
1990	107.0	106.1	109.4	107.0	105.8	109.9	107.0	106.3	109.0	107.2	106.2	109.5	106.9	106.1	109.3
1991	111.7	110.0	116.2	111.9	109.7	116.7	111.6	110.2	115.7	112.2	110.3	116.1	111.5	109.8	116.2
1992	115.6	112.9	122.2	116.1	112.8	123.4	115.2	113.0	121.2	116.5	113.7	122.6	115.1	112.6	122.0
1993	119.8	116.4	128.3	120.6	116.1	130.3	119.3	116.6	126.7	121.3	117.3	130.0	119.0	116.0	127.4
1994	123.5	119.7	133.0	124.3	119.6	134.8	122.8	119.7	131.5	125.1	120.8	134.3	122.6	119.1	132.3
1995	126.7	123.1	135.9	127.3	122.9	137.1	126.2	123.2	134.7	128.3	124.3	136.7	125.9	122.5	135.3
1996	130.6	127.3	138.6	130.9	126.8	139.7	130.2	127.5	137.4	132.1	128.4	139.8	129.8	126.8	137.9
1997	135.1	132.3	141.8	134.1	130.6	141.5	135.3	133.1	141.4	135.3	132.2	141.7	134.7	132.1	141.5
1998	139.8	137.4	145.2	137.8	135.2	143.2	140.5	138.4	145.7	138.9	136.8	142.7	139.7	137.4	145.8
1999	144.6	142.2	150.2	142.5	139.7	148.2	145.3	143.3	150.7	143.6	141.5	147.8	144.5	142.1	150.7
2000	150.9	147.7	158.6	148.8	145.2	156.2	151.7	148.9	159.4	149.3	146.5	154.8	151.1	147.9	159.7
2001	157.2	153.3	166.7	154.4	150.5	162.6	158.2	154.5	168.4	154.6	151.7	160.4	157.6	153.5	168.8
2002: Mar	158.9	154.7	169.3	156.2	151.7	165.8	159.9	156.1	170.7	156.6	153.1	163.7	159.3	155.0	171.1
June	160.7	156.3	171.6	157.6	153.1	167.4	161.8	157.7	173.3	158.1	154.5	165.5	161.1	156.5	173.5
Sept	161.6	157.0	173.1	158.6	153.9	168.8	162.7	158.4	174.9	159.1	155.4	166.8	162.0	157.2	175.2
	Index, June 1989=100; seasonally adjusted														
2001: Mar	152.8	149.4	160.8	150.8	147.0	158.1	153.7	150.5	162.3	151.1	148.5	156.6	153.0	149.5	162.6
June	154.3	150.9	162.5	152.2	148.6	159.3	155.3	151.8	164.4	152.4	150.0	157.6	154.6	150.8	164.7
Sept	155.7	152.0	164.7	153.4	149.5	160.9	156.9	153.1	167.0	153.3	150.7	158.7	156.2	152.1	167.2
Dec	157.3	153.4	166.8	154.8	150.5	163.1	158.6	154.7	169.0	154.8	151.7	161.0	157.9	153.7	169.4
2002: Mar	158.7	154.8	168.6	156.2	151.7	165.4	159.9	156.1	170.4	156.4	153.1	163.2	159.2	155.0	170.8
June	160.4	156.3	170.9	157.7	153.1	167.1	161.8	157.6	173.1	157.8	154.5	165.2	161.0	156.4	173.3
Sept	161.4	156.9	172.6	158.8	153.9	168.9	162.7	158.3	174.8	159.1	155.4	167.0	161.9	157.1	175.0
	Percent change from 12 months earlier, not seasonally adjusted														
December:															
1981	9.9	8.8	12.1	9.9	8.6	12.7	9.8	8.9	11.5	9.8	8.7	12.7	9.7	8.9	11.8
1982	6.5	6.3	7.2	6.1	5.7	7.3	6.6	6.8	6.9	6.1	5.6	7.3	6.7	6.5	6.8
1983	5.7	4.9	7.4	4.9	4.0	7.0	6.5	5.7	8.0	5.1	4.3	7.0	6.0	5.5	7.9
1984	4.9	4.2	6.5	4.7	3.8	6.3	5.1	4.4	6.9	5.2	4.4	6.7	4.8	4.0	6.4
1985	3.9	4.1	3.5	3.3	3.5	3.0	4.5	4.8	4.0	3.3	3.6	2.8	4.3	4.5	4.1
1986	3.2	3.2	3.4	3.2	3.2	3.0	3.1	3.0	3.8	3.3	3.3	2.9	3.1	3.0	3.7
1987	3.3	3.3	3.4	3.1	3.1	2.9	3.7	3.4	3.9	3.0	3.4	2.6	3.6	3.4	4.0
1988	4.8	4.1	6.9	4.4	3.2	7.0	5.1	4.7	6.5	4.5	3.0	7.6	5.0	4.4	6.4
1989	4.8	4.1	6.1	4.3	3.9	5.4	5.1	4.5	6.8	4.5	3.9	5.9	4.9	4.5	6.2
1990	4.6	4.0	6.6	4.8	3.7	7.1	4.6	4.0	6.2	5.1	4.2	7.0	4.5	3.8	6.3
1991	4.4	3.7	6.2	4.6	3.7	6.2	4.3	3.7	6.1	4.7	3.9	6.0	4.3	3.5	6.3
1992	3.5	2.6	5.2	3.8	2.8	5.7	3.2	2.5	4.8	3.8	3.1	5.6	3.2	2.6	5.0
1993	3.6	3.1	5.0	3.9	2.9	5.6	3.6	3.2	4.5	4.1	3.2	6.0	3.4	3.0	4.4
1994	3.1	2.8	3.7	3.1	3.0	3.5	2.9	2.7	3.8	3.1	3.0	3.3	3.0	2.7	3.8
1995	2.6	2.8	2.2	2.4	2.8	1.7	2.8	2.9	2.4	2.6	2.9	1.8	2.7	2.9	2.3
1996	3.1	3.4	2.0	2.8	3.2	1.9	3.2	3.5	2.0	3.0	3.3	2.3	3.1	3.5	1.9
1997	3.4	3.9	2.3	2.4	3.0	1.3	3.9	4.4	2.9	2.4	3.0	1.4	3.8	4.2	2.6
1998	3.5	3.9	2.4	2.8	3.5	1.2	3.8	4.0	3.0	2.7	3.5	.7	3.7	4.0	3.0
1999	3.4	3.5	3.4	3.4	3.3	3.4	3.4	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4
2000	4.4	3.9	5.6	4.4	3.9	5.4	4.4	3.9	5.8	4.0	3.5	4.7	4.6	4.1	6.0
2001	4.2	3.8	5.1	3.8	3.7	4.1	4.3	3.8	5.6	3.5	3.5	3.6	4.3	3.8	5.7
2002: Mar	3.9	3.5	4.8	3.6	3.2	4.6	4.0	3.7	5.0	3.5	3.1	4.2	4.0	3.7	5.0
June	4.0	3.6	5.1	3.6	3.0	4.9	4.2	3.8	5.3	3.6	3.0	4.8	4.1	3.7	5.2
Sept	3.7	3.2	4.8	3.6	2.9	5.0	3.7	3.4	4.7	3.8	3.1	5.2	3.6	3.3	4.7
	Percent change from 3 months earlier, seasonally adjusted														
2001: Mar	1.1	1.0	1.3	1.1	1.2	0.9	1.1	0.9	1.4	1.1	1.4	0.8	1.1	0.9	1.5
June	1.0	1.0	1.1	.9	1.1	.8	1.0	.9	1.3	.9	1.0	.6	1.0	.9	1.3
Sept	.9	.7	1.4	.8	.6	1.0	1.0	.9	1.6	.6	.5	.7	1.0	.9	1.5
Dec	1.0	.9	1.3	.9	.7	1.4	1.1	1.0	1.2	1.0	.7	1.4	1.1	1.1	1.3
2002: Mar	.9	.9	1.1	.9	.8	1.4	.8	.9	.8	1.0	.9	1.4	.8	.8	.8
June	1.1	1.0	1.4	1.0	.9	1.0	1.2	1.0	1.6	.9	.9	1.2	1.1	.9	1.5
Sept	.6	.4	1.0	.7	.5	1.1	.6	.4	1.0	.8	.6	1.1	.6	.4	1.0

[1] Employer costs for employee benefits.

Note.—The employment cost index is a measure of the change in the cost of labor, free from the influence of employment shifts among occupations and industries.

Data exclude farm and household workers.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–49.—*Productivity and related data, business sector, 1959–2002*

[Index numbers, 1992=100; quarterly data seasonally adjusted]

Year or quarter	Output per hour of all persons		Output[1]		Hours of all persons[2]		Compensation per hour[3]		Real compensation per hour[4]		Unit labor costs		Implicit price deflator[5]	
	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector
1959	47.9	51.3	31.9	31.6	66.6	61.6	13.1	13.7	58.3	60.9	27.4	26.7	26.7	26.2
1960	48.8	51.9	32.5	32.1	66.6	61.9	13.7	14.3	59.8	62.6	28.0	27.5	27.0	26.5
1961	50.6	53.7	33.1	32.8	65.5	61.1	14.2	14.8	61.6	64.2	28.1	27.6	27.2	26.7
1962	52.9	56.1	35.2	35.0	66.6	62.4	14.9	15.4	63.7	66.1	28.1	27.5	27.4	26.9
1963	55.0	58.1	36.8	36.6	67.0	63.1	15.4	16.0	65.2	67.5	28.0	27.5	27.6	27.1
1964	57.5	60.5	39.2	39.1	68.1	64.6	16.2	16.7	67.7	69.7	28.2	27.6	27.9	27.5
1965	59.6	62.4	41.9	41.9	70.4	67.1	16.8	17.2	69.1	70.9	28.2	27.6	28.4	27.8
1966	62.0	64.6	44.8	44.9	72.3	69.5	17.9	18.2	71.7	72.9	28.9	28.2	29.1	28.5
1967	63.4	65.8	45.6	45.7	72.1	69.4	19.0	19.3	73.5	74.9	29.9	29.4	29.9	29.4
1968	65.3	67.8	47.9	48.1	73.4	70.9	20.4	20.7	76.0	77.2	31.3	30.6	31.0	30.5
1969	65.7	67.9	49.4	49.5	75.2	73.0	21.9	22.2	77.1	78.2	33.3	32.6	32.4	31.9
1970	67.0	68.9	49.4	49.5	73.7	71.8	23.5	23.7	78.6	79.2	35.1	34.4	33.9	33.3
1971	69.9	71.8	51.3	51.4	73.4	71.5	25.0	25.3	80.1	80.8	35.8	35.2	35.3	34.7
1972	72.2	74.2	54.7	54.9	75.7	74.0	26.6	26.9	82.4	83.3	36.8	36.2	36.5	35.8
1973	74.5	76.5	58.5	58.9	78.5	76.9	28.9	29.1	84.2	84.8	38.8	38.0	38.4	37.0
1974	73.2	75.3	57.6	58.0	78.6	77.0	31.7	31.9	83.2	83.9	43.2	42.4	42.1	40.8
1975	75.8	77.4	57.0	57.0	75.2	73.7	34.9	35.2	84.1	84.7	46.1	45.5	46.1	45.1
1976	78.5	80.3	60.9	61.1	77.6	76.1	38.0	38.2	86.5	87.0	48.4	47.6	48.5	47.6
1977	79.8	81.5	64.3	64.6	80.6	79.2	41.0	41.3	87.6	88.2	51.4	50.7	51.4	50.6
1978	80.7	82.6	68.3	68.8	84.7	83.3	44.6	45.0	89.2	89.9	55.3	54.5	55.1	54.1
1979	80.7	82.2	70.6	70.9	87.5	86.3	48.9	49.3	89.4	90.0	60.7	59.9	59.8	58.7
1980	80.4	82.0	69.8	70.2	86.8	85.6	54.2	54.6	89.2	89.8	67.4	66.5	65.2	64.3
1981	82.0	83.0	71.7	71.6	87.4	86.2	59.4	59.9	89.3	90.0	72.4	72.1	71.2	70.5
1982	81.6	82.5	69.6	69.4	85.2	84.1	63.8	64.3	90.7	91.3	78.2	77.9	75.3	74.8
1983	84.6	86.2	73.3	73.8	86.6	85.6	66.5	67.1	90.7	91.5	78.6	77.8	77.8	77.2
1984	87.0	88.1	79.7	80.0	91.6	90.8	69.4	69.9	91.1	91.7	79.8	79.4	80.0	79.4
1985	88.7	89.3	83.1	83.0	93.6	93.0	72.9	73.2	92.5	92.9	82.1	82.0	82.2	81.9
1986	91.4	92.0	86.1	86.2	94.2	93.8	76.7	77.0	95.5	96.0	83.9	83.7	83.5	83.2
1987	91.9	92.3	89.2	89.3	97.0	96.7	79.7	80.0	96.0	96.4	86.7	86.6	85.6	85.4
1988	93.0	93.5	92.9	93.3	100.0	99.8	83.5	83.6	97.1	97.2	89.8	89.4	88.3	87.9
1989	93.9	94.2	96.2	96.5	102.4	102.4	85.8	85.8	95.7	95.7	91.3	91.1	91.5	91.2
1990	95.2	95.3	97.6	97.8	102.6	102.7	90.7	90.5	96.3	96.2	95.3	95.0	94.8	94.5
1991	96.3	96.4	96.5	96.6	100.2	100.2	95.0	95.0	97.3	97.3	98.7	98.5	98.1	98.0
1992	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1993	100.5	100.5	103.1	103.3	102.6	102.9	102.5	102.2	100.0	99.7	101.9	101.7	102.2	102.2
1994	101.9	101.8	108.1	108.2	106.2	106.2	104.5	104.3	99.9	99.7	102.6	102.5	104.0	104.1
1995	102.6	102.8	111.5	111.8	108.7	108.8	106.7	106.6	99.6	99.4	104.1	103.7	106.0	106.1
1996	105.4	105.4	116.4	116.7	110.4	110.7	110.1	109.8	100.1	99.8	104.5	104.2	107.7	107.6
1997	107.8	107.5	122.5	122.7	113.6	114.1	113.5	113.1	101.0	100.6	105.3	105.2	109.7	109.8
1998	110.6	110.3	128.5	128.8	116.2	116.8	119.7	119.1	105.0	104.5	108.2	108.0	110.6	110.8
1999	113.5	112.9	134.5	134.8	118.5	119.4	125.2	124.3	107.6	106.8	110.3	110.1	111.6	112.1
2000	116.9	116.2	140.0	140.2	119.7	120.6	133.8	133.0	111.2	110.6	114.4	114.4	113.5	114.1
2001	118.2	117.5	139.8	140.1	118.2	119.2	137.7	136.6	111.4	110.5	116.5	116.3	115.8	116.3
1998:I	110.0	109.6	126.7	127.0	115.2	115.9	117.6	116.9	103.6	103.0	106.9	106.7	110.3	110.5
II	110.0	109.8	127.3	127.7	115.7	116.3	119.1	118.6	104.7	104.2	108.3	108.0	110.4	110.6
III	110.6	110.3	128.7	129.0	116.3	117.0	120.5	119.9	105.5	105.0	108.9	108.7	110.7	111.0
IV	111.8	111.4	131.3	131.6	117.4	118.1	121.7	121.1	106.1	105.5	108.8	108.6	110.8	111.1
1999:I	112.7	112.1	132.4	132.7	117.4	118.4	124.1	123.2	107.7	106.9	110.2	109.9	111.2	111.5
II	112.5	111.9	133.0	133.3	118.2	119.1	124.3	123.4	107.1	106.3	110.5	110.3	111.5	111.9
III	113.6	112.9	134.9	135.3	118.8	119.8	125.4	124.5	107.3	106.6	110.4	110.3	111.8	112.3
IV	115.2	114.7	137.7	138.0	119.5	120.4	127.0	126.3	107.8	107.2	110.2	110.1	112.1	112.6
2000:I	115.3	114.7	138.4	138.7	120.1	120.9	131.4	130.8	110.5	110.0	114.0	114.0	112.8	113.4
II	117.2	116.4	140.3	140.5	119.7	120.7	132.4	131.5	110.5	109.8	113.0	113.0	113.4	113.9
III	117.3	116.6	140.4	140.6	119.7	120.6	135.0	134.3	111.7	111.1	115.1	115.2	113.7	114.3
IV	117.9	117.1	140.7	141.0	119.4	120.4	136.3	135.3	111.9	111.2	115.6	115.6	114.3	114.8
2001:I	117.5	116.7	140.4	140.7	119.5	120.6	137.3	136.3	111.8	110.9	116.9	116.8	115.2	115.7
II	117.4	116.6	139.4	139.7	118.7	119.8	137.5	136.3	111.0	110.1	117.1	116.9	115.8	116.3
III	117.9	117.2	139.1	139.4	117.9	118.9	137.8	136.7	111.1	110.2	116.8	116.6	116.4	116.8
IV	120.1	119.3	140.3	140.4	116.8	117.7	138.3	137.2	111.6	110.7	115.1	115.0	115.9	116.5
2002:I	122.5	121.8	142.3	142.5	116.1	117.0	139.3	138.2	112.0	111.1	113.7	113.4	116.0	116.4
II	123.1	122.3	142.5	142.9	115.8	116.8	140.8	139.5	112.2	111.2	114.4	114.0	116.2	116.8
III	124.7	123.8	144.3	144.7	115.7	116.8	142.6	141.2	113.2	112.0	114.3	114.0	116.3	116.9

[1] Output refers to real gross domestic product in the sector.

[2] Hours at work of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by the consumer price index for all urban consumers for recent quarters. The trend from 1978–2001 is based on the consumer price index research series (CPI–U–RS).

[5] Current dollar output divided by the output index.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–50.—*Changes in productivity and related data, business sector, 1959–2002*

[Percent change from preceding period; quarterly data at seasonally adjusted annual rates]

Year or quarter	Output per hour of all persons		Output[1]		Hours of all persons[2]		Compensation per hour[3]		Real compensation per hour[4]		Unit labor costs		Implicit price deflator[5]	
	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector
1959	4.0	4.0	8.3	8.8	4.1	4.6	4.2	4.0	3.5	3.3	0.1	0.0	0.7	1.2
1960	1.9	1.3	1.9	1.7	.0	.4	4.3	4.5	2.6	2.7	2.4	3.1	1.1	1.2
1961	3.7	3.4	2.0	2.0	–1.7	–1.3	4.1	3.6	3.1	2.5	.4	.2	.8	.8
1962	4.6	4.5	6.4	6.8	1.7	2.2	4.5	4.0	3.4	3.0	–.1	–.5	1.0	1.0
1963	3.9	3.5	4.6	4.6	.6	1.1	3.7	3.5	2.3	2.2	–.2	.0	.6	.7
1964	4.6	4.2	6.4	6.7	1.7	2.4	5.1	4.6	3.8	3.2	.5	.3	1.1	1.2
1965	3.6	3.1	7.0	7.1	3.3	3.8	3.8	3.3	2.1	1.7	.2	.2	1.6	1.4
1966	4.1	3.5	6.8	7.2	2.6	3.6	6.7	5.8	3.7	2.9	2.5	2.2	2.5	2.3
1967	2.2	1.7	1.9	1.7	–.3	–.1	5.7	5.9	2.6	2.7	3.5	4.1	2.7	3.2
1968	3.1	3.1	5.0	5.3	1.8	2.1	7.7	7.4	3.4	3.1	4.4	4.2	3.9	3.8
1969	.5	.1	3.0	3.0	2.5	2.9	7.0	6.8	1.5	1.3	6.5	6.7	4.5	4.4
1970	2.0	1.5	.0	–.1	–2.0	–1.6	7.7	7.2	1.9	1.4	5.6	5.6	4.4	4.5
1971	4.4	4.2	3.9	3.8	–.4	–.3	6.4	6.5	1.9	2.0	1.9	2.2	4.3	4.4
1972	3.3	3.4	6.6	6.9	3.3	3.4	6.2	6.4	2.9	3.0	2.8	2.9	3.3	2.9
1973	3.2	3.1	7.0	7.3	3.7	4.0	8.5	8.2	2.2	1.9	5.2	4.9	5.2	3.6
1974	–1.7	–1.6	–1.5	–1.5	.1	.1	9.7	9.8	–1.2	–1.1	11.6	11.6	9.6	10.2
1975	3.5	2.7	–1.0	–1.7	–4.3	–4.3	10.3	10.1	1.0	.9	6.5	7.2	9.6	10.6
1976	3.6	3.7	6.8	7.2	3.1	3.4	8.8	8.6	2.9	2.7	5.1	4.7	5.2	5.4
1977	1.6	1.5	5.6	5.6	3.9	4.0	7.9	8.0	1.3	1.4	6.1	6.4	6.1	6.4
1978	1.1	1.3	6.2	6.5	5.0	5.1	8.8	8.9	1.8	1.9	7.6	7.6	7.2	6.8
1979	.0	–.4	3.3	3.2	3.4	3.6	9.7	9.5	.3	.1	9.8	10.0	8.5	8.5
1980	–.3	–.3	–1.1	–1.1	–.9	–.8	10.8	10.8	–.2	–.2	11.1	11.1	9.1	9.7
1981	1.9	1.2	2.7	2.0	.7	.8	9.5	9.7	.1	.3	7.4	8.3	9.2	9.5
1982	–.4	–.6	–2.9	–3.1	–2.6	–2.5	7.5	7.5	1.5	1.5	8.0	8.1	5.7	6.2
1983	3.6	4.5	5.4	6.4	1.6	1.8	4.2	4.3	.1	.1	.6	–.2	3.4	3.2
1984	2.8	2.2	8.8	8.3	5.8	6.0	4.4	4.3	.4	.3	1.5	2.1	2.9	2.8
1985	2.0	1.3	4.2	3.9	2.2	2.5	4.9	4.7	1.5	1.3	2.9	3.3	2.7	3.2
1986	3.0	3.0	3.7	3.8	.7	.8	5.2	5.2	3.3	3.3	2.1	2.1	1.6	1.7
1987	.5	.4	3.5	3.5	3.0	3.2	3.9	3.8	.5	.4	3.4	3.4	2.5	2.5
1988	1.2	1.3	4.3	4.5	3.0	3.2	4.8	4.6	1.1	.9	3.5	3.2	3.1	3.0
1989	1.0	.8	3.5	3.4	2.5	2.6	2.8	2.7	–1.4	–1.5	1.8	1.9	3.7	3.7
1990	1.3	1.1	1.5	1.4	.2	.3	5.7	5.5	.7	.5	4.3	4.3	3.5	3.6
1991	1.1	1.2	–1.2	–1.3	–2.3	–2.4	4.7	4.9	1.1	1.2	3.6	3.6	3.5	3.7
1992	3.9	3.7	3.7	3.5	–.2	–.2	5.3	5.3	2.7	2.7	1.4	1.6	2.0	2.1
1993	.5	.5	3.1	3.3	2.6	2.9	2.5	2.2	.0	–.3	1.9	1.7	2.2	2.2
1994	1.3	1.3	4.9	4.7	3.5	3.3	2.0	2.1	–.1	.0	.7	.8	1.8	1.9
1995	.7	.9	3.1	3.4	2.4	2.4	2.1	2.1	–.3	–.3	1.4	1.2	2.0	2.0
1996	2.8	2.5	4.4	4.3	1.6	1.7	3.2	3.1	.5	.4	.4	.5	1.6	1.4
1997	2.3	2.0	5.2	5.1	2.9	3.1	3.1	3.0	.9	.8	.8	.9	1.8	2.1
1998	2.6	2.6	4.9	5.0	2.2	2.4	5.5	5.4	4.0	3.9	2.8	2.7	.8	.9
1999	2.6	2.4	4.7	4.6	2.0	2.2	4.6	4.4	2.4	2.2	1.9	2.0	1.0	1.2
2000	3.0	2.9	4.1	4.0	1.0	1.0	6.8	7.0	3.4	3.5	3.7	3.9	1.7	1.8
2001	1.1	1.1	–.2	–.1	–1.3	–1.2	2.9	2.7	.2	–.1	1.8	1.6	2.0	1.9
1998:I	5.1	4.9	7.5	7.8	2.2	2.8	7.3	7.0	6.5	6.2	2.1	2.0	.5	.6
II	.1	.6	1.9	2.1	1.9	1.4	5.4	5.8	4.2	4.6	5.3	5.1	.5	.4
III	2.3	1.9	4.4	4.3	2.0	2.4	4.7	4.6	3.1	3.0	2.3	2.7	.9	1.2
IV	4.4	4.3	8.2	8.3	3.7	3.8	4.0	3.8	2.2	2.0	–.4	–.4	.5	.5
1999:I	3.1	2.4	3.4	3.3	.2	.9	8.2	7.3	6.5	5.5	5.0	4.8	1.3	1.4
II	–.6	–.8	2.1	1.9	2.7	2.6	.5	.6	–2.3	–2.2	1.1	1.3	1.0	1.5
III	3.8	3.7	5.9	6.0	2.0	2.2	3.7	3.7	.8	.8	–.1	.0	1.2	1.4
IV	5.8	6.3	8.4	8.3	2.4	1.9	5.1	5.8	1.7	2.5	–.7	–.5	1.1	1.3
2000:I	.3	.2	2.2	1.9	1.9	1.7	14.7	15.2	10.3	10.7	14.4	14.9	2.4	2.7
II	6.7	6.0	5.4	5.4	–1.2	–.6	3.0	2.2	.0	–.7	–3.5	–3.6	2.2	1.9
III	.4	.6	.4	.2	.0	–.4	8.3	8.7	4.6	4.9	7.8	8.0	1.1	1.4
IV	2.1	1.7	.9	1.1	–1.2	–.6	3.7	3.1	.7	.2	1.6	1.4	1.9	1.6
2001:I	–1.5	–1.5	–1.0	–.9	.4	.5	3.1	2.8	–.6	–.9	4.7	4.3	3.4	3.3
II	–.2	–.1	–2.8	–2.7	–2.6	–2.6	.5	.1	–2.6	–2.9	.7	.3	2.2	2.0
III	1.8	2.1	–.9	–.8	–2.6	–2.9	.9	1.0	.2	.3	–.9	–1.1	1.8	1.7
IV	7.6	7.3	3.5	2.9	–3.9	–4.1	1.4	1.5	1.7	1.8	–5.8	–5.4	–1.6	–1.0
2002:I	8.3	8.6	5.9	6.2	–2.2	–2.2	3.0	2.9	1.6	1.4	–4.9	–5.3	.3	–.2
II	1.8	1.7	.6	.9	–1.2	–.7	4.2	3.9	.8	.5	2.4	2.2	.7	1.4
III	5.4	5.1	5.2	5.1	–.2	.0	5.3	4.9	3.4	3.0	–.1	–.2	.4	.1

[1] Output refers to real gross domestic product in the sector.

[2] Hours at work of all persons engaged in the sector. See footnote 2, Table B-49.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by the consumer price index. See footnote 4, Table B-49.

[5] Current dollar output divided by the output index.

Note.—Percent changes are based on original data and may differ slightly from percent changes based on indexes in Table B-49.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–51.—*Industrial production indexes, major industry divisions, 1955–2002*

[1997=100; monthly data seasonally adjusted]

Year or month	Total industrial production [1]	Manufacturing				Mining	Utilities
		Total [1]	Durable	Nondurable	Other (non-NAICS) [1]		
1955	26.2	24.2					
1956	27.4	25.1					
1957	27.8	25.4					
1958	26.0	23.7					
1959	29.1	26.7					
1960	29.7	27.2					
1961	29.9	27.3					
1962	32.4	29.7					
1963	34.3	31.5					
1964	36.6	33.6					
1965	40.3	37.3					
1966	43.9	40.7					
1967	44.8	41.4					
1968	47.3	43.8					
1969	49.5	45.7					
1970	47.9	43.6					
1971	48.5	44.3					
1972	53.2	48.9	40.2	61.3	67.3	98.7	61.9
1973	57.5	53.3	45.2	64.2	69.5	99.2	64.6
1974	57.2	53.1	44.7	64.4	69.9	97.8	63.9
1975	52.0	47.5	38.8	59.8	66.7	95.4	63.9
1976	56.0	51.7	42.3	65.2	68.6	96.1	66.5
1977	60.1	56.1	46.4	69.6	75.1	98.3	68.2
1978	63.4	59.5	50.0	72.1	77.6	101.4	70.2
1979	65.3	61.2	52.4	72.5	79.3	104.4	71.9
1980	63.5	58.9	49.9	70.3	82.0	106.4	72.4
1981	64.3	59.5	50.4	71.0	83.8	109.1	73.1
1982	60.9	56.2	46.0	69.9	84.8	103.8	71.0
1983	62.5	58.8	48.2	73.2	87.1	98.3	71.5
1984	68.1	64.6	55.0	76.6	91.1	104.6	75.3
1985	68.8	65.7	56.2	77.0	94.6	102.6	75.9
1986	69.5	67.1	57.1	79.2	96.5	95.2	76.4
1987	72.8	70.7	60.2	83.5	101.8	96.0	79.1
1988	76.3	74.3	64.4	86.3	101.5	98.4	82.6
1989	77.0	74.8	64.9	86.8	100.2	97.3	85.8
1990	77.6	75.2	64.9	88.2	99.0	98.7	87.1
1991	76.3	73.7	62.8	87.9	95.1	96.5	88.8
1992	78.3	76.3	65.9	90.1	93.0	94.4	88.0
1993	80.9	78.9	69.5	91.3	93.8	94.4	91.5
1994	85.2	83.7	75.6	94.5	93.1	96.6	92.8
1995	89.3	88.1	82.1	96.2	93.2	96.4	96.4
1996	93.2	92.2	89.1	96.5	92.5	98.1	99.7
1997	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1998	105.6	106.5	110.3	101.4	106.5	98.2	101.5
1999	110.1	111.8	119.3	102.2	109.9	94.0	103.9
2000	115.3	117.4	129.4	102.9	112.4	96.0	106.4
2001	111.2	112.6	122.9	99.8	109.1	96.6	105.6
2002 *p*	110.5	111.5	121.2	99.6	105.7	93.7	110.0
2001: Jan	114.2	115.7	127.6	101.2	112.7	96.3	109.7
Feb	113.6	115.1	126.5	101.3	109.7	97.3	108.5
Mar	113.1	114.5	126.5	100.3	108.8	97.5	107.3
Apr	112.5	114.0	125.3	100.3	109.4	97.8	106.2
May	111.8	113.3	124.2	100.1	108.6	97.6	105.0
June	111.1	112.5	122.9	99.8	108.6	96.9	104.9
July	111.0	112.5	122.8	99.7	109.1	96.4	104.2
Aug	110.7	111.9	121.7	99.6	109.0	96.4	106.2
Sept	109.9	111.2	120.4	99.5	109.4	96.5	104.0
Oct	109.5	110.6	119.3	99.3	109.0	95.8	105.8
Nov	108.8	110.1	119.2	98.6	107.7	95.8	102.7
Dec	108.3	109.6	118.9	98.0	107.1	95.1	102.2
2002: Jan	109.0	110.3	119.6	98.8	105.8	94.4	103.7
Feb	109.2	110.4	119.8	99.0	104.9	94.2	105.2
Mar	109.6	110.7	119.8	99.5	105.0	93.6	108.0
Apr	110.1	111.0	120.5	99.5	104.1	93.4	110.6
May	110.4	111.4	121.2	99.7	104.2	93.4	110.1
June	110.8	111.9	121.8	99.9	105.5	93.5	110.1
July	111.6	112.3	122.2	100.4	105.0	94.4	113.7
Aug	111.3	112.4	122.7	100.0	105.8	93.9	110.4
Sept	111.2	112.1	122.0	100.0	107.1	92.2	113.3
Oct *p*	110.7	111.6	121.6	99.4	106.7	92.4	111.3
Nov *p*	110.8	111.7	122.3	99.1	106.0	93.0	111.3
Dec *p*	110.6	111.5	121.6	99.2	106.9	94.6	110.0

[1] Total industry and total manufacturing series include manufacturing as defined in the North American Industry Classification System (NAICS) plus those industries—logging and newspaper, periodical, book and directory-publishing—that have traditionally been considered to be manufacturing and included in the industrial sector.

Note.—Data based on the North American Industry Classification System; see footnote 1.

Source: Board of Governors of the Federal Reserve System.

TABLE B–52.—*Industrial production indexes, market groupings, 1955–2002*

[1997=100; monthly data seasonally adjusted]

Year or month	Total industrial production	Final products								Nonindustrial supplies			Materials		
		Total	Consumer goods				Equipment			Total	Construction	Business	Total	Nonenergy	Energy
			Total	Automotive products	Other durable goods	Nondurable goods	Total [1]	Business	Defense and space						
1955	26.2	23.8	28.7	27.8	18.3	31.9	17.3	12.6	41.0	25.4	37.9	18.6	28.6	.....	52.0
1956	27.4	25.2	29.8	22.9	19.3	33.9	19.0	14.6	40.1	26.5	39.0	19.7	29.3	.....	55.0
1957	27.8	26.0	30.5	23.9	18.9	35.0	19.7	15.2	41.8	26.5	38.5	19.9	29.3	.....	55.6
1958	26.0	24.8	30.2	19.0	17.8	36.0	17.6	12.8	42.0	25.9	37.1	19.7	26.4	.....	51.6
1959	29.1	27.2	33.2	23.9	20.5	38.5	19.4	14.4	44.3	28.6	41.6	21.5	30.4	.....	54.6
1960	29.7	28.1	34.4	27.3	20.6	39.7	19.9	14.8	45.5	28.8	40.6	22.2	30.8	.....	55.4
1961	29.9	28.3	35.2	25.0	21.2	41.0	19.6	14.3	46.2	29.4	41.0	22.9	30.9	.....	55.8
1962	32.4	30.7	37.5	30.2	23.1	43.0	21.8	15.6	53.5	31.2	43.5	24.3	33.6	.....	57.7
1963	34.3	32.5	39.6	33.1	24.9	44.9	23.1	16.4	57.7	32.9	45.5	25.9	35.8	.....	61.1
1964	36.6	34.3	41.8	34.7	27.2	47.1	24.5	18.3	55.9	35.1	48.3	27.7	38.7	.....	63.6
1965	40.3	37.7	45.1	42.7	30.8	49.2	27.7	21.0	61.8	37.3	51.2	29.6	43.1	.....	66.5
1966	43.9	41.3	47.4	42.6	33.9	51.5	32.2	24.3	72.7	39.6	53.4	31.9	47.0	.....	70.7
1967	44.8	42.9	48.6	37.4	34.4	54.2	34.3	24.8	82.9	41.2	54.8	33.5	46.5	39.2	73.1
1968	47.3	45.0	51.5	44.6	36.8	56.3	35.3	25.9	83.1	43.6	57.6	35.6	49.6	42.1	76.5
1969	49.5	46.4	53.4	44.8	39.2	58.2	36.2	27.5	79.1	46.0	60.1	37.9	52.5	44.7	80.4
1970	47.9	44.8	52.8	37.7	38.0	59.2	33.6	26.5	67.0	45.3	58.0	38.0	50.7	42.1	84.4
1971	48.5	45.2	55.8	48.0	40.3	60.9	31.5	25.2	60.2	46.7	59.8	39.2	51.5	42.9	85.1
1972	53.2	49.0	60.3	51.8	46.1	64.8	34.4	28.8	58.5	52.1	68.0	43.1	56.7	48.0	88.4
1973	57.5	52.7	63.0	56.1	49.2	66.7	39.2	33.5	62.0	55.9	73.5	46.0	61.7	53.2	89.7
1974	57.2	52.5	61.1	48.5	45.8	66.7	40.8	35.4	62.2	55.3	71.5	46.1	61.4	53.1	88.8
1975	52.0	49.5	58.9	46.6	40.1	65.7	37.0	31.3	61.1	49.3	61.1	42.5	54.7	45.7	87.0
1976	56.0	52.9	63.5	53.1	44.8	69.7	38.9	33.3	59.7	52.7	65.8	45.2	59.3	50.8	88.5
1977	60.1	57.1	67.4	60.0	50.1	72.2	43.4	38.1	59.2	57.3	71.7	49.1	63.2	55.0	90.6
1978	63.4	60.6	69.5	59.3	52.3	74.9	48.4	42.9	62.1	60.5	75.8	51.8	66.3	58.4	91.9
1979	65.3	62.5	68.3	53.5	52.5	74.4	53.9	47.9	69.6	62.4	77.4	53.8	68.1	60.0	94.4
1980	63.5	62.2	66.0	41.9	48.9	74.5	56.0	48.3	80.4	59.4	71.5	52.5	65.6	56.5	95.2
1981	64.3	63.6	66.5	43.0	49.4	74.9	58.6	49.8	85.1	59.7	70.4	53.7	66.0	56.7	95.9
1982	60.9	62.6	66.5	41.7	46.0	76.2	56.3	46.4	94.5	56.6	63.4	52.8	60.8	50.9	92.0
1983	62.5	63.8	68.8	47.9	49.8	77.1	56.1	46.3	98.9	59.3	67.1	55.0	62.3	54.2	89.1
1984	68.1	69.1	71.7	52.9	55.6	78.7	64.5	54.4	108.6	64.9	73.4	60.0	68.1	60.5	94.4
1985	68.8	70.9	72.3	52.6	55.5	79.7	67.7	56.2	122.2	66.1	74.7	61.3	67.9	60.6	93.2
1986	69.5	71.9	74.7	55.4	59.0	81.6	66.8	55.3	129.4	68.0	77.0	62.9	67.8	61.8	89.4
1987	72.8	74.9	77.6	58.4	61.9	84.4	70.1	58.5	134.1	72.0	81.2	66.8	71.2	65.9	90.7
1988	76.3	78.6	80.7	61.9	65.6	87.3	74.6	63.8	132.1	74.5	83.2	69.5	74.9	70.0	92.8
1989	77.0	79.3	81.0	64.1	66.3	87.0	76.0	65.9	130.8	75.1	82.6	70.9	75.5	70.4	94.3
1990	77.6	80.0	81.7	61.4	66.7	88.5	76.6	66.8	129.7	76.0	81.7	72.8	75.9	70.4	96.0
1991	76.3	79.0	82.0	57.9	65.5	89.9	73.6	65.3	119.7	74.1	76.9	72.4	74.6	68.8	95.7
1992	78.3	80.8	84.3	67.8	68.3	90.6	74.3	67.9	111.5	76.5	79.9	74.4	76.7	72.0	94.1
1993	80.9	83.2	87.3	75.3	75.4	91.8	75.8	70.1	106.2	79.4	83.4	77.1	79.2	75.0	94.7
1994	85.2	86.9	91.5	85.7	83.4	94.1	78.3	73.7	102.3	84.0	89.2	81.0	84.0	80.9	95.6
1995	89.3	90.5	94.4	89.1	89.3	96.3	83.2	79.6	101.4	88.1	91.5	86.1	88.7	86.3	97.4
1996	93.2	93.9	96.4	92.6	93.3	97.7	89.1	87.1	99.6	92.8	95.6	91.1	92.6	90.7	99.4
1997	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1998	105.6	105.6	103.6	106.9	107.6	102.3	109.7	111.1	104.2	106.7	105.0	107.8	105.2	106.9	99.2
1999	110.1	108.2	105.4	117.2	111.7	102.2	113.8	116.9	103.4	112.2	107.3	115.5	111.2	114.7	98.9
2000	115.3	112.1	107.8	120.3	117.8	103.9	120.8	126.5	99.3	118.8	110.2	124.7	117.0	122.2	99.3
2001	111.2	109.0	106.5	115.6	108.4	104.3	113.8	117.3	100.1	115.3	105.5	121.9	111.8	115.7	97.5
2002 *p*	110.5	107.2	107.6	125.4	108.0	104.2	105.3	107.4	101.3	114.7	104.0	122.0	112.3	115.9	98.6
2001: Jan	114.2	111.6	106.9	108.6	112.9	105.3	121.4	126.7	101.2	119.2	108.7	126.4	114.8	119.4	98.5
Feb	113.6	111.1	106.9	110.4	111.0	105.4	119.6	124.6	99.6	117.9	107.9	124.8	114.4	118.8	98.9
Mar	113.1	110.7	106.6	115.4	110.2	104.2	119.1	123.6	100.7	117.4	107.7	124.0	113.7	117.8	98.9
Apr	112.5	110.5	106.9	114.9	109.8	104.8	117.6	121.5	101.1	115.9	106.6	122.3	113.2	117.3	98.6
May	111.8	110.0	107.1	117.0	109.1	104.8	115.7	119.4	99.7	115.4	106.3	121.6	112.2	116.2	97.7
June	111.1	109.4	106.9	116.3	108.3	104.7	114.3	117.7	99.6	115.0	106.2	121.0	111.3	115.2	97.1
July	111.0	109.3	107.0	120.5	107.3	104.4	113.4	116.7	100.0	114.7	105.2	121.1	111.2	115.3	96.5
Aug	110.7	108.5	106.6	117.2	107.2	104.3	111.8	114.9	99.5	114.6	104.7	121.4	111.3	115.2	97.3
Sept	109.9	107.5	105.9	115.7	106.3	103.8	110.0	112.6	99.9	114.1	104.8	120.5	110.7	114.5	96.9
Oct	109.5	106.9	105.7	112.1	106.0	104.2	108.7	111.1	99.8	113.6	103.0	120.9	110.5	114.0	97.2
Nov	108.8	106.4	105.5	118.0	106.0	102.9	107.4	109.7	99.5	112.9	102.9	119.7	109.7	113.2	96.6
Dec	108.3	106.3	105.7	120.5	106.8	102.7	106.5	108.6	100.3	112.3	102.5	119.0	108.8	112.1	96.2
2002: Jan	109.0	106.6	106.2	120.2	107.5	103.3	106.5	108.8	99.6	112.4	102.6	119.2	110.0	113.4	97.1
Feb	109.2	106.8	106.7	121.3	108.6	103.6	105.8	108.1	99.7	112.8	103.1	119.4	110.2	113.7	97.1
Mar	109.6	107.2	107.4	121.7	109.0	104.4	105.4	107.8	99.8	113.3	104.0	119.7	110.7	114.0	97.9
Apr	110.1	107.2	107.5	123.8	108.2	104.4	105.3	107.7	99.9	113.9	104.0	120.7	111.6	115.0	98.6
May	110.4	107.1	107.3	124.2	109.3	103.9	105.6	108.0	100.6	114.6	104.6	121.5	112.2	115.8	98.5
June	110.8	107.5	107.8	127.4	108.6	104.1	105.7	108.0	101.2	114.8	104.5	121.8	112.6	116.4	98.6
July	111.6	107.9	108.5	130.6	108.0	104.6	105.2	107.3	101.2	115.5	104.4	123.2	113.8	117.2	101.0
Aug	111.3	107.6	107.8	130.6	106.4	103.8	106.0	108.1	101.9	115.4	104.8	122.6	113.6	117.4	99.3
Sept	111.2	107.4	107.9	129.3	106.8	104.2	105.0	106.9	102.0	115.8	104.5	123.6	113.4	117.2	99.1
Oct *p*	110.7	106.7	107.1	125.9	106.8	103.7	104.7	106.2	102.6	115.4	104.2	123.2	112.9	116.9	98.2
Nov *p*	110.8	107.1	107.7	132.2	107.7	103.4	104.3	106.0	102.1	114.9	103.5	122.8	113.0	117.0	98.6
Dec *p*	110.6	106.6	107.1	126.5	108.6	103.3	104.3	105.5	103.3	114.7	102.9	122.9	113.2	117.0	99.1

[1] Includes other items, not shown separately.

Note.—See footnote 1 and Note, Table B–51.

Source: Board of Governors of the Federal Reserve System.

TABLE B–53.—*Industrial production indexes, selected manufacturing industries, 1967–2002*

[1997=100; monthly data seasonally adjusted]

Year or month	Durable manufacturing								Nondurable manufacturing					
	Primary metal		Fabricated metal products	Machinery	Computer and electronic products		Transportation equipment		Apparel	Paper	Printing and support	Chemical	Plastics and rubber products	Food
	Total	Iron and steel products			Total	Selected high-technology [1]	Total	Motor vehicles and parts						
1967	.....	.....	.....	.....	.....	0.8	.....	.....	.....	.....	.....	.....	.....	.....
1968	.....	.....	.....	.....	.....	.9	.....	.....	.....	.....	.....	.....	.....	.....
1969	.....	.....	.....	.....	.....	1.0	.....	.....	.....	.....	.....	.....	.....	.....
1970	.....	.....	.....	.....	.....	1.0	.....	.....	.....	.....	.....	.....	.....	.....
1971	.....	.....	.....	.....	.....	.9	.....	.....	.....	.....	.....	.....	.....	.....
1972	108.3	116.0	67.3	72.5	3.3	1.1	58.8	51.5	98.8	62.5	46.8	53.3	37.5	64.5
1973	126.0	139.1	74.4	83.4	3.9	1.3	67.3	59.0	101.8	67.7	49.3	58.3	42.1	64.6
1974	129.3	148.7	73.0	86.8	4.3	1.6	61.9	50.6	94.5	70.8	47.6	60.5	41.0	65.2
1975	100.2	110.3	63.2	75.4	3.8	1.4	56.1	44.0	92.9	61.3	44.5	53.2	35.1	64.0
1976	106.3	114.4	67.6	78.1	4.5	1.7	62.8	56.4	97.6	67.7	47.8	59.5	38.8	69.1
1977	107.4	111.8	73.4	84.6	5.7	2.3	68.3	64.1	103.9	70.6	51.7	64.6	45.7	70.4
1978	114.2	120.0	77.0	90.4	7.0	2.9	72.8	66.9	107.2	73.6	54.8	67.9	47.2	72.6
1979	116.8	124.3	80.4	94.6	8.7	3.8	73.4	61.2	101.3	74.8	56.4	69.4	46.5	71.8
1980	102.6	105.4	75.9	89.2	10.4	4.6	65.1	45.0	102.9	74.6	56.8	65.5	41.4	73.1
1981	102.7	109.3	75.3	88.0	12.0	5.4	62.6	43.8	102.2	75.7	58.3	66.6	43.9	74.2
1982	72.5	67.1	67.5	72.8	13.6	6.2	57.5	39.4	103.6	74.3	62.8	62.3	43.0	77.0
1983	74.3	67.6	68.1	65.0	15.5	7.4	63.6	50.6	106.8	79.0	67.4	66.6	46.9	77.9
1984	81.5	74.5	74.2	75.1	19.3	9.8	72.3	60.6	108.4	83.2	73.5	70.6	54.2	79.4
1985	75.2	69.2	75.2	74.6	20.7	10.4	76.0	63.0	104.1	81.4	76.3	70.0	56.3	82.3
1986	73.5	67.5	74.7	72.5	21.5	10.7	77.8	62.9	105.5	84.8	80.2	73.3	58.6	83.5
1987	79.1	76.9	76.0	72.9	24.3	12.9	80.6	65.2	105.8	87.7	86.2	78.9	64.9	85.3
1988	88.6	89.5	80.0	79.6	26.7	15.0	85.2	69.7	104.1	91.3	88.8	83.3	67.8	87.5
1989	86.6	86.3	79.3	81.9	27.3	15.8	86.8	69.0	99.1	92.5	89.2	85.0	70.1	87.7
1990	85.5	85.3	78.3	79.4	29.5	17.5	84.0	64.8	96.8	92.4	92.5	87.0	71.9	90.3
1991	80.3	78.0	74.8	74.2	30.5	18.6	80.4	61.7	97.6	92.3	89.7	86.8	71.3	92.0
1992	82.2	81.6	77.0	73.7	34.1	22.3	83.4	70.3	99.3	94.5	94.7	88.0	76.6	93.8
1993	86.2	86.5	79.9	78.9	37.5	26.0	85.8	77.7	101.7	95.5	94.8	89.0	82.0	96.3
1994	92.6	93.3	87.0	86.3	44.4	33.5	89.8	89.3	103.9	99.7	95.9	91.3	88.9	96.8
1995	93.7	94.8	92.2	92.3	57.9	47.7	90.0	92.0	103.9	101.4	97.3	92.7	91.0	99.2
1996	95.9	97.1	95.6	95.3	74.1	67.1	91.7	92.7	101.1	98.0	98.0	94.6	94.2	97.3
1997	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1998	102.3	100.4	103.0	101.9	128.2	138.9	108.7	105.1	94.4	101.0	100.9	101.3	103.3	104.2
1999	101.7	100.0	103.8	99.6	166.4	197.2	114.4	116.4	90.6	102.2	101.9	103.8	108.5	105.1
2000	98.8	100.3	108.2	106.6	221.1	281.4	110.5	116.3	87.2	100.5	102.5	105.9	111.3	106.3
2001	88.2	86.7	100.5	95.1	223.7	290.4	104.1	107.6	78.1	95.3	98.0	105.3	105.2	105.0
2002 *p*	86.0	89.3	99.1	88.0	220.2	291.1	106.1	117.2	72.3	94.3	98.0	105.4	106.0	105.7
2001: Jan	92.9	88.3	105.3	104.9	237.0	308.9	100.7	100.8	83.7	97.4	102.0	104.8	108.5	105.0
Feb	90.3	87.9	103.2	104.2	234.1	305.4	102.1	103.7	83.3	98.0	102.0	106.3	107.1	105.4
Mar	87.8	85.1	102.5	102.0	233.6	305.0	105.2	108.0	82.3	95.3	101.2	105.3	106.5	104.9
Apr	90.6	90.6	101.6	100.0	229.7	298.0	104.9	107.4	80.8	96.9	98.4	104.4	106.3	105.5
May	89.7	90.8	101.0	96.7	225.5	292.6	106.0	109.7	79.9	95.6	98.1	106.0	105.0	105.3
June	90.1	90.3	99.9	94.8	222.7	288.3	105.0	108.7	77.8	94.0	97.0	104.8	105.0	105.1
July	91.2	92.8	100.3	93.0	219.5	282.4	107.3	112.2	77.9	94.8	96.5	105.4	105.5	104.6
Aug	88.6	88.3	100.2	92.0	218.8	282.7	104.9	109.1	75.8	95.5	97.1	105.8	104.8	104.6
Sept	87.9	86.0	98.7	90.9	216.6	279.5	103.4	106.6	74.6	96.4	95.3	105.4	105.2	105.2
Oct	85.9	85.9	98.9	88.5	216.1	280.3	101.4	103.8	74.1	94.7	95.7	106.4	103.6	104.9
Nov	84.9	83.4	97.1	87.8	215.2	280.3	103.8	109.0	73.3	93.1	96.9	105.3	102.2	104.5
Dec	78.2	70.9	97.6	85.9	215.8	280.8	105.0	112.0	73.2	91.5	95.6	103.7	102.5	105.2
2002: Jan	84.3	85.0	97.7	87.2	216.3	281.4	104.4	111.8	72.7	91.9	97.8	104.9	102.5	105.2
Feb	85.3	86.9	98.2	87.3	215.5	281.3	104.9	113.4	72.3	91.8	96.9	104.6	103.3	105.7
Mar	85.1	85.5	98.2	88.0	216.9	284.0	104.3	113.3	74.0	91.6	95.2	105.2	105.1	106.0
Apr	84.6	85.1	98.4	88.3	217.9	286.9	105.5	115.9	72.4	93.0	95.5	105.1	105.7	105.9
May	85.9	90.0	99.7	88.5	220.0	290.8	105.2	115.8	72.9	95.0	96.2	105.0	106.7	105.6
June	86.2	89.0	99.3	88.9	220.8	293.1	106.7	118.6	72.7	94.7	95.5	105.7	107.4	105.5
July	85.0	88.1	99.7	88.4	221.5	293.6	108.4	122.1	72.9	95.2	98.4	106.9	107.5	105.5
Aug	87.6	93.0	99.3	89.4	223.0	296.8	108.5	122.0	71.4	95.8	98.6	106.2	107.3	105.3
Sept	85.0	88.8	99.4	88.2	223.2	296.3	107.7	121.1	72.2	96.1	99.9	106.1	107.2	105.8
Oct *p*	87.9	94.5	100.0	86.8	223.3	297.7	106.1	118.3	70.2	95.5	100.1	105.1	106.4	106.0
Nov *p*	87.4	92.6	99.3	86.9	223.3	298.2	109.1	123.4	71.0	95.2	99.7	104.8	105.4	105.1
Dec *p*	88.7	95.5	98.9	87.3	224.3	299.8	105.6	117.6	70.2	95.6	100.0	105.3	104.9	105.3

[1] Computers and office equipment, communications equipment, and semiconductors and related electronic components.

Note.—See footnote 1 and Note, Table B–51.

Source: Board of Governors of the Federal Reserve System.

TABLE B–54.—*Capacity utilization rates, 1955–2002*

[Percent[1]; monthly data seasonally adjusted]

Year or month	Total industry[2]	Manufacturing				Mining	Utilities	Stage-of-process		
		Total[2]	Durable goods	Non-durable goods	Other (non-NAICS)[2]			Crude	Primary and semi-finished	Finished
1955		87.0							92.0	84.2
1956		86.1							89.4	84.4
1957		83.6							84.7	83.1
1958		75.0							75.4	74.9
1959		81.6							83.0	81.1
1960		80.1							79.8	80.5
1961		77.3							77.9	77.2
1962		81.4							81.5	81.6
1963		83.5							83.8	83.4
1964		85.6							87.8	84.6
1965		89.5							91.0	88.8
1966		91.1							91.4	91.1
1967	87.0	87.2	87.5	86.3		81.2	94.5	81.1	85.0	88.2
1968	87.3	87.0	87.3	86.4		83.6	95.1	83.4	86.8	87.0
1969	87.3	86.5	86.9	86.0		86.8	96.6	85.6	87.9	85.4
1970	81.0	79.2	77.4	82.0		89.3	96.0	85.1	81.2	77.9
1971	79.3	77.6	75.0	81.6		87.9	94.4	84.3	81.3	75.4
1972	84.4	83.2	81.7	85.1	85.4	90.8	95.2	88.7	87.8	79.4
1973	88.3	87.5	88.4	86.6	84.6	91.9	94.1	90.8	92.0	83.1
1974	84.9	84.1	84.2	84.1	82.7	91.1	87.8	91.3	87.1	80.1
1975	75.5	73.4	71.4	76.0	77.2	89.2	84.3	84.1	74.8	73.5
1976	79.5	77.9	75.9	80.9	77.4	90.1	85.1	87.5	79.8	76.2
1977	83.2	82.3	81.0	84.0	83.3	90.4	84.8	89.7	84.4	79.3
1978	85.0	84.5	84.2	84.9	85.1	90.1	84.0	88.9	86.0	82.3
1979	85.0	84.2	84.6	83.6	85.5	91.1	85.5	89.5	85.9	82.0
1980	80.9	78.8	77.8	79.5	87.0	91.7	85.3	89.2	78.8	79.7
1981	79.9	77.2	75.6	78.8	87.3	91.6	84.1	89.5	77.1	78.3
1982	73.8	71.1	66.7	76.7	86.5	83.8	80.5	81.8	70.4	74.0
1983	74.8	73.5	68.7	79.8	86.9	78.4	79.5	78.5	74.2	73.7
1984	80.5	79.5	76.9	82.6	89.0	84.6	82.8	84.7	81.0	77.9
1985	79.4	78.4	75.9	81.1	90.8	83.4	82.4	83.3	79.9	77.3
1986	78.8	78.6	75.4	82.1	88.8	76.7	82.0	79.0	79.8	77.4
1987	81.2	81.1	77.7	85.1	89.4	79.5	83.5	83.0	82.7	78.9
1988	84.2	84.1	82.1	86.4	87.8	83.5	85.3	86.7	85.5	81.7
1989	83.6	83.2	81.4	85.3	85.8	84.3	86.8	87.5	84.6	81.3
1990	82.5	81.6	79.2	84.6	84.0	86.5	86.4	88.9	82.3	80.7
1991	79.6	78.3	74.8	82.6	80.1	84.8	87.1	86.1	79.4	77.9
1992	80.1	79.3	76.6	82.8	78.7	84.2	84.9	85.6	80.8	78.0
1993	81.1	80.0	78.1	82.4	80.9	85.7	87.5	85.4	82.8	78.0
1994	83.3	82.4	81.3	84.0	81.5	87.3	88.4	87.3	86.0	79.0
1995	83.6	82.8	82.0	83.9	80.8	87.2	89.8	88.3	86.3	79.3
1996	82.5	81.2	80.8	82.3	77.3	89.4	91.0	87.8	85.0	78.3
1997	83.7	82.7	82.6	83.4	78.5	90.5	89.8	89.1	85.6	80.1
1998	82.9	81.9	81.8	82.4	79.6	88.1	90.6	86.0	84.0	80.9
1999	82.4	81.4	81.5	81.3	81.4	85.7	92.0	86.3	84.4	79.2
2000	82.7	81.4	81.8	80.7	83.8	89.3	92.0	88.0	84.8	78.9
2001	77.3	75.6	73.2	77.8	82.3	88.1	88.2	84.0	78.6	74.3
2002*p*	75.6	73.8	70.1	78.0	81.3	84.9	86.8	83.2	77.7	71.5
2001: Jan	80.2	78.5	77.5	78.9	84.5	88.8	93.3	85.8	82.1	76.7
Feb	79.6	77.8	76.5	79.0	82.3	89.4	92.0	85.9	81.2	76.3
Mar	79.0	77.3	76.2	78.2	81.7	89.4	90.7	85.1	80.4	76.0
Apr	78.5	76.8	75.2	78.1	82.2	89.5	89.5	84.8	79.7	75.7
May	77.9	76.1	74.2	78.0	81.7	89.0	88.3	83.9	78.9	75.3
June	77.2	75.5	73.2	77.8	81.8	88.2	87.9	83.1	78.3	74.7
July	77.0	75.3	72.9	77.7	82.3	87.7	87.0	83.0	78.0	74.5
Aug	76.7	74.8	72.0	77.7	82.3	87.5	88.3	83.3	78.0	73.7
Sept	76.0	74.3	71.0	77.6	82.8	87.5	86.1	84.0	77.3	72.8
Oct	75.6	73.8	70.2	77.4	82.6	86.9	87.2	83.5	77.0	72.2
Nov	75.1	73.4	70.0	77.0	81.7	86.8	84.3	83.2	76.2	72.0
Dec	74.6	73.0	69.6	76.5	81.4	86.1	83.5	82.1	75.6	71.9
2002: Jan	75.0	73.3	69.9	77.2	80.6	85.5	84.4	82.5	76.2	71.9
Feb	75.1	73.4	69.8	77.4	80.0	85.4	85.2	82.5	76.4	71.8
Mar	75.3	73.5	69.7	77.8	80.2	84.8	86.9	82.2	76.9	71.9
Apr	75.6	73.6	70.0	77.8	79.7	84.7	88.6	82.7	77.5	71.7
May	75.7	73.9	70.3	78.1	80.0	84.8	87.7	83.5	77.8	71.5
June	75.9	74.1	70.5	78.3	81.2	84.9	87.2	83.3	77.9	71.9
July	76.4	74.3	70.6	78.7	80.9	85.7	89.6	84.4	78.6	71.9
Aug	76.1	74.3	70.8	78.4	81.7	85.3	86.5	83.9	78.4	71.7
Sept	76.0	74.1	70.2	78.4	82.8	83.8	88.4	83.1	78.6	71.3
Oct*p*	75.6	73.8	69.9	78.0	82.7	83.9	86.3	82.8	78.1	70.9
Nov*p*	75.6	73.8	70.2	77.8	82.3	84.4	85.9	82.9	78.1	71.0
Dec*p*	75.4	73.6	69.7	77.9	83.2	85.8	84.4	84.2	77.8	70.6

[1] Output as percent of capacity.
[2] See footnote 1 and Note, Table B–51.

Source: Board of Governors of the Federal Reserve System.

TABLE B–55.—*New construction activity, 1962–2002*

[Value put in place, billions of dollars; monthly data at seasonally adjusted annual rates]

Year or month	Total new construction	Private construction							Public construction		
		Total	Residential buildings[1]		Nonresidential buildings and other construction				Total	Federal	State and local[5]
			Total[2]	New housing units	Total	Commercial[3]	Industrial	Other[4]			
1962	60.2	42.3	25.2	19.4	17.2	5.1	2.8	9.2	17.9	3.9	14.0
1963	64.8	45.5	27.9	21.7	17.6	5.0	2.9	9.7	19.4	4.0	15.4
New series											
1964	75.1	54.9	30.5	24.1	24.4	7.9	5.0	11.5	20.2	3.7	16.5
1965	81.9	60.0	30.2	23.8	29.7	9.4	7.2	13.1	21.9	3.9	18.0
1966	85.8	61.9	28.6	21.8	33.3	9.4	9.3	14.6	23.8	3.8	20.0
1967	87.2	61.8	28.7	21.5	33.1	9.3	8.4	15.4	25.4	3.3	22.1
1968	96.8	69.4	34.2	26.7	35.2	10.4	8.5	16.3	27.4	3.2	24.2
1969	104.9	77.2	37.2	29.2	39.9	12.5	9.6	17.8	27.8	3.2	24.6
1970	105.9	78.0	35.9	27.1	42.1	13.0	9.3	19.8	27.9	3.1	24.8
1971	122.4	92.7	48.5	38.7	44.2	15.3	7.8	21.1	29.7	3.8	25.9
1972	139.1	109.1	60.7	50.1	48.4	18.8	6.7	22.9	30.0	4.2	25.8
1973	153.8	121.4	65.1	54.6	56.3	21.7	9.0	25.6	32.3	4.7	27.6
1974	155.2	117.0	56.0	43.4	61.1	21.7	11.5	27.9	38.1	5.1	33.0
1975	152.6	109.3	51.6	36.3	57.8	17.2	11.7	28.9	43.3	6.1	37.2
1976	172.1	128.2	68.3	50.8	59.9	17.0	10.5	32.4	44.0	6.8	37.2
1977	200.5	157.4	92.0	72.2	65.4	19.7	11.3	34.5	43.1	7.1	36.0
1978	239.9	189.7	109.8	85.6	79.9	24.7	16.2	39.0	50.1	8.1	42.0
1979	272.9	216.2	116.4	89.3	99.8	34.0	22.0	43.7	56.6	8.6	48.1
1980	273.9	210.3	100.4	69.6	109.9	41.7	20.5	47.7	63.6	9.6	54.0
1981	289.1	224.4	99.2	69.4	125.1	48.7	25.4	51.0	64.7	10.4	54.3
1982	279.3	216.3	84.7	57.0	131.6	53.9	26.1	51.6	63.1	10.0	53.1
1983	311.9	248.4	125.8	95.0	122.6	53.4	19.5	49.8	63.5	10.6	52.9
1984	370.2	300.0	155.0	114.6	144.9	71.6	20.9	52.4	70.2	11.2	59.0
1985	403.4	325.6	160.5	115.9	165.1	88.1	24.1	52.9	77.8	12.0	65.8
1986	433.5	348.9	190.7	135.2	158.2	84.0	21.0	53.2	84.6	12.4	72.2
1987	446.6	356.0	199.7	142.7	156.3	83.2	21.2	52.0	90.6	14.1	76.6
1988	462.0	367.3	204.5	142.4	162.8	86.4	23.2	53.2	94.7	12.3	82.5
1989	477.5	379.3	204.3	143.2	175.1	89.2	28.8	57.1	98.2	12.2	86.0
1990	476.8	369.3	191.1	132.1	178.2	85.8	33.6	58.8	107.5	12.1	95.4
1991	432.6	322.5	166.3	114.6	156.2	62.2	31.4	62.6	110.1	12.8	97.3
1992	463.7	347.8	199.4	135.1	148.4	53.2	29.0	66.2	115.8	14.4	101.5
1993	491.0	375.1	225.1	150.9	150.0	57.9	23.6	68.5	116.0	14.4	101.5
1994	539.2	419.0	258.6	176.4	160.4	64.4	28.9	67.1	120.2	14.4	105.8
1995	557.8	427.9	247.4	171.4	180.5	75.4	35.5	69.7	129.9	15.8	114.2
1996	615.9	476.6	281.1	191.1	195.5	87.0	38.2	70.4	139.3	15.3	123.9
1997	653.4	502.7	289.0	198.1	213.7	99.0	37.6	77.1	150.7	14.1	136.6
1998	705.7	551.4	314.6	224.0	236.8	110.6	40.5	85.7	154.3	14.3	140.0
1999	765.9	596.3	350.6	251.3	245.8	120.4	32.6	92.7	169.5	14.0	155.5
2000	820.3	641.8	374.5	265.0	267.3	132.3	31.8	103.2	178.6	14.2	164.4
2001	842.5	650.0	388.7	279.8	261.3	126.7	29.0	105.5	192.5	15.0	177.5
2001: Jan	836.5	649.2	375.1	271.6	274.2	137.0	34.6	102.6	187.2	15.2	172.0
Feb	841.7	654.0	386.3	277.8	267.7	136.8	32.1	98.8	187.7	15.0	172.7
Mar	845.7	654.5	382.3	275.3	272.2	137.6	33.9	100.7	191.2	14.5	176.7
Apr	849.7	655.0	386.3	276.9	268.6	133.3	32.3	103.1	194.7	14.9	179.9
May	846.6	648.8	383.9	279.3	264.8	127.6	29.1	108.2	197.8	15.0	182.8
June	852.6	658.4	389.0	280.3	269.4	130.0	31.0	108.4	194.1	15.0	179.2
July	843.6	651.0	385.8	281.0	265.2	128.1	30.2	106.9	192.6	14.3	178.3
Aug	838.6	650.6	391.7	282.3	258.9	121.9	29.0	108.0	188.1	14.9	173.1
Sept	836.0	648.5	393.5	281.6	255.1	119.6	28.6	106.9	187.4	15.2	172.2
Oct	836.6	643.4	392.3	281.6	251.1	119.8	24.6	106.7	193.1	16.0	177.2
Nov	836.5	639.7	394.7	282.2	244.9	117.5	22.5	105.0	196.9	14.7	182.2
Dec	841.8	640.8	395.2	283.1	245.6	114.7	23.0	107.9	201.0	15.6	185.4
2002: Jan	860.2	651.5	403.3	286.9	248.3	117.7	20.9	109.6	208.7	15.7	193.0
Feb	874.3	659.4	413.5	293.8	245.9	115.3	19.6	111.0	214.9	17.8	197.2
Mar	855.2	655.3	413.8	295.4	241.5	113.2	18.5	109.8	199.9	16.8	183.1
Apr	856.9	656.7	411.8	295.6	244.9	113.5	17.5	113.8	200.2	16.6	183.6
May	847.1	642.2	413.5	294.9	228.6	105.3	16.6	106.8	204.9	17.0	187.9
June	833.7	634.6	410.8	292.8	223.8	102.3	16.7	104.7	199.1	16.6	182.6
July	837.8	635.7	414.0	295.2	221.7	101.0	15.8	104.9	202.1	16.3	185.8
Aug	829.8	627.1	409.3	292.7	217.8	98.8	14.6	104.4	202.8	16.4	186.4
Sept	832.2	626.5	412.2	296.7	214.3	96.3	13.8	104.2	205.7	15.2	190.5
Oct	840.5	635.6	417.3	299.1	218.3	96.1	13.7	108.4	204.9	17.0	187.9
Nov*p*	843.2	635.3	421.1	303.4	214.2	96.4	13.5	104.3	207.9	16.0	191.9

[1] Includes farm residential buildings.

[2] Includes residential improvements, not shown separately. Prior to 1964, also includes nonhousekeeping units (hotels, motels, etc.).

[3] Office buildings, warehouses, stores, restaurants, garages, etc., and, beginning 1964, hotels and motels; prior to 1964 hotels and motels are included in total residential.

[4] Religious, educational, hospital and institutional, miscellaneous nonresidential, public utilities (telecommunications, gas, electric, railroad, and petroleum pipelines), all other private, and farm nonresidential.

[5] Includes Federal grants-in-aid for State and local projects.

Source: Department of Commerce, Bureau of the Census.

TABLE B–56.—*New private housing units started, authorized, and completed, and houses sold, 1959–2002*

[Thousands; monthly data at seasonally adjusted annual rates]

Year or month	New housing units started				New housing units authorized [1]				New housing units completed	New houses sold
	Type of structure				Type of structure					
	Total	1 unit	2 to 4 units [2]	5 units or more	Total	1 unit	2 to 4 units	5 units or more		
1959	1,517.0	1,234.0	283.0		1,208.3	938.3	77.1	192.9	.....	.....
1960	1,252.2	994.7	257.5		998.0	746.1	64.6	187.4	.....	.....
1961	1,313.0	974.3	338.7		1,064.2	722.8	67.6	273.8	.....	.....
1962	1,462.9	991.4	471.5		1,186.6	716.2	87.1	383.3	.....	.....
1963	1,603.2	1,012.4	590.8		1,334.7	750.2	118.9	465.6	.....	560
1964	1,528.8	970.5	108.3	450.0	1,285.8	720.1	100.8	464.9	.....	565
1965	1,472.8	963.7	86.7	422.5	1,240.6	709.9	84.8	445.9	.....	575
1966	1,164.9	778.6	61.2	325.1	971.9	563.2	61.0	347.7	.....	461
1967	1,291.6	843.9	71.7	376.1	1,141.0	650.6	73.0	417.5	.....	487
1968	1,507.6	899.4	80.7	527.3	1,353.4	694.7	84.3	574.4	1,319.8	490
1969	1,466.8	810.6	85.1	571.2	1,322.3	624.8	85.2	612.4	1,399.0	448
1970	1,433.6	812.9	84.9	535.9	1,351.5	646.8	88.1	616.7	1,418.4	485
1971	2,052.2	1,151.0	120.5	780.9	1,924.6	906.1	132.9	885.7	1,706.1	656
1972	2,356.6	1,309.2	141.2	906.2	2,218.9	1,033.1	148.6	1,037.2	2,003.9	718
1973	2,045.3	1,132.0	118.2	795.0	1,819.5	882.1	117.0	820.5	2,100.5	634
1974	1,337.7	888.1	68.0	381.6	1,074.4	643.8	64.3	366.2	1,728.5	519
1975	1,160.4	892.2	64.0	204.3	939.2	675.5	63.9	199.8	1,317.2	549
1976	1,537.5	1,162.4	85.8	289.2	1,296.2	893.6	93.1	309.5	1,377.2	646
1977	1,987.1	1,450.9	121.7	414.4	1,690.0	1,126.1	121.3	442.7	1,657.1	819
1978	2,020.3	1,433.3	125.1	462.0	1,800.5	1,182.6	130.6	487.3	1,867.5	817
1979	1,745.1	1,194.1	122.0	429.0	1,551.8	981.5	125.4	444.8	1,870.8	709
1980	1,292.2	852.2	109.5	330.5	1,190.6	710.4	114.5	365.7	1,501.6	545
1981	1,084.2	705.4	91.2	287.7	985.5	564.3	101.8	319.4	1,265.7	436
1982	1,062.2	662.6	80.1	319.6	1,000.5	546.4	88.3	365.8	1,005.5	412
1983	1,703.0	1,067.6	113.5	522.0	1,605.2	901.5	133.6	570.1	1,390.3	623
1984	1,749.5	1,084.2	121.4	543.9	1,681.8	922.4	142.6	616.8	1,652.2	639
1985	1,741.8	1,072.4	93.5	576.0	1,733.3	956.6	120.1	656.6	1,703.3	688
1986	1,805.4	1,179.4	84.0	542.0	1,769.4	1,077.6	108.4	583.5	1,756.4	750
1987	1,620.5	1,146.4	65.1	408.7	1,534.8	1,024.4	89.3	421.1	1,668.8	671
1988	1,488.1	1,081.3	58.7	348.0	1,455.6	993.8	75.7	386.1	1,529.8	676
1989	1,376.1	1,003.3	55.3	317.6	1,338.4	931.7	67.0	339.8	1,422.8	650
1990	1,192.7	894.8	37.6	260.4	1,110.8	793.9	54.3	262.6	1,308.0	534
1991	1,013.9	840.4	35.6	137.9	948.8	753.5	43.1	152.1	1,090.8	509
1992	1,199.7	1,029.9	30.9	139.0	1,094.9	910.7	45.8	138.4	1,157.5	610
1993	1,287.6	1,125.7	29.4	132.6	1,199.1	986.5	52.3	160.2	1,192.7	666
1994	1,457.0	1,198.4	35.2	223.5	1,371.6	1,068.5	62.2	241.0	1,346.9	670
1995	1,354.1	1,076.2	33.8	244.1	1,332.5	997.3	63.7	271.5	1,312.6	667
1996	1,476.8	1,160.9	45.3	270.8	1,425.6	1,069.5	65.8	290.3	1,412.9	757
1997	1,474.0	1,133.7	44.5	295.8	1,441.1	1,062.4	68.5	310.3	1,400.5	804
1998	1,616.9	1,271.4	42.6	302.9	1,612.3	1,187.6	69.2	355.5	1,474.2	886
1999	1,640.9	1,302.4	31.9	306.6	1,663.5	1,246.7	65.8	351.1	1,604.9	880
2000	1,568.7	1,230.9	38.7	299.1	1,592.3	1,198.1	64.9	329.3	1,573.7	877
2001	1,602.7	1,273.3	36.6	292.8	1,636.7	1,235.6	66.0	335.2	1,570.8	908
2002 *P*	1,704.9	1,359.7	38.8	306.3	1,726.3	1,319.1	73.4	333.7	1,650.7	976
2001: Jan	1,627	1,305	39	283	1,709	1,261	59	389	1,439	934
Feb	1,605	1,267	25	313	1,668	1,242	70	356	1,535	944
Mar	1,602	1,218	45	339	1,650	1,228	67	355	1,478	949
Apr	1,636	1,302	42	292	1,649	1,249	66	334	1,577	901
May	1,604	1,281	29	294	1,663	1,232	70	361	1,501	884
June	1,633	1,293	54	286	1,618	1,252	80	286	1,645	892
July	1,664	1,294	41	329	1,602	1,234	62	306	1,588	881
Aug	1,562	1,274	27	261	1,606	1,238	66	302	1,621	871
Sept	1,582	1,263	46	273	1,570	1,199	56	315	1,551	856
Oct	1,531	1,238	33	260	1,566	1,182	60	324	1,575	865
Nov	1,604	1,241	38	325	1,659	1,239	61	359	1,567	938
Dec	1,583	1,294	17	272	1,702	1,266	71	365	1,705	979
2002: Jan	1,713	1,344	67	302	1,686	1,296	75	315	1,607	870
Feb	1,788	1,472	43	273	1,766	1,374	69	323	1,669	937
Mar	1,675	1,298	49	328	1,629	1,248	74	307	1,576	915
Apr	1,566	1,261	27	278	1,631	1,258	71	302	1,650	932
May	1,742	1,380	37	325	1,676	1,268	69	339	1,702	974
June	1,692	1,344	46	302	1,706	1,293	82	331	1,587	947
July	1,652	1,319	31	302	1,712	1,278	72	362	1,614	958
Aug	1,631	1,249	31	351	1,666	1,297	73	296	1,710	1,047
Sept	1,808	1,452	36	320	1,733	1,339	82	312	1,652	1,056
Oct	1,660	1,375	32	253	1,772	1,370	72	330	1,579	1,006
Nov *P*	1,747	1,404	34	309	1,738	1,367	66	305	1,728	1,045
Dec *P*	1,835	1,473	41	321	1,887	1,411	74	402	1,683	1,082

[1] Authorized by issuance of local building permits in: 19,000 permit-issuing places beginning 1994; 17,000 places for 1984–93; 16,000 places for 1978–83; 14,000 places for 1972–77; 13,000 places for 1967–71; 12,000 places for 1963–66; and 10,000 places prior to 1963.

[2] Monthly data derived.

Note.—Data beginning 1999 for new housing units started and completed and for new houses sold are based on new estimation methods and are not directly comparable with earlier data.

Source: Department of Commerce, Bureau of the Census.

TABLE B–57.—*Manufacturing and trade sales and inventories, 1965–2002*

[Amounts in millions of dollars; monthly data seasonally adjusted]

Year or month	Total manufacturing and trade			Manufacturing			Merchant wholesalers			Retail trade			Retail and food services sales
	Sales[1]	Inventories[2]	Ratio[3]	Sales[1]	Inventories[2]	Ratio[3]	Sales[1]	Inventories[2]	Ratio[3]	Sales[1 4]	Inventories[2]	Ratio[3]	
SIC:[5]													
1965	80,283	120,929	1.51	40,995	68,207	1.66	15,611	18,317	1.17	23,677	34,405	1.45	.....
1966	87,187	136,824	1.57	44,870	77,986	1.74	16,987	20,765	1.22	25,330	38,073	1.50	.....
1967	90,820	145,681	1.60	46,486	84,646	1.82	19,576	25,786	1.32	24,757	35,249	1.42	.....
1968	98,685	156,611	1.59	50,229	90,560	1.80	21,012	27,166	1.29	27,445	38,885	1.42	.....
1969	105,690	170,400	1.61	53,501	98,145	1.83	22,818	29,800	1.31	29,371	42,455	1.45	.....
1970	108,221	178,594	1.65	52,805	101,599	1.92	24,167	33,354	1.38	31,249	43,641	1.40	.....
1971	116,895	188,991	1.62	55,906	102,567	1.83	26,492	36,568	1.38	34,497	49,856	1.45	.....
1972	131,081	203,227	1.55	63,027	108,121	1.72	29,866	40,297	1.35	38,189	54,809	1.44	.....
1973	153,677	234,406	1.53	72,931	124,499	1.71	38,115	46,918	1.23	42,631	62,989	1.48	.....
1974	177,912	287,144	1.61	84,790	157,625	1.86	47,982	58,667	1.22	45,141	70,852	1.57	.....
1975	182,198	288,992	1.59	86,589	159,708	1.84	46,634	57,774	1.24	48,975	71,510	1.46	.....
1976	204,150	318,345	1.56	98,797	174,636	1.77	50,698	64,622	1.27	54,655	79,087	1.45	.....
1977	229,513	350,706	1.53	113,201	188,378	1.66	56,136	73,179	1.30	60,176	89,149	1.48	.....
1978	260,320	400,931	1.54	126,905	211,691	1.67	66,413	86,934	1.31	67,002	102,306	1.53	.....
1979	297,701	452,640	1.52	143,936	242,157	1.68	79,051	99,679	1.26	74,713	110,804	1.48	.....
1980	327,233	508,924	1.56	154,391	265,215	1.72	93,099	122,631	1.32	79,743	121,078	1.52	.....
1981	355,822	545,786	1.53	168,129	283,413	1.69	101,180	129,654	1.28	86,514	132,719	1.53	.....
1982	347,625	573,908	1.67	163,351	311,852	1.95	95,211	127,428	1.36	89,062	134,628	1.49	.....
1983	369,286	590,287	1.56	172,547	312,379	1.78	99,225	130,075	1.28	97,514	147,833	1.44	.....
1984	410,124	649,780	1.53	190,682	339,516	1.73	112,199	142,452	1.23	107,243	167,812	1.49	.....
1985	422,583	664,039	1.56	194,538	334,749	1.73	113,459	147,409	1.28	114,586	181,881	1.52	.....
1986	430,419	662,738	1.55	194,657	322,654	1.68	114,960	153,574	1.32	120,803	186,510	1.56	.....
1987	457,735	709,848	1.50	206,326	338,109	1.59	122,968	163,903	1.29	128,442	207,836	1.55	.....
1988	497,157	767,222	1.49	224,619	369,374	1.57	134,521	178,801	1.30	138,017	219,047	1.54	.....
1989	527,039	815,455	1.52	236,698	391,212	1.63	143,760	187,009	1.28	146,581	237,234	1.58	.....
1990	545,909	840,594	1.52	242,686	405,073	1.65	149,506	195,833	1.29	153,718	239,688	1.56	.....
1991	542,815	834,609	1.53	239,847	390,950	1.65	148,306	200,448	1.33	154,661	243,211	1.54	.....
1992	567,176	842,809	1.48	250,394	382,510	1.54	154,150	208,302	1.32	162,632	251,997	1.52	.....
NAICS:[5]													
1992	537,899	837,873	1.53	239,330	375,602	1.57	144,302	194,463	1.32	154,268	267,808	1.68	171,219
1993	564,458	864,841	1.51	248,789	376,205	1.51	150,833	202,730	1.31	164,837	285,906	1.69	182,841
1994	605,983	927,859	1.47	265,918	396,074	1.45	161,133	219,766	1.30	178,932	312,019	1.67	197,735
1995	648,961	986,329	1.49	284,499	420,648	1.45	176,227	236,145	1.31	188,235	329,536	1.72	207,704
1996	680,673	1,005,021	1.47	293,835	425,904	1.44	186,649	238,782	1.28	200,190	340,335	1.68	220,431
1997	716,672	1,044,981	1.43	313,018	437,801	1.38	194,541	256,417	1.27	209,112	350,763	1.65	230,616
1998	736,556	1,076,471	1.45	318,730	442,771	1.39	198,319	269,412	1.33	219,507	364,288	1.62	242,228
1999	779,798	1,134,734	1.41	329,029	456,547	1.36	211,756	285,686	1.31	239,013	392,501	1.59	262,803
2000	827,951	1,198,395	1.42	343,710	477,242	1.37	229,313	304,678	1.30	254,928	416,475	1.59	280,427
2001	815,111	1,122,990	1.43	324,811	439,162	1.42	226,313	288,014	1.32	263,987	395,814	1.55	290,713
2001: Jan	824,702	1,200,281	1.46	331,977	479,506	1.44	232,529	303,655	1.31	260,196	417,120	1.60	286,878
Feb	827,420	1,195,223	1.44	334,843	477,731	1.43	231,852	303,381	1.31	260,725	414,111	1.59	287,182
Mar	822,713	1,189,606	1.45	335,154	473,644	1.41	228,370	303,029	1.33	259,189	412,933	1.59	285,716
Apr	815,643	1,186,817	1.46	325,595	472,121	1.45	228,128	302,941	1.33	261,920	411,755	1.57	288,366
May	825,554	1,183,677	1.43	334,343	468,623	1.40	227,281	303,204	1.33	263,930	411,850	1.56	290,567
June	812,935	1,174,448	1.44	325,391	463,509	1.42	224,588	301,309	1.34	262,956	409,630	1.56	289,681
July	814,554	1,168,281	1.43	325,820	460,388	1.41	225,620	298,162	1.32	263,114	409,731	1.56	289,971
Aug	817,149	1,165,208	1.43	326,654	456,084	1.40	226,739	297,079	1.31	263,756	412,045	1.56	290,791
Sept	798,394	1,158,218	1.45	313,222	452,041	1.44	225,166	295,766	1.31	260,006	410,411	1.58	286,322
Oct	816,883	1,141,144	1.40	318,134	449,047	1.41	221,333	293,113	1.32	277,416	398,984	1.44	304,043
Nov	806,589	1,129,014	1.40	315,079	443,805	1.41	221,978	289,458	1.30	269,532	395,751	1.47	296,278
Dec	803,005	1,122,990	1.40	316,191	439,162	1.39	220,380	288,014	1.31	266,434	395,814	1.49	294,328
2002: Jan	811,196	1,122,911	1.38	321,171	436,648	1.36	223,023	286,994	1.29	267,002	399,269	1.50	294,852
Feb	804,624	1,120,288	1.39	311,476	434,087	1.39	224,738	284,508	1.27	268,410	401,693	1.50	296,468
Mar	808,644	1,116,303	1.38	315,593	431,434	1.37	224,855	283,732	1.26	268,196	401,137	1.50	296,199
Apr	822,615	1,113,864	1.35	322,962	430,153	1.33	228,131	281,193	1.23	271,522	402,518	1.48	299,642
May	820,227	1,116,527	1.36	323,736	428,592	1.32	228,052	281,080	1.23	268,439	406,855	1.52	296,567
June	822,795	1,119,454	1.36	320,810	428,230	1.33	229,638	282,340	1.23	272,347	408,884	1.50	300,634
July	833,564	1,124,317	1.35	326,101	427,996	1.31	231,353	284,083	1.23	276,110	412,238	1.49	304,218
Aug	834,562	1,125,024	1.35	323,729	428,574	1.32	233,314	284,348	1.22	277,519	412,102	1.48	305,616
Sept	828,454	1,132,074	1.37	322,608	429,385	1.33	232,798	285,386	1.23	273,048	417,303	1.53	301,181
Oct	832,466	1,133,221	1.36	326,339	429,074	1.31	232,891	283,971	1.22	273,236	420,176	1.54	301,551
Nov[P]	834,967	1,136,014	1.36	323,730	427,792	1.32	235,672	284,491	1.21	275,565	423,731	1.54	304,198

[1] Annual data are averages of monthly not seasonally adjusted figures.

[2] Seasonally adjusted, end of period. Inventories beginning January 1982 for manufacturing and December 1980 for wholesale and retail trade are not comparable with earlier periods.

[3] Inventory/sales ratio. Annual data are: beginning 1982, averages of monthly ratios; for 1965–81, ratio of December inventories to monthly average sales for the year; and for earlier years, weighted averages. Monthly ratios are inventories at end of month to sales for month.

[4] Food services included on SIC basis and excluded on NAICS basis. See last column for retail and food services sales.

[5] Effective in 2001, data classified based on North American Industry Classification System (NAICS). Data on NAICS basis available beginning 1992. Earlier data based on Standard Industrial Classification (SIC).

Data on SIC basis include semiconductors. In 2002, data on NAICS basis were revised and exclude semiconductors.

Note.—Earlier data are not strictly comparable with data beginning 1967 for wholesale and retail trade.

Source: Department of Commerce, Bureau of the Census.

TABLE B–58.—*Manufacturers' shipments and inventories, 1960–2002*

[Millions of dollars; monthly data seasonally adjusted]

Year or month	Shipments[1]			Inventories[2]								
					Durable goods industries				Nondurable goods industries			
	Total	Durable goods industries	Nondurable goods industries	Total	Total	Materials and supplies	Work in process	Finished goods	Total	Materials and supplies	Work in process	Finished goods
SIC:[3]												
1960	30,878	15,870	15,008	53,786	32,337	10,306	12,809	9,222	21,449	9,097	2,947	9,405
1961	30,922	15,601	15,321	54,871	32,496	10,246	13,211	9,039	22,375	9,505	3,108	9,762
1962	33,358	17,247	16,111	58,172	34,565	10,794	14,124	9,647	23,607	9,836	3,304	10,467
1963	35,058	18,255	16,803	60,029	35,776	11,053	14,835	9,888	24,253	10,009	3,420	10,824
1964	37,331	19,611	17,720	63,410	38,421	11,946	16,158	10,317	24,989	10,167	3,531	11,291
1965	40,995	22,193	18,802	68,207	42,189	13,298	18,055	10,836	26,018	10,487	3,825	11,706
1966	44,870	24,617	20,253	77,986	49,852	15,464	21,908	12,480	28,134	11,197	4,226	12,711
1967	46,486	25,233	21,253	84,646	54,896	16,423	24,933	13,540	29,750	11,760	4,431	13,559
1968	50,229	27,624	22,605	90,560	58,732	17,344	27,213	14,175	31,828	12,328	4,852	14,648
1969	53,501	29,403	24,098	98,145	64,598	18,636	30,282	15,680	33,547	12,753	5,120	15,674
1970	52,805	28,156	24,649	101,599	66,651	19,149	29,745	17,757	34,948	13,168	5,271	16,509
1971	55,906	29,924	25,982	102,567	66,136	19,679	28,550	17,907	36,431	13,686	5,678	17,067
1972	63,027	33,987	29,040	108,121	70,067	20,807	30,713	18,547	38,054	14,677	5,998	17,379
1973	72,931	39,635	33,296	124,499	81,192	25,944	35,490	19,758	43,307	18,147	6,729	18,431
1974	84,790	44,173	40,617	157,625	101,493	35,070	42,530	23,893	56,132	23,744	8,189	24,199
1975	86,589	43,598	42,991	159,708	102,590	33,903	43,227	25,460	57,118	23,565	8,834	24,719
1976	98,797	50,623	48,174	174,636	111,988	37,457	46,074	28,457	62,648	25,847	9,929	26,872
1977	113,201	59,168	54,033	188,378	120,877	40,186	50,226	30,465	67,501	27,387	10,961	29,153
1978	126,905	67,731	59,174	211,691	138,181	45,198	58,848	34,135	73,510	29,619	12,085	31,806
1979	143,936	75,927	68,009	242,157	160,734	52,670	69,325	38,739	81,423	32,814	13,910	34,699
1980	154,391	77,419	76,972	265,215	174,788	55,173	76,945	42,670	90,427	36,606	15,884	37,937
1981	168,129	83,727	84,402	283,413	186,443	57,998	80,998	47,447	96,970	38,165	16,194	42,611
1982	163,351	79,212	84,139	311,852	200,444	59,136	86,707	54,601	111,408	44,039	18,612	48,757
1983	172,547	85,481	87,066	312,379	199,854	60,325	86,899	52,630	112,525	44,816	18,691	49,018
1984	190,682	97,940	92,742	339,516	221,330	66,031	98,251	57,048	118,186	45,692	19,328	53,166
1985	194,538	101,279	93,259	334,749	218,193	63,904	98,162	56,127	116,556	44,106	19,442	53,008
1986	194,657	103,238	91,419	322,654	211,997	61,331	97,000	53,666	110,657	42,335	18,124	50,198
1987	206,326	108,128	98,198	338,109	220,799	63,562	102,393	54,844	117,310	45,319	19,270	52,721
1988	224,619	118,458	106,161	369,374	242,468	69,611	112,958	59,899	126,906	49,396	20,559	56,951
1989	236,698	123,158	113,540	391,212	257,513	72,435	122,251	62,827	133,699	50,674	21,653	61,372
1990	242,686	123,776	118,910	405,073	263,209	73,559	124,130	65,520	141,864	52,645	22,817	66,402
1991	239,847	121,000	118,847	390,950	250,019	70,834	114,960	64,225	140,931	53,011	22,815	65,105
1992	250,394	128,489	121,905	382,510	238,105	69,459	104,424	64,222	144,405	54,007	23,532	66,866
NAICS:[3]												
1992	239,330	123,899	115,430	375,602	234,905	68,707	102,656	63,542	140,697	53,097	23,412	64,188
1993	248,789	130,793	117,996	376,205	235,218	71,452	100,353	63,413	140,987	54,198	23,406	63,383
1994	265,918	143,081	122,838	396,074	249,272	77,198	104,839	67,235	146,802	57,072	24,467	65,263
1995	284,499	153,094	131,405	420,648	263,223	84,004	104,945	74,274	157,425	60,645	25,821	70,959
1996	293,835	158,952	134,883	425,904	267,980	84,634	108,676	74,670	157,924	59,015	26,475	72,434
1997	313,018	172,409	140,610	437,801	275,348	90,225	107,668	77,455	162,453	60,061	28,503	73,889
1998	318,730	179,712	139,019	442,771	284,484	91,350	112,836	80,298	158,287	58,090	27,067	73,130
1999	329,029	186,933	142,096	456,547	289,641	95,157	111,667	82,817	166,906	60,880	28,787	77,239
2000	343,710	190,502	153,207	477,242	304,151	102,224	114,052	87,875	173,091	60,419	29,983	82,689
2001	324,811	175,012	149,799	439,162	275,311	88,973	104,946	81,392	163,851	56,013	27,342	80,496
2001: Jan	331,977	178,732	153,245	479,506	306,135	103,200	114,162	88,773	173,371	60,916	29,618	82,837
Feb	334,843	180,998	153,845	477,731	304,934	102,318	113,670	88,946	172,797	60,534	29,340	82,923
Mar	335,154	182,093	153,061	473,644	300,999	100,667	112,583	87,749	172,645	60,336	29,242	83,067
Apr	325,595	174,163	151,432	472,121	300,029	99,329	113,091	87,609	172,092	59,821	28,994	83,277
May	334,343	180,033	154,310	468,623	297,322	98,846	111,600	86,876	171,301	59,723	28,830	82,748
June	325,391	176,926	148,465	463,509	293,532	96,692	110,211	86,629	169,977	59,043	28,311	82,623
July	325,820	176,191	149,629	460,388	291,012	95,535	109,836	85,641	169,376	59,186	28,226	81,964
Aug	326,654	175,700	150,954	456,084	287,818	94,145	108,955	84,718	168,266	58,282	28,391	81,593
Sept	313,222	166,480	146,742	452,041	284,392	92,139	108,301	83,952	167,649	57,807	28,483	81,359
Oct	318,134	170,284	147,850	449,047	282,528	91,573	107,762	83,193	166,519	57,549	27,740	81,230
Nov	315,079	170,355	144,724	443,805	278,994	90,685	106,199	82,110	164,811	57,188	27,265	80,358
Dec	316,191	171,075	145,116	439,162	275,311	88,973	104,946	81,392	163,851	56,013	27,342	80,496
2002: Jan	321,171	174,828	146,343	436,648	273,770	88,316	104,943	80,511	162,878	55,571	27,556	79,751
Feb	311,476	170,367	141,109	434,087	271,870	87,644	104,168	80,058	162,217	55,726	27,479	79,012
Mar	315,593	170,376	145,217	431,434	269,094	88,076	100,841	80,177	162,340	55,383	27,720	79,237
Apr	322,962	176,426	146,536	430,153	267,811	87,607	100,103	80,101	162,342	55,474	27,665	79,203
May	323,736	175,927	147,809	428,592	266,417	86,554	99,913	79,950	162,175	55,325	27,852	78,998
June	320,810	173,205	147,605	428,230	265,478	85,610	99,764	80,104	162,752	55,136	28,164	79,452
July	326,101	178,739	147,362	427,996	264,398	85,068	98,872	80,458	163,598	55,462	28,748	79,388
Aug	323,729	175,561	148,168	428,574	264,070	84,910	98,531	80,629	164,504	55,291	29,457	79,756
Sept	322,608	174,008	148,600	429,385	263,516	84,496	97,978	81,042	165,869	55,660	29,426	80,783
Oct	326,339	176,241	150,098	429,074	263,040	84,307	97,452	81,281	166,034	55,642	29,399	80,993
Nov[p]	323,730	173,797	149,933	427,792	262,364	83,625	97,401	81,338	165,428	55,773	28,940	80,715

[1] Annual data are averages of monthly not seasonally adjusted figures.

[2] Seasonally adjusted, end of period. Data beginning 1982 are not comparable with data for earlier data.

[3] Effective in 2001, data classified based on North American Industry Classification System (NAICS). Data on NAICS basis available beginning 1992. Earlier data based on Standard Industrial Classification (SIC).

Data on SIC basis include semiconductors. In 2002, data on NAICS basis were revised and exclude semiconductors.

Source: Department of Commerce, Bureau of the Census.

TABLE B–59.—*Manufacturers' new and unfilled orders, 1960–2002*

[Amounts in millions of dollars; monthly data seasonally adjusted]

Year or month	New orders[1]				Unfilled orders[2]			Unfilled orders—shipments ratio[2]		
	Total	Durable goods industries		Non-durable goods industries	Total	Durable goods industries	Non-durable goods industries	Total	Durable goods industries	Non-durable goods industries
		Total	Capital goods, non-defense							
SIC:[3]										
1960	30,232	15,288	.....	14,944	44,213	41,650	2,563	2.71	3.29	0.71
1961	31,112	15,753	.....	15,359	46,624	43,582	3,042	2.58	3.08	.78
1962	33,440	17,363	.....	16,078	47,798	45,170	2,628	2.64	3.18	.68
1963	35,511	18,671	.....	16,840	53,417	50,346	3,071	2.74	3.31	.72
1964	38,240	20,507	.....	17,732	64,518	61,315	3,203	2.99	3.59	.71
1965	42,137	23,286	.....	18,851	78,249	74,459	3,790	3.25	3.86	.79
1966	46,420	26,163	.....	20,258	96,846	93,002	3,844	3.74	4.48	.75
1967	47,067	25,803	.....	21,265	103,711	99,735	3,976	3.66	4.37	.73
1968	50,657	28,051	6,314	22,606	108,377	104,393	3,984	3.79	4.58	.69
1969	53,990	29,876	7,046	24,114	114,341	110,161	4,180	3.71	4.45	.69
1970	52,022	27,340	6,072	24,682	105,008	100,412	4,596	3.61	4.36	.76
1971	55,921	29,905	6,682	26,016	105,247	100,225	5,022	3.32	4.00	.76
1972	64,182	35,038	7,745	29,144	119,349	113,034	6,315	3.26	3.85	.86
1973	76,003	42,627	9,926	33,376	156,561	149,204	7,357	3.80	4.51	.91
1974	87,327	46,862	11,594	40,465	187,043	181,519	5,524	4.09	4.93	.62
1975	85,139	41,957	9,886	43,181	169,546	161,664	7,882	3.69	4.45	.82
1976	99,513	51,307	11,490	48,206	178,128	169,857	8,271	3.24	3.88	.74
1977	115,109	61,035	13,681	54,073	202,024	193,323	8,701	3.24	3.85	.71
1978	131,629	72,278	17,588	59,351	259,169	248,281	10,888	3.57	4.20	.81
1979	147,604	79,483	21,154	68,121	303,593	291,321	12,272	3.89	4.62	.82
1980	156,359	79,392	21,135	76,967	327,416	315,202	12,214	3.85	4.58	.75
1981	168,025	83,654	21,806	84,371	326,547	314,707	11,840	3.87	4.68	.69
1982	162,140	78,064	19,213	84,077	311,887	300,798	11,089	3.84	4.74	.62
1983	175,451	88,140	19,624	87,311	347,273	333,114	14,159	3.53	4.29	.69
1984	192,879	100,164	23,669	92,715	373,529	359,651	13,878	3.60	4.37	.64
1985	195,706	102,356	24,545	93,351	387,196	372,097	15,099	3.67	4.47	.68
1986	195,204	103,647	23,982	91,557	393,515	376,699	16,816	3.59	4.41	.70
1987	209,389	110,809	26,094	98,579	430,426	408,688	21,738	3.63	4.43	.83
1988	228,270	122,076	31,108	106,194	474,154	452,150	22,004	3.64	4.46	.76
1989	239,572	126,055	32,988	113,516	508,849	487,098	21,751	3.96	4.85	.77
1990	244,507	125,583	33,331	118,924	531,131	509,124	22,007	4.15	5.15	.76
1991	238,805	119,849	30,471	118,957	519,199	495,802	23,397	4.08	5.07	.79
1992	248,212	126,308	31,524	121,905	492,893	469,381	23,512	3.51	4.30	.75
NAICS:[3]										
1992	.....	.....	.....	.....	.....	450,631	.....	.....	4.92	.....
1993	246,668	128,672	40,681	.....	.....	425,314	.....	.....	4.39	.....
1994	266,641	143,803	45,175	.....	.....	434,236	.....	.....	4.05	.....
1995	285,542	154,137	51,011	.....	.....	446,913	.....	.....	3.91	.....
1996	297,282	162,399	54,066	.....	.....	488,392	.....	.....	4.20	.....
1997	314,986	174,377	60,697	.....	.....	512,718	.....	.....	4.06	.....
1998	317,345	178,327	62,133	.....	.....	495,947	.....	.....	3.81	.....
1999	329,770	187,674	64,392	.....	.....	505,376	.....	.....	3.75	.....
2000	347,225	194,017	69,476	.....	.....	547,826	.....	.....	4.08	.....
2001	321,397	171,598	57,886	.....	.....	506,412	.....	.....	4.20	.....
2001: Jan	331,535	178,290	66,839	.....	.....	547,384	.....	.....	4.18	.....
Feb	330,257	176,412	63,226	.....	.....	542,798	.....	.....	4.10	.....
Mar	335,689	182,628	64,716	.....	.....	543,333	.....	.....	4.13	.....
Apr	322,021	170,589	59,300	.....	.....	539,759	.....	.....	4.30	.....
May	330,307	175,997	60,121	.....	.....	535,723	.....	.....	4.16	.....
June	320,465	172,000	58,270	.....	.....	530,797	.....	.....	4.18	.....
July	320,496	170,867	56,027	.....	.....	525,473	.....	.....	4.21	.....
Aug	321,844	170,890	56,854	.....	.....	520,663	.....	.....	4.19	.....
Sept	305,994	159,252	51,448	.....	.....	513,435	.....	.....	4.31	.....
Oct	321,694	173,844	51,109	.....	.....	516,995	.....	.....	4.29	.....
Nov	308,379	163,655	53,391	.....	.....	510,295	.....	.....	4.24	.....
Dec	312,308	167,192	55,491	.....	.....	506,412	.....	.....	4.20	.....
2002: Jan	315,360	169,017	54,680	.....	.....	500,601	.....	.....	4.09	.....
Feb	313,068	171,959	55,500	.....	.....	502,193	.....	.....	4.18	.....
Mar	316,737	171,520	53,642	.....	.....	503,337	.....	.....	4.16	.....
Apr	318,861	172,325	54,220	.....	.....	499,236	.....	.....	4.06	.....
May	320,873	173,064	56,174	.....	.....	496,373	.....	.....	4.04	.....
June	312,866	165,261	50,774	.....	.....	488,429	.....	.....	4.02	.....
July	326,636	179,274	56,933	.....	.....	488,964	.....	.....	3.95	.....
Aug	325,464	177,296	59,214	.....	.....	490,699	.....	.....	4.02	.....
Sept	317,660	169,060	52,901	.....	.....	485,751	.....	.....	3.97	.....
Oct	321,993	171,895	55,213	.....	.....	481,405	.....	.....	3.92	.....
Nov[P]	319,269	169,336	53,217	.....	.....	476,944	.....	.....	3.92	.....

[1] Annual data are averages of monthly not seasonally adjusted figures.

[2] Unfilled orders are seasonally adjusted, end of period. Ratios are unfilled orders at end of period to shipments for period (excludes industries with no unfilled orders). Annual ratios relate to seasonally adjusted data for December.

[3] Data based on North American Industry Classification System. Other data shown on Standard Industrial Classification. See footnote 3, Table B–58.

Note.—Since there are no unfilled orders for manufacturers' nondurable goods, manufacturers' nondurable new orders and nondurable shipments are the same (see Table B–58).

Source: Department of Commerce, Bureau of the Census.

TABLE B–60.—*Consumer price indexes for major expenditure classes, 1958–2002*

[For all urban consumers; 1982-84=100, except as noted]

Year or month	All items (CPI-U)	Food and beverages		Apparel	Housing	Transportation	Medical care	Entertainment	Recreation [2]	Education and communication [2]	Other goods and services	Energy [3]
		Total [1]	Food									
1958	28.9	.....	30.2	44.6	.....	28.6	20.6	.....	.....	.....	.....	21.5
1959	29.1	.....	29.7	45.0	.....	29.8	21.5	.....	.....	.....	.....	21.9
1960	29.6	.....	30.0	45.7	.....	29.8	22.3	.....	.....	.....	.....	22.4
1961	29.9	.....	30.4	46.1	.....	30.1	22.9	.....	.....	.....	.....	22.5
1962	30.2	.....	30.6	46.3	.....	30.8	23.5	.....	.....	.....	.....	22.6
1963	30.6	.....	31.1	46.9	.....	30.9	24.1	.....	.....	.....	.....	22.6
1964	31.0	.....	31.5	47.3	.....	31.4	24.6	.....	.....	.....	.....	22.5
1965	31.5	.....	32.2	47.8	.....	31.9	25.2	.....	.....	.....	.....	22.9
1966	32.4	.....	33.8	49.0	.....	32.3	26.3	.....	.....	.....	.....	23.3
1967	33.4	35.0	34.1	51.0	30.8	33.3	28.2	40.7	.....	.....	35.1	23.8
1968	34.8	36.2	35.3	53.7	32.0	34.3	29.9	43.0	.....	.....	36.9	24.2
1969	36.7	38.1	37.1	56.8	34.0	35.7	31.9	45.2	.....	.....	38.7	24.8
1970	38.8	40.1	39.2	59.2	36.4	37.5	34.0	47.5	.....	.....	40.9	25.5
1971	40.5	41.4	40.4	61.1	38.0	39.5	36.1	50.0	.....	.....	42.9	26.5
1972	41.8	43.1	42.1	62.3	39.4	39.9	37.3	51.5	.....	.....	44.7	27.2
1973	44.4	48.8	48.2	64.6	41.2	41.2	38.8	52.9	.....	.....	46.4	29.4
1974	49.3	55.5	55.1	69.4	45.8	45.8	42.4	56.9	.....	.....	49.8	38.1
1975	53.8	60.2	59.8	72.5	50.7	50.1	47.5	62.0	.....	.....	53.9	42.1
1976	56.9	62.1	61.6	75.2	53.8	55.1	52.0	65.1	.....	.....	57.0	45.1
1977	60.6	65.8	65.5	78.6	57.4	59.0	57.0	68.3	.....	.....	60.4	49.4
1978	65.2	72.2	72.0	81.4	62.4	61.7	61.8	71.9	.....	.....	64.3	52.5
1979	72.6	79.9	79.9	84.9	70.1	70.5	67.5	76.7	.....	.....	68.9	65.7
1980	82.4	86.7	86.8	90.9	81.1	83.1	74.9	83.6	.....	.....	75.2	86.0
1981	90.9	93.5	93.6	95.3	90.4	93.2	82.9	90.1	.....	.....	82.6	97.7
1982	96.5	97.3	97.4	97.8	96.9	97.0	92.5	96.0	.....	.....	91.1	99.2
1983	99.6	99.5	99.4	100.2	99.5	99.3	100.6	100.1	.....	.....	101.1	99.9
1984	103.9	103.2	103.2	102.1	103.6	103.7	106.8	103.8	.....	.....	107.9	100.9
1985	107.6	105.6	105.6	105.0	107.7	106.4	113.5	107.9	.....	.....	114.5	101.6
1986	109.6	109.1	109.0	105.9	110.9	102.3	122.0	111.6	.....	.....	121.4	88.2
1987	113.6	113.5	113.5	110.6	114.2	105.4	130.1	115.3	.....	.....	128.5	88.6
1988	118.3	118.2	118.2	115.4	118.5	108.7	138.6	120.3	.....	.....	137.0	89.3
1989	124.0	124.9	125.1	118.6	123.0	114.1	149.3	126.5	.....	.....	147.7	94.3
1990	130.7	132.1	132.4	124.1	128.5	120.5	162.8	132.4	.....	.....	159.0	102.1
1991	136.2	136.8	136.3	128.7	133.6	123.8	177.0	138.4	.....	.....	171.6	102.5
1992	140.3	138.7	137.9	131.9	137.5	126.5	190.1	142.3	.....	.....	183.3	103.0
1993	144.5	141.6	140.9	133.7	141.2	130.4	201.4	145.8	90.7	85.5	192.9	104.2
1994	148.2	144.9	144.3	133.4	144.8	134.3	211.0	150.1	92.7	88.8	198.5	104.6
1995	152.4	148.9	148.4	132.0	148.5	139.1	220.5	153.9	94.5	92.2	206.9	105.2
1996	156.9	153.7	153.3	131.7	152.8	143.0	228.2	159.1	97.4	95.3	215.4	110.1
1997	160.5	157.7	157.3	132.9	156.8	144.3	234.6	162.5	99.6	98.4	224.8	111.5
1998	163.0	161.1	160.7	133.0	160.4	141.6	242.1	.....	101.1	100.3	237.7	102.9
1999	166.6	164.6	164.1	131.3	163.9	144.4	250.6	.....	102.0	101.2	258.3	106.6
2000	172.2	168.4	167.8	129.6	169.6	153.3	260.8	.....	103.3	102.5	271.1	124.6
2001	177.1	173.6	173.1	127.3	176.4	154.3	272.8	.....	104.9	105.2	282.6	129.3
2002	179.9	176.8	176.2	124.0	180.3	152.9	285.6	.....	106.2	107.9	293.2	121.7
2001: Jan	175.1	171.4	170.9	125.4	174.1	154.4	267.1	.....	104.1	103.9	275.9	132.5
Feb	175.8	171.8	171.3	128.4	174.7	154.9	268.9	.....	104.3	104.0	277.2	132.0
Mar	176.2	172.2	171.7	132.2	175.4	153.9	270.0	.....	104.3	104.3	277.7	129.5
Apr	176.9	172.4	171.9	131.9	175.4	156.1	270.8	.....	105.0	104.1	281.3	133.1
May	177.7	172.9	172.5	129.8	175.9	159.2	271.4	.....	105.0	104.0	280.2	140.1
June	178.0	173.4	173.0	126.3	177.3	158.3	272.5	.....	104.8	104.4	281.2	140.5
July	177.5	174.0	173.5	122.6	177.6	154.4	273.1	.....	105.0	104.8	285.8	132.4
Aug	177.5	174.4	173.9	122.6	178.0	153.3	274.4	.....	105.1	105.8	283.3	129.4
Sept	178.3	174.6	174.1	126.8	177.4	155.5	275.0	.....	105.2	106.6	287.8	132.5
Oct	177.7	175.3	174.9	129.5	176.7	152.3	275.9	.....	105.3	107.1	285.6	122.1
Nov	177.4	175.2	174.6	128.0	176.9	150.2	276.7	.....	105.5	107.0	289.2	116.0
Dec	176.7	175.2	174.7	123.7	176.9	148.5	277.3	.....	105.3	106.9	286.4	111.4
2002: Jan	177.1	176.2	175.8	120.4	177.6	148.6	279.6	.....	105.7	107.2	287.2	111.7
Feb	177.8	176.4	175.9	123.5	178.5	148.4	281.0	.....	105.9	107.3	290.2	111.0
Mar	178.8	176.6	176.1	128.2	179.1	150.5	282.0	.....	106.1	106.6	288.5	115.6
Apr	179.8	176.7	176.2	128.8	179.5	153.7	283.2	.....	106.5	106.2	292.9	122.2
May	179.8	176.4	175.8	127.1	179.7	153.8	284.1	.....	106.4	106.6	291.5	122.9
June	179.9	176.4	175.8	122.7	180.7	153.4	284.7	.....	106.2	106.9	294.4	124.9
July	180.1	176.6	176.0	118.7	181.2	153.7	286.6	.....	106.2	107.6	294.5	125.5
Aug	180.7	176.6	176.0	120.5	181.7	153.9	287.3	.....	106.3	108.9	295.9	125.8
Sept	181.0	176.9	176.4	124.6	181.5	154.0	287.7	.....	106.2	109.5	297.0	126.1
Oct	181.3	177.1	176.5	126.8	181.4	154.9	289.2	.....	106.4	109.4	295.4	125.8
Nov	181.3	177.4	176.8	125.5	181.2	155.2	290.5	.....	106.4	109.3	295.6	125.3
Dec	180.9	177.8	177.3	121.5	181.1	154.2	291.3	.....	106.5	109.2	295.8	123.3

[1] Includes alcoholic beverages, not shown separately.
[2] December 1997=100.
[3] Household fuels—gas (piped), electricity, fuel oil, etc.—and motor fuel. Motor oil, coolant, etc. also included through 1982.

Note.—Data beginning 1983 incorporate a rental equivalence measure for homeowners' costs.
Series reflect changes in composition and renaming beginning in 1998, and formula and methodology changes beginning in 1999.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–61.—*Consumer price indexes for selected expenditure classes, 1958–2002*

[For all urban consumers; 1982-84=100, except as noted]

Year or month	Food and beverages				Housing							
		Food				Shelter			Fuels and utilities			
	Total[1]	Total	At home	Away from home	Total	Total[2]	Rent of primary residence	Owners' equivalent rent of primary residence[3]	Total[2]	Fuels		Furnishings and operations
										Total	Fuel oil and other fuels	Gas (piped) and electricity	
1958	.....	30.2	32.0	24.1	.....	24.5	37.6	.....	24.8	.....	13.7	21.9	.....
1959	.....	29.7	31.2	24.8	.....	24.7	38.2	.....	25.4	.....	13.9	22.4	.....
1960	.....	30.0	31.5	25.4	.....	25.2	38.7	.....	26.0	.....	13.8	23.3	.....
1961	.....	30.4	31.8	26.0	.....	25.4	39.2	.....	26.3	.....	14.1	23.5	.....
1962	.....	30.6	32.0	26.7	.....	25.8	39.7	.....	26.3	.....	14.2	23.5	.....
1963	.....	31.1	32.4	27.3	.....	26.1	40.1	.....	26.6	.....	14.4	23.5	.....
1964	.....	31.5	32.7	27.8	.....	26.5	40.5	.....	26.6	.....	14.4	23.5	.....
1965	.....	32.2	33.5	28.4	.....	27.0	40.9	.....	26.6	.....	14.6	23.5	.....
1966	.....	33.8	35.2	29.7	.....	27.8	41.5	.....	26.7	.....	15.0	23.6	.....
1967	35.0	34.1	35.1	31.3	30.8	28.8	42.2	.....	27.1	21.4	15.5	23.7	42.0
1968	36.2	35.3	36.3	32.9	32.0	30.1	43.3	.....	27.4	21.7	16.0	23.9	43.6
1969	38.1	37.1	38.0	34.9	34.0	32.6	44.7	.....	28.0	22.1	16.3	24.3	45.2
1970	40.1	39.2	39.9	37.5	36.4	35.5	46.5	.....	29.1	23.1	17.0	25.4	46.8
1971	41.4	40.4	40.9	39.4	38.0	37.0	48.7	.....	31.1	24.7	18.2	27.1	48.6
1972	43.1	42.1	42.7	41.0	39.4	38.7	50.4	.....	32.5	25.7	18.3	28.5	49.7
1973	48.8	48.2	49.7	44.2	41.2	40.5	52.5	.....	34.3	27.5	21.1	29.9	51.1
1974	55.5	55.1	57.1	49.8	45.8	44.4	55.2	.....	40.7	34.4	33.2	34.5	56.8
1975	60.2	59.8	61.8	54.5	50.7	48.8	58.0	.....	45.4	39.4	36.4	40.1	63.4
1976	62.1	61.6	63.1	58.2	53.8	51.5	61.1	.....	49.4	43.3	38.8	44.7	67.3
1977	65.8	65.5	66.8	62.6	57.4	54.9	64.8	.....	54.7	49.0	43.9	50.5	70.4
1978	72.2	72.0	73.8	68.3	62.4	60.5	69.3	.....	58.5	53.0	46.2	55.0	74.7
1979	79.9	79.9	81.8	75.9	70.1	68.9	74.3	.....	64.8	61.3	62.4	61.0	79.9
1980	86.7	86.8	88.4	83.4	81.1	81.0	80.9	.....	75.4	74.8	86.1	71.4	86.3
1981	93.5	93.6	94.8	90.9	90.4	90.5	87.9	.....	86.4	87.2	104.6	81.9	93.0
1982	97.3	97.4	98.1	95.8	96.9	96.9	94.6	.....	94.9	95.6	103.4	93.2	98.0
1983	99.5	99.4	99.1	100.0	99.5	99.1	100.1	102.5	100.2	100.5	97.2	101.5	100.2
1984	103.2	103.2	102.8	104.2	103.6	104.0	105.3	107.3	104.8	104.0	99.4	105.4	101.9
1985	105.6	105.6	104.3	108.3	107.7	109.8	111.8	113.2	106.5	104.5	95.9	107.1	103.8
1986	109.1	109.0	107.3	112.5	110.9	115.8	118.3	119.4	104.1	99.2	77.6	105.7	105.2
1987	113.5	113.5	111.9	117.0	114.2	121.3	123.1	124.8	103.0	97.3	77.9	103.8	107.1
1988	118.2	118.2	116.6	121.8	118.5	127.1	127.8	131.1	104.4	98.0	78.1	104.6	109.4
1989	124.9	125.1	124.2	127.4	123.0	132.8	132.8	137.4	107.8	100.9	81.7	107.5	111.2
1990	132.1	132.4	132.3	133.4	128.5	140.0	138.4	144.8	111.6	104.5	99.3	109.3	113.3
1991	136.8	136.3	135.8	137.9	133.6	146.3	143.3	150.4	115.3	106.7	94.6	112.6	116.0
1992	138.7	137.9	136.8	140.7	137.5	151.2	146.9	155.5	117.8	108.1	90.7	114.8	118.0
1993	141.6	140.9	140.1	143.2	141.2	155.7	150.3	160.5	121.3	111.2	90.3	118.5	119.3
1994	144.9	144.3	144.1	145.7	144.8	160.5	154.0	165.8	122.8	111.7	88.8	119.2	121.0
1995	148.9	148.4	148.8	149.0	148.5	165.7	157.8	171.3	123.7	111.5	88.1	119.2	123.0
1996	153.7	153.3	154.3	152.7	152.8	171.0	162.0	176.8	127.5	115.2	99.2	122.1	124.7
1997	157.7	157.3	158.1	157.0	156.8	176.3	166.7	181.9	130.8	117.9	99.8	125.1	125.4
1998	161.1	160.7	161.1	161.1	160.4	182.1	172.1	187.8	128.5	113.7	90.0	121.2	126.6
1999	164.6	164.1	164.2	165.1	163.9	187.3	177.5	192.9	128.8	113.5	91.4	120.9	126.7
2000	168.4	167.8	167.9	169.0	169.6	193.4	183.9	198.7	137.9	122.8	129.7	128.0	128.2
2001	173.6	173.1	173.4	173.9	176.4	200.6	192.1	206.3	150.2	135.4	129.3	142.4	129.1
2002	176.8	176.2	175.6	178.3	180.3	208.1	199.7	214.7	143.6	127.2	115.5	134.4	128.3
2001: Jan	171.4	170.9	171.3	171.4	174.1	196.4	188.2	202.4	153.8	139.8	149.1	145.7	128.8
Feb	171.8	171.3	171.8	171.8	174.7	197.6	188.9	202.9	152.3	138.0	144.6	144.0	129.1
Mar	172.2	171.7	172.0	172.3	175.4	198.9	189.6	203.6	150.8	136.3	138.1	142.6	129.1
Apr	172.4	171.9	172.2	172.7	175.4	199.2	190.2	204.2	149.7	135.1	134.4	141.6	129.1
May	172.9	172.5	172.8	173.1	175.9	199.6	191.0	204.9	151.3	136.8	131.9	143.8	128.9
June	173.4	173.0	173.3	173.6	177.3	200.7	191.6	205.7	155.7	141.6	129.6	149.4	129.2
July	174.0	173.5	173.9	174.1	177.6	201.4	192.3	206.3	154.8	140.5	123.8	148.6	129.2
Aug	174.4	173.9	174.2	174.7	178.0	202.4	193.1	207.3	152.7	138.0	122.1	146.0	129.1
Sept	174.6	174.1	174.3	175.1	177.4	202.0	193.9	208.1	150.6	135.7	125.3	143.1	129.4
Oct	175.3	174.9	175.2	175.6	176.7	202.4	194.7	209.0	144.6	129.1	121.5	135.9	129.0
Nov	175.2	174.6	174.7	175.8	176.9	202.9	195.5	210.1	143.5	127.8	118.3	134.7	129.1
Dec	175.2	174.7	174.7	176.0	176.9	203.2	196.4	210.9	142.2	126.2	112.7	133.5	128.9
2002: Jan	176.2	175.8	176.2	176.4	177.6	204.5	197.0	211.6	141.5	125.3	112.9	132.4	128.7
Feb	176.4	175.9	176.0	177.0	178.5	206.1	197.7	212.2	140.0	123.7	112.3	130.6	128.6
Mar	176.6	176.1	176.3	177.1	179.1	207.0	198.2	212.8	140.2	123.8	112.8	130.7	128.7
Apr	176.7	176.2	176.4	177.2	179.5	207.5	198.5	213.3	140.3	123.8	115.1	130.6	128.9
May	176.4	175.8	175.5	177.6	179.7	207.5	198.8	213.7	141.5	125.1	114.4	132.1	128.9
June	176.4	175.8	175.0	178.2	180.7	208.1	199.3	214.3	146.2	130.3	112.7	138.0	128.7
July	176.6	176.0	175.2	178.5	181.2	208.8	199.8	214.9	146.8	130.8	111.6	138.6	128.6
Aug	176.6	176.0	174.9	178.8	181.7	209.6	200.2	215.4	146.8	130.7	112.1	138.5	128.1
Sept	176.9	176.4	175.2	179.2	181.5	209.2	200.7	216.2	147.2	131.0	115.2	138.7	128.1
Oct	177.1	176.5	175.1	179.6	181.4	209.7	201.3	216.8	144.4	127.9	119.3	134.9	128.0
Nov	177.4	176.8	175.5	179.8	181.2	209.6	202.0	217.3	143.6	127.0	121.8	133.7	127.8
Dec	177.8	177.3	176.1	180.1	181.1	209.5	202.5	217.9	144.2	127.5	125.6	134.1	127.0

[1] Includes alcoholic beverages, not shown separately.
[2] Includes other items, not shown separately.
[3] December 1982=100.

See next page for continuation of table.

TABLE B–61.—*Consumer price indexes for selected expenditure classes, 1958–2002*—Continued

[For all urban consumers; 1982-84=100, except as noted]

Year or month	Transportation								Medical care		
		Private transportation									
	Total	Total[2]	New vehicles		Used cars and trucks	Motor fuel	Motor vehicle maintenance and repair	Public transportation	Total	Medical care commodities	Medical care services
			Total[2]	New cars							
1958	28.6	29.5	50.1	50.0	24.0	23.4	25.4	20.9	20.6	46.1	17.9
1959	29.8	30.8	52.3	52.2	26.8	23.7	26.0	21.5	21.5	46.8	18.7
1960	29.8	30.6	51.6	51.5	25.0	24.4	26.5	22.2	22.3	46.9	19.5
1961	30.1	30.8	51.6	51.5	26.0	24.1	27.1	23.2	22.9	46.3	20.2
1962	30.8	31.4	51.4	51.3	28.4	24.3	27.5	24.0	23.5	45.6	20.9
1963	30.9	31.6	51.1	51.0	28.7	24.2	27.8	24.3	24.1	45.2	21.5
1964	31.4	32.0	50.9	50.9	30.0	24.1	28.2	24.7	24.6	45.1	22.0
1965	31.9	32.5	49.8	49.7	29.8	25.1	28.7	25.2	25.2	45.0	22.7
1966	32.3	32.9	48.9	48.8	29.0	25.6	29.2	26.1	26.3	45.1	23.9
1967	33.3	33.8	49.3	49.3	29.9	26.4	30.4	27.4	28.2	44.9	26.0
1968	34.3	34.8	50.7	50.7	.....	26.8	32.1	28.7	29.9	45.0	27.9
1969	35.7	36.0	51.5	51.5	30.9	27.6	34.1	30.9	31.9	45.4	30.2
1970	37.5	37.5	53.1	53.0	31.2	27.9	36.6	35.2	34.0	46.5	32.3
1971	39.5	39.4	55.3	55.2	33.0	28.1	39.3	37.8	36.1	47.3	34.7
1972	39.9	39.7	54.8	54.7	33.1	28.4	41.1	39.3	37.3	47.4	35.9
1973	41.2	41.0	54.8	54.8	35.2	31.2	43.2	39.7	38.8	47.5	37.5
1974	45.8	46.2	58.0	57.9	36.7	42.2	47.6	40.6	42.4	49.2	41.4
1975	50.1	50.6	63.0	62.9	43.8	45.1	53.7	43.5	47.5	53.3	46.6
1976	55.1	55.6	67.0	66.9	50.3	47.0	57.6	47.8	52.0	56.5	51.3
1977	59.0	59.7	70.5	70.4	54.7	49.7	61.9	50.0	57.0	60.2	56.4
1978	61.7	62.5	75.9	75.8	55.8	51.8	67.0	51.5	61.8	64.4	61.2
1979	70.5	71.7	81.9	81.8	60.2	70.1	73.7	54.9	67.5	69.0	67.2
1980	83.1	84.2	88.5	88.4	62.3	97.4	81.5	69.0	74.9	75.4	74.8
1981	93.2	93.8	93.9	93.7	76.9	108.5	89.2	85.6	82.9	83.7	82.8
1982	97.0	97.1	97.5	97.4	88.8	102.8	96.0	94.9	92.5	92.3	92.6
1983	99.3	99.3	99.9	99.9	98.7	99.4	100.3	99.5	100.6	100.2	100.7
1984	103.7	103.6	102.6	102.8	112.5	97.9	103.8	105.7	106.8	107.5	106.7
1985	106.4	106.2	106.1	106.1	113.7	98.7	106.8	110.5	113.5	115.2	113.2
1986	102.3	101.2	110.6	110.6	108.8	77.1	110.3	117.0	122.0	122.8	121.9
1987	105.4	104.2	114.4	114.6	113.1	80.2	114.8	121.1	130.1	131.0	130.0
1988	108.7	107.6	116.5	116.9	118.0	80.9	119.7	123.3	138.6	139.9	138.3
1989	114.1	112.9	119.2	119.2	120.4	88.5	124.9	129.5	149.3	150.8	148.9
1990	120.5	118.8	121.4	121.0	117.6	101.2	130.1	142.6	162.8	163.4	162.7
1991	123.8	121.9	126.0	125.3	118.1	99.4	136.0	148.9	177.0	176.8	177.1
1992	126.5	124.6	129.2	128.4	123.2	99.0	141.3	151.4	190.1	188.1	190.5
1993	130.4	127.5	132.7	131.5	133.9	98.0	145.9	167.0	201.4	195.0	202.9
1994	134.3	131.4	137.6	136.0	141.7	98.5	150.2	172.0	211.0	200.7	213.4
1995	139.1	136.3	141.0	139.0	156.5	100.0	154.0	175.9	220.5	204.5	224.2
1996	143.0	140.0	143.7	141.4	157.0	106.3	158.4	181.9	228.2	210.4	232.4
1997	144.3	141.0	144.3	141.7	151.1	106.2	162.7	186.7	234.6	215.3	239.1
1998	141.6	137.9	143.4	140.7	150.6	92.2	167.1	190.3	242.1	221.8	246.8
1999	144.4	140.5	142.9	139.6	152.0	100.7	171.9	197.7	250.6	230.7	255.1
2000	153.3	149.1	142.8	139.6	155.8	129.3	177.3	209.6	260.8	238.1	266.0
2001	154.3	150.0	142.1	138.9	158.7	124.7	183.5	210.6	272.8	247.6	278.8
2002	152.9	148.8	140.0	137.3	152.0	116.6	190.2	207.4	285.6	256.4	292.9
2001: Jan	154.4	150.3	143.7	140.4	160.4	126.6	180.6	210.2	267.1	242.3	273.0
Feb	154.9	150.7	143.3	139.9	160.4	127.5	181.5	212.1	268.9	243.8	274.9
Mar	153.9	149.7	142.8	139.5	159.9	124.1	181.7	210.0	270.0	244.9	275.9
Apr	156.1	152.1	142.7	139.6	159.7	133.6	181.9	208.3	270.8	245.7	276.8
May	159.2	155.3	142.3	139.2	159.1	146.8	182.5	209.3	271.4	246.6	277.3
June	158.3	154.0	141.7	138.5	158.9	142.0	182.7	216.3	272.5	248.1	278.3
July	154.4	149.9	141.2	138.1	158.3	125.6	183.4	216.1	273.1	248.5	278.9
Aug	153.3	148.8	140.3	137.2	158.0	121.9	184.0	213.7	274.4	249.1	280.5
Sept	155.5	151.2	140.2	137.1	157.3	131.4	185.1	212.7	275.0	249.6	281.0
Oct	152.3	148.1	141.0	137.7	157.8	116.3	186.0	209.1	275.9	250.2	282.0
Nov	150.2	146.1	142.6	139.4	157.4	104.5	186.4	205.1	276.7	250.6	283.0
Dec	148.5	144.3	143.5	140.5	157.2	96.1	186.4	204.8	277.3	251.6	283.5
2002: Jan	148.6	144.4	142.7	139.7	155.6	97.9	187.1	205.8	279.6	252.6	286.2
Feb	148.4	144.1	141.2	138.6	153.9	98.2	188.0	207.3	281.0	253.7	287.7
Mar	150.5	146.3	140.7	138.2	152.1	107.7	188.5	207.9	282.0	254.1	288.9
Apr	153.7	149.6	140.4	137.8	151.8	121.4	189.0	209.7	283.2	254.8	290.2
May	153.8	149.5	139.8	137.2	151.8	121.4	189.9	211.9	284.1	255.4	291.2
June	153.4	149.1	139.2	136.6	152.2	120.1	190.0	211.3	284.7	256.4	291.7
July	153.7	149.5	138.7	136.1	152.7	120.8	189.8	209.7	286.6	257.5	293.8
Aug	153.9	149.7	138.1	135.4	153.4	121.5	191.0	209.4	287.3	257.7	294.7
Sept	154.0	150.0	138.7	135.8	152.2	121.7	191.4	206.5	287.7	257.9	295.2
Oct	154.9	151.1	139.5	136.7	150.7	124.5	191.8	203.4	289.2	258.3	297.1
Nov	155.2	151.5	140.4	137.6	148.8	124.4	192.8	202.3	290.5	259.1	298.5
Dec	154.2	150.4	140.6	137.7	148.5	119.7	193.3	203.0	291.3	259.5	299.4

Note.—See Note, Table B-60.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–62.—*Consumer price indexes for commodities, services, and special groups, 1960–2002*

[For all urban consumers; 1982-84=100, except as noted]

Year or month	All items (CPI-U)	Commodities		Services		Special indexes				All items		
		All commodities	Commodities less food	All services	Services less medical care services	All items less food	All items less energy	All items less food and energy	All items less medical care	CPI-U-X1 (Dec. 1982=97.6)[1]	CPI-U-RS (Dec. 1977=100)[2]	C-CPI-U (Dec. 1999=100)[3]
1960	29.6	33.6	36.0	24.1	25.0	29.7	30.4	30.6	30.2	32.2	.....	.....
1961	29.9	33.8	36.1	24.5	25.4	30.0	30.7	31.0	30.5	32.5	.....	.....
1962	30.2	34.1	36.3	25.0	25.9	30.3	31.1	31.4	30.8	32.8	.....	.....
1963	30.6	34.4	36.6	25.5	26.3	30.7	31.5	31.8	31.1	33.3	.....	.....
1964	31.0	34.8	36.9	26.0	26.8	31.1	32.0	32.3	31.5	33.7	.....	.....
1965	31.5	35.2	37.2	26.6	27.4	31.6	32.5	32.7	32.0	34.2	.....	.....
1966	32.4	36.1	37.7	27.6	28.3	32.3	33.5	33.5	33.0	35.2	.....	.....
1967	33.4	36.8	38.6	28.8	29.3	33.4	34.4	34.7	33.7	36.3	.....	.....
1968	34.8	38.1	40.0	30.3	30.8	34.9	35.9	36.3	35.1	37.7	.....	.....
1969	36.7	39.9	41.7	32.4	32.9	36.8	38.0	38.4	37.0	39.4	.....	.....
1970	38.8	41.7	43.4	35.0	35.6	39.0	40.3	40.8	39.2	41.3	.....	.....
1971	40.5	43.2	45.1	37.0	37.5	40.8	42.0	42.7	40.8	43.1	.....	.....
1972	41.8	44.5	46.1	38.4	38.9	42.0	43.4	44.0	42.1	44.4	.....	.....
1973	44.4	47.8	47.7	40.1	40.6	43.7	46.1	45.6	44.8	47.2	.....	.....
1974	49.3	53.5	52.8	43.8	44.3	48.0	50.6	49.4	49.8	51.9	.....	.....
1975	53.8	58.2	57.6	48.0	48.3	52.5	55.1	53.9	54.3	56.2	.....	.....
1976	56.9	60.7	60.5	52.0	52.2	56.0	58.2	57.4	57.2	59.4	.....	.....
1977	60.6	64.2	63.8	56.0	55.9	59.6	61.9	61.0	60.8	63.2	.....	.....
1978	65.2	68.8	67.5	60.8	60.7	63.9	66.7	65.5	65.4	67.5	104.3	.....
1979	72.6	76.6	75.3	67.5	67.5	71.2	73.4	71.9	72.9	74.0	114.1	.....
1980	82.4	86.0	85.7	77.9	78.2	81.5	81.9	80.8	82.8	82.3	126.7	.....
1981	90.9	93.2	93.1	88.1	88.7	90.4	90.1	89.2	91.4	90.1	138.6	.....
1982	96.5	97.0	96.9	96.0	96.4	96.3	96.1	95.8	96.8	95.6	146.8	.....
1983	99.6	99.8	100.0	99.4	99.2	99.7	99.6	99.6	99.6	99.6	152.9	.....
1984	103.9	103.2	103.1	104.6	104.4	104.0	104.3	104.6	103.7	103.9	159.0	.....
1985	107.6	105.4	105.2	109.9	109.6	108.0	108.4	109.1	107.2	107.6	164.3	.....
1986	109.6	104.4	101.7	115.4	114.6	109.8	112.6	113.5	108.8	109.6	167.3	.....
1987	113.6	107.7	104.3	120.2	119.1	113.6	117.2	118.2	112.6	113.6	173.0	.....
1988	118.3	111.5	107.7	125.7	124.3	118.3	122.3	123.4	117.0	118.3	179.3	.....
1989	124.0	116.7	112.0	131.9	130.1	123.7	128.1	129.0	122.4	124.0	187.0	.....
1990	130.7	122.8	117.4	139.2	136.8	130.3	134.7	135.5	128.8	130.7	196.3	.....
1991	136.2	126.6	121.3	146.3	143.3	136.1	140.9	142.1	133.8	136.2	203.4	.....
1992	140.3	129.1	124.2	152.0	148.4	140.8	145.4	147.3	137.5	140.3	208.5	.....
1993	144.5	131.5	126.3	157.9	153.6	145.1	150.0	152.2	141.2	144.5	213.7	.....
1994	148.2	133.8	127.9	163.1	158.4	149.0	154.1	156.5	144.7	148.2	218.2	.....
1995	152.4	136.4	129.8	168.7	163.5	153.1	158.7	161.2	148.6	152.4	223.5	.....
1996	156.9	139.9	132.6	174.1	168.7	157.5	163.1	165.6	152.8	156.9	229.5	.....
1997	160.5	141.8	133.4	179.4	173.9	161.1	167.1	169.5	156.3	160.5	234.4	.....
1998	163.0	141.9	132.0	184.2	178.4	163.4	170.9	173.4	158.6	163.0	237.7	.....
1999	166.6	144.4	134.0	188.8	182.7	167.0	174.4	177.0	162.0	166.6	242.7	.....
2000	172.2	149.2	139.2	195.3	188.9	173.0	178.6	181.3	167.3	172.2	250.8	102.0
2001	177.1	150.7	138.9	203.4	196.6	177.8	183.5	186.1	171.9	177.1	257.8	104.1
2002	179.9	149.7	136.0	209.8	202.5	180.5	187.7	190.5	174.3	179.9	261.9	105.4
2001: Jan	175.1	150.0	139.0	200.2	193.6	175.9	181.0	183.5	170.1	175.1	255.0	103.1
Feb	175.8	150.6	139.7	201.0	194.3	176.6	181.8	184.4	170.8	175.8	256.0	103.6
Mar	176.2	150.7	139.6	201.8	195.1	177.1	182.6	185.3	171.2	176.2	256.6	103.8
Apr	176.9	151.9	141.2	201.9	195.2	177.8	182.9	185.6	171.8	176.9	257.6	104.2
May	177.7	152.9	142.4	202.5	195.7	178.6	182.9	185.5	172.6	177.7	258.7	104.5
June	178.0	152.1	141.0	204.0	197.2	179.0	183.3	185.9	172.9	178.0	259.3	104.7
July	177.5	150.4	138.2	204.5	197.8	178.2	183.6	186.2	172.3	177.5	258.4	104.4
Aug	177.5	149.8	137.2	205.2	198.4	178.2	184.1	186.6	172.3	177.5	258.5	104.4
Sept	178.3	151.5	139.7	204.9	198.1	179.0	184.5	187.1	173.0	178.3	259.6	104.7
Oct	177.7	150.5	137.8	204.7	197.8	178.2	185.1	187.6	172.4	177.7	258.7	104.4
Nov	177.4	149.5	136.4	205.1	198.2	177.8	185.4	188.1	172.0	177.4	258.3	104.1
Dec	176.7	147.9	134.1	205.3	198.3	177.0	185.2	187.8	171.3	176.7	257.3	103.6
2002: Jan	177.1	147.8	133.5	206.3	199.2	177.4	185.7	188.2	171.7	177.1	257.9	103.9
Feb	177.8	148.1	133.9	207.3	200.2	178.2	186.5	189.2	172.4	177.8	258.9	104.3
Mar	178.8	149.4	135.6	208.0	200.8	179.2	187.1	189.8	173.3	178.8	260.4	104.8
Apr	179.8	151.0	137.8	208.4	201.2	180.4	187.5	190.3	174.3	179.8	261.8	105.5
May	179.8	150.5	137.3	208.8	201.6	180.4	187.4	190.2	174.2	179.8	261.8	105.4
June	179.9	149.8	136.3	209.8	202.6	180.6	187.3	190.1	174.4	179.9	262.0	105.5
July	180.1	149.3	135.5	210.7	203.3	180.8	187.5	190.3	174.5	180.1	262.3	105.5
Aug	180.7	149.6	135.9	211.5	204.2	181.5	188.1	191.0	175.0	180.7	263.1	105.8
Sept	181.0	150.2	136.7	211.5	204.1	181.8	188.4	191.3	175.3	181.0	263.6	106.0
Oct	181.3	150.7	137.3	211.7	204.2	182.2	188.8	191.8	175.6	181.3	264.0	106.2
Nov	181.3	150.6	137.0	211.8	204.3	182.1	188.9	191.8	175.6	181.3	264.0	106.1
Dec	180.9	149.7	135.6	211.9	204.3	181.6	188.6	191.4	175.1	180.9	263.4	105.8

[1] CPI-U-X1 is a rental equivalence approach to homeowners' costs for the CPI-U for years prior to 1983, the first year for which the official index incorporates such a measure. CPI-U-X1 is rebased to the December 1982 value of the CPI-U (1982-84=100) and is identical with CPI-U data from December 1982 forward. Data prior to 1967 estimated by moving the series at the same rate as the CPI-U for each year.

[2] CPI research series using current methods (CPI-U-RS) introduced in June 1999. Data for 2002 are preliminary. All data are subject to revision annually.

[3] Chained consumer price index introduced in August 2002. Data for 2001 and 2002 are subject to revision. See *Monthly Labor Review,* September 2002, for details.

Note.—See Note, Table B-60.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–63.—*Changes in special consumer price indexes, 1960–2002*

[For all urban consumers; percent change]

Year or month	All items (CPI-U)		All items less food		All items less energy		All items less food and energy		All items less medical care	
	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year
1960	1.4	1.7	1.0	1.7	1.3	1.7	1.0	1.3	1.3	1.3
1961	.7	1.0	1.3	1.0	.7	1.0	1.3	1.3	.3	1.0
1962	1.3	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.0
1963	1.6	1.3	1.6	1.3	1.9	1.3	1.6	1.3	1.6	1.0
1964	1.0	1.3	1.0	1.3	1.3	1.6	1.2	1.6	1.0	1.3
1965	1.9	1.6	1.6	1.6	1.9	1.6	1.5	1.2	1.9	1.6
1966	3.5	2.9	3.5	2.2	3.4	3.1	3.3	2.4	3.4	3.1
1967	3.0	3.1	3.3	3.4	3.2	2.7	3.8	3.6	2.7	2.1
1968	4.7	4.2	5.0	4.5	4.9	4.4	5.1	4.6	4.7	4.2
1969	6.2	5.5	5.6	5.4	6.5	5.8	6.2	5.8	6.1	5.4
1970	5.6	5.7	6.6	6.0	5.4	6.1	6.6	6.3	5.2	5.9
1971	3.3	4.4	3.0	4.6	3.4	4.2	3.1	4.7	3.2	4.1
1972	3.4	3.2	2.9	2.9	3.5	3.3	3.0	3.0	3.4	3.2
1973	8.7	6.2	5.6	4.0	8.2	6.2	4.7	3.6	9.1	6.4
1974	12.3	11.0	12.2	9.8	11.7	9.8	11.1	8.3	12.2	11.2
1975	6.9	9.1	7.3	9.4	6.6	8.9	6.7	9.1	6.7	9.0
1976	4.9	5.8	6.1	6.7	4.8	5.6	6.1	6.5	4.5	5.3
1977	6.7	6.5	6.4	6.4	6.7	6.4	6.5	6.3	6.7	6.3
1978	9.0	7.6	8.3	7.2	9.1	7.8	8.5	7.4	9.1	7.6
1979	13.3	11.3	14.0	11.4	11.1	10.0	11.3	9.8	13.4	11.5
1980	12.5	13.5	13.0	14.5	11.7	11.6	12.2	12.4	12.5	13.6
1981	8.9	10.3	9.8	10.9	8.5	10.0	9.5	10.4	8.8	10.4
1982	3.8	6.2	4.1	6.5	4.2	6.7	4.5	7.4	3.6	5.9
1983	3.8	3.2	4.1	3.5	4.5	3.6	4.8	4.0	3.6	2.9
1984	3.9	4.3	3.9	4.3	4.4	4.7	4.7	5.0	3.9	4.1
1985	3.8	3.6	4.1	3.8	4.0	3.9	4.3	4.3	3.5	3.4
1986	1.1	1.9	.5	1.7	3.8	3.9	3.8	4.0	.7	1.5
1987	4.4	3.6	4.6	3.5	4.1	4.1	4.2	4.1	4.3	3.5
1988	4.4	4.1	4.2	4.1	4.7	4.4	4.7	4.4	4.2	3.9
1989	4.6	4.8	4.5	4.6	4.6	4.7	4.4	4.5	4.5	4.6
1990	6.1	5.4	6.3	5.3	5.2	5.2	5.2	5.0	5.9	5.2
1991	3.1	4.2	3.3	4.5	3.9	4.6	4.4	4.9	2.7	3.9
1992	2.9	3.0	3.2	3.5	3.0	3.2	3.3	3.7	2.7	2.8
1993	2.7	3.0	2.7	3.1	3.1	3.2	3.2	3.3	2.6	2.7
1994	2.7	2.6	2.6	2.7	2.6	2.7	2.6	2.8	2.5	2.5
1995	2.5	2.8	2.7	2.8	2.9	3.0	3.0	3.0	2.5	2.7
1996	3.3	3.0	3.1	2.9	2.9	2.8	2.6	2.7	3.3	2.8
1997	1.7	2.3	1.8	2.3	2.1	2.5	2.2	2.4	1.6	2.3
1998	1.6	1.6	1.5	1.4	2.4	2.3	2.4	2.3	1.5	1.5
1999	2.7	2.2	2.8	2.2	2.0	2.0	1.9	2.1	2.6	2.1
2000	3.4	3.4	3.5	3.6	2.6	2.4	2.6	2.4	3.3	3.3
2001	1.6	2.8	1.3	2.8	2.8	2.7	2.7	2.6	1.4	2.7
2002	2.4	1.6	2.6	1.5	1.8	2.3	1.9	2.4	2.2	1.4
	Percent change from preceding month									
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
2001: Jan	0.6	0.6	0.7	0.6	0.4	0.3	0.4	0.3	0.7	0.6
Feb	.4	.2	.4	.2	.4	.3	.5	.3	.4	.2
Mar	.2	.1	.3	0	.4	.2	.5	.2	.2	0
Apr	.4	.3	.4	.3	.2	.2	.2	.2	.4	.3
May	.5	.5	.4	.5	0	.2	–.1	.2	.5	.5
June	.2	.2	.2	.2	.2	.3	.2	.3	.2	.2
July	–.3	–.3	–.4	–.3	.2	.2	.2	.2	–.3	–.3
Aug	0	.1	0	0	.3	.2	.2	.2	0	0
Sept	.5	.4	.4	.4	.2	.2	.3	.2	.4	.3
Oct	–.3	–.3	–.4	–.4	.3	.2	.3	.2	–.3	–.3
Nov	–.2	–.1	–.2	–.1	.2	.3	.3	.4	–.2	–.1
Dec	–.4	–.1	–.4	–.2	–.1	.1	–.2	.1	–.4	–.1
2002: Jan	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2
Feb	.4	.2	.5	.2	.4	.3	.5	.3	.4	.2
Mar	.6	.3	.6	.3	.3	.1	.3	.1	.5	.3
Apr	.6	.5	.7	.6	.2	.3	.3	.3	.6	.5
May	0	0	0	.1	–.1	.1	–.1	.2	–.1	0
June	.1	.1	.1	.1	–.1	.1	–.1	.1	.1	.1
July	.1	.1	.1	.2	.1	.1	.1	.2	.1	.1
Aug	.3	.3	.4	.4	.3	.3	.4	.3	.3	.3
Sept	.2	.2	.2	.2	.2	.1	.2	.1	.2	.2
Oct	.2	.3	.2	.3	.2	.2	.3	.2	.2	.2
Nov	0	.1	–.1	.1	.1	.2	0	.2	0	.1
Dec	–.2	.1	–.3	.1	–.2	.1	–.2	.1	–.3	.1

[1] Changes from December to December are based on unadjusted indexes.

Note.—See Note, Table B-60.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–64.—*Changes in consumer price indexes for commodities and services, 1929–2002*

[For all urban consumers; percent change]

Year	All items (CPI-U)		Commodities				Services				Medical care[2]		Energy[3]	
			Total		Food		Total		Medical care					
	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year
1929	0.6	0	.....	.....	2.5	1.2	.....	.....	.....	.....	.....	.....	.....	.....
1933	.8	–5.1	.....	.....	6.9	–2.8	.....	.....	.....	.....	.....	.....	.....	.....
1939	0	–1.4	–0.7	–2.0	–2.5	–2.5	0	0	1.2	1.2	1.0	0	.....	.....
1940	.7	.7	1.4	.7	2.5	1.7	.8	.8	0	0	0	1.0	.....	.....
1941	9.9	5.0	13.3	6.7	15.7	9.2	2.4	.8	1.2	0	1.0	0	.....	.....
1942	9.0	10.9	12.9	14.5	17.9	17.6	2.3	3.1	3.5	3.5	3.8	2.9	.....	.....
1943	3.0	6.1	4.2	9.3	3.0	11.0	2.3	2.3	5.6	4.5	4.6	4.7	.....	.....
1944	2.3	1.7	2.0	1.0	0	–1.2	2.2	2.2	3.2	4.3	2.6	3.6	.....	.....
1945	2.2	2.3	2.9	3.0	3.5	2.4	.7	1.5	3.1	3.1	2.6	2.6	.....	.....
1946	18.1	8.3	24.8	10.6	31.3	14.5	3.6	1.4	9.0	5.1	8.3	5.0	.....	.....
1947	8.8	14.4	10.3	20.5	11.3	21.7	5.6	4.3	6.4	8.7	6.9	8.0	.....	.....
1948	3.0	8.1	1.7	7.2	–.8	8.3	5.9	6.1	6.9	7.1	5.8	6.7	.....	.....
1949	–2.1	–1.2	–4.1	–2.7	–3.9	–4.2	3.7	5.1	1.6	3.3	1.4	2.8	.....	.....
1950	5.9	1.3	7.8	.7	9.8	1.6	3.6	3.0	4.0	2.4	3.4	2.0	.....	.....
1951	6.0	7.9	5.9	9.0	7.1	11.0	5.2	5.3	5.3	4.7	5.8	5.3	.....	.....
1952	.8	1.9	–.9	1.3	–1.0	1.8	4.4	4.5	5.8	6.7	4.3	5.0	.....	.....
1953	.7	.8	–.3	–.3	–1.1	–1.4	4.2	4.3	3.4	3.5	3.5	3.6	.....	.....
1954	–.7	.7	–1.6	–.9	–1.8	–.4	2.0	3.1	2.6	3.4	2.3	2.9	.....	.....
1955	.4	–.4	–.3	–.9	–.7	–1.4	2.0	2.0	3.2	2.6	3.3	2.2	.....	.....
1956	3.0	1.5	2.6	1.0	2.9	.7	3.4	2.5	3.8	3.8	3.2	3.8	.....	.....
1957	2.9	3.3	2.8	3.2	2.8	3.2	4.2	4.3	4.8	4.3	4.7	4.2	.....	.....
1958	1.8	2.8	1.2	2.1	2.4	4.5	2.7	3.7	4.6	5.3	4.5	4.6	–0.9	0
1959	1.7	.7	.6	0	–1.0	–1.7	3.9	3.1	4.9	4.5	3.8	4.4	4.7	1.9
1960	1.4	1.7	1.2	.9	3.1	1.0	2.5	3.4	3.7	4.3	3.2	3.7	1.3	2.3
1961	.7	1.0	0	.6	–.7	1.3	2.1	1.7	3.5	3.6	3.1	2.7	–1.3	.4
1962	1.3	1.0	.9	.9	1.3	.7	1.6	2.0	2.9	3.5	2.2	2.6	2.2	.4
1963	1.6	1.3	1.5	.9	2.0	1.6	2.4	2.0	2.8	2.9	2.5	2.6	–.9	0
1964	1.0	1.3	.9	1.2	1.3	1.3	1.6	2.0	2.3	2.3	2.1	2.1	0	–.4
1965	1.9	1.6	1.4	1.1	3.5	2.2	2.7	2.3	3.6	3.2	2.8	2.4	1.8	1.8
1966	3.5	2.9	2.5	2.6	4.0	5.0	4.8	3.8	8.3	5.3	6.7	4.4	1.7	1.7
1967	3.0	3.1	2.5	1.9	1.2	.9	4.3	4.3	8.0	8.8	6.3	7.2	1.7	2.1
1968	4.7	4.2	4.0	3.5	4.4	3.5	5.8	5.2	7.1	7.3	6.2	6.0	1.7	1.7
1969	6.2	5.5	5.4	4.7	7.0	5.1	7.7	6.9	7.3	8.2	6.2	6.7	2.9	2.5
1970	5.6	5.7	3.9	4.5	2.3	5.7	8.1	8.0	8.1	7.0	7.4	6.6	4.8	2.8
1971	3.3	4.4	2.8	3.6	4.3	3.1	4.1	5.7	5.4	7.4	4.6	6.2	3.1	3.9
1972	3.4	3.2	3.4	3.0	4.6	4.2	3.4	3.8	3.7	3.5	3.3	3.3	2.6	2.6
1973	8.7	6.2	10.4	7.4	20.3	14.5	6.2	4.4	6.0	4.5	5.3	4.0	17.0	8.1
1974	12.3	11.0	12.8	11.9	12.0	14.3	11.4	9.2	13.2	10.4	12.6	9.3	21.6	29.6
1975	6.9	9.1	6.2	8.8	6.6	8.5	8.2	9.6	10.3	12.6	9.8	12.0	11.4	10.5
1976	4.9	5.8	3.3	4.3	.5	3.0	7.2	8.3	10.8	10.1	10.0	9.5	7.1	7.1
1977	6.7	6.5	6.1	5.8	8.1	6.3	8.0	7.7	9.0	9.9	8.9	9.6	7.2	9.5
1978	9.0	7.6	8.8	7.2	11.8	9.9	9.3	8.6	9.3	8.5	8.8	8.4	7.9	6.3
1979	13.3	11.3	13.0	11.3	10.2	11.0	13.6	11.0	10.5	9.8	10.1	9.2	37.5	25.1
1980	12.5	13.5	11.0	12.3	10.2	8.6	14.2	15.4	10.1	11.3	9.9	11.0	18.0	30.9
1981	8.9	10.3	6.0	8.4	4.3	7.8	13.0	13.1	12.6	10.7	12.5	10.7	11.9	13.6
1982	3.8	6.2	3.6	4.1	3.1	4.1	4.3	9.0	11.2	11.8	11.0	11.6	1.3	1.5
1983	3.8	3.2	2.9	2.9	2.7	2.1	4.8	3.5	6.2	8.7	6.4	8.8	–.5	.7
1984	3.9	4.3	2.7	3.4	3.8	3.8	5.4	5.2	5.8	6.0	6.1	6.2	.2	1.0
1985	3.8	3.6	2.5	2.1	2.6	2.3	5.1	5.1	6.8	6.1	6.8	6.3	1.8	.7
1986	1.1	1.9	–2.0	–.9	3.8	3.2	4.5	5.0	7.9	7.7	7.7	7.5	–19.7	–13.2
1987	4.4	3.6	4.6	3.2	3.5	4.1	4.3	4.2	5.6	6.6	5.8	6.6	8.2	.5
1988	4.4	4.1	3.8	3.5	5.2	4.1	4.8	4.6	6.9	6.4	6.9	6.5	.5	.8
1989	4.6	4.8	4.1	4.7	5.6	5.8	5.1	4.9	8.6	7.7	8.5	7.7	5.1	5.6
1990	6.1	5.4	6.6	5.2	5.3	5.8	5.7	5.5	9.9	9.3	9.6	9.0	18.1	8.3
1991	3.1	4.2	1.2	3.1	1.9	2.9	4.6	5.1	8.0	8.9	7.9	8.7	–7.4	.4
1992	2.9	3.0	2.0	2.0	1.5	1.2	3.6	3.9	7.0	7.6	6.6	7.4	2.0	.5
1993	2.7	3.0	1.5	1.9	2.9	2.2	3.8	3.9	5.9	6.5	5.4	5.9	–1.4	1.2
1994	2.7	2.6	2.3	1.7	2.9	2.4	2.9	3.3	5.4	5.2	4.9	4.8	2.2	.4
1995	2.5	2.8	1.4	1.9	2.1	2.8	3.5	3.4	4.4	5.1	3.9	4.5	–1.3	.6
1996	3.3	3.0	3.2	2.6	4.3	3.3	3.3	3.2	3.2	3.7	3.0	3.5	8.6	4.7
1997	1.7	2.3	.2	1.4	1.5	2.6	2.8	3.0	2.9	2.9	2.8	2.8	–3.4	1.3
1998	1.6	1.6	.4	.1	2.3	2.2	2.6	2.7	3.2	3.2	3.4	3.2	–8.8	–7.7
1999	2.7	2.2	2.7	1.8	1.9	2.1	2.6	2.5	3.6	3.4	3.7	3.5	13.4	3.6
2000	3.4	3.4	2.7	3.3	2.8	2.3	3.9	3.4	4.6	4.3	4.2	4.1	14.2	16.9
2001	1.6	2.8	–1.4	1.0	2.8	3.2	3.7	4.1	4.8	4.8	4.7	4.6	–13.0	3.8
2002	2.4	1.6	1.2	–.7	1.5	1.8	3.2	3.1	5.6	5.1	5.0	4.7	10.7	–5.9

[1] Changes from December to December are based on unadjusted indexes.
[2] Commodities and services.
[3] Household fuels—gas (piped), electricity, fuel oil, etc.,—and motor fuel. Motor oil, coolant, etc., also included through 1982.

Note.—See Note, Table B-60.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–65.—*Producer price indexes by stage of processing, 1958–2002*

[1982=100]

Year or month	Finished goods									
	Total finished goods	Consumer foods			Finished goods excluding consumer foods					Total finished consumer goods
		Total	Crude	Processed	Total	Consumer goods			Capital equipment	
						Total	Durable	Nondurable		
1958	33.2	36.5	41.0	36.1	.....	32.9	43.4	27.8	32.1	33.6
1959	33.1	34.8	37.3	34.7	.....	33.3	43.9	28.2	32.7	33.3
1960	33.4	35.5	39.8	35.2	.....	33.5	43.8	28.4	32.8	33.6
1961	33.4	35.4	38.0	35.3	.....	33.4	43.6	28.4	32.9	33.6
1962	33.5	35.7	38.4	35.6	.....	33.4	43.4	28.4	33.0	33.7
1963	33.4	35.3	37.8	35.2	.....	33.4	43.1	28.5	33.1	33.5
1964	33.5	35.4	38.9	35.2	.....	33.3	43.3	28.4	33.4	33.6
1965	34.1	36.8	39.0	36.8	.....	33.6	43.2	28.8	33.8	34.2
1966	35.2	39.2	41.5	39.2	.....	34.1	43.4	29.3	34.6	35.4
1967	35.6	38.5	39.6	38.8	35.0	34.7	44.1	30.0	35.8	35.6
1968	36.6	40.0	42.5	40.0	35.9	35.5	45.1	30.6	37.0	36.5
1969	38.0	42.4	45.9	42.3	36.9	36.3	45.9	31.5	38.3	37.9
1970	39.3	43.8	46.0	43.9	38.2	37.4	47.2	32.5	40.1	39.1
1971	40.5	44.5	45.8	44.7	39.6	38.7	48.9	33.5	41.7	40.2
1972	41.8	46.9	48.0	47.2	40.4	39.4	50.0	34.1	42.8	41.5
1973	45.6	56.5	63.6	55.8	42.0	41.2	50.9	36.1	44.2	46.0
1974	52.6	64.4	71.6	63.9	48.8	48.2	55.5	44.0	50.5	53.1
1975	58.2	69.8	71.7	70.3	54.7	53.2	61.0	48.9	58.2	58.2
1976	60.8	69.6	76.7	69.0	58.1	56.5	63.7	52.4	62.1	60.4
1977	64.7	73.3	79.5	72.7	62.2	60.6	67.4	56.8	66.1	64.3
1978	69.8	79.9	85.8	79.4	66.7	64.9	73.6	60.0	71.3	69.4
1979	77.6	87.3	92.3	86.8	74.6	73.5	80.8	69.3	77.5	77.5
1980	88.0	92.4	93.9	92.3	86.7	87.1	91.0	85.1	85.8	88.6
1981	96.1	97.8	104.4	97.2	95.6	96.1	96.4	95.8	94.6	96.6
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	101.6	101.0	102.4	100.9	101.8	101.2	102.8	100.5	102.8	101.3
1984	103.7	105.4	111.4	104.9	103.2	102.2	104.5	101.1	105.2	103.3
1985	104.7	104.6	102.9	104.8	104.6	103.3	106.5	101.7	107.5	103.8
1986	103.2	107.3	105.6	107.4	101.9	98.5	108.9	93.3	109.7	101.4
1987	105.4	109.5	107.1	109.6	104.0	100.7	111.5	94.9	111.7	103.6
1988	108.0	112.6	109.8	112.7	106.5	103.1	113.8	97.3	114.3	106.2
1989	113.6	118.7	119.6	118.6	111.8	108.9	117.6	103.8	118.8	112.1
1990	119.2	124.4	123.0	124.4	117.4	115.3	120.4	111.5	122.9	118.2
1991	121.7	124.1	119.3	124.4	120.9	118.7	123.9	115.0	126.7	120.5
1992	123.2	123.3	107.6	124.4	123.1	120.8	125.7	117.3	129.1	121.7
1993	124.7	125.7	114.4	126.5	124.4	121.7	128.0	117.6	131.4	123.0
1994	125.5	126.8	111.3	127.9	125.1	121.6	130.9	116.2	134.1	123.3
1995	127.9	129.0	118.8	129.8	127.5	124.0	132.7	118.8	136.7	125.6
1996	131.3	133.6	129.2	133.8	130.5	127.6	134.2	123.3	138.3	129.5
1997	131.8	134.5	126.6	135.1	130.9	128.2	133.7	124.3	138.2	130.2
1998	130.7	134.3	127.2	134.8	129.5	126.4	132.9	122.2	137.6	128.9
1999	133.0	135.1	125.5	135.9	132.3	130.5	133.0	127.9	137.6	132.0
2000	138.0	137.2	123.5	138.3	138.1	138.4	133.9	138.7	138.8	138.2
2001	140.7	141.3	127.7	142.4	140.4	141.4	134.0	142.8	139.7	141.5
2002	138.8	140.0	128.3	141.0	138.3	138.7	132.9	139.8	139.1	139.3
2001: Jan	141.2	138.6	131.2	139.2	141.9	143.3	134.9	145.1	140.0	142.0
Feb	141.4	140.0	136.9	140.2	141.7	143.3	133.9	145.5	139.6	142.4
Mar	140.9	141.1	137.4	141.3	140.8	141.9	134.1	143.5	139.7	141.8
Apr	141.8	141.8	136.2	142.2	141.7	143.2	134.5	145.1	139.9	142.9
May	142.7	142.3	130.4	143.2	142.7	144.8	133.8	147.6	139.5	144.2
June	142.2	142.0	123.5	143.4	142.2	144.1	133.3	146.9	139.4	143.6
July	140.5	141.4	112.5	143.7	140.1	140.9	133.5	142.3	139.7	141.2
Aug	140.9	142.6	120.2	144.4	140.3	141.3	133.3	142.9	139.6	141.8
Sept	141.6	142.9	126.9	144.1	141.1	142.4	133.2	144.6	139.5	142.7
Oct	139.7	142.2	122.3	143.8	138.8	138.9	134.3	139.2	140.0	140.0
Nov	138.3	140.7	123.8	142.0	137.5	137.0	134.2	136.5	139.9	138.2
Dec	137.4	140.4	130.9	141.2	136.4	135.4	134.5	134.2	139.9	137.1
2002: Jan	137.4	141.1	139.4	141.1	136.3	135.4	133.9	134.4	139.7	137.2
Feb	137.7	142.3	146.4	141.9	136.3	135.4	134.1	134.3	139.8	137.5
Mar	138.7	143.4	160.3	141.9	137.2	136.9	133.6	136.7	139.5	138.9
Apr	138.8	139.2	115.1	141.2	138.5	138.9	133.5	139.8	139.3	139.2
May	138.6	139.4	124.4	140.6	138.2	138.6	133.0	139.5	139.1	139.1
June	139.0	139.8	126.2	140.9	138.6	139.3	132.8	140.6	139.0	139.6
July	138.8	139.8	125.8	140.9	138.3	139.1	131.5	141.0	138.4	139.6
Aug [1]	138.8	139.3	125.4	140.4	138.4	139.3	131.0	141.5	138.2	139.6
Sept	138.9	138.4	118.5	140.1	138.8	140.0	131.1	142.5	138.1	139.8
Oct	140.6	139.1	123.3	140.3	140.7	142.1	134.5	143.9	139.7	141.5
Nov	139.6	139.2	122.7	140.6	139.5	140.3	133.5	141.8	139.3	140.3
Dec	139.1	139.6	112.4	141.9	138.7	139.6	132.1	141.3	138.6	139.8

[1] Data have been revised through August 2002; data are subject to revision 4 months after date of original publication.

See next page for continuation of table.

TABLE B–65.—*Producer price indexes by stage of processing, 1958–2002*—Continued

[1982=100]

Year or month	Intermediate materials, supplies, and components								Crude materials for further processing				
	Total	Foods and feeds [2]	Other	Materials and components		Processed fuels and lubricants	Containers	Supplies	Total	Foodstuffs and feedstuffs	Other		
				For manufacturing	For construction						Total	Fuel	Other
1958	30.4	.....	30.1	32.8	32.0	16.2	33.2	33.1	31.9	41.6	.....	10.2	27.1
1959	30.8	.....	30.5	33.3	32.9	16.2	33.0	33.5	31.1	38.8	.....	10.4	28.1
1960	30.8	.....	30.7	33.3	32.7	16.6	33.4	33.3	30.4	38.4	.....	10.5	26.9
1961	30.6	.....	30.3	32.9	32.2	16.8	33.2	33.7	30.2	37.9	.....	10.5	27.2
1962	30.6	.....	30.2	32.7	32.1	16.7	33.6	34.5	30.5	38.6	.....	10.4	27.1
1963	30.7	.....	30.1	32.7	32.2	16.6	33.2	35.0	29.9	37.5	.....	10.5	26.7
1964	30.8	.....	30.3	33.1	32.5	16.2	32.9	34.7	29.6	36.6	.....	10.5	27.2
1965	31.2	.....	30.7	33.6	32.8	16.5	33.5	35.0	31.1	39.2	.....	10.6	27.7
1966	32.0	.....	31.3	34.3	33.6	16.8	34.5	36.5	33.1	42.7	.....	10.9	28.3
1967	32.2	41.8	31.7	34.5	34.0	16.9	35.0	36.8	31.3	40.3	21.1	11.3	26.5
1968	33.0	41.5	32.5	35.3	35.7	16.5	35.9	37.1	31.8	40.9	21.6	11.5	27.1
1969	34.1	42.9	33.6	36.5	37.7	16.6	37.2	37.8	33.9	44.1	22.5	12.0	28.4
1970	35.4	45.6	34.8	38.0	38.3	17.7	39.0	39.7	35.2	45.2	23.8	13.8	29.1
1971	36.8	46.7	36.2	38.9	40.8	19.5	40.8	40.8	36.0	46.1	24.7	15.7	29.4
1972	38.2	49.5	37.7	40.4	43.0	20.1	42.7	42.5	39.9	51.5	27.0	16.8	32.3
1973	42.4	70.3	40.6	44.1	46.5	22.2	45.2	51.7	54.5	72.6	34.3	18.6	42.9
1974	52.5	83.6	50.5	56.0	55.0	33.6	53.3	56.8	61.4	76.4	44.1	24.8	54.5
1975	58.0	81.6	56.6	61.7	60.1	39.4	60.0	61.8	61.6	77.4	43.7	30.6	50.0
1976	60.9	77.4	60.0	64.0	64.1	42.3	63.1	65.8	63.4	76.8	48.2	34.5	54.9
1977	64.9	79.6	64.1	67.4	69.3	47.7	65.9	69.3	65.5	77.5	51.7	42.0	56.3
1978	69.5	84.8	68.6	72.0	76.5	49.9	71.0	72.9	73.4	87.3	57.5	48.2	61.9
1979	78.4	94.5	77.4	80.9	84.2	61.6	79.4	80.2	85.9	100.0	69.6	57.3	75.5
1980	90.3	105.5	89.4	91.7	91.3	85.0	89.1	89.9	95.3	104.6	84.6	69.4	91.8
1981	98.6	104.6	98.2	98.7	97.9	100.6	96.7	96.9	103.0	103.9	101.8	84.8	109.8
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	100.6	103.6	100.5	101.2	102.8	95.4	100.4	101.8	101.3	101.8	100.7	105.1	98.8
1984	103.1	105.7	103.0	104.1	105.6	95.7	105.9	104.1	103.5	104.7	102.2	105.1	101.0
1985	102.7	97.3	103.0	103.3	107.3	92.8	109.0	104.4	95.8	94.8	96.9	102.7	94.3
1986	99.1	96.2	99.3	102.2	108.1	72.7	110.3	105.6	87.7	93.2	81.6	92.2	76.0
1987	101.5	99.2	101.7	105.3	109.8	73.3	114.5	107.7	93.7	96.2	87.9	84.1	88.5
1988	107.1	109.5	106.9	113.2	116.1	71.2	120.1	113.7	96.0	106.1	85.5	82.1	85.9
1989	112.0	113.8	111.9	118.1	121.3	76.4	125.4	118.1	103.1	111.2	93.4	85.3	95.8
1990	114.5	113.3	114.5	118.7	122.9	85.9	127.7	119.4	108.9	113.1	101.5	84.8	107.3
1991	114.4	111.1	114.6	118.1	124.5	85.3	128.1	121.4	101.2	105.5	94.6	82.9	97.5
1992	114.7	110.7	114.9	117.9	126.5	84.5	127.7	122.7	100.4	105.1	93.5	84.0	94.2
1993	116.2	112.7	116.4	118.9	132.0	84.7	126.4	125.0	102.4	108.4	94.7	87.1	94.1
1994	118.5	114.8	118.7	122.1	136.6	83.1	129.7	127.0	101.8	106.5	94.8	82.4	97.0
1995	124.9	114.8	125.5	130.4	142.1	84.2	148.8	132.1	102.7	105.8	96.8	72.1	105.8
1996	125.7	128.1	125.6	128.6	143.6	90.0	141.1	135.9	113.8	121.5	104.5	92.6	105.7
1997	125.6	125.4	125.7	128.3	146.5	89.3	136.0	135.9	111.1	112.2	106.4	101.3	103.5
1998	123.0	116.2	123.4	126.1	146.8	81.1	140.8	134.8	96.8	103.9	88.4	86.7	84.5
1999	123.2	111.1	123.9	124.6	148.9	84.6	142.5	134.2	98.2	98.7	94.3	91.2	91.1
2000	129.2	111.7	130.1	128.1	150.7	102.0	151.6	136.9	120.6	100.2	130.4	136.9	118.0
2001	129.7	115.9	130.5	127.4	150.6	104.5	153.1	138.7	121.0	106.1	126.8	151.4	101.5
2002	127.8	115.6	128.5	126.1	151.3	96.2	152.2	138.9	108.1	99.5	111.2	117.3	100.8
2001: Jan	131.7	115.1	132.6	128.5	149.7	112.2	153.0	139.1	164.7	104.8	199.9	308.9	108.8
Feb	131.3	113.9	132.3	128.8	150.1	110.0	153.1	138.7	141.2	104.3	161.4	216.8	111.6
Mar	130.7	114.2	131.6	129.0	150.2	105.9	153.1	138.8	132.2	109.1	143.3	182.9	106.1
Apr	130.7	114.2	131.6	128.7	150.4	106.4	153.8	138.9	133.1	109.2	144.7	186.8	105.6
May	131.3	115.2	132.2	128.6	151.6	109.1	153.8	138.6	131.3	110.3	141.1	175.9	107.5
June	131.4	116.3	132.3	128.2	151.7	110.6	154.0	138.8	120.6	109.8	123.6	137.5	106.4
July	130.0	117.2	130.7	127.4	151.1	105.6	153.5	138.7	113.8	109.6	112.6	115.4	104.0
Aug	129.7	119.4	130.2	126.9	151.1	105.2	153.0	138.7	113.0	109.1	111.6	114.6	102.9
Sept	130.1	118.4	130.7	126.7	150.9	108.0	152.9	138.7	107.6	108.7	102.9	94.3	103.2
Oct	127.7	117.5	128.2	125.9	150.3	97.7	152.5	138.4	97.6	104.1	89.6	79.9	91.5
Nov	126.6	115.4	127.2	125.3	150.2	93.9	152.3	138.3	102.1	98.5	100.8	111.2	87.4
Dec	125.4	114.0	126.1	124.7	149.9	89.6	152.3	138.2	94.7	96.2	90.3	92.6	83.4
2002: Jan	125.5	113.6	126.1	124.5	150.2	90.0	152.6	138.2	98.9	99.6	95.0	100.5	86.0
Feb	125.2	113.6	125.9	124.6	150.2	88.8	151.9	138.1	98.0	102.0	91.4	85.0	89.5
Mar	126.1	114.3	126.8	125.1	150.7	91.3	151.7	138.3	103.7	102.8	100.9	98.0	96.4
Apr	127.2	113.6	127.9	125.5	151.1	95.3	151.2	138.5	108.3	96.5	114.0	124.4	100.8
May	127.1	112.9	127.9	125.5	151.4	94.8	151.0	138.4	109.9	98.2	115.6	120.1	105.8
June	127.7	114.2	128.4	125.9	151.5	96.4	151.3	138.7	105.7	96.8	109.2	113.7	99.9
July	128.1	115.8	128.8	126.3	151.7	97.3	151.4	139.1	106.8	98.0	110.2	109.8	103.5
Aug [1]	128.4	116.8	129.0	126.5	152.1	97.6	151.5	139.3	108.7	99.7	112.1	111.1	105.8
Sept	129.4	117.9	130.0	127.0	152.3	100.4	152.8	139.7	108.5	100.7	111.1	105.8	107.4
Oct	129.7	117.4	130.4	127.3	151.8	101.6	153.5	139.6	111.6	99.7	117.4	120.8	108.1
Nov	129.8	117.7	130.5	127.8	151.1	101.1	153.8	139.7	117.1	99.4	127.3	157.1	102.0
Dec	129.4	119.1	130.0	127.3	151.1	100.4	153.4	139.7	119.4	100.4	130.6	160.9	104.8

[2] Intermediate materials for food manufacturing and feeds.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–66.—*Producer price indexes by stage of processing, special groups, 1974–2002*

[1982=100]

Year or month	Finished goods						Intermediate materials, supplies, and components				Crude materials for further processing			
				Excluding foods and energy										
	Total	Foods	Energy	Total	Capital equipment	Consumer goods excluding foods and energy	Total	Foods and feeds[1]	Energy	Other	Total	Foodstuffs and feedstuffs	Energy	Other
1974	52.6	64.4	26.2	53.6	50.5	55.5	52.5	83.6	33.1	54.0	61.4	76.4	27.8	83.3
1975	58.2	69.8	30.7	59.7	58.2	60.6	58.0	81.6	38.7	60.2	61.6	77.4	33.3	69.3
1976	60.8	69.6	34.3	63.1	62.1	63.7	60.9	77.4	41.5	63.8	63.4	76.8	35.3	80.2
1977	64.7	73.3	39.7	66.9	66.1	67.3	64.9	79.6	46.8	67.6	65.5	77.5	40.4	79.8
1978	69.8	79.9	42.3	71.9	71.3	72.2	69.5	84.8	49.1	72.5	73.4	87.3	45.2	87.8
1979	77.6	87.3	57.1	78.3	77.5	78.8	78.4	94.5	61.1	80.7	85.9	100.0	54.9	106.2
1980	88.0	92.4	85.2	87.1	85.8	87.8	90.3	105.5	84.9	90.3	95.3	104.6	73.1	113.1
1981	96.1	97.8	101.5	94.6	94.6	94.6	98.6	104.6	100.5	97.7	103.0	103.9	97.7	111.7
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	101.6	101.0	95.2	103.0	102.8	103.1	100.6	103.6	95.3	101.6	101.3	101.8	98.7	105.3
1984	103.7	105.4	91.2	105.5	105.2	105.7	103.1	105.7	95.5	104.7	103.5	104.7	98.0	111.7
1985	104.7	104.6	87.6	108.1	107.5	108.4	102.7	97.3	92.6	105.2	95.8	94.8	93.3	104.9
1986	103.2	107.3	63.0	110.6	109.7	111.1	99.1	96.2	72.6	104.9	87.7	93.2	71.8	103.1
1987	105.4	109.5	61.8	113.3	111.7	114.2	101.5	99.2	73.0	107.8	93.7	96.2	75.0	115.7
1988	108.0	112.6	59.8	117.0	114.3	118.5	107.1	109.5	70.9	115.2	96.0	106.1	67.7	133.0
1989	113.6	118.7	65.7	122.1	118.8	124.0	112.0	113.8	76.1	120.2	103.1	111.2	75.9	137.9
1990	119.2	124.4	75.0	126.6	122.9	128.8	114.5	113.3	85.5	120.9	108.9	113.1	85.9	136.3
1991	121.7	124.1	78.1	131.1	126.7	133.7	114.4	111.1	85.1	121.4	101.2	105.5	80.4	128.2
1992	123.2	123.3	77.8	134.2	129.1	137.3	114.7	110.7	84.3	122.0	100.4	105.1	78.8	128.4
1993	124.7	125.7	78.0	135.8	131.4	138.5	116.2	112.7	84.6	123.8	102.4	108.4	76.7	140.2
1994	125.5	126.8	77.0	137.1	134.1	139.0	118.5	114.8	83.0	127.1	101.8	106.5	72.1	156.2
1995	127.9	129.0	78.1	140.0	136.7	141.9	124.9	114.8	84.1	135.2	102.7	105.8	69.4	173.6
1996	131.3	133.6	83.2	142.0	138.3	144.3	125.7	128.1	89.8	134.0	113.8	121.5	85.0	155.8
1997	131.8	134.5	83.4	142.4	138.2	145.1	125.6	125.4	89.0	134.2	111.1	112.2	87.3	156.5
1998	130.7	134.3	75.1	143.7	137.6	147.7	123.0	116.2	80.8	133.5	96.8	103.9	68.6	142.1
1999	133.0	135.1	78.8	146.1	137.6	151.7	123.2	111.1	84.3	133.1	98.2	98.7	78.5	135.2
2000	138.0	137.2	94.1	148.0	138.8	154.0	129.2	111.7	101.7	136.6	120.6	100.2	122.1	145.2
2001	140.7	141.3	96.7	150.0	139.7	156.9	129.7	115.9	104.1	136.4	121.0	106.1	122.3	130.7
2002	138.8	140.0	88.8	150.2	139.1	157.7	127.8	115.6	95.9	135.8	108.1	99.5	101.8	135.6
2001: Jan	141.2	138.6	102.2	149.8	140.0	156.4	131.7	115.1	111.7	137.1	164.7	104.8	214.8	138.4
Feb	141.4	140.0	102.7	149.4	139.6	156.1	131.3	113.9	109.5	137.3	141.2	104.3	165.3	136.8
Mar	140.9	141.1	99.0	149.6	139.7	156.3	130.7	114.2	105.5	137.5	132.2	109.1	142.1	135.6
Apr	141.8	141.8	101.6	149.9	139.9	156.6	130.7	114.2	105.9	137.4	133.1	109.2	145.1	132.0
May	142.7	142.3	104.6	150.0	139.5	157.1	131.3	115.2	108.6	137.4	131.3	110.3	140.5	131.6
June	142.2	142.0	103.1	149.9	139.4	156.9	131.4	116.3	110.1	137.1	120.6	109.8	118.3	130.1
July	140.5	141.4	95.6	150.0	139.7	156.9	130.0	117.2	105.1	136.5	113.8	109.6	103.6	131.0
Aug	140.9	142.6	96.6	149.9	139.6	156.8	129.7	119.4	104.8	135.9	113.0	109.1	103.1	128.7
Sept	141.6	142.9	99.2	149.9	139.5	156.9	130.1	118.4	107.5	135.8	107.6	108.7	91.8	128.9
Oct	139.7	142.2	90.0	150.5	140.0	157.5	127.7	117.5	97.4	135.3	97.6	104.1	75.4	125.8
Nov	138.3	140.7	84.8	150.6	139.9	157.8	126.6	115.4	93.5	135.0	102.1	98.5	90.4	124.8
Dec	137.4	140.4	80.8	150.7	139.9	158.0	125.4	114.0	89.3	134.6	94.7	96.2	76.8	124.3
2002: Jan	137.4	141.1	81.3	150.4	139.7	157.6	125.5	113.6	89.6	134.6	98.9	99.6	82.8	126.1
Feb	137.7	142.3	81.3	150.4	139.8	157.6	125.2	113.6	88.4	134.6	98.0	102.0	76.9	128.1
Mar	138.7	143.4	85.0	150.2	139.5	157.4	126.1	114.3	90.9	135.0	103.7	102.8	89.9	129.0
Apr	138.8	139.2	88.8	150.4	139.3	157.9	127.2	113.6	94.9	135.4	108.3	96.5	107.3	131.8
May	138.6	139.4	88.4	150.2	139.1	157.7	127.1	112.9	94.6	135.4	109.9	98.2	108.3	134.9
June	139.0	139.8	89.8	150.2	139.0	157.8	127.7	114.2	96.2	135.7	105.7	96.8	97.8	138.6
July	138.8	139.8	90.5	149.5	138.4	157.1	128.1	115.8	96.7	136.0	106.8	98.0	98.1	141.0
Aug[2]	138.8	139.3	91.3	149.3	138.2	156.8	128.4	116.8	97.0	136.2	108.7	99.7	101.2	140.3
Sept	138.9	138.4	92.8	149.3	138.1	156.9	129.4	117.9	100.1	136.6	108.5	100.7	100.0	139.6
Oct	140.6	139.1	94.4	151.2	139.7	159.0	129.7	117.4	101.6	136.6	111.6	99.7	108.9	139.4
Nov	139.6	139.2	91.1	150.8	139.3	158.6	129.8	117.7	101.0	136.9	117.1	99.4	123.2	139.1
Dec	139.1	139.6	90.4	150.1	138.6	157.8	129.4	119.1	99.5	136.7	119.4	100.4	127.6	139.7

[1] Intermediate materials for food manufacturing and feeds.
[2] Data have been revised through August 2002; data are subject to revision 4 months after date of original publication.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–67.—*Producer price indexes for major commodity groups, 1958–2002*

[1982=100]

Year or month	Farm products and processed foods and feeds			Industrial commodities				
	Total	Farm products	Processed foods and feeds	Total	Textile products and apparel	Hides, skins, leather, and related products	Fuels and related products and power	Chemicals and allied products[1]
1958	39.4	42.9	36.5	30.0	47.4	31.6	13.7	34.9
1959	37.6	40.2	35.6	30.5	48.1	35.9	13.7	34.8
1960	37.7	40.1	35.6	30.5	48.6	34.6	13.9	34.8
1961	37.7	39.7	36.2	30.4	47.8	34.9	14.0	34.5
1962	38.1	40.4	36.5	30.4	48.2	35.3	14.0	33.9
1963	37.7	39.6	36.8	30.3	48.2	34.3	13.9	33.5
1964	37.5	39.0	36.7	30.5	48.5	34.4	13.5	33.6
1965	39.0	40.7	38.0	30.9	48.8	35.9	13.8	33.9
1966	41.6	43.7	40.2	31.5	48.9	39.4	14.1	34.0
1967	40.2	41.3	39.8	32.0	48.9	38.1	14.4	34.2
1968	41.1	42.3	40.6	32.8	50.7	39.3	14.3	34.1
1969	43.4	45.0	42.7	33.9	51.8	41.5	14.6	34.2
1970	44.9	45.8	44.6	35.2	52.4	42.0	15.3	35.0
1971	45.8	46.6	45.5	36.5	53.3	43.4	16.6	35.6
1972	49.2	51.6	48.0	37.8	55.5	50.0	17.1	35.6
1973	63.9	72.7	58.9	40.3	60.5	54.5	19.4	37.6
1974	71.3	77.4	68.0	49.2	68.0	55.2	30.1	50.2
1975	74.0	77.0	72.6	54.9	67.4	56.5	35.4	62.0
1976	73.6	78.8	70.8	58.4	72.4	63.9	38.3	64.0
1977	75.9	79.4	74.0	62.5	75.3	68.3	43.6	65.9
1978	83.0	87.7	80.6	67.0	78.1	76.1	46.5	68.0
1979	92.3	99.6	88.5	75.7	82.5	96.1	58.9	76.0
1980	98.3	102.9	95.9	88.0	89.7	94.7	82.8	89.0
1981	101.1	105.2	98.9	97.4	97.6	99.3	100.2	98.4
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	102.0	102.4	101.8	101.1	100.3	103.2	95.9	100.3
1984	105.5	105.5	105.4	103.3	102.7	109.0	94.8	102.9
1985	100.7	95.1	103.5	103.7	102.9	108.9	91.4	103.7
1986	101.2	92.9	105.4	100.0	103.2	113.0	69.8	102.6
1987	103.7	95.5	107.9	102.6	105.1	120.4	70.2	106.4
1988	110.0	104.9	112.7	106.3	109.2	131.4	66.7	116.3
1989	115.4	110.9	117.8	111.6	112.3	136.3	72.9	123.0
1990	118.6	112.2	121.9	115.8	115.0	141.7	82.3	123.6
1991	116.4	105.7	121.9	116.5	116.3	138.9	81.2	125.6
1992	115.9	103.6	122.1	117.4	117.8	140.4	80.4	125.9
1993	118.4	107.1	124.0	119.0	118.0	143.7	80.0	128.2
1994	119.1	106.3	125.5	120.7	118.3	148.5	77.8	132.1
1995	120.5	107.4	127.0	125.5	120.8	153.7	78.0	142.5
1996	129.7	122.4	133.3	127.3	122.4	150.5	85.8	142.1
1997	127.0	112.9	134.0	127.7	122.6	154.2	86.1	143.6
1998	122.7	104.6	131.6	124.8	122.9	148.0	75.3	143.9
1999	120.3	98.4	131.1	126.5	121.1	146.0	80.5	144.2
2000	122.0	99.5	133.1	134.8	121.4	151.5	103.5	151.0
2001	126.2	103.8	137.3	135.7	121.3	158.4	105.3	151.8
2002	123.9	98.9	136.2	132.4	119.9	157.5	93.1	151.9
2001: Jan	124.8	104.5	134.8	142.9	121.7	156.7	131.8	153.9
Feb	125.0	103.6	135.6	139.7	121.9	157.9	119.6	155.2
Mar	126.7	107.3	136.3	137.7	122.0	159.5	111.3	155.4
Apr	126.8	106.0	137.1	138.2	122.0	163.9	113.3	154.8
May	127.6	106.8	137.8	138.6	121.6	166.0	114.5	153.7
June	127.4	105.9	138.0	137.1	121.5	163.4	109.2	153.2
July	127.4	105.0	138.5	134.5	121.2	160.8	100.7	151.2
Aug	128.2	105.5	139.5	134.3	121.1	156.1	101.0	149.9
Sept	128.0	105.3	139.3	134.3	121.1	155.9	100.7	150.1
Oct	126.2	101.2	138.5	131.1	120.9	153.8	89.2	149.1
Nov	123.7	97.3	136.7	130.9	120.6	154.2	89.1	148.4
Dec	122.8	96.6	135.8	129.1	120.4	152.4	82.6	147.1
2002: Jan	123.9	99.9	135.7	129.4	120.3	152.4	84.0	147.1
Feb	125.1	101.8	136.5	129.1	119.9	152.5	82.5	147.3
Mar	125.9	104.4	136.4	130.5	120.0	154.3	87.4	148.8
Apr	122.0	94.3	135.8	132.4	119.8	154.4	93.7	150.5
May	122.5	96.6	135.3	132.3	119.8	156.5	93.4	150.6
June	122.6	96.2	135.6	132.4	119.9	158.0	92.9	151.3
July	123.5	97.9	136.2	132.6	119.9	158.5	93.5	152.9
Aug[2]	124.0	99.7	136.0	132.8	119.8	160.4	94.5	153.6
Sept	124.0	99.7	136.1	133.4	119.7	160.5	96.4	154.3
Oct	124.0	98.8	136.5	134.7	120.0	160.4	99.3	155.2
Nov	124.1	98.8	136.6	134.9	120.1	161.0	99.9	156.2
Dec	124.9	99.0	137.6	134.5	119.7	160.6	99.6	155.3

[1] Prices for some items in this grouping are lagged and refer to 1 month earlier than the index month.
[2] Data have been revised through August 2002; data are subject to revision 4 months after date of original publication.

See next page for continuation of table.

TABLE B–67.—*Producer price indexes for major commodity groups, 1958–2002*—Continued

[1982=100]

Year or month	Industrial commodities—Continued									
	Rubber and plastic products	Lumber and wood products	Pulp, paper, and allied products	Metals and metal products	Machinery and equipment	Furniture and household durables	Non-metallic mineral products	Transportation equipment		Miscellaneous products
								Total	Motor vehicles and equipment	
1958	42.8	32.5	33.4	30.0	32.1	47.9	29.9	.....	39.0	33.3
1959	42.6	34.7	33.7	30.6	32.8	48.0	30.3	.....	39.9	33.4
1960	42.7	33.5	34.0	30.6	33.0	47.8	30.4	.....	39.3	33.6
1961	41.1	32.0	33.0	30.5	33.0	47.5	30.5	.....	39.2	33.7
1962	39.9	32.2	33.4	30.2	33.0	47.2	30.5	.....	39.2	33.9
1963	40.1	32.8	33.1	30.3	33.1	46.9	30.3	.....	38.9	34.2
1964	39.6	33.5	33.0	31.1	33.3	47.1	30.4	.....	39.1	34.4
1965	39.7	33.7	33.3	32.0	33.7	46.8	30.4	.....	39.2	34.7
1966	40.5	35.2	34.2	32.8	34.7	47.4	30.7	.....	39.2	35.3
1967	41.4	35.1	34.6	33.2	35.9	48.3	31.2	.....	39.8	36.2
1968	42.8	39.8	35.0	34.0	37.0	49.7	32.4	.....	40.9	37.0
1969	43.6	44.0	36.0	36.0	38.2	50.7	33.6	40.4	41.7	38.1
1970	44.9	39.9	37.5	38.7	40.0	51.9	35.3	41.9	43.3	39.8
1971	45.2	44.7	38.1	39.4	41.4	53.1	38.2	44.2	45.7	40.8
1972	45.3	50.7	39.3	40.9	42.3	53.8	39.4	45.5	47.0	41.5
1973	46.6	62.2	42.3	44.0	43.7	55.7	40.7	46.1	47.4	43.3
1974	56.4	64.5	52.5	57.0	50.0	61.8	47.8	50.3	51.4	48.1
1975	62.2	62.1	59.0	61.5	57.9	67.5	54.4	56.7	57.6	53.4
1976	66.0	72.2	62.1	65.0	61.3	70.3	58.2	60.5	61.2	55.6
1977	69.4	83.0	64.6	69.3	65.2	73.2	62.6	64.6	65.2	59.4
1978	72.4	96.9	67.7	75.3	70.3	77.5	69.6	69.5	70.0	66.7
1979	80.5	105.5	75.9	86.0	76.7	82.8	77.6	75.3	75.8	75.5
1980	90.1	101.5	86.3	95.0	86.0	90.7	88.4	82.9	83.1	93.6
1981	96.4	102.8	94.8	99.6	94.4	95.9	96.7	94.3	94.6	96.1
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	100.8	107.9	103.3	101.8	102.7	103.4	101.6	102.8	102.2	104.8
1984	102.3	108.0	110.3	104.8	105.1	105.7	105.4	105.2	104.1	107.0
1985	101.9	106.6	113.3	104.4	107.2	107.1	108.6	107.9	106.4	109.4
1986	101.9	107.2	116.1	103.2	108.8	108.2	110.0	110.5	109.1	111.6
1987	103.0	112.8	121.8	107.1	110.4	109.9	110.0	112.5	111.7	114.9
1988	109.3	118.9	130.4	118.7	113.2	113.1	111.2	114.3	113.1	120.2
1989	112.6	126.7	137.8	124.1	117.4	116.9	112.6	117.7	116.2	126.5
1990	113.6	129.7	141.2	122.9	120.7	119.2	114.7	121.5	118.2	134.2
1991	115.1	132.1	142.9	120.2	123.0	121.2	117.2	126.4	122.1	140.8
1992	115.1	146.6	145.2	119.2	123.4	122.2	117.3	130.4	124.9	145.3
1993	116.0	174.0	147.3	119.2	124.0	123.7	120.0	133.7	128.0	145.4
1994	117.6	180.0	152.5	124.8	125.1	126.1	124.2	137.2	131.4	141.9
1995	124.3	178.1	172.2	134.5	126.6	128.2	129.0	139.7	133.0	145.4
1996	123.8	176.1	168.7	131.0	126.5	130.4	131.0	141.7	134.1	147.7
1997	123.2	183.8	167.9	131.8	125.9	130.8	133.2	141.6	132.7	150.9
1998	122.6	179.1	171.7	127.8	124.9	131.3	135.4	141.2	131.4	156.0
1999	122.5	183.6	174.1	124.6	124.3	131.7	138.9	141.8	131.7	166.6
2000	125.5	178.2	183.7	128.1	124.0	132.6	142.5	143.8	132.3	170.8
2001	127.2	174.4	184.8	125.4	123.7	133.2	144.3	145.2	131.5	181.3
2002	126.8	173.2	186.0	125.9	122.9	133.5	146.1	144.5	129.7	182.7
2001: Jan	127.5	171.6	185.4	126.9	124.0	133.2	142.8	145.7	133.2	177.1
Feb	127.1	171.5	185.3	126.6	123.9	133.4	143.6	144.9	131.7	177.9
Mar	127.5	172.8	185.5	126.6	123.9	133.1	143.6	145.1	131.9	178.3
Apr	127.6	172.9	185.6	126.0	123.9	133.4	144.0	145.5	132.5	179.2
May	127.9	179.0	185.3	126.1	123.9	133.2	144.0	144.8	131.2	182.4
June	127.7	180.7	185.0	125.8	123.8	133.1	143.8	144.5	130.5	182.8
July	127.5	176.7	184.8	125.5	123.6	133.2	144.3	144.9	130.9	182.7
Aug	127.1	176.8	184.2	125.0	123.4	132.9	144.5	144.8	130.5	183.0
Sept	126.8	176.0	184.2	124.9	123.4	132.8	144.8	145.0	130.4	183.1
Oct	126.6	172.3	183.9	124.1	123.3	133.2	145.2	146.0	132.0	182.9
Nov	126.7	171.5	183.9	123.6	123.3	133.1	145.4	145.7	131.7	183.3
Dec	126.4	170.6	184.2	123.6	123.3	133.1	145.2	146.0	132.0	183.3
2002: Jan	126.4	171.7	184.7	123.7	123.3	133.5	145.7	145.4	131.1	182.0
Feb	125.8	173.0	184.4	124.0	123.3	133.4	145.3	145.8	131.7	181.8
Mar	126.0	175.3	184.4	124.5	123.4	133.2	145.1	145.3	131.0	181.4
Apr	126.2	175.6	184.9	125.0	123.2	133.2	145.7	145.1	130.6	183.0
May	126.6	174.4	184.9	125.6	123.0	133.1	146.4	144.5	130.0	182.9
June	127.1	173.3	185.6	126.4	122.9	133.4	146.5	144.4	129.7	183.0
July	126.7	173.3	186.2	126.8	122.7	133.8	146.4	143.0	127.8	183.0
Aug [2]	127.1	173.8	186.6	126.6	122.7	133.7	146.6	142.5	127.0	182.9
Sept	127.8	172.3	187.1	127.1	122.7	133.5	146.6	142.2	126.7	183.2
Oct	127.9	172.4	187.4	126.9	122.6	133.6	146.7	146.0	131.6	183.2
Nov	127.2	172.0	187.7	127.2	122.6	133.8	146.2	145.3	130.6	182.8
Dec	127.0	171.8	187.6	127.2	122.4	133.2	146.5	143.9	128.8	183.4

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–68.—*Changes in producer price indexes for finished goods, 1965–2002*

[Percent change]

Year or month	Total finished goods		Finished consumer foods		Finished goods excluding consumer foods						Finished energy goods		Finished goods excluding foods and energy	
					Total		Consumer goods		Capital equipment					
	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year
1965	3.3	1.8	9.1	4.0	.....	.....	0.9	0.9	1.5	1.2	.....	.....	.....	.....
1966	2.0	3.2	1.3	6.5	.....	.....	1.8	1.5	3.8	2.4	.....	.....	.....	.....
1967	1.7	1.1	–.3	–1.8	.....	.....	2.0	1.8	3.1	3.5	.....	.....	.....	.....
1968	3.1	2.8	4.6	3.9	2.5	2.6	2.0	2.3	3.0	3.4	.....	.....	.....	.....
1969	4.9	3.8	8.1	6.0	3.3	2.8	2.8	2.3	4.8	3.5	.....	.....	.....	.....
1970	2.1	3.4	–2.3	3.3	4.3	3.5	3.8	3.0	4.8	4.7	.....	.....	.....	.....
1971	3.3	3.1	5.8	1.6	2.0	3.7	2.1	3.5	2.4	4.0	.....	.....	.....	.....
1972	3.9	3.2	7.9	5.4	2.3	2.0	2.1	1.8	2.1	2.6	.....	.....	.....	.....
1973	11.7	9.1	22.7	20.5	6.6	4.0	7.5	4.6	5.1	3.3	.....	.....	.....	.....
1974	18.3	15.4	12.8	14.0	21.1	16.2	20.3	17.0	22.7	14.3	.....	.....	17.7	11.4
1975	6.6	10.6	5.6	8.4	7.2	12.1	6.8	10.4	8.1	15.2	16.3	17.2	6.0	11.4
1976	3.8	4.5	–2.5	–.3	6.2	6.2	6.0	6.2	6.5	6.7	11.6	11.7	5.7	5.7
1977	6.7	6.4	6.9	5.3	6.8	7.1	6.7	7.3	7.2	6.4	12.0	15.7	6.2	6.0
1978	9.3	7.9	11.7	9.0	8.3	7.2	8.5	7.1	8.0	7.9	8.5	6.5	8.4	7.5
1979	12.8	11.2	7.4	9.3	14.8	11.8	17.6	13.3	8.8	8.7	58.1	35.0	9.4	8.9
1980	11.8	13.4	7.5	5.8	13.4	16.2	14.1	18.5	11.4	10.7	27.9	49.2	10.8	11.2
1981	7.1	9.2	1.5	5.8	8.7	10.3	8.6	10.3	9.2	10.3	14.1	19.1	7.7	8.6
1982	3.6	4.1	2.0	2.2	4.2	4.6	4.2	4.1	3.9	5.7	–.1	–1.5	4.9	5.7
1983	.6	1.6	2.3	1.0	0	1.8	–.9	1.2	2.0	2.8	–9.2	–4.8	1.9	3.0
1984	1.7	2.1	3.5	4.4	1.1	1.4	.8	1.0	1.8	2.3	–4.2	–4.2	2.0	2.4
1985	1.8	1.0	.6	–.8	2.2	1.4	2.1	1.1	2.7	2.2	–.2	–3.9	2.7	2.5
1986	–2.3	–1.4	2.8	2.6	–4.0	–2.6	–6.6	–4.6	2.1	2.0	–38.1	–28.1	2.7	2.3
1987	2.2	2.1	–.2	2.1	3.2	2.1	4.1	2.2	1.3	1.8	11.2	–1.9	2.1	2.4
1988	4.0	2.5	5.7	2.8	3.2	2.4	3.1	2.4	3.6	2.3	–3.6	–3.2	4.3	3.3
1989	4.9	5.2	5.2	5.4	4.8	5.0	5.3	5.6	3.8	3.9	9.5	9.9	4.2	4.4
1990	5.7	4.9	2.6	4.8	6.9	5.0	8.7	5.9	3.4	3.5	30.7	14.2	3.5	3.7
1991	–.1	2.1	–1.5	–.2	.3	3.0	–.7	2.9	2.5	3.1	–9.6	4.1	3.1	3.6
1992	1.6	1.2	1.6	–.6	1.6	1.8	1.6	1.8	1.7	1.9	–.3	–.4	2.0	2.4
1993	.2	1.2	2.4	1.9	–.4	1.1	–1.4	.7	1.8	1.8	–4.1	.3	.4	1.2
1994	1.7	.6	1.1	.9	1.9	.6	2.0	–.1	2.0	2.1	3.5	–1.3	1.6	1.0
1995	2.3	1.9	1.9	1.7	2.3	1.9	2.3	2.0	2.2	1.9	1.1	1.4	2.6	2.1
1996	2.8	2.7	3.4	3.6	2.6	2.4	3.7	2.9	.4	1.2	11.7	6.5	.6	1.4
1997	–1.2	.4	–.8	.7	–1.2	.3	–1.5	.5	–.6	–.1	–6.4	.2	0	.3
1998	0	–.8	.1	–.1	–.1	–1.1	–.1	–1.4	0	–.4	–11.7	–10.0	2.5	.9
1999	2.9	1.8	.8	.6	3.5	2.2	5.1	3.2	.3	0	18.1	4.9	.9	1.7
2000	3.6	3.8	1.7	1.6	4.1	4.4	5.5	6.1	1.2	.9	16.6	19.4	1.3	1.3
2001	–1.6	2.0	1.8	3.0	–2.6	1.7	–3.9	2.2	0	.6	–17.1	2.8	.9	1.4
2002	1.2	–1.4	–.6	–.9	1.7	–1.5	3.1	–1.9	–.9	–.4	11.9	–8.2	–.4	.1
	Percent change from preceding month													
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
2001: Jan	1.1	1.1	0.5	0.8	1.3	1.1	1.7	1.6	0.1	0.1	4.8	3.9	0.3	0.4
Feb	.1	.2	1.0	.9	–.1	0	0	.1	–.3	–.3	.5	.5	–.3	–.2
Mar	–.4	–.2	.8	.6	–.6	–.4	–1.0	–.7	.1	.1	–3.6	–2.7	.1	.1
Apr	.6	.3	.5	.5	.6	.1	.9	.2	.1	.1	2.6	.4	.2	.2
May	.6	.2	.4	0	.7	.3	1.1	.5	–.3	–.1	3.0	.5	.1	.2
June	–.4	–.5	–.2	–.4	–.4	–.5	–.5	–.8	–.1	.1	–1.4	–2.6	–.1	.1
July	–1.2	–1.2	–.4	–.4	–1.5	–1.3	–2.2	–2.1	.2	.2	–7.3	–7.3	.1	.1
Aug	.3	.4	.8	.7	.1	.2	.3	.4	–.1	0	1.0	1.4	–.1	0
Sept	.5	.4	.2	.1	.6	.4	.8	.6	–.1	.1	2.7	1.5	0	.1
Oct	–1.3	–1.3	–.5	–.1	–1.6	–1.6	–2.5	–2.2	.4	–.4	–9.3	–6.7	.4	–.4
Nov	–1.0	–.6	–1.1	–.8	–.9	–.7	–1.4	–.9	–.1	–.1	–5.8	–3.9	.1	.1
Dec	–.7	–.4	–.2	–.1	–.8	–.4	–1.2	–.6	0	.1	–4.7	–3.0	.1	.2
2002: Jan	0	0	.5	.8	–.1	–.3	0	–.3	–.1	–.1	.6	–.5	–.2	–.2
Feb	.2	.2	.9	.8	0	.1	0	.1	.1	.1	0	0	0	.1
Mar	.7	.9	.8	.6	.7	1.0	1.1	1.5	–.2	–.1	4.6	5.7	–.1	–.1
Apr	.1	–.1	–2.9	–3.0	.9	.5	1.5	.9	–.1	–.2	4.5	2.5	.1	.1
May	–.1	–.4	.1	–.2	–.2	–.4	–.2	–.7	–.1	–.1	–.5	–2.3	–.1	0
June	.3	.1	.3	.2	.3	.1	.5	.1	–.1	.1	1.6	–.1	0	.1
July	–.1	–.2	0	–.1	–.2	–.1	–.1	–.1	–.4	–.4	.8	.8	–.5	–.4
Aug[2]	0	.1	–.4	–.4	.1	.1	.1	.3	–.1	–.1	.9	1.4	–.1	–.1
Sept	.1	.1	–.6	–.7	.3	.2	.5	.4	–.1	.1	1.6	.6	0	.1
Oct	1.2	1.1	.5	.7	1.4	1.2	1.5	1.6	1.2	.4	1.7	4.2	1.3	.5
Nov	–.7	–.4	.1	.3	–.9	–.6	–1.3	–.8	–.3	–.2	–3.5	–1.8	–.3	–.3
Dec	–.4	0	.3	.4	–.6	–.1	–.5	0	–.5	–.4	–.8	.9	–.5	–.3

[1] Changes from December to December are based on unadjusted indexes.
[2] Data have been revised through August 2002; data are subject to revision 4 months after date of original publication.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–69.—*Money stock and debt measures, 1959–2002*

[Averages of daily figures, except debt end-of-period basis; billions of dollars, seasonally adjusted]

Year and month	M1	M2	M3	Debt[1]	Percent change			
					From year or 6 months earlier[2]			From previous period[3]
	Sum of currency, demand deposits, travelers checks, and other checkable deposits (OCDs)	M1 plus retail MMMF balances, savings deposits (including MMDAs), and small time deposits	M2 plus large time deposits, RPs, Eurodollars, and institution-only MMMF balances	Debt of domestic nonfinancial sectors	M1	M2	M3	Debt
December:								
1959	140.0	297.8	299.7	689.5	.....	.....	.....	7.7
1960	140.7	312.4	315.2	724.2	0.5	4.9	5.2	5.0
1961	145.2	335.5	340.8	767.7	3.2	7.4	8.1	6.0
1962	147.8	362.7	371.3	820.6	1.8	8.1	8.9	6.9
1963	153.3	393.2	405.9	876.0	3.7	8.4	9.3	6.8
1964	160.3	424.7	442.4	939.9	4.6	8.0	9.0	7.3
1965	167.8	459.2	482.1	1,007.1	4.7	8.1	9.0	7.1
1966	172.0	480.2	505.4	1,074.6	2.5	4.6	4.8	6.7
1967	183.3	524.8	557.9	1,152.6	6.6	9.3	10.4	7.3
1968	197.4	566.8	607.2	1,242.7	7.7	8.0	8.8	7.9
1969	203.9	587.9	615.9	1,332.0	3.3	3.7	1.4	7.2
1970	214.3	626.4	677.0	1,422.3	5.1	6.5	9.9	6.9
1971	228.2	710.1	775.9	1,557.5	6.5	13.4	14.6	9.5
1972	249.1	802.1	885.8	1,713.5	9.2	13.0	14.2	10.0
1973	262.7	855.3	984.9	1,897.9	5.5	6.6	11.2	10.7
1974	274.0	901.9	1,069.7	2,072.3	4.3	5.4	8.6	9.2
1975	286.8	1,016.0	1,169.9	2,264.7	4.7	12.7	9.4	9.3
1976	305.9	1,151.7	1,309.7	2,508.3	6.7	13.4	11.9	10.8
1977	330.5	1,269.9	1,470.1	2,829.6	8.0	10.3	12.2	12.8
1978	356.9	1,365.6	1,644.2	3,214.5	8.0	7.5	11.8	13.8
1979	381.4	1,473.3	1,808.3	3,606.5	6.9	7.9	10.0	12.2
1980	408.1	1,599.4	1,995.1	3,957.9	7.0	8.6	10.3	9.5
1981	436.2	1,754.9	2,254.0	4,366.4	6.9	9.7	13.0	10.4
1982	474.3	1,909.8	2,460.2	4,788.3	8.7	8.8	9.1	10.1
1983	520.8	2,125.9	2,697.0	5,364.8	9.8	11.3	9.6	12.0
1984	551.2	2,309.6	2,990.5	6,151.2	5.8	8.6	10.9	14.7
1985	619.1	2,494.9	3,207.5	7,132.3	12.3	8.0	7.3	15.7
1986	724.0	2,731.6	3,498.7	7,975.1	16.9	9.5	9.1	11.9
1987	749.4	2,830.6	3,685.8	8,677.6	3.5	3.6	5.3	9.0
1988	786.1	2,993.8	3,928.2	9,461.7	4.9	5.8	6.6	9.1
1989	792.1	3,157.4	4,075.9	10,166.3	.8	5.5	3.8	7.3
1990	824.1	3,276.8	4,151.9	10,850.6	4.0	3.8	1.9	6.5
1991	896.2	3,376.1	4,204.3	11,312.5	8.7	3.0	1.3	4.3
1992	1,024.0	3,430.3	4,215.4	11,839.9	14.3	1.6	.3	4.6
1993	1,129.1	3,483.0	4,277.4	12,434.1	10.3	1.5	1.5	4.9
1994	1,149.7	3,496.0	4,360.1	13,001.5	1.8	.4	1.9	4.5
1995	1,126.5	3,639.8	4,625.7	13,706.9	–2.0	4.1	6.1	5.4
1996	1,079.1	3,813.8	4,971.6	14,440.2	–4.2	4.8	7.5	5.3
1997	1,072.2	4,030.5	5,447.5	15,243.1	–.6	5.7	9.6	5.6
1998	1,096.5	4,383.9	6,037.7	16,285.5	2.3	8.8	10.8	6.8
1999	1,124.4	4,654.2	6,539.6	17,377.6	2.5	6.2	8.3	6.5
2000	1,088.9	4,938.6	7,109.9	18,250.6	–3.2	6.1	8.7	4.9
2001	1,179.3	5,458.6	8,027.0	19,369.2	8.3	10.5	12.9	6.1
2002*p*	1,219.1	5,815.6	8,541.2	.....	3.4	6.5	6.4	.....
2001: Jan	1,095.8	4,983.7	7,207.8	.....	–1.7	7.6	10.5	.....
Feb	1,098.9	5,022.8	7,274.0	.....	–.6	7.8	10.2	.....
Mar	1,107.4	5,071.9	7,327.0	18,487.9	1.5	8.4	9.9	5.2
Apr	1,109.7	5,114.3	7,430.5	.....	1.9	9.4	12.1	.....
May	1,116.6	5,140.4	7,523.4	.....	4.6	9.9	14.1	.....
June	1,125.6	5,187.3	7,612.1	18,746.6	6.7	10.1	14.1	5.6
July	1,138.6	5,227.1	7,655.0	.....	7.8	9.8	12.4	.....
Aug	1,147.3	5,264.4	7,667.0	.....	8.8	9.6	10.8	.....
Sept	1,200.0	5,374.4	7,819.8	19,065.8	16.7	11.9	13.5	6.8
Oct	1,161.0	5,367.9	7,866.9	.....	9.2	9.9	11.7	.....
Nov	1,163.8	5,414.4	7,956.5	.....	8.5	10.7	11.5	.....
Dec	1,179.3	5,458.6	8,027.0	19,369.2	9.5	10.5	10.9	6.4
2002: Jan	1,182.9	5,468.2	8,018.8	.....	7.8	9.2	9.5	.....
Feb	1,184.8	5,498.8	8,057.0	.....	6.5	8.9	10.2	.....
Mar	1,187.8	5,493.0	8,051.8	19,601.0	–2.0	4.4	5.9	4.8
Apr	1,176.7	5,476.5	8,038.7	.....	2.7	4.0	4.4	.....
May	1,183.4	5,542.4	8,118.5	.....	3.4	4.7	4.1	.....
June	1,190.2	5,576.3	8,159.2	20,004.5	1.8	4.3	3.3	8.2
July	1,197.4	5,635.5	8,217.3	.....	2.5	6.1	5.0	.....
Aug	1,183.2	5,680.3	8,291.3	.....	–.3	6.6	5.8	.....
Sept	1,191.2	5,705.5	8,326.7	20,336.8	.6	7.7	6.8	6.6
Oct	1,199.8	5,754.6	8,348.7	.....	3.9	10.2	7.7	.....
Nov	1,201.0	5,802.4	8,485.9	.....	3.0	9.4	9.1	.....
Dec*p*	1,219.1	5,815.6	8,541.2	.....	4.9	8.6	9.4	.....

[1] Consists of outstanding credit market debt of the U.S. Government, State and local governments, and private nonfinancial sectors.
[2] Annual changes are from December to December; monthly changes are from 6 months earlier at a simple annual rate.
[3] Annual changes are from fourth quarter to fourth quarter. Quarterly changes are from previous quarter at annual rate.
Note.—See Table B-70, for components.

Source: Board of Governors of the Federal Reserve System.

TABLE B–70.—*Components of money stock measures, 1959–2002*

[Averages of daily figures; billions of dollars, seasonally adjusted]

Year and month	Currency	Nonbank travelers checks	Demand deposits	Other checkable deposits (OCDs)	Small denomination time deposits [1]	Savings deposits, including money market deposit accounts (MMDAs) [2]
December:						
1959	28.8	0.3	110.8	0.0	11.4	146.5
1960	28.7	.3	111.6	.0	12.5	159.1
1961	29.3	.4	115.5	.0	14.8	175.5
1962	30.3	.4	117.1	.0	20.1	194.8
1963	32.2	.4	120.6	.1	25.5	214.4
1964	33.9	.5	125.8	.1	29.2	235.2
1965	36.0	.5	131.3	.1	34.5	256.9
1966	38.0	.6	133.4	.1	55.0	253.1
1967	40.0	.6	142.5	.1	77.8	263.7
1968	43.0	.7	153.6	.1	100.5	268.9
1969	45.7	.8	157.3	.2	120.4	263.7
1970	48.6	.8	164.7	.1	151.2	261.0
1971	52.0	.9	175.1	.2	189.7	292.2
1972	56.2	1.1	191.6	.2	231.6	321.4
1973	60.8	1.2	200.3	.3	265.8	326.8
1974	67.0	1.5	205.1	.4	287.9	338.6
1975	72.8	1.9	211.3	.9	337.9	388.9
1976	79.5	2.3	221.5	2.7	390.7	453.2
1977	87.4	2.6	236.4	4.2	445.5	492.2
1978	96.0	2.9	249.5	8.5	521.0	481.9
1979	104.8	3.1	256.6	16.8	634.3	423.8
1980	115.3	3.5	261.2	28.1	728.5	400.3
1981	122.5	3.6	231.4	78.7	823.1	343.9
1982	132.5	3.6	234.1	104.1	850.9	400.1
1983	146.2	4.0	238.5	132.1	784.1	684.9
1984	156.1	4.3	243.4	147.4	888.8	704.7
1985	167.7	4.8	266.7	179.8	885.7	815.3
1986	180.4	5.2	302.7	235.6	858.4	940.9
1987	196.7	5.7	287.5	259.5	921.0	937.4
1988	212.0	6.1	287.0	280.9	1,037.1	926.4
1989	222.3	6.1	278.6	285.1	1,151.3	893.7
1990	246.5	7.0	276.9	293.7	1,173.4	922.9
1991	267.1	7.1	289.7	332.4	1,065.6	1,043.6
1992	292.2	7.6	339.9	384.4	868.1	1,186.8
1993	321.6	7.5	385.4	414.6	782.0	1,219.4
1994	354.1	8.0	383.6	404.1	816.4	1,149.9
1995	372.1	8.5	389.2	356.7	931.4	1,134.1
1996	394.0	8.3	401.0	275.8	946.9	1,272.6
1997	424.4	8.1	393.9	245.8	968.2	1,400.1
1998	459.3	8.2	378.4	250.5	951.7	1,602.2
1999	516.9	8.3	354.5	244.7	955.4	1,738.7
2000	530.1	8.0	309.9	240.9	1,043.7	1,875.8
2001	579.9	7.8	329.9	261.8	973.3	2,308.0
2002 *p*	625.0	7.5	301.2	285.4	880.1	2,766.4
2001: Jan	533.6	8.1	312.0	242.2	1,049.2	1,895.8
Feb	536.7	8.0	311.2	243.1	1,049.4	1,929.3
Mar	539.4	7.9	313.5	246.5	1,046.5	1,962.8
Apr	542.6	7.8	310.8	248.6	1,042.9	1,997.7
May	546.1	7.9	313.0	249.6	1,040.6	2,025.5
June	549.2	8.2	312.9	255.2	1,033.3	2,061.9
July	554.2	8.6	314.8	261.0	1,024.1	2,089.6
Aug	562.7	8.8	317.8	258.1	1,016.5	2,131.2
Sept	567.7	8.4	365.4	258.6	1,009.5	2,184.7
Oct	571.4	8.2	327.9	253.6	999.7	2,217.1
Nov	575.0	7.8	326.3	254.7	987.2	2,268.9
Dec	579.9	7.8	329.9	261.8	973.3	2,308.0
2002: Jan	586.1	7.8	326.7	262.3	958.4	2,345.6
Feb	591.4	7.8	324.0	261.6	947.1	2,396.3
Mar	595.1	7.7	323.2	261.7	938.7	2,417.8
Apr	599.4	7.7	308.7	260.9	931.7	2,438.1
May	605.0	7.8	305.5	265.0	928.6	2,484.6
June	611.1	8.2	304.7	266.2	923.7	2,514.2
July	615.1	8.6	303.1	270.6	917.1	2,553.8
Aug	617.3	8.4	288.2	269.4	910.2	2,619.9
Sept	618.0	8.0	292.4	272.9	900.4	2,660.7
Oct	619.9	7.7	295.8	276.3	892.2	2,710.8
Nov	622.0	7.5	292.9	278.6	886.6	2,758.7
Dec *p*	625.0	7.5	301.2	285.4	880.1	2,766.4

[1] Small denomination deposits are those issued in amounts of less than $100,000.
[2] Data prior to 1982 are savings deposits only; MMDA data begin December 1982.

See next page for continuation of table.

TABLE B–70.—*Components of money stock measures, 1959–2002*—Continued

[Averages of daily figures; billions of dollars, seasonally adjusted]

Year and month	Money market mutual fund (MMMF) balances		Large denomination time deposits[3]	Overnight and term repurchase agreements (RPs) (net)	Overnight and term Eurodollars (net)
	Retail	Institution only			
December:					
1959	0.0	0.0	1.2	0.0	0.7
1960	.0	.0	2.0	.0	.8
1961	.0	.0	3.9	.0	1.5
1962	.0	.0	7.0	.0	1.6
1963	.0	.0	10.8	.0	1.9
1964	.0	.0	15.2	.0	2.4
1965	.0	.0	21.2	.0	1.8
1966	.0	.0	23.1	.0	2.2
1967	.0	.0	30.9	.0	2.2
1968	.0	.0	37.4	.0	2.9
1969	.0	.0	20.4	4.9	2.7
1970	.0	.0	45.2	3.0	2.4
1971	.0	.0	57.7	5.2	2.9
1972	.0	.0	73.3	6.6	3.8
1973	.0	.0	110.9	12.8	5.8
1974	1.4	.2	144.7	14.5	8.5
1975	2.4	.5	129.7	13.8	10.0
1976	1.8	.6	118.1	24.0	15.2
1977	1.8	1.0	145.2	32.2	21.7
1978	5.8	3.5	195.6	44.4	35.1
1979	33.9	10.4	223.1	48.8	52.7
1980	62.5	16.0	260.2	58.1	61.4
1981	151.7	38.2	304.3	67.8	88.8
1982	184.4	48.8	325.6	71.8	104.2
1983	136.1	40.9	316.1	97.5	116.6
1984	164.9	62.2	402.2	107.6	108.9
1985	174.9	65.2	421.7	121.5	104.2
1986	208.4	86.2	419.0	146.2	115.7
1987	222.8	93.6	461.9	178.3	121.5
1988	244.3	93.7	512.4	196.7	131.7
1989	320.3	112.1	527.9	169.0	109.4
1990	356.4	140.7	479.7	151.5	103.3
1991	370.7	189.9	414.9	131.1	92.3
1992	351.4	213.8	350.2	141.6	79.5
1993	352.4	217.0	332.1	172.6	72.8
1994	380.0	211.1	370.4	196.3	86.3
1995	447.8	264.2	429.3	198.4	94.0
1996	515.1	322.5	510.5	210.3	114.5
1997	590.1	395.7	620.2	253.9	147.2
1998	733.6	540.1	671.4	293.4	148.8
1999	835.7	638.6	742.4	335.9	168.5
2000	930.2	796.6	820.1	364.0	190.7
2001	997.9	1,206.5	784.3	375.7	201.9
2002 *p*	949.9	1,249.0	793.5	470.1	213.0
2001: Jan	942.9	826.4	838.8	364.2	194.8
Feb	945.2	883.2	805.1	359.1	203.6
Mar	955.2	906.4	779.1	352.7	216.9
Apr	964.0	932.0	801.9	372.0	210.3
May	957.7	985.3	810.4	377.3	210.0
June	966.6	1,024.9	813.9	377.8	208.3
July	974.8	1,036.7	806.5	373.9	210.7
Aug	969.5	1,029.7	795.3	370.7	206.8
Sept	980.2	1,080.2	797.8	360.4	207.0
Oct	990.1	1,148.8	789.4	357.1	203.7
Nov	994.6	1,180.6	780.8	374.1	206.6
Dec	997.9	1,206.5	784.3	375.7	201.9
2002: Jan	981.4	1,178.7	794.1	375.6	202.1
Feb	970.6	1,177.1	792.2	379.9	209.0
Mar	948.6	1,177.3	792.7	377.9	210.9
Apr	930.0	1,175.5	806.0	371.8	208.9
May	945.9	1,186.0	814.6	371.6	203.9
June	948.2	1,196.9	813.5	373.3	199.2
July	967.2	1,192.3	817.8	372.8	199.0
Aug	967.0	1,190.8	819.2	398.1	202.9
Sept	953.1	1,176.6	820.2	417.7	206.8
Oct	951.8	1,141.1	828.1	415.9	208.9
Nov	956.1	1,218.0	816.9	436.8	211.8
Dec *p*	949.9	1,249.0	793.5	470.1	213.0

[3] Large denomination deposits are those issued in amounts of more than $100,000.

Note.—See also Table B-69.

Source: Board of Governors of the Federal Reserve System.

TABLE B–71.—*Aggregate reserves of depository institutions and monetary base, 1959–2002*

[Averages of daily figures [1]; millions of dollars; seasonally adjusted, except as noted]

Year and month	Adjusted for changes in reserve requirements [2]					Borrowings of depository institutions from the Federal Reserve, NSA		
	Reserves of depository institutions				Monetary base			
	Total	Nonborrowed	Nonborrowed plus extended credit	Required		Total	Seasonal	Extended credit
December:								
1959	11,109	10,168	10,168	10,603	40,880	941	.....	.....
1960	11,247	11,172	11,172	10,503	40,977	74	.....	.....
1961	11,499	11,366	11,366	10,915	41,853	133	.....	.....
1962	11,604	11,344	11,344	11,033	42,957	260	.....	.....
1963	11,730	11,397	11,397	11,239	45,003	332	.....	.....
1964	12,011	11,747	11,747	11,605	47,161	264	.....	.....
1965	12,316	11,872	11,872	11,892	49,620	444	.....	.....
1966	12,223	11,690	11,690	11,884	51,565	532	.....	.....
1967	13,180	12,952	12,952	12,805	54,579	228	.....	.....
1968	13,767	13,021	13,021	13,341	58,357	746	.....	.....
1969	14,168	13,049	13,049	13,882	61,569	1,119	.....	.....
1970	14,558	14,225	14,225	14,309	65,013	332	.....	.....
1971	15,230	15,104	15,104	15,049	69,108	126	.....	.....
1972	16,645	15,595	15,595	16,361	75,167	1,050	.....	.....
1973	17,021	15,723	15,723	16,717	81,073	1,298	41	.....
1974	17,550	16,823	16,970	17,292	87,535	727	32	147
1975	17,822	17,692	17,704	17,556	93,887	130	14	12
1976	18,388	18,335	18,335	18,115	101,515	53	13	.....
1977	18,990	18,420	18,420	18,800	110,324	569	55	.....
1978	19,753	18,885	18,885	19,521	120,445	868	135	.....
1979	20,720	19,248	19,248	20,279	131,143	1,473	82	.....
1980	22,015	20,325	20,328	21,501	142,004	1,690	116	3
1981	22,443	21,807	21,956	22,124	149,021	636	54	148
1982	23,600	22,966	23,152	23,100	160,127	634	33	186
1983	25,367	24,593	24,595	24,806	175,467	774	96	2
1984	26,896	23,710	26,314	26,061	187,241	3,186	113	2,604
1985	31,541	30,223	30,722	30,478	203,534	1,318	56	499
1986	38,841	38,015	38,318	37,668	223,435	827	38	303
1987	38,918	38,141	38,624	37,899	239,838	777	93	483
1988	40,428	38,712	39,956	39,366	256,872	1,716	130	1,244
1989	40,430	40,164	40,184	39,488	267,677	265	84	20
1990	41,699	41,374	41,396	40,035	293,266	326	76	23
1991	45,451	45,258	45,259	44,461	317,502	192	38	1
1992	54,332	54,208	54,209	53,178	350,751	124	18	1
1993	60,460	60,378	60,378	59,390	386,477	82	31	0
1994	59,369	59,160	59,160	58,209	418,205	209	100	0
1995	56,430	56,173	56,173	55,140	434,396	257	40	0
1996	50,149	49,994	49,994	48,733	451,839	155	68	0
1997	46,848	46,523	46,523	45,163	479,703	324	79	0
1998	45,136	45,019	45,019	43,622	513,550	117	15	0
1999	41,824	41,504	41,504	40,527	593,121	[3] 320	67	0
2000	38,535	38,326	38,326	37,108	584,042	210	111	0
2001	41,220	41,154	41,154	39,572	634,414	67	33	0
2002	40,070	39,990	39,990	38,083	680,334	80	45	0
2001: Jan	37,973	37,900	37,900	36,588	587,776	73	34	0
Feb	38,382	38,331	38,331	36,875	589,886	51	21	0
Mar	38,460	38,402	38,402	37,061	592,272	58	20	0
Apr	38,568	38,517	38,517	37,291	595,638	51	35	0
May	38,316	38,103	38,103	37,297	598,897	213	79	0
June	39,066	38,836	38,836	37,704	602,835	229	120	0
July	39,785	39,502	39,502	38,377	608,105	283	174	0
Aug	40,079	39,896	39,896	38,871	616,024	183	164	0
Sept	58,217	54,832	54,832	39,200	639,690	3,385	93	0
Oct	45,224	45,097	45,097	43,899	629,954	127	67	0
Nov	40,867	40,783	40,783	39,415	629,374	84	33	0
Dec	41,220	41,154	41,154	39,572	634,414	67	33	0
2002: Jan	41,735	41,685	41,685	40,340	640,845	50	17	0
Feb	41,450	41,420	41,420	40,080	646,153	30	17	0
Mar	41,050	40,971	40,971	39,629	649,629	79	20	0
Apr	40,806	40,735	40,735	39,594	653,921	71	50	0
May	39,164	39,052	39,052	37,902	657,887	112	105	0
June	39,313	39,171	39,171	38,075	664,105	142	136	0
July	39,679	39,488	39,488	38,305	668,755	191	176	0
Aug	40,054	39,721	39,721	38,417	671,143	333	185	0
Sept	39,275	39,045	39,045	37,799	671,568	229	169	0
Oct	38,918	38,776	38,776	37,368	673,626	143	120	0
Nov	39,561	39,290	39,290	37,945	676,238	272	60	0
Dec	40,070	39,990	39,990	38,083	680,334	80	45	0

[1] Data are prorated averages of biweekly (maintenance period) averages of daily figures.

[2] Aggregate reserves incorporate adjustments for discontinuities associated with regulatory changes to reserve requirements. For details on aggregate reserves series see *Federal Reserve Bulletin*.

[3] Total includes borrowing under the terms and conditions established for the Century Date Change Special Liquidity Facility in effect from October 1, 1999 through April 7, 2000.

Note.—NSA indicates data are not seasonally adjusted.

Source: Board of Governors of the Federal Reserve System.

TABLE B–72.—*Bank credit at all commercial banks, 1959–2002*

[Monthly average; billions of dollars, seasonally adjusted [1]]

Year and month	Total bank credit	Securities in bank credit			Loans and leases in bank credit							
		Total securities	U.S. Treasury and agency securities	Other securities	Total loans and leases [2]	Commercial and industrial	Real estate			Consumer	Security	Other
							Total	Revolving home equity	Other			
December:												
1959	189.5	77.4	61.9	15.5	112.1	39.5	28.1	.....	.....	24.1	5.0	15.4
1960	197.6	79.5	63.9	15.6	118.1	42.4	28.7	.....	.....	26.3	5.2	15.6
1961	213.1	88.2	70.4	17.9	124.8	44.1	30.2	.....	.....	27.6	6.1	16.8
1962	231.0	92.2	70.7	21.5	138.8	47.7	34.0	.....	.....	30.3	6.6	20.2
1963	250.7	92.6	67.4	25.2	158.1	52.5	38.9	.....	.....	34.2	7.9	24.6
1964	270.4	94.7	66.7	28.1	175.6	58.7	43.5	.....	.....	39.5	8.3	25.7
1965	297.1	96.1	64.3	31.9	201.0	69.5	48.9	.....	.....	45.0	8.0	29.7
1966	318.6	97.2	61.0	36.2	221.4	79.3	53.8	.....	.....	47.7	8.3	32.4
1967	350.5	111.4	70.7	40.6	239.2	86.5	58.2	.....	.....	51.2	9.6	33.8
1968	390.5	121.9	73.8	48.1	268.6	96.5	64.8	.....	.....	57.7	10.5	39.2
1969	401.6	112.4	64.2	48.2	289.2	106.9	69.9	.....	.....	62.6	10.0	39.8
1970	434.4	129.7	73.4	56.3	304.6	111.6	72.9	.....	.....	65.3	10.4	44.5
1971	485.2	147.5	79.8	67.7	337.6	118.0	81.7	.....	.....	73.3	10.9	53.9
1972	555.3	160.6	85.4	75.2	394.7	133.6	98.8	.....	.....	85.4	14.4	62.5
1973	638.6	168.4	89.7	78.7	470.1	162.8	119.4	.....	119.4	98.3	11.2	78.4
1974	701.7	173.8	87.9	85.9	527.9	193.0	132.5	.....	132.5	102.1	10.6	89.6
1975	732.9	206.7	117.9	88.9	526.2	184.3	137.2	.....	137.2	104.6	12.7	87.5
1976	790.7	228.6	137.3	91.3	562.1	186.3	151.3	.....	151.3	115.9	17.7	91.0
1977	876.0	236.3	137.4	98.9	639.7	205.8	178.0	.....	178.0	138.1	20.7	97.2
1978	989.4	242.2	138.4	103.8	747.2	239.0	213.5	.....	213.5	164.6	19.1	110.9
1979	1,111.4	260.7	147.2	113.4	850.7	282.2	245.0	.....	245.0	184.5	17.4	121.6
1980	1,207.1	296.8	173.2	123.6	910.3	314.5	265.7	.....	265.7	179.2	17.2	133.6
1981	1,302.7	311.1	181.8	129.3	991.6	353.3	287.5	.....	287.5	182.7	20.2	148.0
1982	1,412.3	338.6	204.7	133.9	1,073.7	396.4	303.8	.....	303.8	188.2	23.6	161.7
1983	1,566.7	403.8	263.4	140.4	1,163.0	419.1	334.8	.....	334.8	213.2	26.5	169.4
1984	1,733.4	406.6	262.9	143.7	1,326.9	479.4	380.8	.....	380.8	253.6	34.1	179.0
1985	1,922.2	455.9	273.8	182.2	1,466.3	506.5	431.0	.....	431.0	294.5	42.9	191.4
1986	2,106.6	510.0	312.8	197.2	1,596.5	544.0	499.9	.....	499.9	314.5	38.6	199.5
1987	2,255.3	535.0	338.9	196.1	1,720.2	575.0	595.7	32.2	563.5	327.7	34.8	187.0
1988	2,434.9	562.5	366.9	195.6	1,872.4	611.5	678.1	42.6	635.5	354.8	40.1	188.0
1989	2,603.8	585.1	400.0	185.1	2,018.7	642.4	771.0	53.5	717.6	375.3	40.7	189.3
1990	2,751.1	635.0	456.2	178.8	2,116.1	645.3	858.2	66.3	791.9	380.8	44.4	187.3
1991	2,857.5	747.0	566.8	180.2	2,110.5	623.3	884.3	74.3	810.0	364.0	53.7	185.2
1992	2,956.9	843.3	666.3	177.0	2,113.6	599.4	907.3	78.4	828.9	356.3	63.2	187.5
1993	3,115.7	917.7	732.9	184.8	2,198.1	590.2	948.3	78.0	870.3	387.7	86.5	185.4
1994	3,322.5	942.4	724.3	218.2	2,380.1	650.2	1,012.0	80.4	931.5	448.3	75.9	193.8
1995	3,605.5	986.7	703.8	282.9	2,618.8	724.2	1,090.6	84.4	1,006.2	491.4	83.3	229.2
1996	3,761.8	980.5	700.5	280.0	2,781.3	787.9	1,142.6	90.7	1,051.8	512.9	75.5	262.4
1997	4,105.5	1,089.1	749.6	339.5	3,016.4	856.5	1,248.5	104.8	1,143.7	502.5	95.0	313.9
1998	4,546.0	1,229.8	792.8	437.0	3,316.2	951.0	1,339.5	103.9	1,235.6	497.2	146.5	382.0
1999	4,782.4	1,277.6	811.3	466.4	3,504.7	1,003.9	1,477.7	101.5	1,376.3	490.6	151.9	380.7
2000	5,234.0	1,345.7	790.5	555.2	3,888.3	1,088.4	1,658.4	129.9	1,528.5	539.5	178.7	423.4
2001	5,451.0	1,496.8	855.9	640.9	3,954.2	1,031.0	1,784.5	155.5	1,628.9	557.8	146.8	434.1
2002	5,885.6	1,714.3	1,011.9	702.4	4,171.3	965.0	2,020.3	212.3	1,808.0	587.1	191.6	407.4
2001: Jan	5,272.1	1,365.6	789.1	576.5	3,906.6	1,098.9	1,661.3	128.3	1,533.0	544.1	174.6	427.7
Feb	5,274.0	1,356.2	775.8	580.4	3,917.8	1,101.0	1,673.5	129.7	1,543.8	545.5	169.8	427.8
Mar	5,290.6	1,354.6	761.1	593.5	3,936.0	1,097.7	1,684.6	132.3	1,552.3	544.8	177.3	431.6
Apr	5,315.6	1,373.5	772.3	601.1	3,942.1	1,094.0	1,690.7	133.5	1,557.3	549.9	176.2	431.2
May	5,327.9	1,381.4	775.8	605.7	3,946.4	1,090.4	1,701.0	135.0	1,565.9	553.3	168.3	433.4
June	5,330.0	1,394.1	773.0	621.0	3,935.9	1,075.8	1,704.2	136.3	1,567.9	553.5	169.5	432.8
July	5,335.8	1,395.8	783.2	612.6	3,940.0	1,068.5	1,714.4	138.6	1,575.8	554.0	167.8	435.4
Aug	5,356.5	1,426.3	794.9	631.4	3,930.2	1,062.3	1,716.9	141.4	1,575.5	554.1	167.5	429.4
Sept	5,429.0	1,444.1	804.7	639.4	3,984.9	1,063.7	1,727.0	144.6	1,582.4	553.5	178.1	462.6
Oct	5,424.6	1,474.2	826.6	647.6	3,950.3	1,050.9	1,751.8	150.8	1,601.1	551.0	155.3	441.3
Nov	5,460.4	1,494.9	839.9	655.0	3,965.5	1,040.0	1,772.4	152.6	1,619.8	558.8	155.2	439.2
Dec	5,451.0	1,496.8	855.9	640.9	3,954.2	1,031.0	1,784.5	155.5	1,628.9	557.8	146.8	434.1
2002: Jan	5,428.7	1,491.0	838.8	652.1	3,937.8	1,021.9	1,781.0	158.7	1,622.3	560.8	152.0	422.1
Feb	5,438.9	1,488.5	832.4	656.1	3,950.3	1,028.5	1,789.1	162.2	1,626.9	564.3	153.4	415.0
Mar	5,433.8	1,488.0	849.3	638.7	3,954.8	1,023.5	1,790.3	167.6	1,622.7	563.3	161.3	407.5
Apr	5,450.7	1,504.4	870.2	634.2	3,946.3	1,008.2	1,794.5	172.1	1,622.4	567.7	168.4	407.6
May	5,498.9	1,535.5	893.3	642.2	3,963.3	1,000.7	1,816.6	179.6	1,637.0	570.0	169.7	406.4
June	5,540.7	1,562.5	908.9	653.6	3,978.2	993.1	1,838.4	186.1	1,652.4	568.7	170.2	407.7
July	5,591.4	1,594.6	918.5	676.1	3,996.7	981.6	1,869.2	192.9	1,676.3	564.7	178.0	403.2
Aug	5,673.0	1,632.9	945.9	687.0	4,040.1	981.8	1,900.7	197.7	1,703.0	574.8	176.6	406.3
Sept	5,730.3	1,643.5	962.7	680.8	4,086.8	975.1	1,935.1	200.9	1,734.1	582.8	181.3	412.6
Oct	5,759.6	1,643.0	972.1	670.9	4,116.6	969.9	1,967.4	204.9	1,762.6	584.8	183.2	411.3
Nov	5,837.1	1,687.9	1,001.0	686.8	4,149.3	967.3	2,000.0	207.7	1,792.2	585.6	186.7	409.7
Dec	5,885.6	1,714.3	1,011.9	702.4	4,171.3	965.0	2,020.3	212.3	1,808.0	587.1	191.6	407.4

[1] Data are prorated averages of Wednesday values for domestically chartered commercial banks, branches and agencies of foreign banks, New York State investment companies (through September 1996), and Edge Act and agreement corporations.

[2] Excludes Federal funds sold to, reverse repurchase agreements (RPs) with, and loans to commercial banks in the United States.

Source: Board of Governors of the Federal Reserve System.

TABLE B–73.—*Bond yields and interest rates, 1929–2002*

[Percent per annum]

Year and month	U.S. Treasury securities					Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields[4]	Commercial paper, 6 months[5]	Prime rate charged by banks[6]	Discount rate, Federal Reserve Bank of New York[6]	Federal funds rate[7]
	Bills (new issues)[1]		Constant maturities[2]										
	3-month	6-month	3-year	10-year	30-year	Aaa[3]	Baa						
1929	.....	.....	.....	.....	.....	4.73	5.90	4.27	.....	5.85	5.50-6.00	5.16	.....
1933	0.515	.....	.....	.....	.....	4.49	7.76	4.71	.....	1.73	1.50-4.00	2.56	.....
1939	.023	.....	.....	.....	.....	3.01	4.96	2.76	.....	.59	1.50	1.00	.....
1940	.014	.....	.....	.....	.....	2.84	4.75	2.50	.....	.56	1.50	1.00	.....
1941	.103	.....	.....	.....	.....	2.77	4.33	2.10	.....	.53	1.50	1.00	.....
1942	.326	.....	.....	.....	.....	2.83	4.28	2.36	.....	.66	1.50	[8]1.00	.....
1943	.373	.....	.....	.....	.....	2.73	3.91	2.06	.....	.69	1.50	[8]1.00	.....
1944	.375	.....	.....	.....	.....	2.72	3.61	1.86	.....	.73	1.50	[8]1.00	.....
1945	.375	.....	.....	.....	.....	2.62	3.29	1.67	.....	.75	1.50	[8]1.00	.....
1946	.375	.....	.....	.....	.....	2.53	3.05	1.64	.....	.81	1.50	[8]1.00	.....
1947	.594	.....	.....	.....	.....	2.61	3.24	2.01	.....	1.03	1.50-1.75	1.00	.....
1948	1.040	.....	.....	.....	.....	2.82	3.47	2.40	.....	1.44	1.75-2.00	1.34	.....
1949	1.102	.....	.....	.....	.....	2.66	3.42	2.21	.....	1.49	2.00	1.50	.....
1950	1.218	.....	.....	.....	.....	2.62	3.24	1.98	.....	1.45	2.07	1.59	.....
1951	1.552	.....	.....	.....	.....	2.86	3.41	2.00	.....	2.16	2.56	1.75	.....
1952	1.766	.....	.....	.....	.....	2.96	3.52	2.19	.....	2.33	3.00	1.75	.....
1953	1.931	.....	2.47	2.85	.....	3.20	3.74	2.72	.....	2.52	3.17	1.99	.....
1954	.953	.....	1.63	2.40	.....	2.90	3.51	2.37	.....	1.58	3.05	1.60	.....
1955	1.753	.....	2.47	2.82	.....	3.06	3.53	2.53	.....	2.18	3.16	1.89	1.78
1956	2.658	.....	3.19	3.18	.....	3.36	3.88	2.93	.....	3.31	3.77	2.77	2.73
1957	3.267	.....	3.98	3.65	.....	3.89	4.71	3.60	.....	3.81	4.20	3.12	3.11
1958	1.839	.....	2.84	3.32	.....	3.79	4.73	3.56	.....	2.46	3.83	2.15	1.57
1959	3.405	3.832	4.46	4.33	.....	4.38	5.05	3.95	.....	3.97	4.48	3.36	3.30
1960	2.928	3.247	3.98	4.12	.....	4.41	5.19	3.73	.....	3.85	4.82	3.53	3.22
1961	2.378	2.605	3.54	3.88	.....	4.35	5.08	3.46	.....	2.97	4.50	3.00	1.96
1962	2.778	2.908	3.47	3.95	.....	4.33	5.02	3.18	.....	3.26	4.50	3.00	2.68
1963	3.157	3.253	3.67	4.00	.....	4.26	4.86	3.23	5.89	3.55	4.50	3.23	3.18
1964	3.549	3.686	4.03	4.19	.....	4.40	4.83	3.22	5.83	3.97	4.50	3.55	3.50
1965	3.954	4.055	4.22	4.28	.....	4.49	4.87	3.27	5.81	4.38	4.54	4.04	4.07
1966	4.881	5.082	5.23	4.92	.....	5.13	5.67	3.82	6.25	5.55	5.63	4.50	5.11
1967	4.321	4.630	5.03	5.07	.....	5.51	6.23	3.98	6.46	5.10	5.61	4.19	4.22
1968	5.339	5.470	5.68	5.65	.....	6.18	6.94	4.51	6.97	5.90	6.30	5.16	5.66
1969	6.677	6.853	7.02	6.67	.....	7.03	7.81	5.81	7.81	7.83	7.96	5.87	8.20
1970	6.458	6.562	7.29	7.35	.....	8.04	9.11	6.51	8.45	7.71	7.91	5.95	7.18
1971	4.348	4.511	5.65	6.16	.....	7.39	8.56	5.70	7.74	5.11	5.72	4.88	4.66
1972	4.071	4.466	5.72	6.21	.....	7.21	8.16	5.27	7.60	4.73	5.25	4.50	4.43
1973	7.041	7.178	6.95	6.84	.....	7.44	8.24	5.18	7.96	8.15	8.03	6.44	8.73
1974	7.886	7.926	7.82	7.56	.....	8.57	9.50	6.09	8.92	9.84	10.81	7.83	10.50
1975	5.838	6.122	7.49	7.99	.....	8.83	10.61	6.89	9.00	6.32	7.86	6.25	5.82
1976	4.989	5.266	6.77	7.61	.....	8.43	9.75	6.49	9.00	5.34	6.84	5.50	5.04
1977	5.265	5.510	6.69	7.42	7.75	8.02	8.97	5.56	9.02	5.61	6.83	5.46	5.54
1978	7.221	7.572	8.29	8.41	8.49	8.73	9.49	5.90	9.56	7.99	9.06	7.46	7.93
1979	10.041	10.017	9.71	9.44	9.28	9.63	10.69	6.39	10.78	10.91	12.67	10.28	11.19
1980	11.506	11.374	11.55	11.46	11.27	11.94	13.67	8.51	12.66	12.29	15.27	11.77	13.36
1981	14.029	13.776	14.44	13.91	13.45	14.17	16.04	11.23	14.70	14.76	18.87	13.42	16.38
1982	10.686	11.084	12.92	13.00	12.76	13.79	16.11	11.57	15.14	11.89	14.86	11.02	12.26
1983	8.63	8.75	10.45	11.10	11.18	12.04	13.55	9.47	12.57	8.89	10.79	8.50	9.09
1984	9.58	9.80	11.89	12.44	12.41	12.71	14.19	10.15	12.38	10.16	12.04	8.80	10.23
1985	7.48	7.66	9.64	10.62	10.79	11.37	12.72	9.18	11.55	8.01	9.93	7.69	8.10
1986	5.98	6.03	7.06	7.68	7.78	9.02	10.39	7.38	10.17	6.39	8.33	6.33	6.81
1987	5.82	6.05	7.68	8.39	8.59	9.38	10.58	7.73	9.31	6.85	8.21	5.66	6.66
1988	6.69	6.92	8.26	8.85	8.96	9.71	10.83	7.76	9.19	7.68	9.32	6.20	7.57
1989	8.12	8.04	8.55	8.49	8.45	9.26	10.18	7.24	10.13	8.80	10.87	6.93	9.21
1990	7.51	7.47	8.26	8.55	8.61	9.32	10.36	7.25	10.05	7.95	10.01	6.98	8.10
1991	5.42	5.49	6.82	7.86	8.14	8.77	9.80	6.89	9.32	5.85	8.46	5.45	5.69
1992	3.45	3.57	5.30	7.01	7.67	8.14	8.98	6.41	8.24	3.80	6.25	3.25	3.52
1993	3.02	3.14	4.44	5.87	6.59	7.22	7.93	5.63	7.20	3.30	6.00	3.00	3.02
1994	4.29	4.66	6.27	7.09	7.37	7.96	8.62	6.19	7.49	4.93	7.15	3.60	4.21
1995	5.51	5.59	6.25	6.57	6.88	7.59	8.20	5.95	7.87	5.93	8.83	5.21	5.83
1996	5.02	5.09	5.99	6.44	6.71	7.37	8.05	5.75	7.80	5.42	8.27	5.02	5.30
1997	5.07	5.18	6.10	6.35	6.61	7.26	7.86	5.55	7.71	5.62	8.44	5.00	5.46
1998	4.81	4.85	5.14	5.26	5.58	6.53	7.22	5.12	7.07	.....	8.35	4.92	5.35
1999	4.66	4.76	5.49	5.65	5.87	7.04	7.87	5.43	7.04	.....	8.00	4.62	4.97
2000	5.85	5.92	6.22	6.03	5.94	7.62	8.36	5.77	7.52	.....	9.23	5.73	6.24
2001	3.45	3.39	4.09	5.02	5.49	7.08	7.95	5.19	7.00	.....	6.91	3.40	3.88
2002	1.62	1.69	3.10	4.61	.....	6.49	7.80	5.05	6.43	.....	4.67	1.17	1.67

[1] Rate on new issues within period; bank-discount basis.

[2] Yields on the more actively traded issues adjusted to constant maturities by the Department of the Treasury. In February 2002, the Department of the Treasury discontinued publication of the 30-year series.

[3] Beginning December 7, 2001, data for corporate Aaa series are industrial bonds only.

[4] Effective rate (in the primary market) on conventional mortgages, reflecting fees and charges as well as contract rate and assuming, on the average, repayment at end of 10 years. Rates beginning January 1973 not strictly comparable with prior rates.

See next page for continuation of table.

TABLE B–73.—*Bond yields and interest rates, 1929–2002*—Continued

[Percent per annum]

Year and month	U.S. Treasury securities					Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields[4]	Commercial paper, 6 months[5]	Prime rate charged by banks[6]	Discount rate, Federal Reserve Bank of New York[6]	Federal funds rate[7]
	Bills (new issues)[1]		Constant maturities[2]										
	3-month	6-month	3-year	10-year	30-year	Aaa[3]	Baa				High-low	High-low	
1998:													
Jan	5.09	5.07	5.38	5.54	5.81	6.61	7.19	5.07	7.27	.....	8.50-8.50	5.00-5.00	5.56
Feb	5.11	5.07	5.43	5.57	5.89	6.67	7.25	5.16	7.24	.....	8.50-8.50	5.00-5.00	5.51
Mar	5.03	5.04	5.57	5.65	5.95	6.71	7.32	5.30	7.17	.....	8.50-8.50	5.00-5.00	5.49
Apr	5.00	5.08	5.58	5.64	5.92	6.69	7.33	5.33	7.19	.....	8.50-8.50	5.00-5.00	5.45
May	5.03	5.15	5.61	5.65	5.93	6.69	7.30	5.21	7.18	.....	8.50-8.50	5.00-5.00	5.49
June	4.99	5.12	5.52	5.50	5.70	6.53	7.13	5.13	7.16	.....	8.50-8.50	5.00-5.00	5.56
July	4.96	5.03	5.47	5.46	5.68	6.55	7.15	5.18	7.13	.....	8.50-8.50	5.00-5.00	5.54
Aug	4.94	4.97	5.24	5.34	5.54	6.52	7.14	5.13	7.09	.....	8.50-8.50	5.00-5.00	5.55
Sept	4.74	4.75	4.62	4.81	5.20	6.40	7.09	4.98	6.98	.....	8.50-8.25	5.00-5.00	5.51
Oct	4.08	4.15	4.18	4.53	5.01	6.37	7.18	4.90	6.85	.....	8.25-8.00	5.00-4.75	5.07
Nov	4.44	4.43	4.57	4.83	5.25	6.41	7.34	5.06	6.80	.....	8.00-7.75	4.75-4.50	4.83
Dec	4.42	4.43	4.48	4.65	5.06	6.22	7.23	5.00	6.94	.....	7.75-7.75	4.50-4.50	4.68
1999:													
Jan	4.34	4.36	4.61	4.72	5.16	6.24	7.29	5.04	6.96	.....	7.75-7.75	4.50-4.50	4.63
Feb	4.45	4.43	4.90	5.00	5.37	6.40	7.39	5.03	6.92	.....	7.75-7.75	4.50-4.50	4.76
Mar	4.48	4.52	5.11	5.23	5.58	6.62	7.53	5.10	6.86	.....	7.75-7.75	4.50-4.50	4.81
Apr	4.28	4.36	5.03	5.18	5.55	6.64	7.48	5.07	6.85	.....	7.75-7.75	4.50-4.50	4.74
May	4.51	4.55	5.33	5.54	5.81	6.93	7.72	5.17	6.89	.....	7.75-7.75	4.50-4.50	4.74
June	4.59	4.81	5.70	5.90	6.04	7.23	8.02	5.34	7.03	.....	7.75-7.75	4.50-4.50	4.76
July	4.60	4.62	5.62	5.79	5.98	7.19	7.95	5.36	7.29	.....	8.00-8.00	4.50-4.50	4.99
Aug	4.76	4.88	5.77	5.94	6.07	7.40	8.15	5.59	7.09	.....	8.25-8.00	4.75-4.50	5.07
Sept	4.73	4.91	5.75	5.92	6.07	7.39	8.20	5.70	7.09	.....	8.25-8.25	4.75-4.75	5.22
Oct	4.88	4.98	5.94	6.11	6.26	7.55	8.38	5.92	7.17	.....	8.25-8.25	4.75-4.75	5.20
Nov	5.07	5.17	5.92	6.03	6.15	7.36	8.15	5.85	7.24	.....	8.50-8.25	5.00-4.75	5.42
Dec	5.23	5.43	6.14	6.28	6.35	7.55	8.19	5.93	7.28	.....	8.50-8.50	5.00-5.00	5.30
2000:													
Jan	5.34	5.52	6.49	6.66	6.63	7.78	8.33	6.10	7.45	.....	8.50-8.50	5.00-5.00	5.45
Feb	5.57	5.75	6.65	6.52	6.23	7.68	8.29	6.06	7.54	.....	8.75-8.50	5.25-5.00	5.73
Mar	5.72	5.85	6.53	6.26	6.05	7.68	8.37	5.89	7.60	.....	9.00-8.75	5.50-5.25	5.85
Apr	5.67	5.82	6.36	5.99	5.85	7.64	8.40	5.76	7.63	.....	9.00-9.00	5.50-5.50	6.02
May	5.92	6.12	6.77	6.44	6.15	7.99	8.90	6.04	7.55	.....	9.50-9.00	6.00-5.50	6.27
June	5.74	6.02	6.43	6.10	5.93	7.67	8.48	5.84	7.50	.....	9.50-9.50	6.00-6.00	6.53
July	5.93	5.99	6.28	6.05	5.85	7.65	8.35	5.72	7.51	.....	9.50-9.50	6.00-6.00	6.54
Aug	6.11	6.09	6.17	5.83	5.72	7.55	8.26	5.63	7.54	.....	9.50-9.50	6.00-6.00	6.50
Sept	6.00	5.98	6.02	5.80	5.83	7.62	8.35	5.64	7.52	.....	9.50-9.50	6.00-6.00	6.52
Oct	6.10	6.04	5.85	5.74	5.80	7.55	8.34	5.65	7.53	.....	9.50-9.50	6.00-6.00	6.51
Nov	6.19	6.07	5.79	5.72	5.78	7.45	8.28	5.60	7.47	.....	9.50-9.50	6.00-6.00	6.51
Dec	5.83	5.70	5.26	5.24	5.49	7.21	8.02	5.30	7.40	.....	9.50-9.50	6.00-6.00	6.40
2001:													
Jan	5.27	5.04	4.77	5.16	5.54	7.15	7.93	5.15	7.20	.....	9.50-9.00	6.00-5.00	5.98
Feb	4.93	4.78	4.71	5.10	5.45	7.10	7.87	5.21	7.10	.....	8.50-8.50	5.00-5.00	5.49
Mar	4.50	4.36	4.43	4.89	5.34	6.98	7.84	5.19	7.04	.....	8.50-8.00	5.00-4.50	5.31
Apr	3.92	3.89	4.42	5.14	5.65	7.20	8.07	5.33	7.07	.....	8.00-7.50	4.50-4.00	4.80
May	3.67	3.66	4.51	5.39	5.78	7.29	8.07	5.35	7.12	.....	7.50-7.00	4.00-3.50	4.21
June	3.48	3.44	4.35	5.28	5.67	7.18	7.97	5.24	7.12	.....	7.00-6.75	3.50-3.25	3.97
July	3.54	3.48	4.31	5.24	5.61	7.13	7.97	5.22	7.11	.....	6.75-6.75	3.25-3.25	3.77
Aug	3.39	3.31	4.04	4.97	5.48	7.02	7.85	5.06	7.15	.....	6.75-6.50	3.25-3.00	3.65
Sept	2.87	2.84	3.45	4.73	5.48	7.17	8.03	5.09	6.89	.....	6.50-6.00	3.00-2.50	3.07
Oct	2.22	2.19	3.14	4.57	5.32	7.03	7.91	5.07	6.73	.....	6.00-5.50	2.50-2.00	2.49
Nov	1.93	1.94	3.22	4.65	5.12	6.97	7.81	5.06	6.63	.....	5.50-5.00	2.00-1.50	2.09
Dec	1.72	1.81	3.62	5.09	5.48	6.76	8.05	5.28	6.79	.....	5.00-4.75	1.50-1.25	1.82
2002:													
Jan	1.66	1.74	3.56	5.04	5.45	6.55	7.87	5.19	6.87	.....	4.75-4.75	1.25-1.25	1.73
Feb	1.73	1.83	3.55	4.91	.....	6.51	7.89	5.14	6.82	.....	4.75-4.75	1.25-1.25	1.74
Mar	1.81	2.02	4.14	5.28	.....	6.81	8.11	5.27	6.76	.....	4.75-4.75	1.25-1.25	1.73
Apr	1.72	1.97	4.01	5.21	.....	6.76	8.03	5.27	6.74	.....	4.75-4.75	1.25-1.25	1.75
May	1.74	1.88	3.80	5.16	.....	6.75	8.09	5.22	6.59	.....	4.75-4.75	1.25-1.25	1.75
June	1.71	1.83	3.49	4.93	.....	6.63	7.95	5.11	6.47	.....	4.75-4.75	1.25-1.25	1.75
July	1.68	1.71	3.01	4.65	.....	6.53	7.90	5.01	6.37	.....	4.75-4.75	1.25-1.25	1.73
Aug	1.63	1.62	2.52	4.26	.....	6.37	7.58	4.92	6.26	.....	4.75-4.75	1.25-1.25	1.74
Sept	1.63	1.61	2.32	3.87	.....	6.15	7.40	4.73	6.17	.....	4.75-4.75	1.25-1.25	1.75
Oct	1.60	1.57	2.25	3.94	.....	6.32	7.73	4.85	6.09	.....	4.75-4.75	1.25-1.25	1.75
Nov	1.26	1.29	2.32	4.05	.....	6.31	7.62	4.98	6.08	.....	4.75-4.25	1.25-0.75	1.34
Dec	1.20	1.26	2.23	4.03	.....	6.21	7.45	4.91	6.04	.....	4.25-4.25	0.75-0.75	1.24

[5] Bank-discount basis; prior to November 1979, data are for 4–6 months paper. Series no longer published.

[6] For monthly data, high and low for the period. Prime rate for 1929–33 and 1947–48 are ranges of the rate in effect during the period.

[7] Since July 19, 1975, the daily effective rate is an average of the rates on a given day weighted by the volume of transactions at these rates. Prior to that date, the daily effective rate was the rate considered most representative of the day's transactions, usually the one at which most transactions occurred.

[8] From October 30, 1942, to April 24, 1946, a preferential rate of 0.50 percent was in effect for advances secured by Government securities maturing in 1 year or less.

Sources: Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Housing Finance Board, Moody's Investors Service, and Standard & Poor's.

TABLE B–74.—*Credit market borrowing, 1993–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Item	1993	1994	1995	1996	1997	1998	1999	2000	2001
NONFINANCIAL SECTORS									
DOMESTIC	579.4	561.1	705.8	733.3	804.4	1,042.4	1,057.5	853.9	1,118.0
FEDERAL GOVERNMENT	256.1	155.9	144.4	144.9	23.1	–52.6	–71.2	–295.9	–5.6
Treasury securities	248.3	155.7	142.9	146.6	23.2	–54.6	–71.0	–294.9	–5.0
Budget agency securities and mortgages	7.8	.2	1.5	–1.6	–.1	2.0	–.2	–1.0	–.5
NONFEDERAL, BY INSTRUMENT	323.3	405.3	561.4	588.3	781.3	1,095.0	1,128.7	1,149.8	1,123.6
Commercial paper	10.0	21.4	18.1	–.9	13.7	24.4	37.4	48.1	–88.3
Municipal securities and loans	74.8	–35.9	–48.2	2.6	71.4	96.8	68.2	35.3	117.6
Corporate bonds	75.2	23.3	91.1	116.3	150.5	218.7	229.9	171.1	332.6
Bank loans n.e.c.	6.4	75.2	103.7	70.4	106.4	108.2	82.8	101.7	–82.3
Other loans and advances	–18.9	34.0	67.2	28.7	59.5	82.1	46.0	95.0	29.3
Mortgages	117.4	162.4	190.5	280.1	322.3	489.8	564.9	559.6	704.5
Home	159.9	182.1	176.8	241.7	258.3	387.7	424.6	413.7	530.3
Multifamily residential	–5.6	–2.8	4.6	9.8	7.3	23.4	35.7	35.2	47.9
Commercial	–37.7	–19.3	7.7	25.8	53.5	72.2	98.8	104.2	118.9
Farm	.8	2.3	1.4	2.7	3.1	6.5	5.8	6.5	7.5
Consumer credit	58.4	124.9	138.9	91.3	57.5	75.0	99.5	139.0	110.2
NONFEDERAL, BY SECTOR	323.3	405.3	561.4	588.3	781.3	1,095.0	1,128.7	1,149.8	1,123.6
Household sector	242.1	312.8	337.0	339.8	332.7	454.8	498.0	541.3	610.4
Nonfinancial business	15.0	138.7	275.9	255.3	392.5	559.9	578.4	581.4	409.9
Corporate	33.2	126.3	227.1	183.1	291.6	392.1	390.5	399.8	245.6
Nonfarm noncorporate	–20.5	8.0	46.1	67.3	94.7	159.7	182.4	170.7	156.8
Farm	2.3	4.4	2.7	4.9	6.2	8.0	5.5	10.9	7.5
State and local governments	66.2	–46.2	–51.5	–6.8	56.1	80.3	52.3	27.2	103.2
FOREIGN BORROWING IN THE UNITED STATES	69.8	–13.9	78.5	88.4	71.8	43.2	25.2	65.7	–37.4
Commercial paper	–9.6	–26.1	13.5	11.3	3.7	7.8	16.3	31.7	–14.2
Bonds	82.9	12.2	57.1	67.0	61.4	34.9	14.1	23.9	–12.1
Bank loans n.e.c.	.7	1.4	8.5	9.1	8.5	6.6	.5	11.4	–7.3
Other loans and advances	–4.2	–1.4	–.5	1.0	–1.8	–6.0	–5.7	–1.3	–3.8
NONFINANCIAL DOMESTIC AND FOREIGN BORROWING	649.2	547.2	784.4	821.7	876.2	1,085.6	1,082.6	919.6	1,080.6
FINANCIAL SECTORS									
BY INSTRUMENT	294.4	468.3	454.0	550.1	662.2	1,087.2	1,073.3	809.0	960.4
Federal Government related	165.3	287.4	204.2	231.4	212.9	470.9	592.0	433.5	629.3
Government-sponsored enterprises securities	80.6	176.9	105.9	90.4	98.4	278.3	318.2	234.1	290.8
Mortgage pool securities	84.7	115.3	98.3	141.0	114.6	192.6	273.8	199.4	338.5
U.S. Government loans	0	–4.8	0	0	0	0	0	0	0
Private financial sectors	129.1	180.9	249.8	318.7	449.3	616.3	481.3	375.5	331.1
Open market paper	–5.5	40.5	42.7	92.2	166.7	161.0	176.2	127.7	–61.9
Corporate bonds	123.1	121.8	195.9	178.1	218.9	310.2	207.1	199.3	343.0
Bank loans n.e.c.	–14.4	–13.7	2.5	12.6	13.3	30.1	–14.2	–.2	13.8
Other loans and advances	22.4	22.6	3.4	27.9	35.6	90.2	107.1	42.5	34.9
Mortgages	3.6	9.8	5.3	7.9	14.9	24.8	5.1	6.2	1.3
BY SECTOR	294.4	468.3	454.0	550.1	662.2	1,087.2	1,073.3	809.0	960.4
Commercial banking	13.4	20.1	22.5	13.0	46.1	72.9	67.2	60.0	52.9
Savings institutions	11.3	12.8	2.6	25.5	19.7	52.2	48.0	27.3	7.4
Government-sponsored enterprises	80.6	172.1	105.9	90.4	98.4	278.3	318.2	234.1	290.8
Federally related mortgage pools	84.7	115.3	98.3	141.0	114.6	192.6	273.8	199.4	338.5
Asset-backed securities issuers	85.4	76.5	142.4	150.8	202.2	321.4	212.3	189.7	319.5
Finance companies	–1.4	48.7	50.2	50.6	57.8	57.1	70.3	81.2	–.2
Funding corporations	6.3	23.1	34.9	63.8	79.9	40.0	91.5	–.4	–55.2
Other[1]	14.1	–.2	–2.8	15.1	43.5	72.7	–7.8	17.7	6.7
ALL SECTORS									
BY INSTRUMENT	943.6	1,015.6	1,238.4	1,371.7	1,538.5	2,172.8	2,155.9	1,728.6	2,041.0
Open market paper	–5.1	35.7	74.3	102.6	184.1	193.1	229.9	207.6	–164.4
U.S. Government securities	421.4	448.0	348.6	376.3	236.0	418.3	520.7	137.6	623.8
Municipal securities and loans	74.8	–35.9	–48.2	2.6	71.4	96.8	68.2	35.3	117.6
Corporate and foreign bonds	281.2	157.3	344.1	361.3	430.8	563.7	451.2	394.3	663.5
Bank loans n.e.c.	–7.2	62.9	114.7	92.1	128.2	145.0	69.0	112.8	–75.8
Other loans and advances	–.8	50.4	70.1	57.7	93.2	166.3	147.4	136.2	60.4
Mortgages	121.0	172.2	195.9	287.9	337.2	514.6	570.0	565.9	705.8
Consumer credit	58.4	124.9	138.9	91.3	57.5	75.0	99.5	139.0	110.2

[1] Credit unions, life insurance companies, mortgage companies, real estate investment trusts, and brokers and dealers.

See next page for continuation of table.

TABLE B–74.—*Credit market borrowing, 1993–2002*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Item	2001				2002		
	I	II	III	IV	I	II	III
NONFINANCIAL SECTORS							
DOMESTIC	949.1	1,032.4	1,276.8	1,213.7	927.3	1,613.7	1,329.4
FEDERAL GOVERNMENT	–59.3	–215.8	209.3	43.4	39.8	526.0	265.7
Treasury securities	–57.0	–216.9	209.7	44.2	41.6	524.2	264.2
Budget agency securities and mortgages	–2.2	1.1	–.4	–.7	–1.8	1.8	1.6
NONFEDERAL, BY INSTRUMENT	1,008.4	1,248.2	1,067.4	1,170.2	887.5	1,087.7	1,063.7
Commercial paper	–199.2	–133.4	–66.1	45.5	–155.7	–93.0	–28.7
Municipal securities and loans	102.9	107.3	70.0	190.1	70.3	181.2	152.8
Corporate bonds	399.5	419.5	187.9	323.5	233.8	207.0	–23.4
Bank loans n.e.c.	–19.5	–121.0	–24.4	–164.5	–18.8	–192.8	–125.1
Other loans and advances	32.5	132.3	59.4	–107.3	–20.6	77.2	84.0
Mortgages	547.7	767.5	770.0	732.9	696.8	831.8	944.0
Home	423.4	607.8	559.3	530.6	601.1	657.4	786.2
Multifamily residential	37.6	40.8	56.5	56.5	29.2	44.3	35.8
Commercial	82.3	107.0	147.1	139.0	59.6	121.0	109.5
Farm	4.3	11.9	7.0	6.8	6.9	9.1	12.4
Consumer credit	144.5	76.0	70.6	149.9	81.7	76.4	60.1
NONFEDERAL, BY SECTOR	1,008.4	1,248.2	1,067.4	1,170.2	887.5	1,087.7	1,063.7
Household sector	506.5	650.6	661.3	623.3	702.6	679.8	770.7
Nonfinancial business	405.7	495.1	349.6	389.2	122.6	239.5	153.2
Corporate	237.7	313.5	191.3	239.8	7.1	98.3	10.7
Nonfarm noncorporate	162.2	170.1	153.8	141.1	110.3	132.7	128.9
Farm	5.7	11.5	4.4	8.3	5.3	8.5	13.5
State and local governments	96.3	102.5	56.6	157.7	62.3	168.4	139.9
FOREIGN BORROWING IN THE UNITED STATES	–8.5	–50.5	–106.7	16.0	75.3	15.0	–36.8
Commercial paper	–33.8	–3.8	–25.2	5.9	64.8	36.3	3.8
Bonds	21.4	–15.8	–83.9	29.7	–2.3	–41.0	–27.6
Bank loans n.e.c.	14.3	–31.4	4.2	–16.3	13.9	22.0	–11.7
Other loans and advances	–10.4	.5	–1.8	–3.3	–1.2	–2.3	–1.3
NONFINANCIAL DOMESTIC AND FOREIGN BORROWING	940.6	981.9	1,170.1	1,229.6	1,002.6	1,628.8	1,292.6
FINANCIAL SECTORS							
BY INSTRUMENT	915.8	828.2	1,118.6	979.1	860.8	866.3	855.9
Federal Government related	432.6	674.6	818.4	591.8	691.1	487.9	425.6
Government-sponsored enterprise securities	262.3	268.3	326.2	306.5	191.3	141.7	253.2
Mortgage pool securities	170.3	406.2	492.2	285.3	499.8	346.2	172.4
U.S. Government loans	0	0	0	0	0	0	0
Private financial sectors	483.3	153.7	300.2	387.3	169.7	378.4	430.3
Open market paper	–83.8	–77.9	–72.2	–13.6	–178.3	–109.1	84.3
Corporate bonds	459.7	223.2	313.9	375.3	345.1	431.9	194.7
Bank loans n.e.c.	24.3	10.8	1.6	18.3	.2	31.9	82.2
Other loans and advances	90.6	–18.7	58.8	8.9	–3.9	16.7	71.9
Mortgages	–7.5	16.2	–1.9	–1.6	6.6	7.0	–2.7
BY SECTOR	915.8	828.2	1,118.6	979.1	860.8	866.3	855.9
Commercial banking	138.1	–10.5	39.7	44.1	24.3	13.3	111.3
Savings institutions	55.5	3.4	39.4	–68.6	–33.1	–12.1	–10.2
Government-sponsored enterprises	262.3	268.3	326.2	306.5	191.3	141.7	253.2
Federally related mortgage pools	170.3	406.2	492.2	285.3	499.8	346.2	172.4
Asset-backed securities issuers	320.5	205.9	318.9	432.6	254.5	237.7	203.0
Finance companies	–54.0	36.8	41.8	–25.3	–31.2	80.2	106.4
Funding corporations	55.3	–129.6	–155.7	9.1	–42.2	12.4	–16.2
Other [1]	–32.1	47.7	16.0	–4.7	–2.7	46.7	35.9
ALL SECTORS							
BY INSTRUMENT	1,856.5	1,810.1	2,288.7	2,208.7	1,863.4	2,495.1	2,148.5
Open market paper	–316.8	–215.1	–163.5	37.8	–269.2	–165.8	59.4
U.S. Government securities	373.3	458.8	1,027.8	635.2	730.9	1,013.9	691.4
Municipal securities and loans	102.9	107.3	70.0	190.1	70.3	181.2	152.8
Corporate and foreign bonds	880.6	626.9	417.9	728.4	576.6	597.9	143.7
Bank loans n.e.c.	19.2	–141.6	–18.6	–162.4	–4.6	–139.0	–54.7
Other loans and advances	112.7	114.2	116.5	–101.8	–25.7	91.5	154.6
Mortgages	540.2	783.7	768.0	731.3	703.4	838.8	941.2
Consumer credit	144.5	76.0	70.6	149.9	81.7	76.4	60.1

Source: Board of Governors of the Federal Reserve System.

TABLE B–75.—*Mortgage debt outstanding by type of property and of financing, 1949–2002*

[Billions of dollars]

End of year or quarter	All properties	Farm properties	Nonfarm properties				Nonfarm properties by type of mortgage					
							Government underwritten				Conventional[2]	
								1- to 4-family houses				
			Total	1- to 4-family houses	Multifamily properties	Commercial properties	Total[1]	Total	FHA insured	VA guaranteed	Total	1- to 4-family houses
1949	62.3	5.6	56.7	37.3	8.6	10.8	17.1	15.0	6.9	8.1	39.6	22.3
1950	72.7	6.0	66.6	45.1	10.1	11.5	22.1	18.8	8.5	10.3	44.6	26.2
1951	82.1	6.6	75.6	51.6	11.5	12.5	26.6	22.9	9.7	13.2	49.0	28.8
1952	91.4	7.2	84.2	58.6	12.3	13.4	29.3	25.4	10.8	14.6	55.0	33.2
1953	101.2	7.7	93.5	66.1	12.9	14.6	32.1	28.1	12.0	16.1	61.4	38.0
1954	113.7	8.1	105.6	75.8	13.5	16.3	36.2	32.1	12.8	19.3	69.4	43.7
1955	130.1	9.0	121.1	88.4	14.3	18.4	42.9	38.9	14.3	24.6	78.1	49.5
1956	144.7	9.8	134.8	99.2	14.9	20.8	47.8	43.9	15.5	28.4	87.0	55.3
1957	156.7	10.4	146.3	107.8	15.3	23.2	51.6	47.2	16.5	30.7	94.8	60.6
1958	172.0	11.1	160.9	117.9	16.8	26.2	55.2	50.1	19.7	30.4	105.8	67.8
1959	190.9	12.1	178.8	130.9	18.7	29.2	59.3	53.8	23.8	30.0	119.5	77.1
1960	207.5	12.8	194.7	141.9	20.3	32.4	62.3	56.4	26.7	29.7	132.3	85.5
1961	228.1	13.9	214.2	154.7	23.0	36.5	65.6	59.1	29.5	29.6	148.6	95.5
1962	251.6	15.2	236.4	169.4	25.8	41.2	69.4	62.2	32.3	29.9	167.1	107.3
1963	278.7	16.8	261.9	186.6	29.0	46.3	73.4	65.9	35.0	30.9	188.5	120.7
1964	306.2	18.9	287.3	203.6	33.6	50.1	77.2	69.2	38.3	30.9	210.1	134.3
1965	333.7	21.2	312.5	220.8	37.2	54.5	81.2	73.1	42.0	31.1	231.3	147.6
1966	356.9	23.1	333.8	233.3	40.3	60.3	84.1	76.1	44.8	31.3	249.7	157.2
1967	381.6	25.1	356.5	247.7	43.9	64.8	88.2	79.9	47.4	32.5	268.3	167.8
1968	411.5	27.5	383.9	265.2	47.3	71.4	93.4	84.4	50.6	33.8	290.5	180.8
1969	442.3	29.4	412.9	283.6	52.2	77.1	100.2	90.2	54.5	35.7	312.7	193.4
1970	474.4	30.5	443.9	297.8	60.1	86.0	109.2	97.3	59.9	37.3	334.7	200.6
1971	525.1	32.4	492.7	326.2	70.1	96.4	120.7	105.2	65.7	39.5	372.0	221.0
1972	598.1	35.4	562.8	366.7	82.8	113.3	131.1	113.0	68.2	44.7	431.7	253.8
1973	673.4	39.8	633.6	407.9	93.2	132.6	135.0	116.2	66.2	50.0	498.6	291.6
1974	734.0	44.9	689.1	440.7	100.0	148.3	140.2	121.3	65.1	56.2	548.8	319.4
1975	793.5	49.9	743.7	482.0	100.7	161.0	147.0	127.7	66.1	61.6	596.7	354.2
1976	880.3	55.4	824.9	544.8	105.9	174.2	154.0	133.5	66.5	67.0	670.9	411.3
1977	1,012.0	63.8	948.2	640.6	114.3	193.3	161.7	141.6	68.0	73.6	786.4	499.0
1978	1,164.6	72.8	1,091.9	752.2	125.2	214.5	176.4	153.4	71.4	82.0	915.5	598.8
1979	1,330.0	86.8	1,243.3	868.8	135.0	239.4	199.0	172.9	81.0	92.0	1,044.3	695.9
1980	1,464.8	97.5	1,367.3	966.2	141.1	259.9	225.1	195.2	93.6	101.6	1,142.2	771.1
1981	1,590.1	107.2	1,482.9	1,044.1	139.2	299.7	238.9	207.6	101.3	106.2	1,244.0	836.5
1982	1,675.5	111.3	1,564.2	1,089.5	141.1	333.6	248.9	217.9	108.0	109.9	1,315.3	871.6
1983	1,869.1	113.7	1,755.3	1,211.6	154.3	389.4	279.8	248.8	127.4	121.4	1,475.5	962.8
1984	2,113.1	112.4	2,000.7	1,351.4	177.4	471.9	294.8	265.9	136.7	129.1	1,705.8	1,085.5
1985	2,376.4	105.9	2,270.5	1,523.5	205.9	541.2	328.3	288.8	153.0	135.8	1,942.2	1,234.7
1986	2,661.6	95.1	2,566.5	1,726.4	239.2	600.9	370.5	328.6	185.5	143.1	2,196.0	1,397.8
1987	2,999.9	87.7	2,912.2	1,953.6	262.0	696.6	431.4	387.9	235.5	152.4	2,480.8	1,565.7
1988	3,318.1	83.0	3,235.2	2,188.1	278.9	768.2	459.7	414.2	258.8	155.4	2,775.5	1,773.9
1989	3,589.4	80.5	3,508.9	2,421.5	289.8	797.7	486.8	440.1	282.8	157.3	3,022.1	1,981.4
1990	3,805.0	78.9	3,726.0	2,619.9	288.2	817.9	517.9	470.9	310.9	160.0	3,208.1	2,149.0
1991	3,956.8	79.2	3,877.6	2,788.6	284.3	804.8	537.2	493.3	330.6	162.7	3,340.4	2,295.3
1992	4,071.4	79.7	3,991.7	2,957.1	272.0	762.6	533.3	489.8	326.0	163.8	3,458.4	2,467.4
1993	4,207.0	80.7	4,126.2	3,119.1	269.0	738.1	513.4	469.5	303.2	166.2	3,612.8	2,649.7
1994	4,379.6	83.0	4,296.6	3,301.5	269.5	725.7	559.3	514.2	336.8	177.3	3,737.3	2,787.3
1995	4,575.5	84.6	4,490.9	3,478.2	275.4	737.3	584.3	537.1	352.3	184.7	3,906.7	2,941.2
1996	4,863.6	87.1	4,776.5	3,719.9	287.8	768.7	620.3	571.2	379.2	192.0	4,156.1	3,148.8
1997	5,201.2	90.3	5,110.9	3,978.7	301.1	831.1	656.7	605.7	405.7	200.0	4,454.2	3,373.0
1998	5,715.6	96.5	5,619.1	4,366.0	331.6	921.5	674.1	623.8	417.9	205.9	4,945.0	3,742.1
1999	6,320.7	103.0	6,217.7	4,790.6	369.3	1,057.9	731.5	678.8	462.3	216.5	5,486.3	4,111.8
2000	6,885.5	108.9	6,776.7	5,203.9	406.5	1,166.3	773.1	720.0	499.9	220.1	6,003.6	4,483.9
2001	7,590.0	116.3	7,473.6	5,732.9	454.7	1,286.0	772.7	718.5	497.4	221.2	6,701.0	5,014.4
2000: I	6,430.3	103.9	6,326.4	4,866.1	376.8	1,083.5	743.8	690.7	472.7	218.0	5,582.6	4,175.4
II	6,595.5	106.4	6,489.1	4,987.7	388.2	1,113.2	751.6	699.3	480.5	218.9	5,737.5	4,288.3
III	6,745.8	107.9	6,637.8	5,105.2	395.8	1,136.8	762.4	709.1	490.6	218.5	5,875.4	4,396.1
IV	6,885.5	108.9	6,776.7	5,203.9	406.5	1,166.3	773.1	720.0	499.9	220.1	6,003.6	4,483.9
2001: I	7,009.5	110.0	6,899.5	5,298.7	415.3	1,185.6	776.6	723.1	502.8	220.3	6,122.9	4,575.6
II	7,212.2	113.0	7,099.3	5,457.4	426.8	1,215.1	772.3	718.2	497.8	220.4	6,327.0	4,739.2
III	7,407.5	114.6	7,292.9	5,600.7	440.8	1,251.5	773.7	719.7	499.3	220.4	6,519.2	4,881.0
IV	7,590.0	116.3	7,473.6	5,732.9	454.7	1,286.0	772.7	718.5	497.4	221.2	6,701.0	5,014.4
2002: I	7,754.0	118.1	7,635.9	5,871.3	462.6	1,302.0	778.5	723.9	503.5	220.4	6,857.4	5,147.5
II	7,971.4	120.4	7,851.0	6,043.1	474.2	1,333.7	781.0	726.2	508.7	217.5	7,070.0	5,317.0
III[p]	8,209.3	123.4	8,085.9	6,242.7	482.9	1,360.4	778.3	723.7	505.9	217.8	7,307.6	5,519.0

[1] Includes FHA insured multifamily properties, not shown separately.

[2] Derived figures. Total includes commercial properties, and multifamily properties, not shown separately.

Source: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations.

TABLE B–76.—*Mortgage debt outstanding by holder, 1949–2002*

[Billions of dollars]

End of year or quarter	Total	Major financial institutions				Other holders	
		Total	Savings institutions[1]	Commercial banks[2]	Life insurance companies	Federal and related agencies[3]	Individuals and others[4]
1949	62.3	42.9	18.3	11.6	12.9	2.0	17.5
1950	72.7	51.7	21.9	13.7	16.1	2.6	18.4
1951	82.1	59.5	25.5	14.7	19.3	3.3	19.3
1952	91.4	67.0	29.8	16.0	21.3	3.9	20.4
1953	101.2	75.1	34.8	17.0	23.3	4.4	21.7
1954	113.7	85.8	41.1	18.7	26.0	4.7	23.2
1955	130.1	99.5	48.9	21.2	29.4	5.3	25.3
1956	144.7	111.4	55.5	22.9	33.0	6.2	27.1
1957	156.7	120.0	61.2	23.6	35.2	7.7	29.1
1958	172.0	131.7	68.9	25.8	37.1	8.0	32.3
1959	190.9	145.6	78.1	28.2	39.2	10.2	35.1
1960	207.5	157.6	86.9	28.9	41.8	11.5	38.4
1961	228.1	172.7	98.0	30.6	44.2	12.2	43.1
1962	251.6	192.6	111.1	34.7	46.9	12.6	46.3
1963	278.7	217.4	127.2	39.6	50.5	11.8	49.5
1964	306.2	241.3	141.9	44.3	55.2	12.2	52.7
1965	333.7	265.0	154.9	50.0	60.0	13.5	55.2
1966	356.9	281.2	161.8	54.8	64.6	17.5	58.2
1967	381.6	299.2	172.3	59.5	67.4	20.9	61.4
1968	411.5	320.3	184.3	66.1	70.0	25.1	66.1
1969	442.3	339.8	196.4	71.4	72.0	31.1	71.4
1970	474.4	356.7	208.3	74.1	74.4	38.3	79.4
1971	525.1	395.2	236.2	83.4	75.5	46.3	83.6
1972	598.1	450.8	273.6	100.2	76.9	54.5	92.8
1973	673.4	506.3	305.0	120.1	81.3	64.7	102.4
1974	734.0	544.1	324.2	133.6	86.2	82.2	107.7
1975	793.5	582.9	355.8	137.9	89.2	101.1	109.6
1976	880.3	649.3	404.6	153.1	91.6	116.7	114.4
1977	1,012.0	747.0	469.4	180.8	96.8	140.5	124.6
1978	1,164.6	849.8	528.0	215.7	106.2	170.6	144.3
1979	1,330.0	939.9	574.6	246.9	118.4	216.0	174.2
1980	1,464.8	998.6	603.1	264.5	131.1	256.8	209.4
1981	1,590.1	1,042.8	618.5	286.5	137.7	289.4	257.9
1982	1,675.5	1,023.4	578.1	303.4	142.0	355.4	296.7
1983	1,869.1	1,109.9	626.6	332.3	151.0	433.3	325.8
1984	2,113.1	1,247.8	709.7	381.4	156.7	490.6	374.7
1985	2,376.4	1,363.5	760.5	431.2	171.8	580.9	432.0
1986	2,661.6	1,476.5	778.0	504.7	193.8	733.7	451.4
1987	2,999.9	1,667.6	860.5	594.8	212.4	857.9	474.4
1988	3,318.1	1,834.3	924.5	676.9	232.9	937.8	546.1
1989	3,589.4	1,935.2	910.3	770.7	254.2	1,067.3	586.9
1990	3,805.0	1,918.8	801.6	849.3	267.9	1,258.9	627.3
1991	3,956.8	1,846.2	705.4	881.3	259.5	1,422.5	688.2
1992	4,071.4	1,770.4	627.9	900.5	242.0	1,558.1	742.9
1993	4,207.0	1,770.1	598.4	947.8	223.9	1,682.8	754.0
1994	4,379.6	1,824.7	596.2	1,012.7	215.8	1,787.6	767.3
1995	4,575.5	1,900.1	596.8	1,090.2	213.1	1,878.2	797.2
1996	4,863.6	1,981.9	628.3	1,145.4	208.2	2,005.6	876.1
1997	5,201.2	2,084.0	631.8	1,245.3	206.8	2,111.0	1,006.2
1998	5,715.6	2,194.6	644.0	1,337.0	213.6	2,310.4	1,210.6
1999	6,320.7	2,394.3	668.1	1,495.4	230.8	2,612.3	1,314.1
2000	6,885.5	2,619.0	723.0	1,660.1	235.9	2,835.8	1,430.7
2001	7,590.0	2,791.1	758.2	1,789.8	243.0	3,207.1	1,591.8
2000: I	6,430.3	2,457.1	680.4	1,547.3	229.4	2,642.9	1,330.3
II	6,595.5	2,548.4	701.4	1,614.4	232.6	2,687.1	1,360.0
III	6,745.8	2,604.2	721.0	1,648.5	234.7	2,750.6	1,390.9
IV	6,885.5	2,619.0	723.0	1,660.1	235.9	2,835.8	1,430.7
2001: I	7,009.5	2,663.2	740.5	1,687.7	235.1	2,881.7	1,464.6
II	7,212.2	2,711.3	751.6	1,722.4	237.2	2,992.6	1,508.4
III	7,407.5	2,734.2	758.3	1,736.6	239.2	3,121.8	1,551.5
IV	7,590.0	2,791.1	758.2	1,789.8	243.0	3,207.1	1,591.8
2002: I	7,754.0	2,789.7	746.0	1,800.4	243.3	3,340.1	1,624.2
II	7,971.4	2,861.0	742.7	1,873.2	245.1	3,437.7	1,672.6
III[p]	8,209.3	2,981.1	773.7	1,961.9	245.5	3,496.8	1,731.4

[1] Includes savings banks and savings and loan associations. Data reported by Federal Savings and Loan Insurance Corporation-insured institutions include loans in process for 1987 and exclude loans in process beginning 1988.

[2] Includes loans held by nondeposit trust companies, but not by bank trust departments.

[3] Includes Government National Mortgage Association (GNMA), Federal Housing Administration, Veterans Administration, Farmers Home Administration (FmHA), Federal Deposit Insurance Corporation, Resolution Trust Corporation (through 1995), and in earlier years Reconstruction Finance Corporation, Homeowners Loan Corporation, Federal Farm Mortgage Corporation, and Public Housing Administration. Also includes U.S.-sponsored agencies such as Federal National Mortgage Association (FNMA), Federal Land Banks, Federal Home Loan Mortgage Corporation (FHLMC), Federal Home Loan Banks (beginning 1997), and mortgage pass-through securities issued or guaranteed by GNMA, FHLMC, FNMA or FmHA. Other U.S. agencies (amounts small or current separate data not readily available) included with "individuals and others."

[4] Includes private mortgage pools.

Source: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations.

TABLE B–77.—*Consumer credit outstanding, 1952–2002*

[Amount outstanding (end of month); millions of dollars, seasonally adjusted]

Year and month	Total consumer credit [1]	Revolving	Nonrevolving [2]
December:			
1952	29,685.6	.....	29,685.6
1953	33,696.9	.....	33,696.9
1954	35,028.3	.....	35,028.3
1955	41,869.0	.....	41,869.0
1956	45,448.2	.....	45,448.2
1957	48,078.3	.....	48,078.3
1958	48,394.3	.....	48,394.3
1959	56,010.7	.....	56,010.7
1960	60,025.3	.....	60,025.3
1961	62,248.5	.....	62,248.5
1962	68,126.7	.....	68,126.7
1963	76,581.4	.....	76,581.4
1964	85,959.6	.....	85,959.6
1965	95,954.7	.....	95,954.7
1966	101,788.2	.....	101,788.2
1967	106,842.6	.....	106,842.6
1968	117,399.1	2,041.5	115,357.5
1969	127,156.2	3,604.8	123,551.3
1970	131,551.6	4,961.5	126,590.1
1971	146,930.2	8,245.3	138,684.8
1972	166,189.1	9,379.2	156,809.9
1973	190,086.3	11,342.2	178,744.1
1974	198,917.8	13,241.3	185,676.6
1975	204,002.0	14,495.3	189,506.7
1976	225,721.6	16,489.1	209,232.5
1977	260,053.3	37,414.8	222,638.5
1978	305,194.4	45,691.0	259,503.4
1979	347,097.7	53,596.4	293,501.3
1980	349,303.9	54,970.1	294,333.8
1981	366,517.1	60,928.0	305,589.1
1982	383,489.9	66,348.3	317,141.6
1983	432,526.4	79,027.2	353,499.1
1984	511,751.5	100,385.6	411,365.9
1985	592,965.8	124,465.8	468,500.0
1986	646,635.8	141,068.2	505,567.7
1987	676,342.9	160,853.9	515,489.0
1988 [3]	718,797.8	184,593.1	534,204.7
1989	778,681.7	211,229.8	567,451.9
1990	789,118.2	238,642.6	550,475.6
1991	777,090.8	263,768.6	513,322.3
1992	782,165.5	278,449.7	503,715.8
1993	838,754.7	309,908.0	528,846.6
1994	960,431.0	365,569.6	594,861.5
1995	1,095,837.3	443,126.9	652,710.4
1996	1,185,055.9	498,931.0	686,124.9
1997	1,242,984.1	531,017.3	711,966.8
1998	1,317,507.4	562,458.8	755,048.6
1999	1,416,315.8	597,668.5	818,647.2
2000	1,560,633.9	666,606.9	894,027.0
2001	1,667,928.4	699,875.1	968,053.3
2001: Jan	1,574,590.9	669,770.2	904,820.7
Feb	1,588,002.9	681,792.9	906,209.9
Mar	1,595,333.9	685,796.8	909,537.1
Apr	1,608,414.8	693,271.8	915,143.0
May	1,613,779.9	695,706.0	918,073.9
June	1,614,994.6	695,968.1	919,026.5
July	1,620,811.9	699,155.8	921,656.1
Aug	1,624,694.8	697,482.1	927,212.8
Sept	1,630,968.8	698,276.6	932,692.2
Oct	1,643,500.4	697,712.3	945,788.2
Nov	1,664,055.0	704,922.9	959,132.1
Dec	1,667,928.4	699,875.1	968,053.3
2002: Jan	1,673,828.6	700,880.1	972,948.5
Feb	1,680,495.2	700,625.3	979,869.9
Mar	1,688,357.1	703,352.4	985,004.7
Apr	1,696,299.0	708,100.3	988,198.7
May	1,704,560.9	709,676.3	994,884.6
June	1,707,452.0	712,126.2	995,325.9
July	1,714,828.4	715,795.3	999,033.1
Aug	1,717,799.0	719,482.5	998,316.5
Sept	1,722,548.7	721,274.3	1,001,274.4
Oct	1,724,063.6	723,694.8	1,000,368.8
Nov *p*	1,721,859.1	722,122.3	999,736.8

[1] Covers most short- and intermediate-term credit extended to individuals. Credit secured by real estate is excluded.

[2] Includes automobile loans and all other loans not included in revolving credit, such as loans for mobile homes, education, boats, trailers, or vacations. These loans may be secured or unsecured.

[3] Data newly available in January 1989 result in breaks in many series between December 1988 and subsequent months.

Source: Board of Governors of the Federal Reserve System.

TABLE B–78.—*Federal receipts, outlays, surplus or deficit, and debt, selected fiscal years, 1939–2004*

[Billions of dollars; fiscal years]

Fiscal year or period	Total			On-budget			Off-budget			Federal debt (end of period)		Addendum: Gross domestic product
	Receipts	Outlays	Surplus or deficit (–)	Receipts	Outlays	Surplus or deficit (–)	Receipts	Outlays	Surplus or deficit (–)	Gross Federal	Held by the public	
1939	6.3	9.1	–2.8	5.8	9.2	–3.4	0.5	–0.0	0.5	48.2	41.4	89.0
1940	6.5	9.5	–2.9	6.0	9.5	–3.5	.6	–.0	.6	50.7	42.8	96.7
1941	8.7	13.7	–4.9	8.0	13.6	–5.6	.7	.0	.7	57.5	48.2	114.0
1942	14.6	35.1	–20.5	13.7	35.1	–21.3	.9	.1	.8	79.2	67.8	144.2
1943	24.0	78.6	–54.6	22.9	78.5	–55.6	1.1	.1	1.0	142.6	127.8	180.1
1944	43.7	91.3	–47.6	42.5	91.2	–48.7	1.3	.1	1.2	204.1	184.8	209.0
1945	45.2	92.7	–47.6	43.8	92.6	–48.7	1.3	.1	1.2	260.1	235.2	221.3
1946	39.3	55.2	–15.9	38.1	55.0	–17.0	1.2	.2	1.0	271.0	241.9	222.7
1947	38.5	34.5	4.0	37.1	34.2	2.9	1.5	.3	1.2	257.1	224.3	234.6
1948	41.6	29.8	11.8	39.9	29.4	10.5	1.6	.4	1.2	252.0	216.3	256.4
1949	39.4	38.8	.6	37.7	38.4	–.7	1.7	.4	1.3	252.6	214.3	271.5
1950	39.4	42.6	–3.1	37.3	42.0	–4.7	2.1	.5	1.6	256.9	219.0	273.4
1951	51.6	45.5	6.1	48.5	44.2	4.3	3.1	1.3	1.8	255.3	214.3	321.0
1952	66.2	67.7	–1.5	62.6	66.0	–3.4	3.6	1.7	1.9	259.1	214.8	348.8
1953	69.6	76.1	–6.5	65.5	73.8	–8.3	4.1	2.3	1.8	266.0	218.4	373.4
1954	69.7	70.9	–1.2	65.1	67.9	–2.8	4.6	2.9	1.7	270.8	224.5	378.0
1955	65.5	68.4	–3.0	60.4	64.5	–4.1	5.1	4.0	1.1	274.4	226.6	395.2
1956	74.6	70.6	3.9	68.2	65.7	2.5	6.4	5.0	1.5	272.7	222.2	427.7
1957	80.0	76.6	3.4	73.2	70.6	2.6	6.8	6.0	.8	272.3	219.3	450.7
1958	79.6	82.4	–2.8	71.6	74.9	–3.3	8.0	7.5	.5	279.7	226.3	461.1
1959	79.2	92.1	–12.8	71.0	83.1	–12.1	8.3	9.0	–.7	287.5	234.7	492.1
1960	92.5	92.2	.3	81.9	81.3	.5	10.6	10.9	–.2	290.5	236.8	518.9
1961	94.4	97.7	–3.3	82.3	86.0	–3.8	12.1	11.7	.4	292.6	238.4	531.8
1962	99.7	106.8	–7.1	87.4	93.3	–5.9	12.3	13.5	–1.3	302.9	248.0	568.5
1963	106.6	111.3	–4.8	92.4	96.4	–4.0	14.2	15.0	–.8	310.3	254.0	599.7
1964	112.6	118.5	–5.9	96.2	102.8	–6.5	16.4	15.7	.6	316.1	256.8	641.3
1965	116.8	118.2	–1.4	100.1	101.7	–1.6	16.7	16.5	.2	322.3	260.8	687.9
1966	130.8	134.5	–3.7	111.7	114.8	–3.1	19.1	19.7	–.6	328.5	263.7	754.2
1967	148.8	157.5	–8.6	124.4	137.0	–12.6	24.4	20.4	4.0	340.4	266.6	813.5
1968	153.0	178.1	–25.2	128.1	155.8	–27.7	24.9	22.3	2.6	368.7	289.5	868.4
1969	186.9	183.6	3.2	157.9	158.4	–.5	29.0	25.2	3.7	365.8	278.1	949.2
1970	192.8	195.6	–2.8	159.3	168.0	–8.7	33.5	27.6	5.9	380.9	283.2	1,013.2
1971	187.1	210.2	–23.0	151.3	177.3	–26.1	35.8	32.8	3.0	408.2	303.0	1,081.4
1972	207.3	230.7	–23.4	167.4	193.8	–26.4	39.9	36.9	3.1	435.9	322.4	1,181.5
1973	230.8	245.7	–14.9	184.7	200.1	–15.4	46.1	45.6	.5	466.3	340.9	1,308.1
1974	263.2	269.4	–6.1	209.3	217.3	–8.0	53.9	52.1	1.8	483.9	343.7	1,442.1
1975	279.1	332.3	–53.2	216.6	271.9	–55.3	62.5	60.4	2.0	541.9	394.7	1,559.8
1976	298.1	371.8	–73.7	231.7	302.2	–70.5	66.4	69.6	–3.2	629.0	477.4	1,736.7
Transition quarter	81.2	96.0	–14.7	63.2	76.6	–13.3	18.0	19.4	–1.4	643.6	495.5	454.8
1977	355.6	409.2	–53.7	278.7	328.5	–49.8	76.8	80.7	–3.9	706.4	549.1	1,971.3
1978	399.6	458.7	–59.2	314.2	369.1	–54.9	85.4	89.7	–4.3	776.6	607.1	2,218.6
1979	463.3	504.0	–40.7	365.3	404.1	–38.7	98.0	100.0	–2.0	829.5	640.3	2,503.8
1980	517.1	590.9	–73.8	403.9	476.6	–72.7	113.2	114.3	–1.1	909.0	711.9	2,732.1
1981	599.3	678.2	–79.0	469.1	543.0	–73.9	130.2	135.2	–5.0	994.8	789.4	3,061.6
1982	617.8	745.7	–128.0	474.3	594.3	–120.0	143.5	151.4	–7.9	1,137.3	924.6	3,228.6
1983	600.6	808.4	–207.8	453.2	661.3	–208.0	147.3	147.1	.2	1,371.7	1,137.3	3,440.5
1984	666.5	851.9	–185.4	500.4	686.0	–185.6	166.1	165.8	.3	1,564.6	1,307.0	3,839.4
1985	734.1	946.4	–212.3	547.9	769.6	–221.7	186.2	176.8	9.4	1,817.4	1,507.3	4,136.6
1986	769.2	990.4	–221.2	569.0	806.9	–237.9	200.2	183.5	16.7	2,120.5	1,740.6	4,401.4
1987	854.4	1,004.1	–149.7	641.0	810.2	–169.3	213.4	193.8	19.6	2,346.0	1,889.8	4,647.0
1988	909.3	1,064.5	–155.2	667.8	861.8	–194.0	241.5	202.7	38.8	2,601.1	2,051.6	5,014.7
1989	991.2	1,143.6	–152.5	727.5	932.7	–205.2	263.7	210.9	52.8	2,867.8	2,190.7	5,405.5
1990	1,032.0	1,253.2	–221.2	750.3	1,028.1	–277.8	281.7	225.1	56.6	3,206.3	2,411.6	5,735.6
1991	1,055.0	1,324.4	–269.3	761.2	1,082.7	–321.5	293.9	241.7	52.2	3,598.2	2,689.0	5,930.4
1992	1,091.3	1,381.7	–290.4	788.9	1,129.3	–340.5	302.4	252.3	50.1	4,001.8	2,999.7	6,218.6
1993	1,154.4	1,409.5	–255.1	842.5	1,142.9	–300.4	311.9	266.6	45.3	4,351.0	3,248.4	6,558.4
1994	1,258.6	1,461.9	–203.3	923.6	1,182.5	–258.9	335.0	279.4	55.7	4,643.3	3,433.1	6,944.6
1995	1,351.8	1,515.8	–164.0	1,000.8	1,227.1	–226.4	351.1	288.7	62.4	4,920.6	3,604.4	7,324.0
1996	1,453.1	1,560.5	–107.5	1,085.6	1,259.6	–174.1	367.5	300.9	66.6	5,181.5	3,734.1	7,694.6
1997	1,579.3	1,601.3	–22.0	1,187.3	1,290.6	–103.3	392.0	310.6	81.4	5,369.2	3,772.3	8,185.2
1998	1,721.8	1,652.6	69.2	1,306.0	1,336.0	–30.0	415.8	316.6	99.2	5,478.2	3,721.1	8,663.9
1999	1,827.5	1,701.9	125.6	1,383.0	1,381.1	1.9	444.5	320.8	123.7	5,605.5	3,632.4	9,137.7
2000	2,025.2	1,788.8	236.4	1,544.6	1,458.0	86.6	480.6	330.8	149.8	5,628.7	3,409.8	9,718.8
2001	1,991.2	1,863.9	127.3	1,483.7	1,517.1	–33.4	507.5	346.8	160.7	5,769.9	3,319.6	10,021.5
2002	1,853.2	2,011.0	–157.8	1,337.9	1,655.3	–317.5	515.3	355.7	159.7	6,198.4	3,540.4	10,336.6
2003 [1]	1,836.2	2,140.4	–304.2	1,304.7	1,772.3	–467.6	531.6	368.1	163.5	6,752.0	3,878.4	10,756.8
2004 [1]	1,922.0	2,229.4	–307.4	1,365.9	1,847.9	–482.1	556.2	381.5	174.7	7,320.8	4,166.1	11,303.1

[1] Estimates.

Note.—Through fiscal year 1976, the fiscal year was on a July 1-June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1-September 30 basis. The transition quarter is the 3-month period from July 1, 1976 through September 30, 1976.

Refunds of receipts are excluded from receipts and outlays.

See *Budget of the United States Government, Fiscal Year 2004,* for additional information.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of the Treasury, and Office of Management and Budget.

TABLE B–79.—*Federal receipts, outlays, surplus or deficit, and debt, as percent of gross domestic product, fiscal years 1934–2004*

[Percent; fiscal years]

Fiscal year or period	Receipts	Outlays		Surplus or deficit (–)	Federal debt (end of period)	
		Total	National defense		Gross Federal	Held by public
1934	4.8	10.7	.....	–5.9	.....	.....
1935	5.2	9.2	.....	–4.0	.....	.....
1936	5.0	10.5	.....	–5.5	.....	.....
1937	6.1	8.6	.....	–2.5	.....	.....
1938	7.6	7.7	.....	–.1	.....	.....
1939	7.1	10.3	.....	–3.2	54.2	46.6
1940	6.8	9.8	1.7	–3.0	52.4	44.2
1941	7.6	12.0	5.6	–4.3	50.5	42.3
1942	10.1	24.4	17.8	–14.2	54.9	47.0
1943	13.3	43.6	37.0	–30.3	79.2	70.9
1944	20.9	43.7	37.9	–22.8	97.6	88.4
1945	20.4	41.9	37.5	–21.5	117.5	106.3
1946	17.6	24.8	19.2	–7.2	121.7	108.6
1947	16.4	14.7	5.5	1.7	109.6	95.6
1948	16.2	11.6	3.6	4.6	98.3	84.3
1949	14.5	14.3	4.8	.2	93.0	78.9
1950	14.4	15.6	5.0	–1.1	93.9	80.1
1951	16.1	14.2	7.3	1.9	79.5	66.8
1952	19.0	19.4	13.2	–.4	74.3	61.6
1953	18.6	20.4	14.1	–1.7	71.2	58.5
1954	18.4	18.7	13.0	–.3	71.6	59.4
1955	16.6	17.3	10.8	–.8	69.4	57.3
1956	17.4	16.5	9.9	.9	63.8	51.9
1957	17.7	17.0	10.1	.8	60.4	48.7
1958	17.3	17.9	10.2	–.6	60.7	49.1
1959	16.1	18.7	10.0	–2.6	58.4	47.7
1960	17.8	17.8	9.3	.1	56.0	45.6
1961	17.7	18.4	9.3	–.6	55.0	44.8
1962	17.5	18.8	9.2	–1.3	53.3	43.6
1963	17.8	18.6	8.9	–.8	51.7	42.4
1964	17.6	18.5	8.5	–.9	49.3	40.1
1965	17.0	17.2	7.4	–.2	46.9	37.9
1966	17.3	17.8	7.7	–.5	43.6	35.0
1967	18.3	19.4	8.8	–1.1	41.8	32.8
1968	17.6	20.5	9.4	–2.9	42.5	33.3
1969	19.7	19.3	8.7	.3	38.5	29.3
1970	19.0	19.3	8.1	–.3	37.6	28.0
1971	17.3	19.4	7.3	–2.1	37.7	28.0
1972	17.5	19.5	6.7	–2.0	36.9	27.3
1973	17.6	18.8	5.9	–1.1	35.6	26.1
1974	18.3	18.7	5.5	–.4	33.6	23.8
1975	17.9	21.3	5.5	–3.4	34.7	25.3
1976	17.2	21.4	5.2	–4.2	36.2	27.5
Transition quarter	17.9	21.1	4.9	–3.2	35.4	27.2
1977	18.0	20.8	4.9	–2.7	35.8	27.9
1978	18.0	20.7	4.7	–2.7	35.0	27.4
1979	18.5	20.1	4.6	–1.6	33.1	25.6
1980	18.9	21.6	4.9	–2.7	33.3	26.1
1981	19.6	22.2	5.1	–2.6	32.5	25.8
1982	19.1	23.1	5.7	–4.0	35.2	28.6
1983	17.5	23.5	6.1	–6.0	39.9	33.1
1984	17.4	22.2	5.9	–4.8	40.8	34.0
1985	17.7	22.9	6.1	–5.1	43.9	36.4
1986	17.5	22.5	6.2	–5.0	48.2	39.5
1987	18.4	21.6	6.1	–3.2	50.5	40.7
1988	18.1	21.2	5.8	–3.1	51.9	40.9
1989	18.3	21.2	5.6	–2.8	53.1	40.5
1990	18.0	21.8	5.2	–3.9	55.9	42.0
1991	17.8	22.3	4.6	–4.5	60.7	45.3
1992	17.5	22.2	4.8	–4.7	64.4	48.2
1993	17.6	21.5	4.4	–3.9	66.3	49.5
1994	18.1	21.1	4.1	–2.9	66.9	49.4
1995	18.5	20.7	3.7	–2.2	67.2	49.2
1996	18.9	20.3	3.5	–1.4	67.3	48.5
1997	19.3	19.6	3.3	–.3	65.6	46.1
1998	19.9	19.1	3.1	.8	63.2	42.9
1999	20.0	18.6	3.0	1.4	61.3	39.8
2000	20.8	18.4	3.0	2.4	57.9	35.1
2001	19.9	18.6	3.0	1.3	57.6	33.1
2002	17.9	19.5	3.4	–1.5	60.0	34.3
2003 [1]	17.1	19.9	3.5	–2.8	62.8	36.1
2004 [1]	17.0	19.7	3.5	–2.7	64.8	36.9

[1] Estimates.

Note.—See Note, Table B-78.

Sources: Department of the Treasury and Office of Management and Budget.

TABLE B–80.—*Federal receipts and outlays, by major category, and surplus or deficit, fiscal years 1940–2004*

[Billions of dollars; fiscal years]

Fiscal year or period	Receipts (on-budget and off-budget)					Outlays (on-budget and off-budget)										Surplus or deficit (–) (on-budget and off-budget)
							National defense									
	Total	Individual income taxes	Corporation income taxes	Social insurance and retirement receipts	Other	Total	Total	Department of Defense, military	International affairs	Health	Medicare	Income security	Social security	Net interest	Other	
1940	6.5	0.9	1.2	1.8	2.7	9.5	1.7	.....	0.1	0.1	.....	1.5	0.0	0.9	5.3	–2.9
1941	8.7	1.3	2.1	1.9	3.3	13.7	6.4	.....	.1	.1	.....	1.9	.1	.9	4.1	–4.9
1942	14.6	3.3	4.7	2.5	4.2	35.1	25.7	.....	1.0	.1	.....	1.8	.1	1.1	5.4	–20.5
1943	24.0	6.5	9.6	3.0	4.9	78.6	66.7	.....	1.3	.1	.....	1.7	.2	1.5	7.0	–54.6
1944	43.7	19.7	14.8	3.5	5.7	91.3	79.1	.....	1.4	.2	.....	1.5	.2	2.2	6.6	–47.6
1945	45.2	18.4	16.0	3.5	7.3	92.7	83.0	.....	1.9	.2	.....	1.1	.3	3.1	3.1	–47.6
1946	39.3	16.1	11.9	3.1	8.2	55.2	42.7	.....	1.9	.2	.....	2.4	.4	4.1	3.6	–15.9
1947	38.5	17.9	8.6	3.4	8.5	34.5	12.8	.....	5.8	.2	.....	2.8	.5	4.2	8.2	4.0
1948	41.6	19.3	9.7	3.8	8.8	29.8	9.1	.....	4.6	.2	.....	2.5	.6	4.3	8.5	11.8
1949	39.4	15.6	11.2	3.8	8.9	38.8	13.2	.....	6.1	.2	.....	3.2	.7	4.5	11.1	.6
1950	39.4	15.8	10.4	4.3	8.9	42.6	13.7	.....	4.7	.3	.....	4.1	.8	4.8	14.2	–3.1
1951	51.6	21.6	14.1	5.7	10.2	45.5	23.6	.....	3.6	.3	.....	3.4	1.6	4.7	8.4	6.1
1952	66.2	27.9	21.2	6.4	10.6	67.7	46.1	.....	2.7	.3	.....	3.7	2.1	4.7	8.1	–1.5
1953	69.6	29.8	21.2	6.8	11.7	76.1	52.8	.....	2.1	.3	.....	3.8	2.7	5.2	9.1	–6.5
1954	69.7	29.5	21.1	7.2	11.9	70.9	49.3	.....	1.6	.3	.....	4.4	3.4	4.8	7.1	–1.2
1955	65.5	28.7	17.9	7.9	11.0	68.4	42.7	.....	2.2	.3	.....	5.1	4.4	4.9	8.9	–3.0
1956	74.6	32.2	20.9	9.3	12.2	70.6	42.5	.....	2.4	.4	.....	4.7	5.5	5.1	10.1	3.9
1957	80.0	35.6	21.2	10.0	13.2	76.6	45.4	.....	3.1	.5	.....	5.4	6.7	5.4	10.1	3.4
1958	79.6	34.7	20.1	11.2	13.6	82.4	46.8	.....	3.4	.5	.....	7.5	8.2	5.6	10.3	–2.8
1959	79.2	36.7	17.3	11.7	13.5	92.1	49.0	.....	3.1	.7	.....	8.2	9.7	5.8	15.5	–12.8
1960	92.5	40.7	21.5	14.7	15.6	92.2	48.1	.....	3.0	.8	.....	7.4	11.6	6.9	14.4	.3
1961	94.4	41.3	21.0	16.4	15.7	97.7	49.6	.....	3.2	.9	.....	9.7	12.5	6.7	15.2	–3.3
1962	99.7	45.6	20.5	17.0	16.5	106.8	52.3	50.1	5.6	1.2	.....	9.2	14.4	6.9	17.2	–7.1
1963	106.6	47.6	21.6	19.8	17.6	111.3	53.4	51.1	5.3	1.5	.....	9.3	15.8	7.7	18.3	–4.8
1964	112.6	48.7	23.5	22.0	18.5	118.5	54.8	52.6	4.9	1.8	.....	9.7	16.6	8.2	22.6	–5.9
1965	116.8	48.8	25.5	22.2	20.3	118.2	50.6	48.8	5.3	1.8	.....	9.5	17.5	8.6	25.0	–1.4
1966	130.8	55.4	30.1	25.5	19.8	134.5	58.1	56.6	5.6	2.5	0.1	9.7	20.7	9.4	28.5	–3.7
1967	148.8	61.5	34.0	32.6	20.7	157.5	71.4	70.1	5.6	3.4	2.7	10.3	21.7	10.3	32.1	–8.6
1968	153.0	68.7	28.7	33.9	21.7	178.1	81.9	80.4	5.3	4.4	4.6	11.8	23.9	11.1	35.1	–25.2
1969	186.9	87.2	36.7	39.0	23.9	183.6	82.5	80.8	4.6	5.2	5.7	13.1	27.3	12.7	32.6	3.2
1970	192.8	90.4	32.8	44.4	25.2	195.6	81.7	80.1	4.3	5.9	6.2	15.7	30.3	14.4	37.2	–2.8
1971	187.1	86.2	26.8	47.3	26.8	210.2	78.9	77.5	4.2	6.8	6.6	22.9	35.9	14.8	40.0	–23.0
1972	207.3	94.7	32.2	52.6	27.8	230.7	79.2	77.6	4.8	8.7	7.5	27.7	40.2	15.5	47.3	–23.4
1973	230.8	103.2	36.2	63.1	28.3	245.7	76.7	75.0	4.1	9.4	8.1	28.3	49.1	17.3	52.8	–14.9
1974	263.2	119.0	38.6	75.1	30.6	269.4	79.3	77.9	5.7	10.7	9.6	33.7	55.9	21.4	52.9	–6.1
1975	279.1	122.4	40.6	84.5	31.5	332.3	86.5	84.9	7.1	12.9	12.9	50.2	64.7	23.2	74.8	–53.2
1976	298.1	131.6	41.4	90.8	34.3	371.8	89.6	87.9	6.4	15.7	15.8	60.8	73.9	26.7	82.7	–73.7
Transition quarter	81.2	38.8	8.5	25.2	8.8	96.0	22.3	21.8	2.5	3.9	4.3	15.0	19.8	6.9	21.4	–14.7
1977	355.6	157.6	54.9	106.5	36.6	409.2	97.2	95.1	6.4	17.3	19.3	61.1	85.1	29.9	93.0	–53.7
1978	399.6	181.0	60.0	121.0	37.7	458.7	104.5	102.3	7.5	18.5	22.8	61.5	93.9	35.5	114.7	–59.2
1979	463.3	217.8	65.7	138.9	40.8	504.0	116.3	113.6	7.5	20.5	26.5	66.4	104.1	42.6	120.2	–40.7
1980	517.1	244.1	64.6	157.8	50.6	590.9	134.0	130.9	12.7	23.2	32.1	86.6	118.5	52.5	131.3	–73.8
1981	599.3	285.9	61.1	182.7	69.5	678.2	157.5	153.9	13.1	26.9	39.1	100.3	139.6	68.8	133.0	–79.0
1982	617.8	297.7	49.2	201.5	69.3	745.7	185.3	180.7	12.3	27.4	46.6	108.2	156.0	85.0	125.0	–128.0
1983	600.6	288.9	37.0	209.0	65.6	808.4	209.9	204.4	11.8	28.6	52.6	123.0	170.7	89.8	121.8	–207.8
1984	666.5	298.4	56.9	239.4	71.8	851.9	227.4	220.9	15.9	30.4	57.5	113.4	178.2	111.1	117.9	–185.4
1985	734.1	334.5	61.3	265.2	73.1	946.4	252.7	245.2	16.2	33.5	65.8	129.0	188.6	129.5	131.0	–212.3
1986	769.2	349.0	63.1	283.9	73.2	990.4	273.4	265.5	14.2	35.9	70.2	120.6	198.8	136.0	141.4	–221.2
1987	854.4	392.6	83.9	303.3	74.6	1,004.1	282.0	274.0	11.6	40.0	75.1	124.1	207.4	138.6	125.3	–149.7
1988	909.3	401.2	94.5	334.3	79.3	1,064.5	290.4	281.9	10.5	44.5	78.9	130.4	219.3	151.8	138.7	–155.2
1989	991.2	445.7	103.3	359.4	82.8	1,143.6	303.6	294.9	9.6	48.4	85.0	137.4	232.5	169.0	158.2	–152.5
1990	1,032.0	466.9	93.5	380.0	91.5	1,253.2	299.3	289.8	13.8	57.7	98.1	148.7	248.6	184.3	202.6	–221.2
1991	1,055.0	467.8	98.1	396.0	93.1	1,324.4	273.3	262.4	15.9	71.2	104.5	172.4	269.0	194.4	223.7	–269.3
1992	1,091.3	476.0	100.3	413.7	101.4	1,381.7	298.4	286.9	16.1	89.5	119.0	199.5	287.6	199.3	172.2	–290.4
1993	1,154.4	509.7	117.5	428.3	98.9	1,409.5	291.1	278.6	17.2	99.4	130.6	209.9	304.6	198.7	158.0	–255.1
1994	1,258.6	543.1	140.4	461.5	113.7	1,461.9	281.6	268.6	17.1	107.1	144.7	217.1	319.6	202.9	171.7	–203.3
1995	1,351.8	590.2	157.0	484.5	120.1	1,515.8	272.1	259.4	16.4	115.4	159.9	223.7	335.8	232.1	160.3	–164.0
1996	1,453.1	656.4	171.8	509.4	115.4	1,560.5	265.8	253.2	13.5	119.4	174.2	229.7	349.7	241.1	167.3	–107.5
1997	1,579.3	737.5	182.3	539.4	120.2	1,601.3	270.5	258.3	15.2	123.8	190.0	235.0	365.3	244.0	157.5	–22.0
1998	1,721.8	828.6	188.7	571.8	132.7	1,652.6	268.5	256.1	13.1	131.4	192.8	237.7	379.2	241.1	188.8	69.2
1999	1,827.5	879.5	184.7	611.8	151.5	1,701.9	274.9	261.4	15.2	141.1	190.4	242.4	390.0	229.8	218.1	125.6
2000	2,025.2	1,004.5	207.3	652.9	160.6	1,788.8	294.5	281.2	17.2	154.5	197.1	253.6	409.4	223.0	239.5	236.4
2001	1,991.2	994.3	151.1	694.0	151.8	1,863.9	305.5	291.0	16.5	172.3	217.4	269.6	433.0	206.2	243.5	127.3
2002	1,853.2	858.3	148.0	700.8	146.0	2,011.0	348.6	332.0	22.4	196.5	230.9	312.5	456.4	171.0	272.8	–157.8
2003 [1]	1,836.2	849.1	143.2	726.6	117.4	2,140.4	376.3	358.2	20.7	223.1	244.7	330.1	478.5	161.4	305.6	–304.2
2004 [1]	1,922.0	849.9	169.1	764.5	138.5	2,229.4	390.4	370.7	25.6	246.6	258.9	325.0	497.3	176.4	309.3	–307.4

[1] Estimates.

Note.—See Note, Table B-78.

Sources: Department of the Treasury and Office of Management and Budget.

TABLE B–81.—*Federal receipts, outlays, surplus or deficit, and debt, fiscal years 1999–2004*

[Millions of dollars; fiscal years]

Description	Actual				Estimates	
	1999	2000	2001	2002	2003	2004
RECEIPTS AND OUTLAYS:						
Total receipts	1,827,454	2,025,218	1,991,194	1,853,173	1,836,218	1,922,025
Total outlays	1,701,891	1,788,773	1,863,895	2,010,975	2,140,377	2,229,425
Total surplus or deficit (–)	125,563	236,445	127,299	–157,802	–304,159	–307,400
On-budget receipts	1,382,986	1,544,634	1,483,675	1,337,852	1,304,653	1,365,857
On-budget outlays	1,381,113	1,458,008	1,517,057	1,655,313	1,772,280	1,847,924
On-budget surplus or deficit (–)	1,873	86,626	–33,382	–317,461	–467,627	–482,067
Off-budget receipts	444,468	480,584	507,519	515,321	531,565	556,168
Off-budget outlays	320,778	330,765	346,838	355,662	368,097	381,501
Off-budget surplus or deficit (–)	123,690	149,819	160,681	159,659	163,468	174,667
OUTSTANDING DEBT, END OF PERIOD:						
Gross Federal debt	5,605,523	5,628,700	5,769,881	6,198,401	6,752,033	7,320,769
Held by Federal Government accounts	1,973,160	2,218,896	2,450,266	2,657,974	2,873,595	3,154,708
Held by the public	3,632,363	3,409,804	3,319,615	3,540,427	3,878,438	4,166,061
Federal Reserve System	496,644	511,413	534,135	604,191	.....	.....
Other	3,135,719	2,898,391	2,785,480	2,936,235	.....	.....
RECEIPTS: ON-BUDGET AND OFF-BUDGET	1,827,454	2,025,218	1,991,194	1,853,173	1,836,218	1,922,025
Individual income taxes	879,480	1,004,462	994,339	858,345	849,053	849,880
Corporation income taxes	184,680	207,289	151,075	148,044	143,186	169,060
Social insurance and retirement receipts	611,833	652,852	693,967	700,760	726,593	764,548
On-budget	167,365	172,268	186,448	185,439	195,028	208,380
Off-budget	444,468	480,584	507,519	515,321	531,565	556,168
Excise taxes	70,414	68,865	66,232	66,989	68,416	70,905
Estate and gift taxes	27,782	29,010	28,400	26,507	20,209	23,379
Customs duties and fees	18,336	19,914	19,369	18,602	19,052	20,713
Miscellaneous receipts	34,929	42,826	37,812	33,926	34,709	38,540
Deposits of earnings by Federal Reserve System	25,917	32,293	26,124	23,683	23,565	27,078
All other[1]	9,012	10,533	11,688	10,243	11,144	11,462
Adjustment for revenue uncertainty	.....	.....	.....	.....	–25,000	–15,000
OUTLAYS: ON-BUDGET AND OFF-BUDGET	1,701,891	1,788,773	1,863,895	2,010,975	2,140,377	2,229,425
National defense	274,873	294,495	305,500	348,555	376,286	390,419
International affairs	15,243	17,216	16,493	22,357	20,735	25,622
General science, space and technology	18,125	18,637	19,789	20,772	21,699	22,851
Energy	912	–1,060	39	483	708	918
Natural resources and environment	23,968	25,031	25,623	29,454	30,578	31,586
Agriculture	23,011	36,641	26,397	22,188	20,847	20,799
Commerce and housing credit	2,647	3,211	5,883	–385	1,262	–701
On-budget	1,626	1,182	3,581	266	5,500	2,344
Off-budget	1,021	2,029	2,302	–651	–4,238	–3,045
Transportation	42,533	46,854	54,449	61,862	64,228	63,449
Community and regional development	11,870	10,629	11,907	12,991	18,459	17,060
Education, training, employment, and social services	50,591	53,754	57,143	70,544	86,252	85,336
Health	141,074	154,533	172,270	196,545	223,068	246,579
Medicare	190,447	197,113	217,384	230,855	244,667	258,878
Income security	242,356	253,575	269,615	312,511	330,120	324,962
Social security	390,037	409,423	432,958	456,413	478,471	497,299
On-budget	10,824	13,254	11,701	13,988	13,067	14,032
Off-budget	379,213	396,169	421,257	442,425	465,404	483,267
Veterans benefits and services	43,212	47,083	45,039	50,984	57,070	62,022
Administration of justice	26,082	27,995	29,660	34,316	36,142	39,413
General government	15,599	13,273	14,589	17,385	18,998	20,503
Net interest	229,756	222,951	206,168	170,951	161,441	176,395
On-budget	281,827	282,747	274,979	247,771	245,017	265,093
Off-budget	–52,071	–59,796	–68,811	–76,820	–83,576	–88,698
Allowances	.....	.....	.....	.....	–368	–297
Undistributed offsetting receipts	–40,445	–42,581	–47,011	–47,806	–50,286	–53,668
On-budget	–33,060	–34,944	–39,101	–38,514	–40,793	–43,645
Off-budget	–7,385	–7,637	–7,910	–9,292	–9,493	–10,023

[1] Beginning 1984, includes universal service fund receipts.

Note.—See Note, Table B-78.

Sources: Department of the Treasury and Office of Management and Budget.

TABLE B–82.—*Federal and State and local government current receipts and expenditures, national income and product accounts (NIPA), 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Total government			Federal Government			State and local government			Addendum: Grants-in-aid to State and local governments
	Current receipts	Current expenditures	Current surplus or deficit (–) (NIPA)	Current receipts	Current expenditures	Current surplus or deficit (–) (NIPA)	Current receipts	Current expenditures	Current surplus or deficit (–) (NIPA)	
1959	122.1	115.1	7.0	87.0	83.8	3.2	38.9	35.1	3.8	3.8
1960	131.2	119.9	11.3	92.8	85.8	7.1	42.4	38.1	4.3	4.0
1961	135.8	129.1	6.8	94.4	92.0	2.5	45.9	41.6	4.3	4.5
1962	147.0	139.4	7.6	102.3	100.0	2.4	49.7	44.5	5.2	5.0
1963	157.9	147.0	10.9	110.2	105.0	5.2	53.4	47.7	5.7	5.6
1964	162.1	154.9	7.2	110.2	109.3	.8	58.4	52.0	6.4	6.5
1965	175.4	165.7	9.7	119.3	116.1	3.2	63.3	56.8	6.5	7.2
1966	197.8	187.3	10.5	136.3	133.6	2.7	71.5	63.8	7.7	10.1
1967	212.1	213.4	–1.4	144.9	153.2	–8.3	78.9	71.9	7.0	11.7
1968	245.3	239.2	6.2	168.5	169.8	–1.3	89.5	82.1	7.5	12.7
1969	276.3	258.7	17.6	190.1	180.5	9.6	100.7	92.8	8.0	14.6
1970	279.6	286.9	–7.3	184.3	198.6	–14.4	114.6	107.5	7.1	19.3
1971	295.9	316.3	–20.4	189.8	216.6	–26.8	129.3	122.9	6.4	23.2
1972	338.1	345.0	–6.9	217.5	240.0	–22.5	152.3	136.7	15.6	31.7
1973	380.3	375.8	4.5	248.5	259.7	–11.2	166.6	150.9	15.7	34.8
1974	419.6	424.2	–4.6	277.3	291.2	–13.9	178.5	169.2	9.3	36.3
1975	430.5	497.4	–66.9	276.1	345.4	–69.3	199.6	197.2	2.4	45.1
1976	492.6	538.3	–45.7	318.9	371.9	–53.0	224.5	217.2	7.3	50.7
1977	552.8	584.8	–32.0	359.9	405.0	–45.2	249.5	236.4	13.1	56.6
1978	626.0	634.3	–8.2	417.3	444.2	–26.9	274.3	255.6	18.7	65.5
1979	702.7	701.1	1.7	478.3	489.6	–11.4	290.8	277.8	13.0	66.3
1980	767.1	812.0	–44.9	522.8	576.6	–53.8	316.6	307.8	8.8	72.3
1981	877.6	923.7	–46.2	605.6	659.3	–53.7	344.4	336.9	7.5	72.5
1982	890.3	1,025.1	–134.8	599.5	732.1	–132.6	360.3	362.5	–2.3	69.5
1983	944.5	1,113.5	–169.1	623.9	797.8	–173.9	392.1	387.3	4.8	71.6
1984	1,047.8	1,192.1	–144.2	688.1	856.1	–168.1	436.4	412.6	23.8	76.7
1985	1,135.8	1,290.7	–154.9	747.4	924.6	–177.1	469.2	447.0	22.3	80.9
1986	1,206.7	1,378.1	–171.4	786.4	978.5	–192.1	507.9	487.2	20.8	87.6
1987	1,322.5	1,458.2	–135.7	870.5	1,018.4	–147.9	536.0	523.8	12.2	83.9
1988	1,410.9	1,532.7	–121.8	928.9	1,066.2	–137.4	573.7	558.1	15.6	91.6
1989	1,530.9	1,641.6	–110.7	1,010.3	1,140.3	–130.0	618.9	599.6	19.3	98.3
1990	1,607.7	1,778.0	–170.3	1,055.7	1,228.7	–173.0	663.4	660.8	2.6	111.4
1991	1,656.6	1,879.7	–223.1	1,072.3	1,287.6	–215.3	716.0	723.8	–7.8	131.6
1992	1,744.4	2,046.9	–302.5	1,121.3	1,418.9	–297.5	772.2	777.2	–4.9	149.1
1993	1,857.9	2,130.5	–272.7	1,197.3	1,471.5	–274.1	823.2	821.7	1.5	162.6
1994	1,993.0	2,196.7	–203.7	1,293.7	1,506.0	–212.3	873.8	865.2	8.6	174.5
1995	2,117.1	2,293.7	–176.7	1,383.7	1,575.7	–192.0	917.9	902.5	15.3	184.5
1996	2,269.1	2,384.5	–115.4	1,499.1	1,635.9	–136.8	960.4	939.0	21.4	190.4
1997	2,440.0	2,462.4	–22.3	1,625.5	1,678.8	–53.3	1,011.3	980.3	31.0	196.8
1998	2,613.8	2,529.3	84.5	1,749.7	1,705.9	43.8	1,074.4	1,033.7	40.7	210.3
1999	2,780.3	2,630.1	150.2	1,867.2	1,755.3	111.9	1,144.1	1,105.8	38.3	231.0
2000	3,000.6	2,775.8	224.8	2,033.9	1,827.1	206.9	1,214.2	1,196.2	18.0	247.5
2001	2,992.3	2,951.6	40.7	2,008.4	1,936.4	72.0	1,261.3	1,292.6	–31.3	277.4
1998: I	2,551.6	2,495.3	56.3	1,708.0	1,688.4	19.6	1,048.8	1,012.1	36.7	205.2
II	2,585.9	2,521.0	65.0	1,733.8	1,700.8	33.0	1,058.5	1,026.5	32.0	206.4
III	2,635.9	2,534.7	101.3	1,768.9	1,703.2	65.7	1,077.0	1,041.4	35.6	209.9
IV	2,681.8	2,566.4	115.5	1,788.2	1,731.1	57.0	1,113.3	1,054.9	58.4	219.6
1999: I	2,718.2	2,581.2	137.0	1,823.2	1,734.5	88.7	1,119.9	1,071.6	48.4	224.9
II	2,750.7	2,606.6	144.2	1,847.1	1,734.2	112.9	1,125.9	1,094.6	31.3	222.2
III	2,792.8	2,641.6	151.2	1,876.3	1,758.9	117.4	1,151.4	1,117.6	33.8	234.9
IV	2,859.4	2,691.0	168.4	1,922.4	1,793.6	128.8	1,179.1	1,139.5	39.6	242.0
2000: I	2,966.1	2,710.2	255.9	2,009.6	1,786.4	223.2	1,195.9	1,163.2	32.7	239.4
II	2,985.5	2,768.0	217.5	2,022.9	1,825.7	197.2	1,204.7	1,184.5	20.2	242.2
III	3,020.6	2,788.2	232.4	2,049.1	1,835.9	213.2	1,225.4	1,206.2	19.2	253.8
IV	3,030.3	2,836.7	193.6	2,054.1	1,860.3	193.8	1,230.8	1,231.0	–.2	254.6
2001: I	3,053.5	2,896.1	157.3	2,072.9	1,899.1	173.8	1,247.3	1,263.8	–16.5	266.8
II	3,051.4	2,939.3	112.1	2,072.3	1,927.8	144.4	1,261.1	1,293.4	–32.3	281.9
III	2,878.2	2,976.1	–97.9	1,896.0	1,947.7	–51.7	1,253.6	1,299.8	–46.2	271.4
IV	2,986.1	2,994.9	–8.9	1,992.3	1,971.0	21.3	1,283.2	1,313.3	–30.2	289.4
2002: I	2,865.7	3,067.3	–201.6	1,884.7	2,030.5	–145.8	1,273.3	1,329.1	–55.8	292.3
II	2,876.7	3,117.4	–240.7	1,883.7	2,079.3	–195.6	1,302.5	1,347.6	–45.1	309.6
III	2,881.5	3,134.6	–253.1	1,874.0	2,074.6	–200.7	1,312.6	1,365.0	–52.5	305.0

Note.—Federal grants-in-aid to State and local governments are reflected in Federal current expenditures and State and local current receipts. Total government current receipts and expenditures have been adjusted to eliminate this duplication.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–83.—*Federal and State and local government current receipts and expenditures, national income and product accounts (NIPA), by major type, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Current receipts					Current expenditures								Current surplus or deficit (–) (NIPA)	Addendum: Grants-in-aid to State and local governments
									Net interest paid			Less: Dividends received by government	Subsidies less current surplus of government enterprises		
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total [1]	Consumption expenditures	Transfer payments	Total	Interest paid	Less: Interest received by government				
1959	122.1	42.8	23.6	41.9	13.8	115.1	83.2	24.7	7.1	.....	.....	.....	0.1	7.0	3.8
1960	131.2	46.6	22.7	45.5	16.4	119.9	85.5	26.3	7.9	10.4	2.5	.....	.2	11.3	4.0
1961	135.8	47.9	22.8	48.1	17.0	129.1	90.2	30.2	7.5	10.2	2.6	.....	1.2	6.8	4.5
1962	147.0	52.3	24.0	51.7	19.1	139.4	98.9	30.9	8.2	11.1	2.9	.....	1.4	7.6	5.0
1963	157.9	55.3	26.2	54.7	21.7	147.0	104.9	32.4	8.9	12.0	3.1	.....	.9	10.9	5.6
1964	162.1	52.8	28.0	58.8	22.4	154.9	110.5	33.4	9.6	12.9	3.3	.....	1.4	7.2	6.5
1965	175.4	58.4	30.9	62.7	23.4	165.7	118.2	36.0	10.0	13.7	3.7	.....	1.7	9.7	7.2
1966	197.8	67.3	33.7	65.4	31.3	187.3	134.0	39.7	10.7	15.1	4.4	.....	3.0	10.5	10.1
1967	212.1	74.2	32.7	70.4	34.9	213.4	151.6	47.5	11.5	16.4	4.9	.....	2.9	–1.4	11.7
1968	245.3	88.3	39.4	79.0	38.7	239.2	168.1	54.9	13.1	18.8	5.7	0.0	3.0	6.2	12.7
1969	276.3	105.9	39.7	86.6	44.1	258.7	180.2	60.6	14.5	20.7	6.2	.0	3.5	17.6	14.6
1970	279.6	104.6	34.4	94.3	46.4	286.9	192.4	73.5	16.2	23.4	7.1	.0	4.8	–7.3	19.3
1971	295.9	103.4	37.7	103.6	51.2	316.3	207.0	87.5	17.0	24.5	7.5	.0	4.9	–20.4	23.2
1972	338.1	125.6	41.9	111.4	59.2	345.0	223.7	97.0	18.4	26.3	7.9	.0	6.1	–6.9	31.7
1973	380.3	134.5	49.3	121.0	75.5	375.8	238.5	110.5	21.2	31.3	10.0	.0	5.6	4.5	34.8
1974	419.6	153.3	51.8	129.3	85.2	424.2	264.9	131.5	23.1	35.6	12.5	.0	4.2	–4.6	36.3
1975	430.5	150.3	50.9	140.0	89.3	497.4	296.5	166.4	26.9	40.0	13.1	.0	7.7	–66.9	45.1
1976	492.6	175.5	64.2	151.6	101.3	538.3	318.1	180.4	33.1	46.3	13.2	.0	6.9	–45.7	50.7
1977	552.8	201.2	73.0	165.5	113.1	584.8	347.8	192.0	35.5	50.8	15.3	.0	9.7	–32.0	56.6
1978	626.0	233.5	83.5	177.8	131.3	634.3	378.5	206.1	39.3	60.2	20.9	.1	10.6	–8.2	65.5
1979	702.7	273.3	88.0	188.7	152.7	701.1	415.0	230.2	44.8	72.9	28.2	.1	11.0	1.7	66.3
1980	767.1	304.2	84.8	212.0	166.2	812.0	469.4	275.0	53.2	89.1	35.9	.1	14.5	–44.9	72.3
1981	877.6	351.5	81.1	249.3	195.7	923.7	524.5	311.8	71.6	116.7	45.1	.1	16.1	–46.2	72.5
1982	890.3	361.6	63.1	256.7	208.9	1,025.1	572.1	348.5	86.6	138.9	52.4	.2	18.1	–134.8	69.5
1983	944.5	360.9	77.2	280.3	226.0	1,113.5	613.1	376.4	99.4	156.9	57.5	.2	24.3	–169.1	71.6
1984	1,047.8	387.2	94.0	309.1	257.5	1,192.1	661.5	387.4	120.7	187.3	66.6	.2	22.9	–144.2	76.7
1985	1,135.8	428.5	96.5	329.4	281.4	1,290.7	719.5	414.2	136.5	211.5	75.0	.2	20.4	–154.9	80.9
1986	1,206.7	449.9	106.5	346.8	303.4	1,378.1	769.1	440.4	145.1	226.1	81.1	.2	23.6	–171.4	87.6
1987	1,322.5	503.0	127.1	369.3	323.1	1,458.2	813.6	458.0	156.7	236.5	79.8	.2	30.1	–135.7	83.9
1988	1,410.9	519.7	137.2	392.6	361.5	1,532.7	850.7	486.5	168.3	253.7	85.4	.2	27.4	–121.8	91.6
1989	1,530.9	583.5	141.5	420.7	385.2	1,641.6	902.6	529.6	187.0	276.9	90.0	.2	22.6	–110.7	98.3
1990	1,607.7	609.6	140.6	447.3	410.1	1,778.0	965.7	583.1	204.3	297.8	93.6	.2	25.3	–170.3	111.4
1991	1,656.6	610.5	133.6	482.3	430.2	1,879.7	1,015.2	620.1	223.1	314.6	91.5	.2	21.5	–223.1	131.6
1992	1,744.4	635.8	143.1	510.6	455.0	2,046.9	1,047.4	745.4	232.0	316.3	84.3	.2	22.4	–302.5	149.1
1993	1,857.9	674.6	165.4	540.1	477.8	2,130.5	1,072.1	793.2	235.8	316.0	80.2	.2	29.6	–272.7	162.6
1994	1,993.0	722.6	186.7	575.3	508.4	2,196.7	1,102.3	825.4	244.0	326.9	82.9	.2	25.2	–203.7	174.5
1995	2,117.1	778.3	211.0	594.6	533.2	2,293.7	1,133.9	869.9	268.0	357.5	89.5	.3	22.2	–176.7	184.5
1996	2,269.1	869.7	223.6	620.0	555.8	2,384.5	1,171.8	916.0	274.4	366.6	92.2	.3	22.6	–115.4	190.4
1997	2,440.0	968.8	237.2	646.2	587.8	2,462.4	1,223.3	945.0	275.3	371.2	96.0	.3	19.1	–22.3	196.8
1998	2,613.8	1,070.4	238.8	681.3	623.3	2,529.3	1,261.4	965.9	278.8	372.2	93.4	.4	23.5	84.5	210.3
1999	2,780.3	1,159.1	247.8	712.9	660.4	2,630.1	1,336.3	998.5	263.1	360.0	96.9	.4	32.5	150.2	231.0
2000	3,000.6	1,286.4	259.4	753.6	701.3	2,775.8	1,431.2	1,050.8	260.1	363.6	103.5	.4	34.1	224.8	247.5
2001	2,992.3	1,292.1	199.3	774.8	726.1	2,951.6	1,522.2	1,146.6	236.0	341.1	105.1	.4	47.3	40.7	277.4
1998: I	2,551.6	1,034.0	239.9	666.3	611.4	2,495.3	1,236.5	958.9	280.6	374.1	93.4	.4	19.6	56.3	205.2
II	2,585.9	1,055.4	237.8	673.6	619.1	2,521.0	1,259.7	959.6	280.3	373.9	93.6	.4	21.6	65.0	206.4
III	2,635.9	1,083.7	243.6	681.4	627.2	2,534.7	1,264.0	966.2	280.4	373.3	93.0	.4	24.5	101.3	209.9
IV	2,681.8	1,108.5	234.1	703.9	635.3	2,566.4	1,285.3	979.0	274.0	367.6	93.5	.4	28.4	115.5	219.6
1999: I	2,718.2	1,125.5	243.1	697.8	651.7	2,581.2	1,301.8	984.9	265.4	360.2	94.8	.4	29.3	137.0	224.9
II	2,750.7	1,142.0	246.0	706.6	656.0	2,606.6	1,317.2	993.6	263.8	360.0	96.1	.4	32.3	144.2	222.2
III	2,792.8	1,167.2	246.3	717.1	662.2	2,641.6	1,347.8	999.2	261.0	358.5	97.5	.4	34.0	151.2	234.9
IV	2,859.4	1,201.8	255.7	730.3	671.7	2,691.0	1,378.4	1,016.3	262.2	361.4	99.2	.4	34.5	168.4	242.0
2000: I	2,966.1	1,256.3	270.8	745.1	693.9	2,710.2	1,394.0	1,020.4	261.8	364.0	102.2	.4	34.3	255.9	239.4
II	2,985.5	1,273.0	267.3	750.3	694.9	2,768.0	1,431.3	1,042.1	261.1	365.2	104.0	.4	33.9	217.5	242.2
III	3,020.6	1,299.6	257.4	757.9	705.7	2,788.2	1,439.5	1,055.1	260.0	363.5	103.6	.4	34.0	232.4	253.8
IV	3,030.3	1,316.7	241.9	761.1	710.6	2,836.7	1,459.9	1,085.6	257.5	361.6	104.1	.4	34.2	193.6	254.6
2001: I	3,053.5	1,340.6	217.3	770.6	725.0	2,896.1	1,493.4	1,108.7	251.7	356.1	104.5	.4	42.8	157.3	266.8
II	3,051.4	1,336.1	213.1	775.9	726.4	2,939.3	1,515.5	1,133.7	240.9	345.4	104.5	.4	49.7	112.1	281.9
III	2,878.2	1,181.9	196.2	772.7	727.4	2,976.1	1,528.0	1,157.8	231.6	336.8	105.2	.4	59.1	–97.9	271.4
IV	2,986.1	1,309.7	170.6	779.9	725.8	2,994.9	1,551.8	1,186.3	219.9	326.1	106.2	.4	37.5	–8.9	289.4
2002: I	2,865.7	1,136.8	202.4	786.2	740.4	3,067.3	1,584.0	1,240.2	206.6	312.7	106.2	.4	37.0	–201.6	292.3
II	2,876.7	1,121.8	213.7	795.1	746.1	3,117.4	1,611.6	1,258.3	212.8	319.5	106.7	.5	35.1	–240.7	309.6
III	2,881.5	1,107.3	214.7	806.9	752.5	3,134.6	1,629.4	1,272.8	203.8	312.2	108.4	.5	29.1	–253.1	305.0

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–84.—*Federal Government current receipts and expenditures, national income and product accounts (NIPA), 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Current receipts					Current expenditures								Current surplus or deficit (–) (NIPA)
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total[1]	Consumption expenditures		Transfer payments		Grants-in-aid to State and local governments	Net interest paid	Subsidies less current surplus of government enterprises	
							Total	National defense	To persons	To rest of the world (net)				
1959	87.0	38.5	22.5	12.6	13.4	83.8	52.0	42.2	18.6	1.8	3.8	6.4	1.2	3.2
1960	92.8	41.9	21.4	13.5	16.0	85.8	51.5	42.8	19.9	1.8	4.0	7.1	1.5	7.1
1961	94.4	42.7	21.5	13.7	16.5	92.0	53.2	44.3	23.1	2.1	4.5	6.6	2.5	2.5
1962	102.3	46.6	22.5	14.7	18.6	100.0	59.5	48.3	23.5	2.1	5.0	7.1	2.8	2.4
1963	110.2	49.2	24.6	15.4	21.0	105.0	62.4	50.1	24.6	2.1	5.6	7.7	2.5	5.2
1964	110.2	46.0	26.1	16.3	21.7	109.3	64.2	50.3	25.2	2.1	6.5	8.4	3.0	.8
1965	119.3	51.1	28.9	16.6	22.7	116.1	67.4	52.4	27.3	2.0	7.2	8.9	3.3	3.2
1966	136.3	58.7	31.4	15.7	30.5	133.6	77.2	61.4	29.9	2.2	10.1	9.8	4.5	2.7
1967	144.9	64.4	30.0	16.5	34.0	153.2	88.3	71.5	36.2	2.1	11.7	10.5	4.4	–8.3
1968	168.5	76.5	36.1	18.2	37.8	169.8	97.0	79.0	41.6	1.9	12.7	12.1	4.5	–1.3
1969	190.1	91.8	36.1	19.2	43.1	180.5	100.0	80.1	45.6	1.8	14.6	13.6	5.0	9.6
1970	184.3	88.9	30.6	19.5	45.3	198.6	100.4	78.7	55.5	1.9	19.3	15.3	6.2	–14.4
1971	189.8	85.9	33.5	20.5	50.0	216.6	103.7	79.3	65.9	2.3	23.2	15.3	6.3	–26.8
1972	217.5	102.9	36.6	20.1	57.9	240.0	109.9	82.3	72.6	2.5	31.7	16.1	7.7	–22.5
1973	248.5	109.7	43.3	21.5	74.0	259.7	111.6	82.6	84.0	2.4	34.8	19.9	7.0	–11.2
1974	277.3	126.6	45.1	22.1	83.5	291.2	120.4	87.5	103.1	3.1	36.3	22.9	5.0	–13.9
1975	276.1	120.9	43.6	24.2	87.5	345.4	131.2	93.4	132.2	3.4	45.1	25.6	7.9	–69.3
1976	318.9	141.4	54.6	23.8	99.1	371.9	138.0	97.9	142.7	3.6	50.7	29.9	7.1	–53.0
1977	359.9	162.3	61.6	25.6	110.3	405.0	151.3	105.8	151.7	3.3	56.6	32.5	9.8	–45.2
1978	417.3	189.1	71.4	28.9	127.9	444.2	164.3	114.2	161.7	3.6	65.5	38.5	10.7	–26.9
1979	478.3	224.8	74.4	30.1	148.9	489.6	180.0	125.3	182.1	3.9	66.3	47.0	10.3	–11.4
1980	522.8	250.2	70.3	39.7	162.6	576.6	209.0	145.3	219.0	4.8	72.3	58.5	12.9	–53.8
1981	605.6	290.8	65.7	57.3	191.8	659.3	239.9	168.9	249.9	4.8	72.5	79.1	13.3	–53.7
1982	599.5	295.7	49.0	49.9	204.9	732.1	265.3	193.6	281.1	6.1	69.5	93.9	16.1	–132.6
1983	623.9	287.2	61.3	53.5	221.8	797.8	288.0	210.6	302.5	7.0	71.6	104.6	23.7	–173.9
1984	688.1	302.5	75.2	57.6	252.8	856.1	312.0	234.9	307.1	9.1	76.7	127.5	24.0	–168.1
1985	747.4	337.2	76.3	57.5	276.5	924.6	339.0	254.9	325.8	11.1	80.9	144.4	23.3	–177.1
1986	786.4	351.4	83.8	53.7	297.5	978.5	358.3	269.3	344.0	12.1	87.6	150.5	26.1	–192.1
1987	870.5	394.5	103.2	56.8	315.9	1,018.4	374.6	284.8	357.0	10.2	83.9	159.8	32.9	–147.9
1988	928.9	405.7	111.1	58.9	353.1	1,066.2	382.8	294.6	377.5	10.3	91.6	172.1	31.9	–137.4
1989	1,010.3	454.6	117.2	62.3	376.3	1,140.3	399.6	300.5	409.8	10.4	98.3	193.5	28.7	–130.0
1990	1,055.7	473.6	118.1	63.9	400.1	1,228.7	419.9	308.9	445.3	10.0	111.4	210.5	31.6	–173.0
1991	1,072.3	465.2	109.9	78.5	418.6	1,287.6	439.1	321.1	492.4	–29.0	131.6	225.2	28.2	–215.3
1992	1,121.3	479.4	118.8	81.3	441.8	1,418.9	445.8	316.9	549.1	16.2	149.1	229.2	29.6	–297.5
1993	1,197.3	509.9	138.5	85.3	463.7	1,471.5	442.6	309.2	581.1	16.7	162.6	230.2	38.2	–274.1
1994	1,293.7	547.8	156.7	95.2	493.9	1,506.0	439.7	301.1	603.2	15.3	174.5	239.6	33.6	–212.3
1995	1,383.7	591.8	179.3	93.0	519.6	1,575.7	439.2	297.5	642.3	9.8	184.5	267.5	32.4	–192.0
1996	1,499.1	670.0	190.6	95.1	543.3	1,635.9	445.3	302.4	678.1	13.6	190.4	273.6	35.1	–136.8
1997	1,625.5	751.9	203.0	93.7	577.0	1,678.8	456.9	304.2	706.8	10.6	196.8	276.2	31.5	–53.3
1998	1,749.7	834.9	204.2	97.4	613.1	1,705.9	453.1	299.7	719.7	11.0	210.3	278.5	33.4	43.8
1999	1,867.2	903.3	213.0	100.2	650.7	1,755.3	471.6	312.0	734.4	11.4	231.0	263.8	43.0	111.9
2000	2,033.9	1,009.0	223.8	109.1	692.1	1,827.1	493.3	321.4	765.9	13.6	247.5	263.0	43.8	206.9
2001	2,008.4	1,010.9	170.2	110.3	716.9	1,936.4	528.4	344.5	832.6	9.6	277.4	238.1	50.3	72.0
1998:I	1,708.0	805.8	205.1	96.0	601.1	1,688.4	444.2	291.6	719.8	8.1	205.2	280.8	30.3	19.6
II	1,733.8	825.0	203.4	96.5	608.9	1,700.8	456.5	300.8	719.2	7.1	206.4	280.0	31.6	33.0
III	1,768.9	844.8	208.3	98.6	617.2	1,703.2	449.9	301.4	720.3	9.4	209.9	279.7	34.0	65.7
IV	1,788.2	864.1	200.3	98.5	625.3	1,731.1	461.8	305.0	719.3	19.2	219.6	273.3	37.9	57.0
1999:I	1,823.2	875.0	208.9	97.5	641.8	1,734.5	465.5	306.9	730.8	8.3	224.9	265.3	39.6	88.7
II	1,847.1	891.2	211.4	98.2	646.3	1,734.2	461.6	303.0	733.4	9.9	222.2	264.2	42.8	112.9
III	1,876.3	911.2	211.7	100.8	652.6	1,758.9	473.4	313.4	735.3	8.6	234.9	262.1	44.6	117.4
IV	1,922.4	935.8	219.9	104.4	662.2	1,793.6	486.0	324.8	738.2	18.7	242.0	263.7	44.9	128.8
2000:I	2,009.6	984.5	233.7	107.0	684.5	1,786.4	480.0	311.9	749.9	8.6	239.4	264.2	44.2	223.2
II	2,022.9	997.2	230.5	109.5	685.7	1,825.7	501.3	325.8	765.1	9.5	242.2	264.1	43.5	197.2
III	2,049.1	1,020.5	222.1	109.8	696.6	1,835.9	494.2	321.3	769.7	11.6	253.8	263.0	43.6	213.2
IV	2,054.1	1,033.6	208.9	110.1	701.5	1,860.3	497.7	326.5	779.0	24.5	254.6	260.5	44.0	193.8
2001:I	2,072.9	1,057.9	186.9	112.3	715.8	1,899.1	517.3	338.4	809.9	6.4	266.8	254.1	44.6	173.8
II	2,072.3	1,059.8	183.2	112.2	717.1	1,927.8	524.9	340.0	824.5	7.7	281.9	243.1	45.6	144.4
III	1,896.0	900.4	168.0	109.5	718.1	1,947.7	527.9	343.4	840.4	8.9	271.4	233.6	65.5	–51.7
IV	1,992.3	1,025.5	142.9	107.3	716.6	1,971.0	543.6	356.0	855.6	15.3	289.4	221.6	45.5	21.3
2002:I	1,884.7	874.8	170.5	108.4	731.1	2,030.5	566.3	372.1	894.1	22.8	292.3	208.5	46.6	–145.8
II	1,883.7	856.6	180.2	110.2	736.7	2,079.3	581.0	382.5	917.0	10.6	309.6	214.9	46.3	–195.6
III	1,874.0	837.5	181.1	112.4	743.0	2,074.6	589.8	388.9	924.4	9.7	305.0	205.8	39.9	–200.7

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–85.—*State and local government current receipts and expenditures, national income and product accounts (NIPA), 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Current receipts						Current expenditures					Current surplus or deficit (–) (NIPA)
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social Insurance	Federal grants-in-aid	Total[1]	Consumption expenditures	Transfer payments to persons	Net interest paid less dividends received	Subsidies less current surplus of government enterprises	
1959	38.9	4.2	1.2	29.3	0.4	3.8	35.1	31.1	4.3	0.7	–1.1	3.8
1960	42.4	4.7	1.2	32.0	.5	4.0	38.1	34.0	4.6	.8	–1.2	4.3
1961	45.9	5.1	1.3	34.4	.5	4.5	41.6	37.0	5.0	1.0	–1.3	4.3
1962	49.7	5.7	1.5	37.0	.5	5.0	44.5	39.4	5.3	1.1	–1.4	5.2
1963	53.4	6.1	1.7	39.4	.6	5.6	47.7	42.4	5.7	1.2	–1.6	5.7
1964	58.4	6.8	1.8	42.6	.7	6.5	52.0	46.3	6.2	1.2	–1.6	6.4
1965	63.3	7.3	2.0	46.1	.8	7.2	56.8	50.8	6.7	1.1	–1.7	6.5
1966	71.5	8.7	2.2	49.7	.8	10.1	63.8	56.8	7.6	1.0	–1.6	7.7
1967	78.9	9.7	2.6	53.9	.9	11.7	71.9	63.2	9.2	1.0	–1.5	7.0
1968	89.5	11.8	3.3	60.8	.9	12.7	82.1	71.1	11.4	1.0	–1.5	7.5
1969	100.7	14.1	3.6	67.4	1.0	14.6	92.8	80.2	13.2	.8	–1.4	8.0
1970	114.6	15.7	3.7	74.8	1.1	19.3	107.5	92.0	16.1	.9	–1.5	7.1
1971	129.3	17.5	4.3	83.1	1.2	23.2	122.9	103.4	19.3	1.7	–1.3	6.4
1972	152.3	22.8	5.3	91.2	1.3	31.7	136.7	113.8	22.0	2.3	–1.5	15.6
1973	166.6	24.7	6.0	99.5	1.5	34.8	150.9	126.9	24.1	1.3	–1.4	15.7
1974	178.5	26.7	6.7	107.2	1.7	36.3	169.2	144.5	25.3	.2	–.8	9.3
1975	199.6	29.5	7.3	115.8	1.8	45.1	197.2	165.4	30.8	1.3	–.2	2.4
1976	224.5	34.1	9.6	127.8	2.2	50.7	217.2	180.1	34.1	3.2	–.2	7.3
1977	249.5	38.8	11.4	139.9	2.8	56.6	236.4	196.5	37.0	3.0	–.1	13.1
1978	274.3	44.3	12.1	148.9	3.4	65.5	255.6	214.3	40.8	.7	.0	18.7
1979	290.8	48.4	13.6	158.6	3.9	66.3	277.8	235.0	44.3	–2.3	.6	13.0
1980	316.6	53.9	14.5	172.3	3.6	72.3	307.8	260.5	51.2	–5.5	1.6	8.8
1981	344.4	60.6	15.4	192.0	3.9	72.5	336.9	284.6	57.1	–7.6	2.8	7.5
1982	360.3	65.9	14.0	206.8	4.0	69.5	362.5	306.8	61.2	–7.5	2.1	–2.3
1983	392.1	73.7	15.9	226.8	4.1	71.6	387.3	325.1	66.9	–5.4	.7	4.8
1984	436.4	84.8	18.8	251.5	4.7	76.7	412.6	349.5	71.2	–6.9	–1.1	23.8
1985	469.2	91.3	20.2	272.0	4.9	80.9	447.0	380.5	77.3	–8.1	–2.8	22.3
1986	507.9	98.6	22.7	293.1	6.0	87.6	487.2	410.8	84.4	–5.7	–2.5	20.8
1987	536.0	108.5	23.9	312.4	7.2	83.9	523.8	439.0	90.8	–3.3	–2.8	12.2
1988	573.7	114.0	26.0	333.7	8.4	91.6	558.1	467.9	98.6	–4.0	–4.5	15.6
1989	618.9	128.9	24.2	358.5	9.0	98.3	599.6	503.0	109.5	–6.8	–6.1	19.3
1990	663.4	136.0	22.5	383.4	10.0	111.4	660.8	545.8	127.8	–6.5	–6.3	2.6
1991	716.0	145.3	23.6	403.8	11.6	131.6	723.8	576.1	156.6	–2.3	–6.6	–7.8
1992	772.2	156.4	24.4	429.2	13.1	149.1	777.2	601.6	180.1	2.6	–7.2	–4.9
1993	823.2	164.7	26.9	454.8	14.1	162.6	821.7	629.5	195.4	5.4	–8.6	1.5
1994	873.8	174.8	30.0	480.1	14.5	174.5	865.2	662.6	206.9	4.2	–8.5	8.6
1995	917.9	186.5	31.7	501.6	13.6	184.5	902.5	694.7	217.8	.2	–10.2	15.3
1996	960.4	199.6	33.0	524.9	12.5	190.4	939.0	726.5	224.3	.6	–12.5	21.4
1997	1,011.3	216.9	34.2	552.5	10.8	196.8	980.3	766.4	227.5	–1.2	–12.4	31.0
1998	1,074.4	235.5	34.6	583.9	10.1	210.3	1,033.7	808.3	235.3	.0	–9.9	40.7
1999	1,144.1	255.8	34.8	612.7	9.7	231.0	1,105.8	864.7	252.7	–1.1	–10.5	38.3
2000	1,214.2	277.5	35.6	644.5	9.2	247.5	1,196.2	937.9	271.3	–3.2	–9.7	18.0
2001	1,261.3	281.2	29.1	664.4	9.2	277.4	1,292.6	993.7	304.4	–2.5	–3.1	–31.3
1998:I	1,048.8	228.3	34.8	570.2	10.3	205.2	1,012.1	792.3	230.9	–.6	–10.6	36.7
II	1,058.5	230.5	34.5	577.0	10.2	206.4	1,026.5	803.2	233.3	.0	–10.0	32.0
III	1,077.0	238.9	35.3	582.8	10.1	209.9	1,041.4	814.1	236.5	.2	–9.5	35.6
IV	1,113.3	244.4	33.8	605.4	10.0	219.6	1,054.9	823.6	240.4	.3	–9.5	58.4
1999:I	1,119.9	250.5	34.3	600.3	9.9	224.9	1,071.6	836.3	245.8	–.3	–10.3	48.4
II	1,125.9	250.8	34.6	608.5	9.8	222.2	1,094.6	855.6	250.4	–.8	–10.5	31.3
III	1,151.4	256.0	34.6	616.3	9.6	234.9	1,117.6	874.4	255.3	–1.5	–10.6	33.8
IV	1,179.1	265.9	35.8	625.8	9.5	242.0	1,139.5	892.3	259.5	–1.9	–10.5	39.6
2000:I	1,195.9	271.8	37.1	638.1	9.4	239.4	1,163.2	914.0	262.0	–2.8	–9.9	32.7
II	1,204.7	275.7	36.8	640.8	9.2	242.2	1,184.5	930.0	267.4	–3.3	–9.6	20.2
III	1,225.4	279.1	35.3	648.0	9.1	253.8	1,206.2	945.4	273.8	–3.4	–9.6	19.2
IV	1,230.8	283.2	33.0	650.9	9.2	254.6	1,231.0	962.2	282.1	–3.5	–9.8	–.2
2001:I	1,247.3	282.6	30.4	658.3	9.2	266.8	1,263.8	976.2	292.4	–2.8	–1.9	–16.5
II	1,261.1	276.3	29.9	663.8	9.2	281.9	1,293.4	990.6	301.5	–2.6	4.1	–32.3
III	1,253.6	281.6	28.2	663.2	9.3	271.4	1,299.8	1,000.1	308.5	–2.4	–6.4	–46.2
IV	1,283.2	284.3	27.7	672.5	9.2	289.4	1,313.3	1,008.2	315.4	–2.2	–8.1	–30.2
2002:I	1,273.3	262.0	32.0	677.8	9.3	292.3	1,329.1	1,017.7	323.4	–2.3	–9.6	–55.8
II	1,302.5	265.3	33.5	684.9	9.4	309.6	1,347.6	1,030.6	330.7	–2.5	–11.2	–45.1
III	1,312.6	269.9	33.7	694.5	9.4	305.0	1,365.0	1,039.6	338.7	–2.5	–10.8	–52.5

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–86.—*State and local government revenues and expenditures, selected fiscal years, 1927–2000*

[Millions of dollars]

Fiscal year[1]	General revenues by source[2]							General expenditures by function[2]				
	Total	Property taxes	Sales and gross receipts taxes	Individual income taxes	Corporation net income taxes	Revenue from Federal Government	All other[3]	Total	Education	Highways	Public welfare	All other[4]
1927	7,271	4,730	470	70	92	116	1,793	7,210	2,235	1,809	151	3,015
1932	7,267	4,487	752	74	79	232	1,643	7,765	2,311	1,741	444	3,269
1934	7,678	4,076	1,008	80	49	1,016	1,449	7,181	1,831	1,509	889	2,952
1936	8,395	4,093	1,484	153	113	948	1,604	7,644	2,177	1,425	827	3,215
1938	9,228	4,440	1,794	218	165	800	1,811	8,757	2,491	1,650	1,069	3,547
1940	9,609	4,430	1,982	224	156	945	1,872	9,229	2,638	1,573	1,156	3,862
1942	10,418	4,537	2,351	276	272	858	2,123	9,190	2,586	1,490	1,225	3,889
1944	10,908	4,604	2,289	342	451	954	2,269	8,863	2,793	1,200	1,133	3,737
1946	12,356	4,986	2,986	422	447	855	2,661	11,028	3,356	1,672	1,409	4,591
1948	17,250	6,126	4,442	543	592	1,861	3,685	17,684	5,379	3,036	2,099	7,170
1950	20,911	7,349	5,154	788	593	2,486	4,541	22,787	7,177	3,803	2,940	8,867
1952	25,181	8,652	6,357	998	846	2,566	5,763	26,098	8,318	4,650	2,788	10,342
1953	27,307	9,375	6,927	1,065	817	2,870	6,252	27,910	9,390	4,987	2,914	10,619
1954	29,012	9,967	7,276	1,127	778	2,966	6,897	30,701	10,557	5,527	3,060	11,557
1955	31,073	10,735	7,643	1,237	744	3,131	7,584	33,724	11,907	6,452	3,168	12,197
1956	34,667	11,749	8,691	1,538	890	3,335	8,465	36,711	13,220	6,953	3,139	13,399
1957	38,164	12,864	9,467	1,754	984	3,843	9,252	40,375	14,134	7,816	3,485	14,940
1958	41,219	14,047	9,829	1,759	1,018	4,865	9,699	44,851	15,919	8,567	3,818	16,547
1959	45,306	14,983	10,437	1,994	1,001	6,377	10,516	48,887	17,283	9,592	4,136	17,876
1960	50,505	16,405	11,849	2,463	1,180	6,974	11,634	51,876	18,719	9,428	4,404	19,325
1961	54,037	18,002	12,463	2,613	1,266	7,131	12,563	56,201	20,574	9,844	4,720	21,063
1962	58,252	19,054	13,494	3,037	1,308	7,871	13,489	60,206	22,216	10,357	5,084	22,549
1963	62,890	20,089	14,456	3,269	1,505	8,722	14,850	64,816	23,776	11,136	5,481	24,423
1962-63	62,269	19,833	14,446	3,267	1,505	8,663	14,556	63,977	23,729	11,150	5,420	23,678
1963-64	68,443	21,241	15,762	3,791	1,695	10,002	15,951	69,302	26,286	11,664	5,766	25,586
1964-65	74,000	22,583	17,118	4,090	1,929	11,029	17,250	74,678	28,563	12,221	6,315	27,579
1965-66	83,036	24,670	19,085	4,760	2,038	13,214	19,269	82,843	33,287	12,770	6,757	30,029
1966-67	91,197	26,047	20,530	5,825	2,227	15,370	21,198	93,350	37,919	13,932	8,218	33,281
1967-68	101,264	27,747	22,911	7,308	2,518	17,181	23,599	102,411	41,158	14,481	9,857	36,915
1968-69	114,550	30,673	26,519	8,908	3,180	19,153	26,117	116,728	47,238	15,417	12,110	41,963
1969-70	130,756	34,054	30,322	10,812	3,738	21,857	29,973	131,332	52,718	16,427	14,679	47,508
1970-71	144,927	37,852	33,233	11,900	3,424	26,146	32,372	150,674	59,413	18,095	18,226	54,940
1971-72	167,535	42,877	37,518	15,227	4,416	31,342	36,156	168,549	65,813	19,021	21,117	62,598
1972-73	190,222	45,283	42,047	17,994	5,425	39,264	40,210	181,357	69,713	18,615	23,582	69,447
1973-74	207,670	47,705	46,098	19,491	6,015	41,820	46,542	198,959	75,833	19,946	25,085	78,095
1974-75	228,171	51,491	49,815	21,454	6,642	47,034	51,735	230,722	87,858	22,528	28,156	92,180
1975-76	256,176	57,001	54,547	24,575	7,273	55,589	57,191	256,731	97,216	23,907	32,604	103,004
1976-77	285,157	62,527	60,641	29,246	9,174	62,444	61,125	274,215	102,780	23,058	35,906	112,472
1977-78	315,960	66,422	67,596	33,176	10,738	69,592	68,435	296,984	110,758	24,609	39,140	122,478
1978-79	343,236	64,944	74,247	36,932	12,128	75,164	79,822	327,517	119,448	28,440	41,898	137,731
1979-80	382,322	68,499	79,927	42,080	13,321	83,029	95,467	369,086	133,211	33,311	47,288	155,276
1980-81	423,404	74,969	85,971	46,426	14,143	90,294	111,599	407,449	145,784	34,603	54,105	172,957
1981-82	457,654	82,067	93,613	50,738	15,028	87,282	128,925	436,733	154,282	34,520	57,996	189,935
1982-83	486,753	89,105	100,247	55,129	14,258	90,007	138,008	466,516	163,876	36,655	60,906	205,080
1983-84	542,730	96,457	114,097	64,529	17,141	96,935	153,571	505,008	176,108	39,419	66,414	223,068
1984-85	598,121	103,757	126,376	70,361	19,152	106,158	172,317	553,899	192,686	44,989	71,479	244,745
1985-86	641,486	111,709	135,005	74,365	19,994	113,099	187,314	605,623	210,819	49,368	75,868	269,568
1986-87	686,860	121,203	144,091	83,935	22,425	114,857	200,350	657,134	226,619	52,355	82,650	295,510
1987-88	726,762	132,212	156,452	88,350	23,663	117,602	208,482	704,921	242,683	55,621	89,090	317,527
1988-89	786,129	142,400	166,336	97,806	25,926	125,824	227,838	762,360	263,898	58,105	97,879	342,479
1989-90	849,502	155,613	177,885	105,640	23,566	136,802	249,996	834,818	288,148	61,057	110,518	375,094
1990-91	902,207	167,999	185,570	109,341	22,242	154,099	262,955	908,108	309,302	64,937	130,402	403,467
1991-92	979,137	180,337	197,731	115,638	23,880	179,174	282,376	981,253	324,652	67,351	158,723	430,526
1992-93	1,041,643	189,744	209,649	123,235	26,417	198,663	293,935	1,030,434	342,287	68,370	170,705	449,072
1993-94	1,100,490	197,141	223,628	128,810	28,320	215,492	307,099	1,077,665	353,287	72,067	183,394	468,916
1994-95	1,169,505	203,451	237,268	137,931	31,406	228,771	330,677	1,149,863	378,273	77,109	196,703	497,779
1995-96	1,222,821	209,440	248,993	146,844	32,009	234,891	350,645	1,193,276	398,859	79,092	197,354	517,971
1996-97	1,289,237	218,877	261,418	159,042	33,820	244,847	371,233	1,249,984	418,416	82,062	203,779	545,727
1997-98	1,365,762	230,150	274,883	175,630	34,412	255,048	395,639	1,318,042	450,365	87,214	208,120	572,343
1998-99	1,434,464	240,107	290,993	189,309	33,922	270,628	409,505	1,402,369	483,259	93,018	218,957	607,134
1999-2000	1,541,322	249,178	309,290	211,661	36,059	291,950	443,186	1,506,797	521,612	101,336	237,336	646,512

[1] Fiscal years not the same for all governments. See Note.

[2] Excludes revenues or expenditures of publicly owned utilities and liquor stores, and of insurance-trust activities. Intergovernmental receipts and payments between State and local governments are also excluded.

[3] Includes other taxes and charges and miscellaneous revenues.

[4] Includes expenditures for libraries, hospitals, health, employment security administration, veterans' services, air transportation, water transport and terminals, parking facilities, transit subsidies, police protection, fire protection, correction, protective inspection and regulation, sewerage, natural resources, parks and recreation, housing and community development, solid waste management, financial administration, judicial and legal, general public buildings, other government administration, interest on general debt, and general expenditures, n.e.c.

Note.—Except for States listed, data for fiscal years listed from 1962-63 to 1999-2000 are the aggregation of data for government fiscal years that ended in the 12-month period from July 1 to June 30 of those years (Texas used August and Alabama and Michigan used September). Data for 1963 and earlier years include data for governments fiscal years ending during that particular calendar year.

Data are not available for intervening years.

Source: Department of Commerce, Bureau of the Census.

TABLE B–87.—*U.S. Treasury securities outstanding by kind of obligation, 1967–2002*

[Billions of dollars]

End of year or month	Total Treasury securities outstanding [1]	Marketable						Nonmarketable				
		Total [2]	Treasury bills	Treasury notes	Treasury bonds	Treasury inflation-indexed		Total	U.S. savings securities [3]	Foreign series [4]	Government account series	Other [5]
						Notes	Bonds					
Fiscal year:												
1967	322.3	[6] 210.7	58.5	49.1	97.4	.....	.....	111.6	51.2	1.5	56.2	2.7
1968	344.4	226.6	64.4	71.1	91.1	.....	.....	117.8	51.7	3.7	59.5	2.8
1969	351.7	226.1	68.4	78.9	78.8	.....	.....	125.6	51.7	4.1	66.8	3.1
1970	369.0	232.6	76.2	93.5	63.0	.....	.....	136.4	51.3	4.8	76.3	4.1
1971	396.3	245.5	86.7	104.8	54.0	.....	.....	150.8	53.0	9.3	82.8	5.8
1972	425.4	257.2	94.6	113.4	49.1	.....	.....	168.2	55.9	19.0	89.6	3.7
1973	456.4	263.0	100.1	117.8	45.1	.....	.....	193.4	59.4	28.5	101.7	3.7
1974	473.2	266.6	105.0	128.4	33.1	.....	.....	206.7	61.9	25.0	115.4	4.3
1975	532.1	315.6	128.6	150.3	36.8	.....	.....	216.5	65.5	23.2	124.2	3.6
1976	619.3	392.6	161.2	191.8	39.6	.....	.....	226.7	69.7	21.5	130.6	4.9
1977	697.6	443.5	156.1	241.7	45.7	.....	.....	254.1	75.4	21.8	140.1	16.8
1978	767.0	485.2	160.9	267.9	56.4	.....	.....	281.8	79.8	21.7	153.3	27.1
1979	819.0	506.7	161.4	274.2	71.1	.....	.....	312.3	80.4	28.1	176.4	27.4
1980	906.4	594.5	199.8	310.9	83.8	.....	.....	311.9	72.7	25.2	189.8	24.2
1981	996.5	683.2	223.4	363.6	96.2	.....	.....	313.3	68.0	20.5	201.1	23.7
1982	1,140.9	824.4	277.9	442.9	103.6	.....	.....	316.5	67.3	14.6	210.5	24.1
1983	1,375.8	1,024.0	340.7	557.5	125.7	.....	.....	351.8	70.0	11.5	234.7	35.6
1984	1,559.6	1,176.6	356.8	661.7	158.1	.....	.....	383.0	72.8	8.8	259.5	41.8
1985	1,821.0	1,360.2	384.2	776.4	199.5	.....	.....	460.8	77.0	6.6	313.9	63.3
1986	2,122.7	[2] 1,564.3	410.7	896.9	241.7	.....	.....	558.4	85.6	4.1	365.9	102.8
1987	2,347.8	[2] 1,676.0	378.3	1,005.1	277.6	.....	.....	671.8	97.0	4.4	440.7	129.8
1988	2,599.9	[2] 1,802.9	398.5	1,089.6	299.9	.....	.....	797.0	106.2	6.3	536.5	148.0
1989	2,836.3	[2] 1,892.8	406.6	1,133.2	338.0	.....	.....	943.5	114.0	6.8	663.7	159.0
1990	3,210.9	[2] 2,092.8	482.5	1,218.1	377.2	.....	.....	1,118.2	122.2	36.0	779.4	180.6
1991	3,662.8	[2] 2,390.7	564.6	1,387.7	423.4	.....	.....	1,272.1	133.5	41.6	908.4	188.5
1992	4,061.8	[2] 2,677.5	634.3	1,566.3	461.8	.....	.....	1,384.3	148.3	37.0	1,011.0	188.0
1993	4,408.6	[2] 2,904.9	658.4	1,734.2	497.4	.....	.....	1,503.7	167.0	42.5	1,114.3	179.9
1994	4,689.5	[2] 3,091.6	697.3	1,867.5	511.8	.....	.....	1,597.9	176.4	42.0	1,211.7	167.8
1995	4,950.6	[2] 3,260.4	742.5	1,980.3	522.6	.....	.....	1,690.2	181.2	41.0	1,324.3	143.8
1996	5,220.8	[2] 3,418.4	761.2	2,098.7	543.5	.....	.....	1,802.4	184.1	37.5	1,454.7	126.1
1997	5,407.5	[2] 3,439.6	701.9	2,122.2	576.2	24.4	.....	1,967.9	182.7	34.9	1,608.5	141.9
1998	5,518.7	[2] 3,331.0	637.6	2,009.1	610.4	41.9	17.0	2,187.7	180.8	35.1	1,777.3	194.4
1999	5,647.2	[2] 3,233.0	653.2	1,828.8	643.7	67.6	24.8	2,414.2	180.0	31.0	2,005.2	198.1
2000	5,622.1	[2] 2,992.8	616.2	1,611.3	635.3	81.6	33.4	2,629.3	177.7	25.4	2,242.9	183.3
2001 [1]	5,807.5	[2] 2,930.7	734.9	1,433.0	613.0	95.1	39.7	2,876.7	186.5	18.3	2,492.1	179.9
2002	6,228.2	[2] 3,136.7	868.3	1,521.6	593.0	93.7	45.1	3,091.5	193.3	12.5	2,707.3	178.4
2001: Jan [1]	5,716.1	[2] 2,977.3	656.1	1,555.1	623.8	88.3	39.0	2,738.7	184.6	24.9	2,348.2	181.0
Feb	5,735.9	[2] 2,989.3	680.7	1,534.9	631.5	88.3	39.0	2,746.6	184.7	24.9	2,354.0	183.0
Mar	5,773.7	[2] 3,017.9	712.0	1,534.9	628.0	88.8	39.2	2,755.9	184.8	24.7	2,360.3	186.0
Apr	5,661.3	[2] 2,877.9	619.1	1,492.3	623.0	89.2	39.4	2,783.5	185.2	24.5	2,385.6	188.1
May	5,656.2	[2] 2,855.4	618.5	1,474.4	618.7	89.4	39.4	2,800.8	185.3	24.2	2,401.9	189.3
June	5,726.8	[2] 2,855.7	620.1	1,474.4	617.0	89.7	39.6	2,871.1	185.5	24.0	2,474.7	186.8
July	5,718.3	[2] 2,852.9	653.1	1,437.1	612.7	95.2	39.8	2,865.4	185.8	22.2	2,474.8	182.6
Aug	5,769.9	[2] 2,928.8	732.6	1,433.0	613.0	95.4	39.9	2,841.0	186.0	21.7	2,452.6	180.8
Sept	5,807.5	[2] 2,930.7	734.9	1,433.0	613.0	95.1	39.7	2,876.7	186.5	18.3	2,492.1	179.9
Oct	5,816.0	[2] 2,921.3	736.3	1,419.6	610.5	95.1	44.8	2,894.7	188.4	16.0	2,508.1	182.2
Nov	5,888.9	[2] 2,991.4	813.4	1,415.5	607.0	95.6	44.9	2,897.5	189.9	15.5	2,510.4	181.8
Dec	5,943.4	[2] 2,983.0	811.2	1,414.0	602.7	95.3	44.8	2,960.4	190.4	15.4	2,574.8	179.9
2002: Jan	5,937.2	[2] 2,968.2	792.7	1,411.9	602.7	101.1	44.7	2,969.0	190.9	16.4	2,584.8	176.9
Feb	6,003.5	[2] 3,033.6	833.2	1,443.2	596.8	100.7	44.6	2,969.8	191.5	14.8	2,588.1	175.5
Mar	6,006.0	[2] 3,035.0	834.4	1,443.3	596.8	100.9	44.7	2,971.0	192.0	14.6	2,589.7	174.8
Apr	5,984.7	[2] 2,992.7	793.5	1,445.4	593.0	101.3	44.6	2,991.9	192.4	14.8	2,610.5	174.2
May	6,019.3	[2] 3,045.1	816.1	1,474.3	593.0	101.9	44.8	2,974.2	192.6	14.4	2,587.0	180.2
June	6,126.5	[2] 3,052.3	822.5	1,474.3	593.0	102.4	45.1	3,074.2	192.8	13.3	2,691.4	176.7
July	6,159.7	[2] 3,095.9	862.3	1,487.0	593.0	93.6	45.1	3,063.8	193.0	12.9	2,689.2	168.8
Aug	6,210.5	[2] 3,145.6	890.7	1,508.2	593.0	93.6	45.1	3,064.9	193.1	12.7	2,683.5	175.6
Sept	6,228.2	[2] 3,136.7	868.3	1,521.6	593.0	93.7	45.1	3,091.5	193.3	12.5	2,707.3	178.4
Oct	6,282.5	3,148.7	881.9	1,527.4	593.0	101.1	45.3	3,133.9	193.9	12.7	2,743.6	183.7
Nov	6,343.5	3,205.7	901.4	1,568.9	588.8	101.3	45.4	3,137.8	194.4	12.5	2,742.6	188.2
Dec	6,405.7	3,205.3	888.8	1,580.9	588.8	101.4	45.4	3,200.4	194.9	11.2	2,806.9	187.4

[1] Data beginning January 2001 are interest-bearing and noninterest-bearing securities; prior data are interest-bearing securities only.

[2] Includes Federal Financing Bank securities, not shown separately, in the amount of $15 billion.

[3] Through 1996, series is U.S. savings bonds. Beginning 1997, includes U.S. retirement plan bonds, U.S. individual retirement bonds, and U.S. savings notes previously included in "other" nonmarketable securities.

[4] Nonmarketable certificates of indebtedness, notes, bonds, and bills in the Treasury foreign series of dollar-denominated and foreign-currency denominated issues.

[5] Includes depository bonds, retirement plan bonds, Rural Electrification Administration bonds, State and local bonds, and special issues held only by U.S. Government agencies and trust funds and the Federal home loan banks.

[6] Includes $5,610 million in certificates not shown separately.

Note.—Through fiscal year 1976, the fiscal year was on a July 1-June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1-September 30 basis.

Source: Department of the Treasury.

TABLE B–88.—*Maturity distribution and average length of marketable interest-bearing public debt securities held by private investors, 1967–2002*

End of year or month	Amount outstanding, privately held	Maturity class					Average length [1]	
		Within 1 year	1 to 5 years	5 to 10 years	10 to 20 years	20 years and over		
	Millions of dollars						Years	Months
Fiscal year:								
1967	150,321	56,561	53,584	21,057	6,153	12,968	5	1
1968	159,671	66,746	52,295	21,850	6,110	12,670	4	5
1969	156,008	69,311	50,182	18,078	6,097	12,337	4	2
1970	157,910	76,443	57,035	8,286	7,876	8,272	3	8
1971	161,863	74,803	58,557	14,503	6,357	7,645	3	6
1972	165,978	79,509	57,157	16,033	6,358	6,922	3	3
1973	167,869	84,041	54,139	16,385	8,741	4,564	3	1
1974	164,862	87,150	50,103	14,197	9,930	3,481	2	11
1975	210,382	115,677	65,852	15,385	8,857	4,611	2	8
1976	279,782	150,296	90,578	24,169	8,087	6,652	2	7
1977	326,674	161,329	113,319	33,067	8,428	10,531	2	11
1978	356,501	163,819	132,993	33,500	11,383	14,805	3	3
1979	380,530	181,883	127,574	32,279	18,489	20,304	3	7
1980	463,717	220,084	156,244	38,809	25,901	22,679	3	9
1981	549,863	256,187	182,237	48,743	32,569	30,127	4	0
1982	682,043	314,436	221,783	75,749	33,017	37,058	3	11
1983	862,631	379,579	294,955	99,174	40,826	48,097	4	1
1984	1,017,488	437,941	332,808	130,417	49,664	66,658	4	6
1985	1,185,675	472,661	402,766	159,383	62,853	88,012	4	11
1986	1,354,275	506,903	467,348	189,995	70,664	119,365	5	3
1987	1,445,366	483,582	526,746	209,160	72,862	153,016	5	9
1988	1,555,208	524,201	552,993	232,453	74,186	171,375	5	9
1989	1,654,660	546,751	578,333	247,428	80,616	201,532	6	0
1990	1,841,903	626,297	630,144	267,573	82,713	235,176	6	1
1991	2,113,799	713,778	761,243	280,574	84,900	273,304	6	0
1992	2,363,802	808,705	866,329	295,921	84,706	308,141	5	11
1993	2,562,336	858,135	978,714	306,663	94,345	324,479	5	10
1994	2,719,861	877,932	1,128,322	289,998	88,208	335,401	5	8
1995	2,870,781	1,002,875	1,157,492	290,111	87,297	333,006	5	4
1996	3,011,185	1,058,558	1,212,258	306,643	111,360	322,366	5	3
1997	2,998,846	1,017,913	1,206,993	321,622	154,205	298,113	5	5
1998	2,856,637	940,572	1,105,175	319,331	157,347	334,212	5	10
1999	2,728,011	915,145	962,644	378,163	149,703	322,356	6	0
2000	2,469,152	858,903	791,540	355,382	167,082	296,246	6	2
2001	2,328,302	900,178	650,522	329,247	174,653	273,702	6	1
2002	2,492,821	939,986	802,032	311,176	203,816	235,811	5	6
2001: Jan	2,428,525	879,611	741,178	348,632	162,096	297,008	6	1
Feb	2,434,842	876,447	749,391	342,160	169,386	297,457	6	2
Mar	2,430,055	902,824	722,106	342,556	168,191	294,378	6	1
Apr	2,317,798	806,690	712,551	340,779	164,662	293,116	5	11
May	2,294,130	789,827	716,107	333,361	173,218	281,617	6	4
June	2,260,841	781,923	693,530	333,618	170,990	280,779	6	4
July	2,282,982	824,863	691,268	319,016	169,852	277,983	6	2
Aug	2,353,208	902,150	673,169	329,438	174,653	273,798	6	1
Sept	2,328,302	900,178	650,522	329,247	174,653	273,702	6	1
Oct	2,342,638	892,994	683,271	315,731	174,415	276,227	6	0
Nov	2,405,814	940,974	696,263	319,510	199,232	249,835	5	11
Dec	2,392,530	932,153	696,991	317,932	197,742	247,712	5	10
2002: Jan	2,371,510	906,466	712,370	307,869	197,484	247,321	5	10
Feb	2,430,599	959,624	719,279	308,109	197,408	246,179	5	9
Mar	2,400,776	953,703	696,282	307,424	197,398	245,968	5	9
Apr	2,375,274	904,061	725,849	306,097	195,227	244,040	5	9
May	2,419,547	912,351	761,718	305,994	195,227	244,258	5	8
June	2,402,091	916,256	740,340	305,792	195,227	244,478	5	8
July	2,457,756	922,600	781,212	314,301	195,227	244,416	5	7
Aug	2,483,538	968,597	764,257	311,100	203,816	235,768	5	7
Sept	2,492,821	939,986	802,032	311,176	203,816	235,811	5	6

[1] In 2002, the average length calculation was revised to include Treasury inflation-indexed notes (first offered in 1997) and bonds (first offered in 1998).

Note.—Through fiscal year 1976, the fiscal year was on a July 1-June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1-September 30 basis.

Source: Department of the Treasury.

TABLE B–89.—*Estimated ownership of U.S. Treasury securities, 1991–2002*

[Billions of dollars]

End of month	Total public debt [1]	Federal Reserve and Government accounts [2]	Held by private investors									
			Total privately held	Depository institutions [3]	U.S. savings bonds [4]	Pension funds		Insurance companies	Mutual funds [6]	State and local governments	Foreign and international [7]	Other investors [8]
						Private [5]	State and local governments					
1991: Mar	3,465.2	1,104.6	2,360.6	222.5	129.7	122.9	153.4	147.2	161.0	415.6	492.0	516.2
June	3,538.0	1,139.1	2,398.9	231.5	133.2	122.8	155.0	156.8	153.8	416.8	502.0	527.0
Sept	3,665.3	1,166.9	2,498.4	251.6	138.1	126.2	140.2	171.4	171.6	430.2	506.3	562.8
Dec	3,801.7	1,223.2	2,578.5	271.6	138.1	126.9	141.7	181.8	192.2	435.5	520.9	569.8
1992: Mar	3,881.3	1,215.5	2,665.8	300.5	142.0	116.9	141.7	188.4	193.8	460.0	536.4	586.0
June	3,984.7	1,272.3	2,712.4	315.1	145.4	116.7	146.7	192.8	193.7	435.6	558.2	608.2
Sept	4,064.6	1,282.4	2,782.2	337.2	150.3	120.0	166.4	194.8	195.9	429.3	562.8	625.5
Dec	4,177.0	1,329.7	2,847.3	348.3	157.3	121.1	172.3	197.5	200.4	418.2	576.7	655.5
1993: Mar	4,230.6	1,328.6	2,902.0	362.6	163.6	112.1	171.2	208.0	202.0	434.0	585.9	662.7
June	4,352.0	1,400.6	2,951.4	360.9	166.5	111.6	176.9	217.8	207.5	441.2	596.8	672.2
Sept	4,411.5	1,422.2	2,989.3	366.2	169.1	125.1	189.2	229.4	217.6	434.0	619.1	639.7
Dec	4,535.7	1,476.1	3,059.6	373.0	171.9	119.3	186.6	234.5	227.1	447.8	650.3	649.2
1994: Mar	4,575.9	1,476.0	3,099.9	397.4	175.0	119.6	195.3	233.4	212.8	443.4	661.1	661.9
June	4,645.8	1,547.5	3,098.3	383.8	177.1	128.9	193.4	238.0	204.6	425.2	659.9	687.4
Sept	4,692.8	1,562.8	3,130.0	364.0	178.6	135.9	191.9	243.7	201.6	398.2	682.0	734.1
Dec	4,800.2	1,622.6	3,177.6	339.6	179.9	139.6	191.9	240.1	209.4	370.0	667.3	839.8
1995: Mar	4,864.1	1,619.3	3,244.8	353.0	181.4	141.1	203.1	244.2	210.6	350.5	707.0	854.0
June	4,951.4	1,690.1	3,261.3	340.0	182.6	142.1	197.2	245.0	202.5	313.7	762.5	875.8
Sept	4,974.0	1,688.0	3,286.0	330.8	183.5	141.5	193.0	245.2	211.6	304.3	820.4	855.7
Dec	4,988.7	1,681.0	3,307.7	315.4	185.0	142.0	191.7	241.5	225.1	289.8	835.2	881.8
1996: Mar	5,117.8	1,731.1	3,386.7	322.1	185.8	143.8	198.9	239.4	240.9	283.6	908.1	864.1
June	5,161.1	1,806.7	3,354.4	318.7	186.5	144.0	208.2	229.5	230.6	283.3	929.7	823.9
Sept	5,224.8	1,831.6	3,393.2	310.9	186.8	140.7	202.4	226.8	226.8	263.7	993.4	841.7
Dec	5,323.2	1,892.0	3,431.2	296.6	187.0	139.4	203.5	214.1	227.4	257.0	1,102.1	804.1
1997: Mar	5,380.9	1,928.7	3,452.2	317.3	186.5	140.9	203.7	181.8	221.9	248.1	1,157.6	794.4
June	5,376.2	1,998.9	3,377.3	300.1	186.3	141.4	209.3	183.1	216.8	243.3	1,182.7	714.2
Sept	5,413.1	2,011.5	3,401.6	292.8	186.2	142.4	219.7	186.8	221.6	235.2	1,230.5	686.4
Dec	5,502.4	2,087.8	3,414.6	300.3	186.5	143.5	216.9	176.6	232.8	239.3	1,241.6	677.1
1998: Mar	5,542.4	2,104.9	3,437.5	308.3	186.2	135.9	211.9	169.4	235.1	238.1	1,250.5	702.1
June	5,547.9	2,198.6	3,349.3	290.9	186.0	129.0	214.8	160.6	231.2	258.5	1,256.0	622.3
Sept	5,526.2	2,213.0	3,313.2	244.4	186.0	120.5	211.2	151.3	232.5	266.4	1,224.2	676.7
Dec	5,614.2	2,280.2	3,334.0	237.4	186.6	112.5	217.7	141.7	253.9	269.3	1,278.7	636.2
1999: Mar	5,651.6	2,324.1	3,327.5	247.4	186.5	108.8	218.4	137.5	254.4	272.5	1,272.3	629.7
June	5,638.8	2,439.6	3,199.2	240.6	186.5	110.3	222.5	133.6	228.3	279.1	1,258.8	539.5
Sept	5,656.3	2,480.9	3,175.4	241.2	186.2	110.1	215.3	128.0	224.8	271.6	1,281.4	516.8
Dec	5,776.1	2,542.2	3,233.9	248.6	186.4	109.8	211.2	123.4	229.1	266.8	1,268.7	589.9
2000: Mar	5,773.4	2,590.6	3,182.8	237.7	185.3	107.9	211.1	120.0	222.4	257.2	1,106.9	734.3
June	5,685.9	2,698.6	2,987.4	222.1	184.6	109.3	210.5	116.5	205.3	256.4	1,082.0	600.7
Sept	5,674.2	2,737.9	2,936.2	220.5	184.3	109.7	200.7	113.8	207.6	241.9	1,057.9	599.8
Dec	5,662.2	2,781.8	2,880.4	201.4	184.8	108.4	195.7	110.2	221.8	236.2	1,034.2	587.7
2001: Mar	5,773.7	2,880.9	2,892.9	188.0	184.8	105.7	195.3	109.1	222.3	239.0	1,029.9	618.8
June	5,726.8	3,004.2	2,722.6	188.1	185.5	105.9	204.4	108.1	218.4	246.5	1,000.5	465.2
Sept	5,807.5	3,027.8	2,779.7	189.1	186.4	103.2	187.7	106.8	230.6	248.9	1,005.5	521.5
Dec	5,943.4	3,123.9	2,819.5	181.5	190.3	104.2	177.4	105.7	256.8	256.5	1,053.1	494.1
2002: Mar	6,006.0	3,156.8	2,849.2	187.6	192.0	106.3	187.0	108.4	263.3	261.2	1,055.7	487.7
June	6,126.5	3,276.7	2,849.8	204.4	192.8	107.5	190.0	110.1	251.8	270.0	1,071.3	451.9
Sept	6,228.2	3,303.5	2,924.8	.....	193.3	.....	.....	.....	.....	.....	1,133.7	.....

[1] Face value.

[2] Federal Reserve holdings exclude Treasury securities held under repurchase agreements.

[3] Includes commercial banks, savings institutions, and credit unions.

[4] Current accrual value.

[5] Includes Treasury securities held by the Federal Employees Retirement System Thrift Savings Plan "G Fund."

[6] Includes money market mutual funds, mutual funds, and closed-end investment companies.

[7] Includes nonmarketable foreign series Treasury securities and Treasury deposit funds. Excludes Treasury securities held under repurchase agreements in custody accounts at the Federal Reserve Bank of New York.

Estimates reflect the 1989 benchmark to December 1994, the 1994 benchmark to March 2000, and the 2000 benchmark to date.

[8] Includes individuals, Government-sponsored enterprises, brokers and dealers, bank personal trusts and estates, corporate and noncorporate businesses, and other investors.

Note.—Data shown in this table are as of November 2002.

Source: Department of the Treasury.

TABLE B–90.—*Corporate profits with inventory valuation and capital consumption adjustments, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation and capital consumption adjustments	Corporate profits tax liability	Corporate profits after tax with inventory valuation and capital consumption adjustments		
			Total	Dividends	Undistributed profits with inventory valuation and capital consumption adjustments
1959	53.7	23.6	30.0	12.6	17.5
1960	52.3	22.7	29.6	13.4	16.3
1961	53.5	22.8	30.7	13.9	16.8
1962	61.6	24.0	37.6	15.0	22.6
1963	67.6	26.2	41.4	16.2	25.2
1964	74.8	28.0	46.8	18.2	28.6
1965	86.0	30.9	55.1	20.2	34.9
1966	92.0	33.7	58.3	20.7	37.6
1967	89.6	32.7	56.9	21.5	35.4
1968	96.5	39.4	57.2	23.5	33.6
1969	93.7	39.7	54.0	24.2	29.8
1970	81.6	34.4	47.3	24.3	23.0
1971	95.1	37.7	57.4	25.0	32.4
1972	109.8	41.9	67.9	26.8	41.1
1973	123.9	49.3	74.7	29.9	44.8
1974	114.5	51.8	62.7	33.2	29.5
1975	133.0	50.9	82.1	33.0	49.1
1976	160.6	64.2	96.4	39.0	57.3
1977	190.9	73.0	117.9	44.8	73.1
1978	217.2	83.5	133.7	50.8	82.9
1979	222.5	88.0	134.5	57.5	77.0
1980	198.5	84.8	113.7	64.1	49.6
1981	219.0	81.1	137.8	73.8	64.1
1982	201.2	63.1	138.2	76.2	61.9
1983	254.1	77.2	176.9	83.6	93.2
1984	309.8	94.0	215.7	91.0	124.7
1985	322.4	96.5	225.9	97.7	128.3
1986	300.7	106.5	194.2	106.3	88.0
1987	346.6	127.1	219.5	112.2	107.3
1988	405.0	137.2	267.9	129.6	138.3
1989	395.7	141.5	254.2	155.0	99.2
1990	408.6	140.6	268.0	165.6	102.4
1991	431.2	133.6	297.7	178.4	119.2
1992	453.1	143.1	309.9	185.5	124.4
1993	510.5	165.4	345.1	203.1	142.0
1994	573.2	186.7	386.5	234.9	151.6
1995	668.8	211.0	457.8	254.2	203.6
1996	754.0	223.6	530.4	297.7	232.7
1997	833.8	237.2	596.6	335.2	261.3
1998	777.4	238.8	538.6	348.7	189.9
1999	805.8	247.8	558.0	328.4	229.6
2000	788.1	259.4	528.7	376.1	152.6
2001	731.6	199.3	532.3	409.6	122.7
1998: I	787.4	239.9	547.5	349.4	198.1
II	769.6	237.8	531.8	350.4	181.4
III	781.9	243.6	538.3	348.3	190.0
IV	770.8	234.1	536.8	346.7	190.1
1999: I	808.2	243.1	565.1	332.0	233.1
II	802.1	246.0	556.0	323.7	232.3
III	788.0	246.3	541.7	324.3	217.4
IV	824.7	255.7	569.1	333.5	235.6
2000: I	807.6	270.8	536.8	351.1	185.7
II	807.3	267.3	540.0	369.7	170.4
III	787.7	257.4	530.3	386.1	144.2
IV	749.7	241.9	507.8	397.6	110.2
2001: I	706.5	217.3	489.2	402.9	86.3
II	721.4	213.1	508.3	406.5	101.9
III	687.2	196.2	490.9	411.4	79.5
IV	811.4	170.6	640.8	417.7	223.0
2002: I	797.6	202.4	595.2	424.2	171.0
II	785.0	213.7	571.3	430.8	140.5
III	771.0	214.7	556.3	437.7	118.6

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–91.—*Corporate profits by industry, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation adjustment and without capital consumption adjustment											
	Total	Domestic industries										Rest of the world
		Total	Financial[1]			Nonfinancial						
			Total	Federal Reserve banks	Other	Total	Manufacturing[2]	Transportation and public utilities	Wholesale trade	Retail trade	Other	
1959	53.4	50.7	7.4	0.7	6.6	43.3	26.5	7.1	2.8	3.3	3.6	2.7
1960	51.4	48.2	8.1	.9	7.2	40.1	23.8	7.5	2.5	2.8	3.6	3.1
1961	51.7	48.4	8.1	.8	7.3	40.4	23.3	7.9	2.5	3.0	3.6	3.3
1962	56.9	53.1	8.2	.9	7.4	44.9	26.2	8.5	2.8	3.4	3.9	3.8
1963	62.0	57.9	8.0	1.0	7.1	49.9	29.6	9.5	2.8	3.6	4.4	4.1
1964	68.4	64.0	8.4	1.1	7.2	55.6	32.4	10.2	3.4	4.5	5.1	4.5
1965	78.7	74.0	9.0	1.3	7.6	65.0	39.7	11.0	3.8	4.9	5.7	4.7
1966	84.4	79.8	10.4	1.7	8.7	69.5	42.5	12.0	4.0	4.9	6.2	4.5
1967	81.7	77.0	10.8	2.0	8.9	66.1	39.1	10.9	4.1	5.7	6.5	4.8
1968	88.5	82.9	12.4	2.5	9.9	70.5	41.7	11.0	4.6	6.4	6.9	5.6
1969	85.2	78.6	13.3	3.1	10.3	65.3	37.1	10.7	4.9	6.4	6.3	6.6
1970	74.0	66.9	15.0	3.5	11.4	52.0	27.2	8.3	4.4	6.0	6.1	7.1
1971	87.9	80.0	17.3	3.3	14.0	62.7	34.8	8.9	5.2	7.2	6.7	7.9
1972	100.7	91.2	18.8	3.3	15.4	72.4	41.5	9.5	6.8	7.4	7.2	9.5
1973	114.6	99.7	20.3	4.5	15.8	79.4	46.8	9.1	8.2	6.6	8.7	14.9
1974	108.5	91.1	19.7	5.7	14.0	71.4	41.0	7.6	11.5	2.3	9.0	17.5
1975	134.3	119.6	19.7	5.6	14.1	100.0	54.9	11.0	13.8	8.2	12.1	14.6
1976	164.5	148.0	24.2	5.9	18.3	123.8	71.0	15.3	12.9	10.5	14.2	16.5
1977	193.3	174.2	30.7	6.1	24.6	143.5	78.8	18.6	15.6	12.4	18.2	19.1
1978	221.2	198.4	37.7	7.6	30.0	160.7	89.7	21.8	15.7	12.4	21.1	22.9
1979	229.9	195.3	38.4	9.4	29.0	156.9	88.4	17.0	19.0	10.0	22.6	34.6
1980	209.3	173.8	32.3	11.8	20.5	141.5	76.3	18.4	17.1	6.4	23.3	35.5
1981	216.3	186.6	27.1	14.4	12.7	159.6	88.5	20.4	22.3	10.1	18.2	29.7
1982	188.0	155.2	25.8	15.2	10.6	129.4	63.8	23.1	19.7	13.8	8.9	32.7
1983	223.9	188.5	35.2	14.6	20.6	153.3	72.2	29.6	21.7	19.1	10.8	35.5
1984	262.0	225.1	33.8	16.4	17.3	191.3	87.9	40.1	30.2	21.5	11.6	37.0
1985	255.2	216.8	44.5	16.3	28.2	172.3	81.5	33.9	23.9	22.4	10.7	38.4
1986	250.5	210.7	55.8	15.5	40.3	154.9	54.1	36.0	24.1	23.7	17.0	39.8
1987	298.4	250.4	57.1	15.7	41.4	193.3	83.1	42.0	17.7	23.4	27.1	48.0
1988	359.8	303.1	67.9	17.6	50.3	235.2	116.1	48.4	19.6	20.6	30.4	56.7
1989	360.4	296.1	76.8	20.2	56.7	219.3	105.7	43.5	21.5	21.2	27.4	64.2
1990	388.6	315.9	91.6	21.4	70.2	224.3	109.2	44.4	19.1	21.0	30.6	72.7
1991	421.1	346.7	120.2	20.3	99.9	226.5	93.5	53.2	22.0	27.7	30.0	74.3
1992	448.8	380.1	124.8	17.8	107.0	255.2	93.9	58.5	25.9	33.7	43.2	68.7
1993	506.4	429.6	127.9	16.1	111.7	301.7	108.4	69.6	28.2	39.7	55.9	76.7
1994	561.0	483.7	114.7	17.8	97.0	369.0	139.6	82.9	33.1	46.6	66.8	77.2
1995	650.2	558.2	154.3	22.2	132.1	403.8	166.1	85.8	29.4	44.1	78.5	92.0
1996	729.4	628.6	165.3	21.8	143.5	463.3	181.2	91.4	42.6	52.9	95.2	100.9
1997	800.8	690.2	185.7	23.4	162.3	504.5	195.2	85.0	49.2	63.9	111.2	110.7
1998	739.4	637.2	158.4	24.6	133.9	478.8	164.3	79.1	55.9	73.8	105.7	102.3
1999	757.9	637.6	181.7	25.8	155.9	455.9	157.5	57.2	54.4	75.6	111.2	120.2
2000	767.3	624.0	201.0	30.0	171.0	423.0	159.8	36.6	62.1	73.4	91.0	143.3
2001	675.1	524.4	190.6	27.9	162.8	333.7	83.4	27.7	44.8	79.1	98.8	150.8
1998:I	751.8	642.2	166.8	24.4	142.4	475.4	165.9	77.5	54.2	71.3	106.5	109.5
II	733.1	626.7	156.4	24.6	131.9	470.3	160.1	80.9	55.5	72.3	101.3	106.4
III	743.8	651.3	155.0	24.8	130.2	496.4	168.9	87.0	60.4	74.7	105.4	92.4
IV	729.2	628.5	155.5	24.6	130.9	473.0	162.2	71.1	53.3	76.7	109.6	100.7
1999:I	760.5	647.1	175.1	24.4	150.8	471.9	159.1	63.9	57.4	79.4	112.2	113.4
II	750.5	635.0	170.2	25.0	145.2	464.8	161.0	53.3	53.7	79.8	116.9	115.5
III	739.6	624.0	183.2	25.7	157.5	440.9	155.8	53.1	50.0	71.0	111.0	115.5
IV	781.0	644.5	198.4	28.1	170.3	446.1	154.0	58.6	56.4	72.3	104.7	136.5
2000:I	774.3	642.7	201.7	29.3	172.4	441.0	167.6	43.6	57.3	77.7	94.7	131.6
II	784.2	642.7	193.1	29.7	163.4	449.7	176.1	35.7	66.7	74.1	97.1	141.4
III	772.3	626.9	204.5	30.3	174.2	422.4	160.7	34.4	67.1	74.0	86.1	145.4
IV	738.6	583.6	204.9	30.9	174.0	378.8	134.6	32.8	57.4	67.9	86.1	154.9
2001:I	696.9	560.8	208.2	30.4	177.7	352.6	92.3	36.6	45.2	75.7	102.8	136.1
II	714.0	553.6	191.6	28.8	162.8	362.0	99.2	34.3	41.0	77.8	109.8	160.4
III	663.2	521.4	162.7	27.3	135.4	358.7	91.1	33.3	45.9	82.6	105.7	141.8
IV	626.3	461.6	200.1	25.0	175.2	261.5	50.9	6.5	46.9	80.5	76.7	164.7
2002:I	641.3	509.3	218.2	23.4	194.8	291.1	68.9	15.0	41.2	81.4	84.6	132.0
II	652.2	537.1	218.5	23.9	194.6	318.6	91.9	17.1	44.8	86.0	78.9	115.1
III	653.4	537.3	216.1	22.9	193.2	321.2	100.5	13.2	44.5	82.5	80.6	116.1

[1] Consists of the following industries: Depository institutions; nondepository credit institutions; security and commodity brokers; insurance carriers; regulated investment companies; small business investment companies; and real estate investment trusts.

[2] See Table B-92 for industry detail.

Note.—The industry classification is on a company basis and is based on the 1987 Standard Industrial Classification (SIC) beginning 1987, and on the 1972 SIC for earlier years shown.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–92.—*Corporate profits of manufacturing industries, 1959–2002*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation adjustment and without capital consumption adjustment												
		Durable goods							Nondurable goods				
	Total manufacturing	Total	Primary metal industries	Fabricated metal products	Industrial machinery and equipment	Electronic and other electric equipment	Motor vehicles and equipment	Other	Total	Food and kindred products	Chemicals and allied products	Petroleum and coal products	Other
1959	26.5	13.7	2.3	1.1	2.2	1.7	3.0	3.5	12.8	2.5	3.5	2.6	4.3
1960	23.8	11.6	2.0	.8	1.8	1.3	3.0	2.7	12.1	2.2	3.1	2.6	4.2
1961	23.3	11.3	1.6	1.0	1.9	1.3	2.5	2.9	12.0	2.4	3.3	2.2	4.2
1962	26.2	14.0	1.6	1.2	2.4	1.5	4.0	3.4	12.2	2.4	3.2	2.2	4.4
1963	29.6	16.4	2.0	1.3	2.6	1.6	4.9	3.9	13.2	2.7	3.7	2.2	4.7
1964	32.4	18.0	2.5	1.5	3.3	1.7	4.6	4.4	14.4	2.7	4.1	2.4	5.3
1965	39.7	23.2	3.1	2.1	4.0	2.7	6.2	5.2	16.5	2.9	4.6	2.9	6.1
1966	42.5	24.0	3.6	2.4	4.6	3.0	5.2	5.2	18.5	3.3	4.9	3.4	6.9
1967	39.1	21.2	2.7	2.5	4.2	3.0	4.0	4.9	17.9	3.3	4.3	3.9	6.4
1968	41.7	22.4	1.9	2.3	4.2	2.9	5.5	5.6	19.3	3.2	5.3	3.7	7.1
1969	37.1	19.1	1.4	2.0	3.7	2.3	4.8	4.9	18.0	3.1	4.6	3.3	7.0
1970	27.2	10.4	.8	1.1	3.0	1.3	1.3	2.9	16.8	3.2	3.9	3.6	6.1
1971	34.8	16.5	.8	1.5	3.0	2.0	5.1	4.1	18.3	3.5	4.5	3.7	6.6
1972	41.5	22.6	1.7	2.2	4.4	2.8	5.9	5.5	19.0	3.0	5.2	3.2	7.6
1973	46.8	25.0	2.3	2.6	4.8	3.2	5.9	6.2	21.8	2.5	6.1	5.2	7.9
1974	41.0	15.2	5.0	1.8	3.3	.5	.7	3.9	25.8	2.6	5.2	10.7	7.2
1975	54.9	20.6	2.8	3.3	5.0	2.6	2.2	4.6	34.3	8.6	6.4	9.9	9.4
1976	71.0	31.3	2.1	3.9	6.9	3.8	7.4	7.3	39.6	7.1	8.2	13.3	11.1
1977	78.8	37.7	1.0	4.5	8.5	5.9	9.3	8.5	41.1	6.8	7.8	12.9	13.6
1978	89.7	45.1	3.6	5.0	10.5	6.7	9.0	10.4	44.6	6.1	8.2	15.5	14.7
1979	88.4	36.6	3.5	5.2	9.2	5.5	4.6	8.5	51.8	5.8	7.1	24.5	14.5
1980	76.3	18.3	2.6	4.4	7.7	5.2	–4.3	2.7	57.9	6.0	5.5	33.6	12.9
1981	88.5	18.9	3.1	4.5	8.6	5.1	.4	–2.7	69.6	9.0	7.7	38.6	14.3
1982	63.8	3.8	–4.8	2.7	2.6	1.6	–.2	1.9	60.0	7.2	4.7	33.4	14.7
1983	72.2	17.8	–5.0	3.1	3.1	3.4	5.1	8.1	54.3	6.1	7.0	22.4	18.9
1984	87.9	37.7	–.5	4.6	5.1	5.1	8.9	14.4	50.2	6.6	7.7	16.1	19.8
1985	81.5	28.8	–1.0	4.8	4.9	2.6	7.3	10.1	52.7	8.6	6.2	17.4	20.5
1986	54.1	24.5	.7	5.1	–.3	2.5	4.4	12.0	29.6	7.3	7.1	–5.8	21.1
1987	83.1	39.3	2.5	5.4	4.5	5.6	3.7	17.6	43.8	11.2	13.9	–2.6	21.3
1988	116.1	51.0	6.0	6.4	9.6	7.3	5.7	16.1	65.1	11.8	18.2	11.9	23.2
1989	105.7	48.3	6.2	6.3	10.7	9.0	2.2	13.8	57.4	10.8	17.6	5.4	23.6
1990	109.2	41.6	3.4	6.0	10.5	8.4	–2.2	15.6	67.6	14.2	16.3	15.4	21.8
1991	93.5	32.1	1.4	5.2	4.2	9.7	–5.4	16.9	61.5	18.0	15.6	6.3	21.6
1992	93.9	37.6	–.2	6.1	5.9	10.1	–1.2	17.0	56.3	17.9	15.4	–2.0	24.9
1993	108.4	51.8	.2	7.3	5.6	14.9	5.2	18.7	56.6	16.0	15.3	1.6	23.8
1994	139.6	70.6	2.1	10.9	7.6	22.5	7.3	20.2	69.0	19.5	22.2	–.1	27.5
1995	166.1	77.6	6.9	11.8	12.9	21.4	–.3	24.9	88.5	26.7	26.7	5.5	29.5
1996	181.2	87.0	5.4	14.4	15.0	20.2	3.7	28.4	94.2	21.6	25.5	13.3	33.7
1997	195.2	94.0	5.8	16.3	13.8	22.8	4.0	31.2	101.2	24.1	31.3	15.9	29.9
1998	164.3	80.7	6.2	16.6	16.1	7.6	5.2	29.1	83.6	22.0	25.4	5.0	31.2
1999	157.5	68.2	2.1	15.9	7.2	3.4	6.3	33.3	89.3	27.9	23.9	1.7	35.8
2000	159.8	61.5	1.0	15.4	14.2	5.5	–2.2	27.6	98.3	25.8	17.2	26.1	29.1
2001	83.4	9.9	–1.6	9.0	–.6	–3.2	–9.4	15.7	73.5	16.6	15.2	25.7	16.0
1998: I	165.9	73.9	6.1	14.3	10.7	10.8	5.2	26.8	92.0	23.3	29.0	9.3	30.5
II	160.1	74.2	5.9	16.4	16.1	6.9	2.9	26.2	85.9	24.6	22.0	7.5	31.8
III	168.9	81.7	5.9	18.9	16.9	5.3	3.6	31.0	87.2	26.2	24.2	4.9	32.0
IV	162.2	93.0	7.0	16.7	20.7	7.2	9.1	32.4	69.2	13.7	26.5	–1.7	30.6
1999: I	159.1	67.0	3.4	16.0	5.1	2.1	8.0	32.3	92.1	27.4	30.7	–1.7	35.7
II	161.0	67.7	2.7	15.3	6.8	2.3	5.1	35.6	93.4	28.2	30.2	.9	34.1
III	155.8	67.3	1.2	15.5	6.8	5.2	6.4	32.3	88.5	27.6	20.8	5.2	34.9
IV	154.0	70.7	1.2	16.7	9.9	4.0	5.7	33.2	83.3	28.4	14.0	2.6	38.4
2000: I	167.6	69.3	2.0	18.9	11.1	3.8	.9	32.5	98.3	28.6	20.5	12.9	36.3
II	176.1	71.0	1.7	16.0	13.2	8.7	–.5	31.8	105.1	25.8	18.1	30.3	30.9
III	160.7	60.9	.2	15.3	16.6	5.0	–2.9	26.6	99.8	28.5	14.8	30.4	26.2
IV	134.6	44.8	.0	11.2	15.7	4.6	–6.1	19.3	89.8	20.3	15.3	31.0	23.2
2001: I	92.3	25.9	–3.5	10.3	9.4	1.4	–8.0	16.3	66.4	12.3	8.0	29.6	16.6
II	99.2	17.0	–.6	10.5	.9	–1.3	–10.1	17.6	82.2	18.0	16.1	28.9	19.3
III	91.1	11.6	–.1	8.5	–5.2	–4.6	–6.4	19.4	79.5	17.8	18.0	25.0	18.8
IV	50.9	–14.9	–2.2	6.8	–7.5	–8.4	–13.3	9.7	65.8	18.3	18.5	19.4	9.5
2002: I	68.9	2.5	.5	5.2	–4.9	–6.2	–11.8	19.7	66.4	18.9	15.1	14.1	18.3
II	91.9	17.8	.3	5.8	–2.9	–.9	–4.4	20.0	74.1	19.2	16.7	15.4	22.8
III	100.5	22.8	1.3	4.7	–.1	4.0	–6.6	19.5	77.6	21.0	17.0	17.4	22.3

Note.—The industry classification is on a company basis and is based on the 1987 Standard Industrial Classification (SIC) beginning 1987 and on the 1972 SIC for earlier years shown. In the 1972 SIC, the categories shown here as "industrial machinery and equipment" and "electronic and other electric equipment" were identified as "machinery, except electrical" and "electric and electronic equipment," respectively.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–93.—*Sales, profits, and stockholders' equity, all manufacturing corporations, 1959–2002*

[Billions of dollars]

Year or quarter	All manufacturing corporations				Durable goods industries				Nondurable goods industries			
	Sales (net)	Profits		Stockholders' equity[2]	Sales (net)	Profits		Stockholders' equity[2]	Sales (net)	Profits		Stockholders' equity[2]
		Before income taxes[1]	After income taxes			Before income taxes[1]	After income taxes			Before income taxes[1]	After income taxes	
1959	338.0	29.7	16.3	157.1	169.4	15.8	8.1	77.9	168.5	13.9	8.3	79.2
1960	345.7	27.5	15.2	165.4	173.9	14.0	7.0	82.3	171.8	13.5	8.2	83.1
1961	356.4	27.5	15.3	172.6	175.2	13.6	6.9	84.9	181.2	13.9	8.5	87.7
1962	389.4	31.9	17.7	181.4	195.3	16.8	8.6	89.1	194.1	15.1	9.2	92.3
1963	412.7	34.9	19.5	189.7	209.0	18.5	9.5	93.3	203.6	16.4	10.0	96.3
1964	443.1	39.6	23.2	199.8	226.3	21.2	11.6	98.5	216.8	18.3	11.6	101.3
1965	492.2	46.5	27.5	211.7	257.0	26.2	14.5	105.4	235.2	20.3	13.0	106.3
1966	554.2	51.8	30.9	230.3	291.7	29.2	16.4	115.2	262.4	22.6	14.6	115.1
1967	575.4	47.8	29.0	247.6	300.6	25.7	14.6	125.0	274.8	22.0	14.4	122.6
1968	631.9	55.4	32.1	265.9	335.5	30.6	16.5	135.6	296.4	24.8	15.5	130.3
1969	694.6	58.1	33.2	289.9	366.5	31.5	16.9	147.6	328.1	26.6	16.4	142.3
1970	708.8	48.1	28.6	306.8	363.1	23.0	12.9	155.1	345.7	25.2	15.7	151.7
1971	751.1	52.9	31.0	320.8	381.8	26.5	14.5	160.4	369.3	26.5	16.5	160.5
1972	849.5	63.2	36.5	343.4	435.8	33.6	18.4	171.4	413.7	29.6	18.0	172.0
1973	1,017.2	81.4	48.1	374.1	527.3	43.6	24.8	188.7	489.9	37.8	23.3	185.4
1973: IV	275.1	21.4	13.0	386.4	140.1	10.8	6.3	194.7	135.0	10.6	6.7	191.7
New series:												
1973: IV	236.6	20.6	13.2	368.0	122.7	10.1	6.2	185.8	113.9	10.5	7.0	182.1
1974	1,060.6	92.1	58.7	395.0	529.0	41.1	24.7	196.0	531.6	51.0	34.1	199.0
1975	1,065.2	79.9	49.1	423.4	521.1	35.3	21.4	208.1	544.1	44.6	27.7	215.3
1976	1,203.2	104.9	64.5	462.7	589.6	50.7	30.8	224.3	613.7	54.3	33.7	238.4
1977	1,328.1	115.1	70.4	496.7	657.3	57.9	34.8	239.9	670.8	57.2	35.5	256.8
1978	1,496.4	132.5	81.1	540.5	760.7	69.6	41.8	262.6	735.7	62.9	39.3	277.9
1979	1,741.8	154.2	98.7	600.5	865.7	72.4	45.2	292.5	876.1	81.8	53.5	308.0
1980	1,912.8	145.8	92.6	668.1	889.1	57.4	35.6	317.7	1,023.7	88.4	56.9	350.4
1981	2,144.7	158.6	101.3	743.4	979.5	67.2	41.6	350.4	1,165.2	91.3	59.6	393.0
1982	2,039.4	108.2	70.9	770.2	913.1	34.7	21.7	355.5	1,126.4	73.6	49.3	414.7
1983	2,114.3	133.1	85.8	812.8	973.5	48.7	30.0	372.4	1,140.8	84.4	55.8	440.4
1984	2,335.0	165.6	107.6	864.2	1,107.6	75.5	48.9	395.6	1,227.5	90.0	58.8	468.5
1985	2,331.4	137.0	87.6	866.2	1,142.6	61.5	38.6	420.9	1,188.8	75.6	49.1	445.3
1986	2,220.9	129.3	83.1	874.7	1,125.5	52.1	32.6	436.3	1,095.4	77.2	50.5	438.4
1987	2,378.2	173.0	115.6	900.9	1,178.0	78.0	53.0	444.3	1,200.3	95.1	62.6	456.6
1988[3]	2,596.2	215.3	153.8	957.6	1,284.7	91.6	66.9	468.7	1,311.5	123.7	86.8	488.9
1989	2,745.1	187.6	135.1	999.0	1,356.6	75.1	55.5	501.3	1,388.5	112.6	79.6	497.7
1990	2,810.7	158.1	110.1	1,043.8	1,357.2	57.3	40.7	515.0	1,453.5	100.8	69.4	528.9
1991	2,761.1	98.7	66.4	1,064.1	1,304.0	13.9	7.2	506.8	1,457.1	84.8	59.3	557.4
1992[4]	2,890.2	31.4	22.1	1,034.7	1,389.8	–33.7	–24.0	473.9	1,500.4	65.1	46.0	560.8
1993	3,015.1	117.9	83.2	1,039.7	1,490.2	38.9	27.4	482.7	1,524.9	79.0	55.7	557.1
1994	3,255.8	243.5	174.9	1,110.1	1,657.6	121.0	87.1	533.3	1,598.2	122.5	87.8	576.8
1995	3,528.3	274.5	198.2	1,240.6	1,807.7	130.6	94.3	613.7	1,720.6	143.9	103.9	627.0
1996	3,757.6	306.6	224.9	1,348.0	1,941.6	146.6	106.1	673.9	1,816.0	160.0	118.8	674.2
1997	3,920.0	331.4	244.5	1,462.7	2,075.8	167.0	121.4	743.4	1,844.2	164.4	123.1	719.3
1998	3,949.4	314.7	234.4	1,482.9	2,168.8	175.1	127.8	779.9	1,780.7	139.6	106.5	703.0
1999	4,148.9	355.3	257.8	1,569.3	2,314.2	198.8	140.3	869.6	1,834.6	156.5	117.5	699.7
2000	4,548.2	381.1	275.3	1,823.1	2,457.4	190.7	131.8	1,054.3	2,090.8	190.5	143.5	768.7
2000: IV	1,163.6	69.2	46.8	1,892.4	620.4	31.2	19.3	1,101.5	543.2	38.0	27.4	790.9
NAICS:[5]												
2000: IV	1,128.8	62.1	41.7	1,833.8	623.0	26.9	15.4	1,100.0	505.8	35.2	26.3	733.8
2001	4,293.4	82.8	35.6	1,841.8	2,320.4	–69.2	–76.4	1,078.3	1,973.0	152.0	112.0	763.5
2001:I	1,082.2	12.0	–.2	1,846.3	591.6	–28.0	–31.6	1,101.7	490.6	40.0	31.4	744.6
II	1,116.6	39.6	24.0	1,858.2	600.6	–8.3	–12.2	1,100.5	516.0	47.9	36.3	757.7
III	1,062.4	20.1	9.8	1,840.8	567.4	–18.9	–18.1	1,068.6	495.0	39.0	27.9	772.2
IV	1,032.2	11.0	1.9	1,821.9	560.7	–14.0	–14.5	1,042.3	471.5	25.0	16.4	779.6
2002:I	997.2	37.7	24.3	1,791.6	549.5	2.3	–2.4	1,027.0	447.7	35.4	26.7	764.6
II	1,070.9	65.5	47.7	1,816.1	584.0	22.3	15.5	1,036.1	486.9	43.2	32.2	780.0
III	1,069.2	61.8	43.1	1,827.0	567.4	18.2	11.6	1,036.0	501.8	43.6	31.5	791.0

[1] In the old series, "income taxes" refers to Federal income taxes only, as State and local income taxes had already been deducted. In the new series, no income taxes have been deducted.

[2] Annual data are average equity for the year (using four end-of-quarter figures).

[3] Beginning 1988, profits before and after income taxes reflect inclusion of minority stockholders' interest in net income before and after income taxes.

[4] Data for 1992 (most significantly 1992:I) reflect the early adoption of Financial Accounting Standards Board Statement 106 (Employer's Accounting for Post-Retirement Benefits Other Than Pensions) by a large number of companies during the fourth quarter of 1992. Data for 1993 (1993:I) also reflect adoption of Statement 106. Corporations must show the cumulative effect of a change in accounting principle in the first quarter of the year in which the change is adopted.

[5] Data based on the North American Industry Classification System (NAICS). Other data shown are based on the Standard Industrial Classification (SIC).

Note.—Data are not necessarily comparable from one period to another due to changes in accounting principles, industry classifications, sampling procedures, etc. For explanatory notes concerning compilation of the series, see "Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations," Department of Commerce, Bureau of the Census.

Source: Department of Commerce, Bureau of the Census.

TABLE B–94.—*Relation of profits after taxes to stockholders' equity and to sales, all manufacturing corporations, 1950–2002*

Year or quarter	Ratio of profits after income taxes (annual rate) to stockholders' equity—percent[1]			Profits after income taxes per dollar of sales—cents		
	All manufacturing corporations	Durable goods industries	Nondurable goods industries	All manufacturing corporations	Durable goods industries	Nondurable goods industries
1950	15.4	16.9	14.1	7.1	7.7	6.5
1951	12.1	13.0	11.2	4.9	5.3	4.5
1952	10.3	11.1	9.7	4.3	4.5	4.1
1953	10.5	11.1	9.9	4.3	4.2	4.3
1954	9.9	10.3	9.6	4.5	4.6	4.4
1955	12.6	13.8	11.4	5.4	5.7	5.1
1956	12.3	12.8	11.8	5.3	5.2	5.3
1957	10.9	11.3	10.6	4.8	4.8	4.9
1958	8.6	8.0	9.2	4.2	3.9	4.4
1959	10.4	10.4	10.4	4.8	4.8	4.9
1960	9.2	8.5	9.8	4.4	4.0	4.8
1961	8.9	8.1	9.6	4.3	3.9	4.7
1962	9.8	9.6	9.9	4.5	4.4	4.7
1963	10.3	10.1	10.4	4.7	4.5	4.9
1964	11.6	11.7	11.5	5.2	5.1	5.4
1965	13.0	13.8	12.2	5.6	5.7	5.5
1966	13.4	14.2	12.7	5.6	5.6	5.6
1967	11.7	11.7	11.8	5.0	4.8	5.3
1968	12.1	12.2	11.9	5.1	4.9	5.2
1969	11.5	11.4	11.5	4.8	4.6	5.0
1970	9.3	8.3	10.3	4.0	3.5	4.5
1971	9.7	9.0	10.3	4.1	3.8	4.5
1972	10.6	10.8	10.5	4.3	4.2	4.4
1973	12.8	13.1	12.6	4.7	4.7	4.8
1973: IV	13.4	12.9	14.0	4.7	4.5	5.0
New series:						
1973: IV	14.3	13.3	15.3	5.6	5.0	6.1
1974	14.9	12.6	17.1	5.5	4.7	6.4
1975	11.6	10.3	12.9	4.6	4.1	5.1
1976	13.9	13.7	14.2	5.4	5.2	5.5
1977	14.2	14.5	13.8	5.3	5.3	5.3
1978	15.0	16.0	14.2	5.4	5.5	5.3
1979	16.4	15.4	17.4	5.7	5.2	6.1
1980	13.9	11.2	16.3	4.8	4.0	5.6
1981	13.6	11.9	15.2	4.7	4.2	5.1
1982	9.2	6.1	11.9	3.5	2.4	4.4
1983	10.6	8.1	12.7	4.1	3.1	4.9
1984	12.5	12.4	12.5	4.6	4.4	4.8
1985	10.1	9.2	11.0	3.8	3.4	4.1
1986	9.5	7.5	11.5	3.7	2.9	4.6
1987	12.8	11.9	13.7	4.9	4.5	5.2
1988[2]	16.1	14.3	17.8	5.9	5.2	6.6
1989	13.5	11.1	16.0	4.9	4.1	5.7
1990	10.6	7.9	13.1	3.9	3.0	4.8
1991	6.2	1.4	10.6	2.4	.5	4.1
1992[3]	2.1	–5.1	8.2	.8	–1.7	3.1
1993	8.0	5.7	10.0	2.8	1.8	3.7
1994	15.8	16.3	15.2	5.4	5.3	5.5
1995	16.0	15.4	16.6	5.6	5.2	6.0
1996	16.7	15.7	17.6	6.0	5.5	6.5
1997	16.7	16.3	17.1	6.2	5.8	6.7
1998	15.8	16.4	15.2	5.9	5.9	6.0
1999	16.4	16.1	16.8	6.2	6.1	6.4
2000	15.1	12.5	18.7	6.1	5.4	6.9
2000: IV	9.9	7.0	13.9	4.0	3.1	5.1
NAICS:[4]						
2000: IV	9.1	5.6	14.3	3.7	2.5	5.2
2001	1.9	–7.1	14.7	.8	–3.3	5.7
2001: I	.0	–11.5	16.9	.0	–5.3	6.4
II	5.2	–4.5	19.2	2.2	–2.0	7.0
III	2.1	–6.8	14.5	.9	–3.2	5.6
IV	.4	–5.6	8.4	.2	–2.6	3.5
2002: I	5.4	–.9	14.0	2.4	–.4	6.0
II	10.5	6.0	16.5	4.5	2.6	6.6
III	9.4	4.5	15.9	4.0	2.0	6.3

[1] Annual ratios based on average equity for the year (using four end-of-quarter figures). Quarterly ratios based on equity at end of quarter.
[2] See footnote 3, Table B-93.
[3] See footnote 4, Table B-93.
[4] See footnote 5, Table B-93.

Note.—Based on data in millions of dollars.
See Note, Table B-93.

Source: Department of Commerce, Bureau of the Census.

TABLE B–95.—*Common stock prices and yields, 1965–2002*

Year or month	Common stock prices[1]								Common stock yields (S&P) (percent)[4]	
	New York Stock Exchange indexes (Dec. 31, 1965=50)[2]					Dow Jones industrial average[2]	Standard & Poor's composite index (1941-43=10)[2]	Nasdaq composite index (Feb. 5, 1971=100)[2]	Dividend-price ratio[5]	Earnings-price ratio[6]
	Composite	Industrial	Transportation	Utility[3]	Finance					
1965	47.39	.....	.....	.....	.....	910.88	88.17	.....	3.00	5.59
1966	46.15	46.18	50.26	90.81	44.45	873.60	85.26	.....	3.40	6.63
1967	50.77	51.97	53.51	90.86	49.82	879.12	91.93	.....	3.20	5.73
1968	55.37	58.00	50.58	88.38	65.85	906.00	98.70	.....	3.07	5.67
1969	54.67	57.44	46.96	85.60	70.49	876.72	97.84	.....	3.24	6.08
1970	45.72	48.03	32.14	74.47	60.00	753.19	83.22	.....	3.83	6.45
1971	54.22	57.92	44.35	79.05	70.38	884.76	98.29	107.44	3.14	5.41
1972	60.29	65.73	50.17	76.95	78.35	950.71	109.20	128.52	2.84	5.50
1973	57.42	63.08	37.74	75.38	70.12	923.88	107.43	109.90	3.06	7.12
1974	43.84	48.08	31.89	59.58	49.67	759.37	82.85	76.29	4.47	11.59
1975	45.73	50.52	31.10	63.00	47.14	802.49	86.16	77.20	4.31	9.15
1976	54.46	60.44	39.57	73.94	52.94	974.92	102.01	89.90	3.77	8.90
1977	53.69	57.86	41.09	81.84	55.25	894.63	98.20	98.71	4.62	10.79
1978	53.70	58.23	43.50	78.44	56.65	820.23	96.02	117.53	5.28	12.03
1979	58.32	64.76	47.34	76.41	61.42	844.40	103.01	136.57	5.47	13.46
1980	68.10	78.70	60.61	74.69	64.25	891.41	118.78	168.61	5.26	12.66
1981	74.02	85.44	72.61	77.81	73.52	932.92	128.05	203.18	5.20	11.96
1982	68.93	78.18	60.41	79.49	71.99	884.36	119.71	188.97	5.81	11.60
1983	92.63	107.45	89.36	93.99	95.34	1,190.34	160.41	285.43	4.40	8.03
1984	92.46	108.01	85.63	92.89	89.28	1,178.48	160.46	248.88	4.64	10.02
1985	108.09	123.79	104.11	113.49	114.21	1,328.23	186.84	290.19	4.25	8.12
1986	136.00	155.85	119.87	142.72	147.20	1,792.76	236.34	366.96	3.49	6.09
1987	161.70	195.31	140.39	148.59	146.48	2,275.99	286.83	402.57	3.08	5.48
1988	149.91	180.95	134.12	143.53	127.26	2,060.82	265.79	374.43	3.64	8.01
1989	180.02	216.23	175.28	174.87	151.88	2,508.91	322.84	437.81	3.45	7.42
1990	183.46	225.78	158.62	181.20	133.26	2,678.94	334.59	409.17	3.61	6.47
1991	206.33	258.14	173.99	185.32	150.82	2,929.33	376.18	491.69	3.24	4.79
1992	229.01	284.62	201.09	198.91	179.26	3,284.29	415.74	599.26	2.99	4.22
1993	249.58	299.99	242.49	228.90	216.42	3,522.06	451.41	715.16	2.78	4.46
1994	254.12	315.25	247.29	209.06	209.73	3,793.77	460.42	751.65	2.82	5.83
1995	291.15	367.34	269.41	220.30	238.45	4,493.76	541.72	925.19	2.56	6.09
1996	358.17	453.98	327.33	249.77	303.89	5,742.89	670.50	1,164.96	2.19	5.24
1997	456.54	574.52	414.60	283.82	424.48	7,441.15	873.43	1,469.49	1.77	4.57
1998	550.26	681.57	468.69	378.12	516.35	8,625.52	1,085.50	1,794.91	1.49	3.46
1999	619.16	774.78	491.60	473.73	530.86	10,464.88	1,327.33	2,728.15	1.25	3.17
2000	643.66	810.63	413.60	477.65	553.13	10,734.90	1,427.22	3,783.67	1.15	3.63
2001	605.07	748.26	443.59	377.30	595.61	10,189.13	1,194.18	2,035.00	1.32	2.95
2002	527.62	657.37	431.10	260.85	555.27	9,226.43	993.94	1,539.73	1.61	.....
2001: Jan	650.55	796.74	471.21	440.36	634.17	10,682.74	1,335.63	2,656.86	1.16	.....
Feb	648.05	799.38	482.26	424.53	626.41	10,774.57	1,305.75	2,449.57	1.22	.....
Mar	603.44	744.21	452.36	395.34	583.38	10,081.32	1,185.85	1,986.66	1.33	3.92
Apr	607.06	747.48	455.22	400.49	587.88	10,234.52	1,189.84	1,933.93	1.32	.....
May	644.44	798.94	477.21	414.69	618.74	11,004.96	1,270.37	2,181.13	1.23	.....
June	630.86	782.73	458.60	382.98	622.17	10,767.20	1,238.71	2,112.05	1.27	3.00
July	613.36	756.04	469.80	374.11	614.54	10,444.50	1,204.45	2,033.98	1.30	.....
Aug	604.52	748.65	458.39	357.76	605.59	10,314.68	1,178.51	1,929.71	1.34	.....
Sept	544.39	672.89	382.68	339.72	538.01	9,042.56	1,044.64	1,573.31	1.48	2.72
Oct	556.04	688.35	371.56	341.51	553.16	9,220.75	1,076.59	1,656.43	1.45	.....
Nov	575.30	715.98	410.05	330.78	577.85	9,721.82	1,129.68	1,870.06	1.38	.....
Dec	582.82	727.67	433.70	325.33	585.47	9,979.88	1,144.93	1,977.71	1.36	2.15
2002: Jan	581.74	723.56	446.13	322.49	591.94	9,923.80	1,140.21	1,976.77	1.38	.....
Feb	569.55	715.80	453.51	301.32	570.18	9,891.05	1,100.67	1,799.72	1.43	.....
Mar	600.74	751.79	490.51	316.27	609.72	10,500.95	1,153.79	1,863.05	1.37	2.15
Apr	587.58	732.71	470.00	300.66	610.24	10,165.18	1,112.03	1,758.80	1.42	.....
May	575.75	718.12	459.55	287.10	603.15	10,080.48	1,079.27	1,660.31	1.47	.....
June	544.36	677.58	449.42	265.21	577.05	9,492.44	1,014.05	1,505.49	1.58	2.70
July	486.11	603.04	416.10	230.19	524.01	8,616.52	903.59	1,346.09	1.76	.....
Aug	491.84	611.34	409.96	225.52	533.60	8,685.48	912.55	1,327.36	1.72	.....
Sept	471.04	589.14	388.19	210.76	506.05	8,160.78	867.81	1,251.07	1.80	3.68
Oct	459.88	574.45	383.41	207.83	494.06	8,048.12	854.63	1,241.91	1.86	.....
Nov	482.79	597.75	405.03	229.41	523.50	8,625.72	909.93	1,409.15	1.73	.....
Dec	480.04	593.15	401.39	233.38	519.72	8,526.66	899.18	1,387.15	1.77	.....

[1] Averages of daily closing prices.

[2] Includes stocks as follows: for NYSE, all stocks listed (nearly 3,000); for Dow Jones industrial average, 30 stocks; for S&P composite index, 500 stocks; and for Nasdaq composite index, over 4,000.

[3] Effective April 1993, the NYSE doubled the value of the utility index to facilitate trading of options and futures on the index. Annual indexes prior to 1993 reflect the doubling.

[4] Based on 500 stocks in the S&P composite index.

[5] Aggregate cash dividends (based on latest known annual rate) divided by aggregate market value based on Wednesday closing prices. Monthly data are averages of weekly figures; annual data are averages of monthly figures.

[6] Quarterly data are ratio of earnings (after taxes) for 4 quarters ending with particular quarter to price index for last day of that quarter. Annual data are averages of quarterly ratios.

Note.—Data shown are as of December 31, 2002. On January 9, 2003, the New York Stock Exchange issued a revised composite index using new methodology, definitions, and base value.

Sources: New York Stock Exchange (NYSE), Dow Jones & Co., Inc., Standard & Poor's (S&P), and Nasdaq Stock Market.

TABLE B–96.—*Business formation and business failures, 1955–97*

Year or month	Index of net business formation (1967=100)	New business incorporations (number)	Business failures[1]						
			Business failure rate[2]	Number of failures			Amount of current liabilities (millions of dollars)		
				Total	Liability size class		Total	Liability size class	
					Under $100,000	$100,000 and over		Under $100,000	$100,000 and over
1955	96.6	139,915	42	10,969	10,113	856	449.4	206.4	243.0
1956	94.6	141,163	48	12,686	11,615	1,071	562.7	239.8	322.9
1957	90.3	137,112	52	13,739	12,547	1,192	615.3	267.1	348.2
1958	90.2	150,781	56	14,964	13,499	1,465	728.3	297.6	430.7
1959	97.9	193,067	52	14,053	12,707	1,346	692.8	278.9	413.9
1960	94.5	182,713	57	15,445	13,650	1,795	938.6	327.2	611.4
1961	90.8	181,535	64	17,075	15,006	2,069	1,090.1	370.1	720.0
1962	92.6	182,057	61	15,782	13,772	2,010	1,213.6	346.5	867.1
1963	94.4	186,404	56	14,374	12,192	2,182	1,352.6	321.0	1,031.6
1964	98.2	197,724	53	13,501	11,346	2,155	1,329.2	313.6	1,015.6
1965	99.8	203,897	53	13,514	11,340	2,174	1,321.7	321.7	1,000.0
1966	99.3	200,010	52	13,061	10,833	2,228	1,385.7	321.5	1,064.1
1967	100.0	206,569	49	12,364	10,144	2,220	1,265.2	297.9	967.3
1968	108.3	233,635	39	9,636	7,829	1,807	941.0	241.1	699.9
1969	115.8	274,267	37	9,154	7,192	1,962	1,142.1	231.3	910.8
1970	108.8	264,209	44	10,748	8,019	2,729	1,887.8	269.3	1,618.4
1971	111.1	287,577	42	10,326	7,611	2,715	1,916.9	271.3	1,645.6
1972	119.3	316,601	38	9,566	7,040	2,526	2,000.2	258.8	1,741.5
1973	119.1	329,358	36	9,345	6,627	2,718	2,298.6	235.6	2,063.0
1974	113.2	319,149	38	9,915	6,733	3,182	3,053.1	256.9	2,796.3
1975	109.9	326,345	43	11,432	7,504	3,928	4,380.2	298.6	4,081.6
1976	120.4	375,766	35	9,628	6,176	3,452	3,011.3	257.8	2,753.4
1977	130.8	436,170	28	7,919	4,861	3,058	3,095.3	208.3	2,887.0
1978	138.1	478,019	24	6,619	3,712	2,907	2,656.0	164.7	2,491.3
1979	138.3	524,565	28	7,564	3,930	3,634	2,667.4	179.9	2,487.5
1980	129.9	533,520	42	11,742	5,682	6,060	4,635.1	272.5	4,362.6
1981	124.8	581,242	61	16,794	8,233	8,561	6,955.2	405.8	6,549.3
1982	116.4	566,942	88	24,908	11,509	13,399	15,610.8	541.7	15,069.1
1983	117.5	600,420	110	31,334	15,572	15,762	16,072.9	635.1	15,437.8
1984	121.3	634,991	107	52,078	33,527	18,551	29,268.6	409.8	28,858.8
1985	120.9	664,235	115	57,253	36,551	20,702	36,937.4	423.9	36,513.5
1986	120.4	702,738	120	61,616	38,908	22,708	44,724.0	838.3	43,885.7
1987	121.2	685,572	102	61,111	38,949	22,162	34,723.8	746.0	33,977.8
1988	124.1	685,095	98	57,097	38,300	18,797	39,573.0	686.9	38,886.1
1989	124.8	676,565	65	50,361	33,312	17,049	42,328.8	670.5	41,658.2
1990	120.7	647,366	74	60,747	40,833	19,914	56,130.1	735.6	55,394.5
1991	115.2	628,604	107	88,140	60,617	27,523	96,825.3	1,044.9	95,780.4
1992	116.3	666,800	110	97,069	68,264	28,805	94,317.5	1,096.7	93,220.8
1993	121.1	706,537	109	86,133	61,188	24,945	47,755.5	947.6	46,807.9
1994	125.5	741,778	86	71,558	50,814	20,744	28,977.9	845.0	28,132.9
1995	[3]	766,988	82	71,128	49,495	21,633	37,283.6	866.1	36,417.4
1996	[3]	786,482	80	71,931	49,667	22,264	29,568.7	914.9	28,653.8
1997	[3]	798,779	88	83,384	56,050	27,334	37,436.9	1,111.3	36,325.6

[1] Commercial and industrial failures only through 1983, excluding failures of banks, railroads, real estate, insurance, holding, and financial companies, steamship lines, travel agencies, etc.

Data beginning 1984 are based on expanded coverage and new methodology and are therefore not generally comparable with earlier data.

[2] Failure rate per 10,000 listed enterprises.

[3] Series discontinued in 1995.

Note.—Data are no longer published.

Sources: Department of Commerce (Bureau of Economic Analysis) and The Dun & Bradstreet Corporation.

TABLE B–97.—*Farm income, 1945–2002*

[Billions of dollars]

Year	Income of farm operators from farming							
	Gross farm income						Production expenses	Net farm income
	Total[1]	Cash marketing receipts			Value of inventory changes[3]	Direct Government payments[4]		
		Total	Livestock and products	Crops[2]				
1945	25.4	21.7	12.0	9.7	–0.4	0.7	13.1	12.3
1946	29.6	24.8	13.8	11.0	.0	.8	14.5	15.1
1947	32.4	29.6	16.5	13.1	–1.8	.3	17.0	15.4
1948	36.5	30.2	17.1	13.1	1.7	.3	18.8	17.7
1949	30.8	27.8	15.4	12.4	–.9	.2	18.0	12.8
1950	33.1	28.5	16.1	12.4	.8	.3	19.5	13.6
1951	38.3	32.9	19.6	13.2	1.2	.3	22.3	15.9
1952	37.8	32.5	18.2	14.3	.9	.3	22.8	15.0
1953	34.4	31.0	16.9	14.1	–.6	.2	21.5	13.0
1954	34.2	29.8	16.3	13.6	.5	.3	21.8	12.4
1955	33.5	29.5	16.0	13.5	.2	.2	22.2	11.3
1956	34.0	30.4	16.4	14.0	–.5	.6	22.7	11.3
1957	34.8	29.7	17.4	12.3	.6	1.0	23.7	11.1
1958	39.0	33.5	19.2	14.2	.8	1.1	25.8	13.2
1959	37.9	33.6	18.9	14.7	.0	.7	27.2	10.7
1960	38.6	34.0	19.0	15.0	.4	.7	27.4	11.2
1961	40.5	35.2	19.5	15.7	.3	1.5	28.6	12.0
1962	42.3	36.5	20.2	16.3	.6	1.7	30.3	12.1
1963	43.4	37.5	20.0	17.4	.6	1.7	31.6	11.8
1964	42.3	37.3	19.9	17.4	–.8	2.2	31.8	10.5
1965	46.5	39.4	21.9	17.5	1.0	2.5	33.6	12.9
1966	50.5	43.4	25.0	18.4	–.1	3.3	36.5	14.0
1967	50.5	42.8	24.4	18.4	.7	3.1	38.2	12.3
1968	51.8	44.2	25.5	18.7	.1	3.5	39.5	12.3
1969	56.4	48.2	28.6	19.6	.1	3.8	42.1	14.3
1970	58.8	50.5	29.5	21.0	.0	3.7	44.5	14.4
1971	62.1	52.7	30.5	22.3	1.4	3.1	47.1	15.0
1972	71.1	61.1	35.6	25.5	.9	4.0	51.7	19.5
1973	98.9	86.9	45.8	41.1	3.4	2.6	64.6	34.4
1974	98.2	92.4	41.3	51.1	–1.6	.5	71.0	27.3
1975	100.6	88.9	43.1	45.8	3.4	.8	75.0	25.5
1976	102.9	95.4	46.3	49.0	–1.5	.7	82.7	20.2
1977	108.8	96.2	47.6	48.6	1.1	1.8	88.9	19.9
1978	128.4	112.4	59.2	53.2	1.9	3.0	103.2	25.2
1979	150.7	131.5	69.2	62.3	5.0	1.4	123.3	27.4
1980	149.3	139.7	68.0	71.7	–6.3	1.3	133.1	16.1
1981	166.3	141.6	69.2	72.5	6.5	1.9	139.4	26.9
1982	164.1	142.6	70.3	72.3	–1.4	3.5	140.3	23.8
1983	153.9	136.8	69.6	67.2	–10.9	9.3	139.6	14.2
1984	168.0	142.8	72.9	69.9	6.0	8.4	142.0	26.0
1985	161.2	144.1	69.8	74.3	–2.3	7.7	132.6	28.6
1986	156.1	135.4	71.6	63.8	–2.2	11.8	125.2	30.9
1987	168.4	141.8	76.0	65.8	–2.3	16.7	131.0	37.4
1988	177.9	151.2	79.6	71.6	–4.1	14.5	139.9	38.0
1989	191.9	160.8	83.9	76.9	3.8	10.9	146.5	45.4
1990	198.1	169.5	89.2	80.3	3.3	9.3	153.4	44.6
1991	191.9	167.9	85.8	82.1	–.2	8.2	153.4	38.5
1992	200.6	171.4	85.8	85.7	4.2	9.2	152.8	47.8
1993	205.0	178.2	90.5	87.7	–4.2	13.4	160.4	44.7
1994	216.0	181.3	88.3	93.0	8.3	7.9	167.2	48.9
1995	210.8	188.0	87.2	100.8	–5.0	7.3	173.8	36.9
1996	235.8	199.3	92.9	106.3	7.9	7.3	181.0	54.8
1997	238.1	207.7	96.5	111.2	.6	7.5	187.6	50.5
1998	232.1	196.0	94.1	101.9	–.6	12.4	186.5	45.6
1999	234.5	187.5	95.6	91.9	–.3	21.5	188.3	46.2
2000	241.7	193.7	99.6	94.1	.1	22.9	193.7	48.0
2001	246.5	202.8	106.4	96.4	–3.2	20.7	200.8	45.7
2002 *p*	236.9	196.5	97.4	99.1	–3.6	17.0	200.7	36.2

[1] Cash marketing receipts, Government payments, value of changes in inventories, other farm related cash income, and nonmoney income produced by farms including imputed rent of operator residences.

[2] Crop receipts include proceeds received from commodities placed under Commodity Credit Corporation loans.

[3] Physical changes in beginning and ending year inventories of crop and livestock commodities valued at weighted average market prices during the year.

[4] Includes only Government payments made directly to farmers.

Note.—Data for 2002 are forecasts.

Source: Department of Agriculture, Economic Research Service.

TABLE B–98.—*Farm business balance sheet, 1950–2001*

[Billions of dollars]

End of year	Assets								Claims			
	Total assets	Physical assets					Financial assets		Total claims	Real estate debt [5]	Non-real estate debt [6]	Proprietors' equity
		Real estate	Nonreal estate				Investments in cooperatives	Other [4]				
			Livestock and poultry [1]	Machinery and motor vehicles	Crops [2]	Purchased inputs [3]						
1950	121.6	75.4	17.1	12.3	7.1	.....	2.7	7.0	121.6	5.2	5.7	110.7
1951	136.1	83.8	19.5	14.3	8.2	.....	2.9	7.3	136.1	5.7	6.9	123.5
1952	133.0	85.1	14.8	15.0	7.9	.....	3.2	7.1	133.0	6.2	7.1	119.7
1953	128.7	84.3	11.7	15.6	6.8	.....	3.3	7.0	128.7	6.6	6.3	115.8
1954	132.6	87.8	11.2	15.7	7.5	.....	3.5	6.9	132.6	7.1	6.7	118.8
1955	137.0	93.0	10.6	16.3	6.5	.....	3.7	6.9	137.0	7.8	7.3	121.9
1956	145.7	100.3	11.0	16.9	6.8	.....	4.0	6.7	145.7	8.5	7.4	129.8
1957	154.5	106.4	13.9	17.0	6.4	.....	4.2	6.6	154.5	9.0	8.2	137.3
1958	168.7	114.6	17.7	18.1	6.9	.....	4.5	6.9	168.7	9.7	9.4	149.6
1959	173.0	121.2	15.2	19.3	6.2	.....	4.8	6.2	173.0	10.6	10.7	151.7
1960	174.4	123.3	15.6	19.1	6.4	.....	4.2	5.8	174.4	11.3	11.1	152.0
1961	181.6	129.1	16.4	19.3	6.5	.....	4.5	5.9	181.6	12.3	11.8	157.5
1962	188.9	134.6	17.3	19.9	6.5	.....	4.6	5.9	188.9	13.5	13.2	162.3
1963	196.7	142.4	15.9	20.4	7.4	.....	5.0	5.7	196.7	15.0	14.6	167.2
1964	204.2	150.5	14.5	21.2	7.0	.....	5.2	5.8	204.2	16.9	15.3	172.1
1965	220.8	161.5	17.6	22.4	7.9	.....	5.4	6.0	220.8	18.9	16.9	185.0
1966	234.0	171.2	19.0	24.1	8.1	.....	5.7	6.0	234.0	20.7	18.5	194.8
1967	246.1	180.9	18.8	26.3	8.0	.....	5.8	6.1	246.1	22.6	19.6	203.9
1968	257.2	189.4	20.2	27.7	7.4	.....	6.1	6.3	257.2	24.7	19.2	213.3
1969	267.8	195.3	22.8	28.6	8.3	.....	6.4	6.4	267.8	26.4	20.0	221.4
1970	278.9	202.4	23.7	30.4	8.7	.....	7.2	6.5	278.9	27.5	21.2	230.2
1971	301.7	217.6	27.3	32.4	10.0	.....	7.9	6.7	301.7	29.3	24.0	248.5
1972	339.9	243.0	33.7	34.6	12.9	.....	8.7	6.9	339.9	32.0	26.7	281.2
1973	418.5	298.3	42.4	39.7	21.4	.....	9.7	7.1	418.5	36.1	31.6	350.8
1974 [7]	449.2	335.6	24.6	48.5	22.5	.....	11.2	6.9	449.2	40.8	35.1	373.3
1975	510.8	383.6	29.4	57.4	20.5	.....	13.0	6.9	510.8	45.3	39.7	425.8
1976	590.7	456.5	29.0	63.3	20.6	.....	14.3	6.9	590.7	50.5	45.6	494.7
1977	651.5	509.3	31.9	69.3	20.4	.....	13.5	7.0	651.5	58.4	52.4	540.7
1978	767.4	601.8	50.1	68.5	23.8	.....	16.1	7.1	767.4	66.7	60.7	640.0
1979	898.1	706.1	61.4	75.4	29.9	.....	18.1	7.3	898.1	79.7	71.8	746.6
1980	983.3	782.8	60.6	80.3	32.8	.....	19.3	7.4	983.3	89.7	77.1	816.5
1981	982.3	785.6	53.5	85.5	29.5	.....	20.6	7.6	982.3	98.8	83.6	799.9
1982	944.6	750.0	53.0	86.0	25.9	.....	21.9	7.8	944.6	101.8	87.0	755.8
1983	943.4	753.4	49.5	85.8	23.7	.....	22.8	8.1	943.4	103.2	87.9	752.3
1984	857.0	661.8	49.5	85.0	26.1	2.0	24.3	8.3	857.0	106.7	87.1	663.2
1985	772.7	586.2	46.3	82.9	22.9	1.2	24.3	9.0	772.7	100.1	77.5	595.1
1986	724.8	542.4	47.8	81.9	16.3	2.1	24.4	10.0	724.8	90.4	66.6	567.8
1987	756.3	563.7	58.0	78.7	17.8	3.2	25.3	9.9	756.3	82.4	62.0	611.9
1988	788.4	582.3	62.2	81.0	23.7	3.5	25.6	10.4	788.4	77.8	61.7	648.9
1989	813.7	600.1	66.2	84.1	23.9	2.6	26.3	10.4	813.7	76.0	61.9	675.8
1990	840.6	619.1	70.9	86.3	23.2	2.8	27.5	10.9	840.6	74.7	63.2	702.7
1991	844.2	624.8	68.1	85.9	22.2	2.6	28.7	11.8	844.2	74.9	64.3	705.0
1992	867.8	640.8	71.0	84.8	24.2	3.9	29.4	13.6	867.8	75.4	63.6	728.8
1993	909.2	677.6	72.8	85.4	23.3	3.8	31.0	15.3	909.2	76.0	65.9	767.3
1994	934.7	704.1	67.9	86.8	23.3	5.0	32.1	15.5	934.7	77.7	69.1	787.9
1995	965.7	740.5	57.8	87.6	27.4	3.4	34.1	15.0	965.7	79.3	71.5	814.9
1996	1,003.0	769.5	60.3	88.0	31.7	4.4	34.9	14.1	1,003.0	81.7	74.4	846.9
1997	1,051.3	808.2	67.1	88.7	32.7	4.9	35.7	14.0	1,051.3	85.4	80.1	885.8
1998	1,083.4	840.4	63.4	89.8	29.9	5.0	40.5	14.3	1,083.4	89.6	83.2	910.5
1999	1,141.1	889.1	73.2	90.0	28.3	4.0	41.9	14.6	1,141.1	94.2	82.2	964.7
2000	1,206.5	949.5	76.8	90.3	27.9	4.9	43.0	14.2	1,206.5	97.6	86.5	1,022.4
2001	1,251.0	998.7	73.2	90.7	25.2	4.2	43.6	15.3	1,251.0	103.0	89.0	1,059.0

[1] Excludes commercial broilers; excludes horses and mules beginning 1959; excludes turkeys beginning 1986.
[2] Non-Commodity Credit Corporation (CCC) crops held on farms plus value above loan rate for crops held under CCC.
[3] Includes fertilizer, chemicals, fuels, parts, feed, seed, and other supplies.
[4] Currency and demand deposits.
[5] Includes CCC storage and drying facilities loans.
[6] Does not include CCC crop loans.
[7] Beginning 1974, data are for farms included in the new farm definition, that is, places with sales of $1,000 or more annually.

Note.—Data exclude operator households.
Beginning 1959, data include Alaska and Hawaii.

Source: Department of Agriculture, Economic Research Service.

TABLE B–99.—*Farm output and productivity indexes, 1948–99*

[1996=100]

Year	Farm output				Productivity indicators	
	Total	Primary output		Secondary output	Farm output per unit of total factor input	Farm output per unit of labor input
		Livestock and products	Crops			
1948	43	49	41	27	43	13
1949	42	50	39	25	40	13
1950	42	52	37	22	39	13
1951	44	54	39	23	41	14
1952	45	55	41	23	42	15
1953	45	55	41	22	43	16
1954	46	58	40	22	44	17
1955	47	59	42	22	44	17
1956	48	62	41	23	44	18
1957	47	61	41	27	44	19
1958	50	62	45	31	46	21
1959	52	64	45	38	46	22
1960	53	65	48	42	48	23
1961	54	68	48	42	50	24
1962	55	69	48	41	50	25
1963	57	71	50	43	51	27
1964	56	72	49	37	51	28
1965	58	70	52	36	53	29
1966	58	72	51	35	52	31
1967	59	74	53	35	54	34
1968	60	74	54	34	56	36
1969	62	74	56	32	56	37
1970	61	76	54	28	55	37
1971	66	79	60	31	60	41
1972	66	81	60	30	59	42
1973	69	81	64	32	61	43
1974	64	78	59	30	58	44
1975	68	75	67	31	63	46
1976	69	79	66	30	61	47
1977	73	80	72	31	66	52
1978	74	80	74	33	63	56
1979	79	81	81	33	66	60
1980	75	82	74	29	63	60
1981	81	83	85	21	70	64
1982	83	83	86	51	73	68
1983	72	84	66	59	64	60
1984	82	83	83	47	75	69
1985	85	85	87	55	80	77
1986	82	86	82	56	80	80
1987	84	87	83	74	82	81
1988	80	88	73	99	79	75
1989	86	88	83	105	86	82
1990	90	90	89	99	89	86
1991	91	92	89	105	89	84
1992	96	95	96	98	96	94
1993	91	96	87	101	91	93
1994	102	101	103	98	101	103
1995	97	102	92	105	93	94
1996	100	100	100	100	100	100
1997	104	103	104	115	102	104
1998	105	104	103	121	101	107
1999	107	108	104	129	101	106

Note.—Farm output includes primary agricultural activities and certain secondary activities that are closely linked to agricultural production for which information on production and input use cannot be separately observed.

See Table B–100 for farm inputs.

Source: Department of Agriculture, Economic Research Service.

TABLE B–100.—*Farm input use, selected inputs, 1948–2002*

Year	Farm population, April[1]		Farm employment (thousands)[3]			Crops harvested (millions of acres)[5]	Selected indexes of input use (1996=100)							
	Number (thousands)	As percent of total population[2]	Total	Self-employed and unpaid workers[4]	Hired workers		Total	Farm labor	Farm real estate	Durable equipment	Energy	Agricultural chemicals	Feed, seed, and purchased livestock	Other purchased inputs
1948	24,383	16.6	10,363	8,026	2,337	356	101	341	116	70	66	22	55	14
1949	24,194	16.2	9,964	7,712	2,252	360	106	334	116	82	73	24	59	31
1950	23,048	15.2	9,926	7,597	2,329	345	106	321	117	94	75	29	59	32
1951	21,890	14.2	9,546	7,310	2,236	344	108	308	117	105	77	28	62	34
1952	21,748	13.9	9,149	7,005	2,144	349	107	298	118	114	81	29	61	35
1953	19,874	12.5	8,864	6,775	2,089	348	106	282	118	119	83	29	62	38
1954	19,019	11.7	8,651	6,570	2,081	346	104	275	117	125	82	30	59	36
1955	19,078	11.5	8,381	6,345	2,036	340	108	279	117	127	85	31	65	41
1956	18,712	11.1	7,852	5,900	1,952	324	109	264	116	129	85	33	68	46
1957	17,656	10.3	7,600	5,660	1,940	324	108	246	116	127	83	31	72	52
1958	17,128	9.8	7,503	5,521	1,982	324	109	235	115	125	81	32	76	51
1959	16,592	9.3	7,342	5,390	1,952	324	111	234	115	125	82	38	77	59
1960	15,635	8.7	7,057	5,172	1,885	324	111	228	115	127	83	45	77	60
1961	14,803	8.1	6,919	5,029	1,890	302	110	222	115	124	85	48	76	58
1962	14,313	7.7	6,700	4,873	1,827	295	111	220	115	122	87	46	80	57
1963	13,367	7.1	6,518	4,738	1,780	298	112	214	116	122	88	50	82	56
1964	12,954	6.7	6,110	4,506	1,604	298	109	202	116	124	89	56	80	57
1965	12,363	6.4	5,610	4,128	1,482	298	109	196	116	126	91	60	80	58
1966	11,595	5.9	5,214	3,854	1,360	294	110	183	116	129	92	69	86	55
1967	10,875	5.5	4,903	3,650	1,253	306	110	174	115	134	92	70	86	60
1968	10,454	5.2	4,749	3,535	1,213	300	108	168	115	139	92	60	87	62
1969	10,307	5.1	4,596	3,419	1,176	290	109	165	115	142	94	61	91	60
1970	9,712	4.7	4,523	3,348	1,175	293	110	163	114	143	94	72	93	58
1971	9,425	4.5	4,436	3,275	1,161	305	110	160	113	144	92	72	94	60
1972	9,610	4.6	4,373	3,228	1,146	294	112	158	112	145	91	77	99	58
1973	9,472	4.5	4,337	3,169	1,168	321	112	159	111	147	92	80	98	49
1974	9,264	4.3	4,389	3,075	1,314	328	110	147	111	156	88	86	94	48
1975	8,864	4.1	4,331	3,021	1,310	336	109	147	112	162	103	77	91	53
1976	8,253	3.8	4,363	2,992	1,371	337	113	145	112	166	116	91	95	58
1977	[6]6,194	[6]2.8	4,143	2,852	1,291	345	111	140	113	171	122	80	94	62
1978	[6]6,501	[6]2.9	3,937	2,680	1,256	338	117	133	114	175	127	87	106	77
1979	[6]6,241	[6]2.8	3,765	2,495	1,270	348	119	130	113	180	116	95	109	78
1980	[6]6,051	[6]2.7	3,699	2,401	1,298	352	120	126	115	186	113	112	109	73
1981	[6]5,850	[6]2.5	[7]3,582	[7]2,324	[7]1,258	366	115	128	114	186	108	101	103	71
1982	[6]5,628	[6]2.4	[7]3,466	[7]2,248	[7]1,218	362	113	122	110	183	102	82	107	79
1983	[6]5,787	[6]2.5	[7]3,349	[7]2,171	[7]1,178	306	113	121	110	174	99	81	107	79
1984	5,754	2.4	[7]3,233	[7]2,095	[7]1,138	348	109	119	111	166	103	88	99	74
1985	5,355	2.2	3,116	2,018	1,098	342	106	111	111	158	92	90	100	81
1986	5,226	2.2	2,912	1,873	1,039	325	104	103	109	147	86	105	101	81
1987	4,986	2.1	2,897	1,846	1,051	302	102	103	107	136	95	96	100	84
1988	4,951	2.1	2,954	1,967	1,037	297	102	106	107	129	95	80	99	83
1989	4,801	2.0	2,863	1,935	928	318	100	105	107	123	94	82	95	86
1990	4,591	1.9	2,891	2,000	892	322	102	105	106	119	94	95	101	87
1991	4,632	1.9	2,877	1,968	910	318	102	108	105	116	94	96	101	90
1992	.....	.....	2,810	1,944	866	319	100	102	104	113	94	98	101	89
1993	.....	.....	2,800	1,942	857	308	100	98	103	109	94	94	103	99
1994	.....	.....	2,767	1,925	842	321	101	99	102	106	97	101	103	104
1995	.....	.....	2,836	1,967	869	314	104	103	101	103	102	92	109	110
1996	.....	.....	2,842	2,010	832	326	100	100	100	100	100	100	100	100
1997	.....	.....	2,867	1,990	877	333	103	101	99	98	102	108	105	108
1998	.....	.....	2,827	1,947	880	327	103	98	98	98	104	105	111	119
1999	.....	.....	2,977	2,048	929	327	106	101	97	99	105	104	117	127
2000	.....	.....	2,952	2,062	890	322	.....	.....	.....	.....	.....	.....	.....	.....
2001	.....	.....	2,923	2,050	873	321	.....	.....	.....	.....	.....	.....	.....	.....
2002 *p*	.....	.....	.....	.....	885	317	.....	.....	.....	.....	.....	.....	.....	.....

[1] Farm population as defined by Department of Agriculture and Department of Commerce, i.e., civilian population living on farms in rural areas, regardless of occupation. Series discontinued in 1992.

[2] Total population of United States including Armed Forces overseas, as of July 1.

[3] Includes persons doing farmwork on all farms. These data, published by the Department of Agriculture, differ from those on agricultural employment by the Department of Labor (see Table B-35) because of differences in the method of approach, in concepts of employment, and in time of month for which the data are collected.

[4] Prior to 1982 this category was termed "family workers" and did not include nonfamily unpaid workers. Series discontinued in 2002.

[5] Acreage harvested plus acreages in fruits, tree nuts, and vegetables and minor crops.

[6] Based on new definition of a farm. Under old definition of a farm, farm population (in thousands and as percent of total population) for 1977, 1978, 1979, 1980, 1981, 1982, and 1983 is 7,806 and 3.6; 8,005 and 3.6; 7,553 and 3.4; 7,241 and 3.2; 7,014 and 3.1; 6,880 and 3.0; 7,029 and 3.0, respectively.

[7] Basis for farm employment series was discontinued for 1981 through 1984. Employment is estimated for these years.

Note.—Population includes Alaska and Hawaii beginning 1960.

Sources: Department of Agriculture (Economic Research Service) and Department of Commerce (Bureau of the Census).

TABLE B–101.—*Agricultural price indexes and farm real estate value, 1975–2002*

[1990-92=100, except as noted]

Year or month	Prices received by farmers			Prices paid by farmers												Addendum: Average farm real estate value per acre (dollars)[3]
				All commodities, services, interest, taxes, and wage rates[1]	Production items										Wage rates	
	All farm products	Crops	Livestock and products		Total[2]	Feed	Livestock and poultry	Fertilizer	Agricultural chemicals	Fuels	Farm machinery	Farm services		Rent		
1975	73	88	62	47	55	83	39	87	72	40	38	48			44	340
1976	75	87	64	50	59	83	47	74	78	43	43	52			48	397
1977	73	83	64	53	61	82	48	72	71	46	47	57			51	474
1978	83	89	78	58	67	80	65	72	66	48	51	60			55	531
1979	94	98	90	66	76	89	88	77	67	61	56	66			60	628
1980	98	107	89	75	85	98	85	96	71	86	63	81			65	737
1981	100	111	89	82	92	110	80	104	77	98	70	89			70	819
1982	94	98	90	86	94	99	78	105	83	97	76	96			74	823
1983	98	108	88	86	92	107	76	100	87	94	81	82			76	788
1984	101	111	91	89	94	112	73	103	90	93	85	86			77	801
1985	91	97	86	86	91	95	74	98	90	93	85	85			78	713
1986	87	87	88	85	86	88	73	90	89	76	83	83			81	640
1987	89	86	91	87	87	83	85	86	87	76	85	84			85	599
1988	99	105	93	91	90	104	91	94	89	77	89	85			87	632
1989	104	109	100	96	95	110	93	99	93	83	94	91			95	668
1990	104	103	105	99	99	103	102	97	95	100	96	96	96	96	96	683
1991	100	101	99	100	100	98	102	103	101	104	100	98	100		100	703
1992	99	101	97	101	101	99	96	100	103	96	104	103	104		105	713
1993	101	102	100	104	104	102	104	96	109	93	107	110	100		108	736
1994	100	105	95	106	106	106	94	105	112	89	113	110	108		111	798
1995	102	112	92	109	108	103	82	121	116	89	120	115	117		114	844
1996	112	127	99	115	115	129	75	125	119	102	125	116	128		117	887
1997	107	115	98	118	119	125	94	121	121	106	128	116	136		123	926
1998	102	107	97	115	113	110	88	112	122	84	132	115	120		129	974
1999	95	96	95	115	111	100	95	105	121	93	135	116	113		135	1,020
2000	96	96	97	120	116	102	110	110	120	134	139	119	110		140	1,080
2001	102	99	106	124	120	109	111	123	120	119	144	121	117		146	1,150
2002	98	106	91	124	119	113	101	108	119	110	146	120	119		152	1,210
2001: Jan	97	94	100	125	121	112	111	135	123	137	141	120	117		150	1,150
Feb	100	98	102	124	121	108	108	140	121	135	142	120	117		150	.....
Mar	103	99	107	124	120	107	109	140	121	123	142	120	117		150	.....
Apr	106	103	109	124	120	106	113	135	121	127	143	120	117		144	.....
May	108	105	110	124	120	106	110	129	121	135	143	120	117		144	.....
June	107	102	113	124	120	107	113	123	120	130	143	122	117		144	.....
July	108	104	112	123	120	108	114	119	120	112	144	122	117		143	.....
Aug	110	109	111	124	120	111	113	115	120	115	144	122	117		143	.....
Sept	106	102	111	124	120	110	112	113	120	128	145	122	117		143	.....
Oct	94	88	104	123	119	109	113	110	120	105	145	121	117		148	.....
Nov	93	89	99	122	118	109	107	108	120	96	145	120	117		148	.....
Dec	93	90	96	122	117	109	110	107	120	79	146	120	117		148	.....
2002: Jan	95	93	97	122	117	108	109	108	120	83	146	120	119		155	1,210
Feb	99	101	97	123	117	107	110	108	118	86	146	120	119		155	.....
Mar	106	117	95	123	118	109	106	107	119	101	147	120	119		155	.....
Apr	95	100	90	123	118	109	102	107	119	114	147	119	119		153	.....
May	98	106	90	123	118	109	98	107	118	110	148	120	119		153	.....
June	98	106	91	123	118	110	95	109	118	109	145	121	119		153	.....
July	100	111	89	123	119	114	96	109	118	113	145	121	119		149	.....
Aug	100	114	87	124	120	117	97	109	118	116	145	121	119		149	.....
Sept	99	110	86	125	121	120	98	109	118	130	146	121	119		149	.....
Oct	96	102	87	125	121	118	101	110	117	139	145	120	119		154	.....
Nov	98	104	90	125	121	117	105	112	117	124	146	120	119		154	.....
Dec	97	102	91	125	121	116	109	113	117	122	146	120	119		154	.....

[1] Includes items used for family living, not shown separately.
[2] Includes other production items not shown separately.
[3] Average for 48 States. Annual data are: March 1 for 1975, February 1 for 1976-81, April 1 for 1982-85, February 1 for 1986-89, and January 1 for 1990-2002.

Note.—Data on a 1990-92 base prior to 1975 have not been calculated by Department of Agriculture.

Source: Department of Agriculture, National Agricultural Statistics Service.

TABLE B–102.—*U.S. exports and imports of agricultural commodities, 1945–2002*

[Billions of dollars]

Year	Exports							Imports					Agricultural trade balance
	Total[1]	Feed grains	Food grains[2]	Oilseeds and products	Cotton	Tobacco	Animals and products	Total[1]	Crops, fruits, and vegetables[3]	Animals and products	Coffee	Cocoa beans and products	
1945	2.3	([4])	0.4	([4])	0.3	0.2	0.9	1.7	0.1	0.4	0.3	([4])	0.5
1946	3.1	0.1	.7	([4])	.5	.4	.9	2.3	.2	.4	.5	0.1	.8
1947	4.0	.4	1.4	0.1	.4	.3	.7	2.8	.1	.4	.6	.2	1.2
1948	3.5	.1	1.5	.2	.5	.2	.5	3.1	.2	.6	.7	.2	.3
1949	3.6	.3	1.1	.3	.9	.3	.4	2.9	.2	.4	.8	.1	.7
1950	2.9	.2	.6	.2	1.0	.3	.3	4.0	.2	.7	1.1	.2	–1.1
1951	4.0	.3	1.1	.3	1.1	.3	.5	5.2	.2	1.1	1.4	.2	–1.1
1952	3.4	.3	1.1	.2	.9	.2	.3	4.5	.2	.7	1.4	.2	–1.1
1953	2.8	.3	.7	.2	.5	.3	.4	4.2	.2	.6	1.5	.2	–1.3
1954	3.1	.2	.5	.3	.8	.3	.5	4.0	.2	.5	1.5	.3	–.9
1955	3.2	.3	.6	.4	.5	.4	.6	4.0	.2	.5	1.4	.2	–.8
1956	4.2	.4	1.0	.5	.7	.3	.7	4.0	.2	.4	1.4	.2	.2
1957	4.5	.3	1.0	.5	1.0	.4	.7	4.0	.2	.5	1.4	.2	.6
1958	3.9	.5	.8	.4	.7	.4	.5	3.9	.2	.7	1.2	.2	([4])
1959	4.0	.6	.9	.6	.4	.3	.6	4.1	.2	.8	1.1	.2	–.1
1960	4.8	.5	1.2	.6	1.0	.4	.6	3.8	.2	.6	1.0	.2	1.0
1961	5.0	.5	1.4	.6	.9	.4	.6	3.7	.2	.7	1.0	.2	1.3
1962	5.0	.8	1.3	.7	.5	.4	.6	3.9	.2	.9	1.0	.2	1.2
1963	5.6	.8	1.5	.8	.6	.4	.7	4.0	.3	.9	1.0	.2	1.6
1964	6.3	.9	1.7	1.0	.7	.4	.8	4.1	.3	.8	1.2	.2	2.3
1965	6.2	1.1	1.4	1.2	.5	.4	.8	4.1	.3	.9	1.1	.1	2.1
1966	6.9	1.3	1.8	1.2	.4	.5	.7	4.5	.4	1.2	1.1	.1	2.4
1967	6.4	1.1	1.5	1.3	.5	.5	.7	4.5	.4	1.1	1.0	.2	1.9
1968	6.3	.9	1.4	1.3	.5	.5	.7	5.0	.5	1.3	1.2	.2	1.3
1969	6.0	.9	1.2	1.3	.3	.6	.8	5.0	.5	1.4	.9	.2	1.1
1970	7.3	1.1	1.4	1.9	.4	.5	.9	5.8	.5	1.6	1.2	.3	1.5
1971	7.7	1.0	1.3	2.2	.6	.5	1.0	5.8	.6	1.5	1.2	.2	1.9
1972	9.4	1.5	1.8	2.4	.5	.7	1.1	6.5	.7	1.8	1.3	.2	2.9
1973	17.7	3.5	4.7	4.3	.9	.7	1.6	8.4	.8	2.6	1.7	.3	9.3
1974	21.9	4.6	5.4	5.7	1.3	.8	1.8	10.2	.8	2.2	1.6	.5	11.7
1975	21.9	5.2	6.2	4.5	1.0	.9	1.7	9.3	.8	1.8	1.7	.5	12.6
1976	23.0	6.0	4.7	5.1	1.0	.9	2.4	11.0	.9	2.3	2.9	.6	12.0
1977	23.6	4.9	3.6	6.6	1.5	1.1	2.7	13.4	1.2	2.3	4.2	1.0	10.2
1978	29.4	5.9	5.5	8.2	1.7	1.4	3.0	14.8	1.5	3.1	4.0	1.4	14.6
1979	34.7	7.7	6.3	8.9	2.2	1.2	3.8	16.7	1.7	3.9	4.2	1.2	18.0
1980	41.2	9.8	7.9	9.4	2.9	1.3	3.8	17.4	1.7	3.8	4.2	.9	23.8
1981	43.3	9.4	9.6	9.6	2.3	1.5	4.2	16.9	2.0	3.5	2.9	.9	26.4
1982	36.6	6.4	7.9	9.1	2.0	1.5	3.9	15.3	2.3	3.7	2.9	.7	21.3
1983	36.1	7.3	7.4	8.7	1.8	1.5	3.8	16.5	2.3	3.8	2.8	.8	19.6
1984	37.8	8.1	7.5	8.4	2.4	1.5	4.2	19.3	3.1	4.1	3.3	1.1	18.5
1985	29.0	6.0	4.5	5.8	1.6	1.5	4.1	20.0	3.5	4.2	3.3	1.4	9.1
1986	26.2	3.1	3.8	6.5	.8	1.2	4.5	21.5	3.6	4.5	4.6	1.1	4.7
1987	28.7	3.8	3.8	6.4	1.6	1.1	5.2	20.4	3.6	4.9	2.9	1.2	8.3
1988	37.1	5.9	5.9	7.7	2.0	1.3	6.4	21.0	3.8	5.2	2.5	1.0	16.1
1989	40.1	7.7	7.1	6.4	2.2	1.3	6.4	21.9	4.2	5.0	2.4	1.0	18.2
1990	39.5	7.0	4.8	5.7	2.8	1.4	6.6	22.9	4.9	5.6	1.9	1.1	16.6
1991	39.3	5.7	4.2	6.4	2.5	1.4	7.1	22.9	4.8	5.5	1.9	1.1	16.4
1992	43.1	5.7	5.4	7.2	2.0	1.7	8.0	24.8	4.9	5.7	1.7	1.1	18.3
1993	42.9	5.0	5.6	7.3	1.5	1.3	8.0	25.1	5.0	5.9	1.5	1.0	17.8
1994	46.2	4.7	5.3	7.2	2.7	1.3	9.2	27.0	5.4	5.7	2.5	1.0	19.2
1995	56.3	8.2	6.7	9.0	3.7	1.4	10.9	30.3	5.9	6.0	3.3	1.1	26.0
1996	60.3	9.4	7.4	10.8	2.7	1.4	11.1	33.5	6.9	6.1	2.8	1.4	26.8
1997	57.2	6.0	5.2	12.1	2.7	1.6	11.3	36.1	7.2	6.5	3.9	1.5	21.1
1998	51.8	5.0	5.0	9.5	2.5	1.5	10.6	36.9	7.9	6.9	3.4	1.7	14.9
1999	48.4	5.5	4.7	8.1	1.0	1.3	10.4	37.7	8.9	7.3	2.9	1.5	10.7
2000	51.2	5.2	4.3	8.6	1.9	1.2	11.6	39.0	9.0	8.3	2.7	1.4	12.2
2001	53.7	5.2	4.2	9.2	2.2	1.3	12.4	39.4	9.3	9.1	1.7	1.5	14.3
Jan-Nov:													
2001	49.0	4.8	3.8	8.2	2.0	1.1	11.4	36.2	8.5	8.5	1.5	1.4	12.8
2002	48.0	4.9	4.0	8.5	1.8	1.0	10.2	38.2	9.1	8.3	1.5	1.6	9.8

[1] Total includes items not shown separately.
[2] Rice, wheat, and wheat flour.
[3] Includes nuts, fruits, and vegetable preparations.
[4] Less than $50 million.

Note.—Data derived from official estimates released by the Bureau of the Census, Department of Commerce. Agricultural commodities are defined as (1) nonmarine food products and (2) other products of agriculture which have not passed through complex processes of manufacture. Export value, at U.S. port of exportation, is based on the selling price and includes inland freight, insurance, and other charges to the port. Import value, defined generally as the market value in the foreign country, excludes import duties, ocean freight, and marine insurance.

Source: Department of Agriculture, Economic Research Service.

TABLE B–103.—*U.S. international transactions, 1946–2002*

[Millions of dollars; quarterly data seasonally adjusted. Credits (+), debits (–)]

Year or quarter	Goods[1]			Services			Balance on goods and services	Income receipts and payments			Unilateral current transfers, net[2]	Balance on current account
	Exports	Imports	Balance on goods	Net military transactions[2]	Net travel and transportation	Other services, net		Receipts	Payments	Balance on income		
1946	11,764	–5,067	6,697	–424	733	310	7,316	772	–212	560	–2,991	4,885
1947	16,097	–5,973	10,124	–358	946	145	10,857	1,102	–245	857	–2,722	8,992
1948	13,265	–7,557	5,708	–351	374	175	5,906	1,921	–437	1,484	–4,973	2,417
1949	12,213	–6,874	5,339	–410	230	208	5,367	1,831	–476	1,355	–5,849	873
1950	10,203	–9,081	1,122	–56	–120	242	1,188	2,068	–559	1,509	–4,537	–1,840
1951	14,243	–11,176	3,067	169	298	254	3,788	2,633	–583	2,050	–4,954	884
1952	13,449	–10,838	2,611	528	83	309	3,531	2,751	–555	2,196	–5,113	614
1953	12,412	–10,975	1,437	1,753	–238	307	3,259	2,736	–624	2,112	–6,657	–1,286
1954	12,929	–10,353	2,576	902	–269	305	3,514	2,929	–582	2,347	–5,642	219
1955	14,424	–11,527	2,897	–113	–297	299	2,786	3,406	–676	2,730	–5,086	430
1956	17,556	–12,803	4,753	–221	–361	447	4,618	3,837	–735	3,102	–4,990	2,730
1957	19,562	–13,291	6,271	–423	–189	482	6,141	4,180	–796	3,384	–4,763	4,762
1958	16,414	–12,952	3,462	–849	–633	486	2,466	3,790	–825	2,965	–4,647	784
1959	16,458	–15,310	1,148	–831	–821	573	69	4,132	–1,061	3,071	–4,422	–1,282
1960	19,650	–14,758	4,892	–1,057	–964	639	3,508	4,616	–1,238	3,379	–4,062	2,824
1961	20,108	–14,537	5,571	–1,131	–978	732	4,195	4,999	–1,245	3,755	–4,127	3,822
1962	20,781	–16,260	4,521	–912	–1,152	912	3,370	5,618	–1,324	4,294	–4,277	3,387
1963	22,272	–17,048	5,224	–742	–1,309	1,036	4,210	6,157	–1,560	4,596	–4,392	4,414
1964	25,501	–18,700	6,801	–794	–1,146	1,161	6,022	6,824	–1,783	5,041	–4,240	6,823
1965	26,461	–21,510	4,951	–487	–1,280	1,480	4,664	7,437	–2,088	5,350	–4,583	5,431
1966	29,310	–25,493	3,817	–1,043	–1,331	1,497	2,940	7,528	–2,481	5,047	–4,955	3,031
1967	30,666	–26,866	3,800	–1,187	–1,750	1,742	2,604	8,021	–2,747	5,274	–5,294	2,583
1968	33,626	–32,991	635	–596	–1,548	1,759	250	9,367	–3,378	5,990	–5,629	611
1969	36,414	–35,807	607	–718	–1,763	1,964	91	10,913	–4,869	6,044	–5,735	399
1970	42,469	–39,866	2,603	–641	–2,038	2,330	2,254	11,748	–5,515	6,233	–6,156	2,331
1971	43,319	–45,579	–2,260	653	–2,345	2,649	–1,303	12,707	–5,435	7,272	–7,402	–1,433
1972	49,381	–55,797	–6,416	1,072	–3,063	2,965	–5,443	14,765	–6,572	8,192	–8,544	–5,795
1973	71,410	–70,499	911	740	–3,158	3,406	1,900	21,808	–9,655	12,153	–6,913	7,140
1974	98,306	–103,811	–5,505	165	–3,184	4,231	–4,292	27,587	–12,084	15,503	–9,249	1,962
1975	107,088	–98,185	8,903	1,461	–2,812	4,854	12,404	25,351	–12,564	12,787	–7,075	18,116
1976	114,745	–124,228	–9,483	931	–2,558	5,027	–6,082	29,375	–13,311	16,063	–5,686	4,295
1977	120,816	–151,907	–31,091	1,731	–3,565	5,680	–27,246	32,354	–14,217	18,137	–5,226	–14,335
1978	142,075	–176,002	–33,927	857	–3,573	6,879	–29,763	42,088	–21,680	20,408	–5,788	–15,143
1979	184,439	–212,007	–27,568	–1,313	–2,935	7,251	–24,565	63,834	–32,961	30,873	–6,593	–285
1980	224,250	–249,750	–25,500	–1,822	–997	8,912	–19,407	72,606	–42,532	30,073	–8,349	2,317
1981	237,044	–265,067	–28,023	–844	144	12,552	–16,172	86,529	–53,626	32,903	–11,702	5,030
1982	211,157	–247,642	–36,485	112	–992	13,209	–24,156	91,747	–56,583	35,164	–16,544	–5,536
1983	201,799	–268,901	–67,102	–563	–4,227	14,124	–57,767	90,000	–53,614	36,386	–17,310	–38,691
1984	219,926	–332,418	–112,492	–2,547	–8,438	14,404	–109,073	108,819	–73,756	35,063	–20,335	–94,344
1985	215,915	–338,088	–122,173	–4,390	–9,798	14,483	–121,880	98,542	–72,819	25,723	–21,998	–118,155
1986	223,344	–368,425	–145,081	–5,181	–8,779	20,502	–138,538	97,064	–81,571	15,494	–24,132	–147,177
1987	250,208	–409,765	–159,557	–3,844	–8,010	19,728	–151,684	108,184	–93,891	14,293	–23,265	–160,655
1988	320,230	–447,189	–126,959	–6,320	–3,013	21,725	–114,566	136,713	–118,026	18,687	–25,274	–121,153
1989	359,916	–477,665	–117,749	–6,749	3,551	27,805	–93,142	161,287	–141,463	19,824	–26,169	–99,486
1990	387,401	–498,435	–111,034	–7,599	7,501	30,270	–80,861	171,742	–143,192	28,550	–26,654	–78,965
1991	414,083	–491,020	–76,937	–5,274	16,561	34,516	–31,135	149,214	–125,084	24,130	10,752	3,747
1992	439,631	–536,528	–96,897	–1,448	19,969	41,918	–36,457	132,056	–109,101	22,954	–35,013	–48,515
1993	456,943	–589,394	–132,451	1,385	19,714	42,562	–68,791	134,159	–110,255	23,904	–37,637	–82,523
1994	502,859	–668,690	–165,831	2,570	16,305	50,278	–96,678	165,438	–148,744	16,694	–38,260	–118,244
1995	575,204	–749,374	–174,170	4,600	21,772	51,410	–96,388	211,502	–186,880	24,622	–34,057	–105,823
1996	612,113	–803,113	–191,000	5,385	25,015	58,757	–101,843	225,846	–201,743	24,103	–40,081	–117,821
1997	678,366	–876,485	–198,119	4,968	22,152	63,234	–107,765	260,558	–240,371	20,187	–40,794	–128,372
1998	670,416	–917,112	–246,696	5,220	10,145	64,398	–166,933	259,366	–251,751	7,615	–44,509	–203,827
1999	683,965	–1,029,987	–346,022	2,470	7,113	74,202	–262,237	290,536	–272,398	18,138	–48,757	–292,856
2000	771,994	–1,224,417	–452,423	421	2,472	70,849	–378,681	352,997	–331,215	21,782	–53,442	–410,341
2001	718,762	–1,145,927	–427,165	–2,978	–1,926	73,779	–358,290	283,771	–269,389	14,382	–49,463	–393,371
2000: I	184,486	–290,941	–106,455	–74	825	18,532	–87,172	84,083	–79,260	4,823	–11,749	–94,098
II	191,411	–303,581	–112,170	412	1,486	18,345	–91,927	90,183	–83,994	6,189	–12,349	–98,087
III	199,641	–314,779	–115,138	–199	–31	17,042	–98,326	88,129	–84,055	4,074	–12,925	–107,177
IV	196,456	–315,116	–118,660	282	189	16,931	–101,258	90,603	–83,909	6,694	–16,418	–110,982
2001: I	193,284	–306,316	–113,032	–742	903	15,711	–97,160	83,036	–81,990	1,046	–11,608	–107,722
II	184,846	–292,565	–107,719	–285	–1,219	15,899	–93,324	74,846	–68,840	6,006	–11,916	–99,234
III	173,274	–279,025	–105,751	–706	–255	26,934	–79,778	67,152	–66,345	807	–12,360	–91,331
IV	167,358	–268,021	–100,663	–1,245	–1,357	15,237	–88,028	58,737	–52,216	6,521	–13,579	–95,086
2002: I	164,649	–271,073	–106,424	–1,498	–544	12,974	–95,492	58,096	–59,042	–946	–16,016	–112,454
II	172,426	–294,893	–122,467	–1,679	–863	15,696	–109,313	60,722	–66,009	–5,287	–13,011	–127,611
III *p*	175,727	–298,903	–123,176	–2,083	–808	15,206	–110,861	63,472	–66,431	–2,959	–13,221	–127,041

[1] Adjusted from Census data for differences in valuation, coverage, and timing; excludes military.
[2] Includes transfers of goods and services under U.S. military grant programs.

See next page for continuation of table.

TABLE B–103.—*U.S. international transactions, 1946–2002*—Continued

[Millions of dollars; quarterly data seasonally adjusted. Credits (+), debits (–)]

Year or quarter	Capital account transactions, net	Financial account							Statistical discrepancy	
		U.S.-owned assets abroad, net [increase/financial outflow (–)]				Foreign-owned assets in the U.S., net [increase/financial inflow (+)]				
		Total	U.S. official reserve assets[3]	Other U.S. Government assets	U.S. private assets	Total	Foreign official assets	Other foreign assets	Total (sum of the items with sign reversed)	Of which: Seasonal adjustment discrepancy
1946			–623							
1947			–3,315							
1948			–1,736							
1949			–266							
1950			1,758							
1951			–33							
1952			–415							
1953			1,256							
1954			480							
1955			182							
1956			–869							
1957			–1,165							
1958			2,292							
1959			1,035							
1960		–4,099	2,145	–1,100	–5,144	2,294	1,473	821	–1,019	
1961		–5,538	607	–910	–5,235	2,705	765	1,939	–989	
1962		–4,174	1,535	–1,085	–4,623	1,911	1,270	641	–1,124	
1963		–7,270	378	–1,662	–5,986	3,217	1,986	1,231	–360	
1964		–9,560	171	–1,680	–8,050	3,643	1,660	1,983	–907	
1965		–5,716	1,225	–1,605	–5,336	742	134	607	–457	
1966		–7,321	570	–1,543	–6,347	3,661	–672	4,333	629	
1967		–9,757	53	–2,423	–7,386	7,379	3,451	3,928	–205	
1968		–10,977	–870	–2,274	–7,833	9,928	–774	10,703	438	
1969		–11,585	–1,179	–2,200	–8,206	12,702	–1,301	14,002	–1,516	
1970		–8,470	3,348	–1,589	–10,229	6,359	6,908	–550	–219	
1971		–11,758	3,066	–1,884	–12,940	22,970	26,879	–3,909	–9,779	
1972		–13,787	706	–1,568	–12,925	21,461	10,475	10,986	–1,879	
1973		–22,874	158	–2,644	–20,388	18,388	6,026	12,362	–2,654	
1974		–34,745	–1,467	366	–33,643	35,341	10,546	24,796	–2,558	
1975		–39,703	–849	–3,474	–35,380	17,170	7,027	10,143	4,417	
1976		–51,269	–2,558	–4,214	–44,498	38,018	17,693	20,326	8,955	
1977		–34,785	–375	–3,693	–30,717	53,219	36,816	16,403	–4,099	
1978		–61,130	732	–4,660	–57,202	67,036	33,678	33,358	9,236	
1979		–64,915	6	–3,746	–61,176	40,852	–13,665	54,516	24,349	
1980		–85,815	–7,003	–5,162	–73,651	62,612	15,497	47,115	20,886	
1981		–113,054	–4,082	–5,097	–103,875	86,232	4,960	81,272	21,792	
1982	199	–127,882	–4,965	–6,131	–116,786	96,589	3,593	92,997	36,630	
1983	209	–66,373	–1,196	–5,006	–60,172	88,694	5,845	82,849	16,162	
1984	235	–40,376	–3,131	–5,489	–31,757	117,752	3,140	114,612	16,733	
1985	315	–44,752	–3,858	–2,821	–38,074	146,115	–1,119	147,233	16,478	
1986	301	–111,723	312	–2,022	–110,014	230,009	35,648	194,360	28,590	
1987	365	–79,296	9,149	1,006	–89,450	248,634	45,387	203,247	–9,048	
1988	493	–106,573	–3,912	2,967	–105,628	246,522	39,758	206,764	–19,289	
1989	336	–175,383	–25,293	1,233	–151,323	224,928	8,503	216,425	49,605	
1990	–6,579	–81,234	–2,158	2,317	–81,393	141,571	33,910	107,661	25,208	
1991	–4,479	–64,388	5,763	2,924	–73,075	110,808	17,389	93,420	–45,688	
1992	612	–74,410	3,901	–1,667	–76,644	170,663	40,477	130,186	–48,350	
1993	–88	–200,552	–1,379	–351	–198,822	282,040	71,753	210,287	1,123	
1994	–469	–176,056	5,346	–390	–181,012	305,989	39,583	266,406	–11,220	
1995	372	–352,376	–9,742	–984	–341,650	438,562	109,880	328,682	19,265	
1996	693	–413,923	6,668	–989	–419,602	551,096	126,724	424,372	–20,045	
1997	350	–487,599	–1,010	68	–486,657	706,809	19,036	687,773	–91,188	
1998	704	–359,760	–6,783	–422	–352,555	423,569	–19,903	443,472	139,314	
1999	–3,340	–477,569	8,747	2,750	–489,066	742,479	43,666	698,813	31,286	
2000	837	–606,489	–290	–941	–605,258	1,015,986	37,640	978,346	7	
2001	826	–370,962	–4,911	–486	–365,565	752,806	5,224	747,582	10,701	
2000: I	210	–228,888	–554	–127	–228,207	240,723	22,711	218,012	82,053	7,951
II	206	–110,470	2,020	–570	–111,920	245,787	6,563	239,224	–37,436	–838
III	207	–93,029	–346	114	–92,797	244,933	12,904	232,029	–44,934	–10,675
IV	214	–174,104	–1,410	–358	–172,336	284,544	–4,538	289,082	328	3,566
2001: I	208	–215,815	190	77	–216,082	302,510	4,087	298,423	20,819	7,691
II	207	–80,036	–1,343	–783	–77,910	181,610	–20,831	202,441	–2,547	875
III	206	24,978	–3,559	77	28,460	17,889	16,882	1,007	48,258	–10,286
IV	205	–100,088	–199	143	–100,032	250,797	5,086	245,711	–55,828	1,721
2002: I	208	–25,918	390	133	–26,441	113,496	7,641	105,855	24,668	10,019
II	200	–131,079	–1,843	42	–129,278	204,307	47,252	157,055	54,183	1,256
III *p*	223	23,920	–1,416	172	25,164	148,510	9,319	139,191	–45,612	–14,063

[3] Consists of gold, special drawing rights, foreign currencies, and the U.S. reserve position in the International Monetary Fund (IMF).

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–104.—*U.S. international trade in goods by principal end-use category, 1965–2002*

[Billions of dollars; quarterly data seasonally adjusted]

Year or quarter	Exports							Imports						
			Nonagricultural products							Nonpetroleum products				
	Total	Agricultural products	Total	Industrial supplies and materials	Capital goods except automotive	Automotive	Other	Total	Petroleum and products	Total	Industrial supplies and materials	Capital goods except automotive	Automotive	Other
1965	26.5	6.3	20.2	7.6	8.1	1.9	2.6	21.5	2.0	19.5	9.1	1.5	0.9	8.0
1966	29.3	6.9	22.4	8.2	8.9	2.4	2.9	25.5	2.1	23.4	10.2	2.2	1.8	9.2
1967	30.7	6.5	24.2	8.5	9.9	2.8	3.0	26.9	2.1	24.8	10.0	2.5	2.4	9.9
1968	33.6	6.3	27.3	9.6	11.1	3.5	3.2	33.0	2.4	30.6	12.0	2.8	4.0	11.8
1969	36.4	6.1	30.3	10.3	12.4	3.9	3.7	35.8	2.6	33.2	11.8	3.4	4.9	13.0
1970	42.5	7.4	35.1	12.3	14.7	3.9	4.3	39.9	2.9	36.9	12.4	4.0	5.5	15.0
1971	43.3	7.8	35.5	10.9	15.4	4.7	4.5	45.6	3.7	41.9	13.8	4.3	7.4	16.4
1972	49.4	9.5	39.9	11.9	16.9	5.5	5.6	55.8	4.7	51.1	16.3	5.9	8.7	20.2
1973	71.4	18.0	53.4	17.0	22.0	6.9	7.6	70.5	8.4	62.1	19.6	8.3	10.3	23.9
1974	98.3	22.4	75.9	26.3	30.9	8.6	10.0	103.8	26.6	77.2	27.8	9.8	12.0	27.5
1975	107.1	22.2	84.8	26.8	36.6	10.6	10.8	98.2	27.0	71.2	24.0	10.2	11.7	25.3
1976	114.7	23.4	91.4	28.4	39.1	12.1	11.7	124.2	34.6	89.7	29.8	12.3	16.2	31.4
1977	120.8	24.3	96.5	29.8	39.8	13.4	13.5	151.9	45.0	106.9	35.7	14.0	18.6	38.6
1978[1]	142.1	29.9	112.2	34.2	47.5	15.2	15.3	176.0	42.6	133.4	40.7	19.3	25.0	48.4
1979	184.4	35.5	149.0	52.2	60.2	17.9	18.7	212.0	60.4	151.6	47.5	24.6	26.6	52.8
1980	224.3	42.0	182.2	65.1	76.3	17.4	23.4	249.8	79.5	170.2	53.0	31.6	28.3	57.4
1981	237.0	44.1	193.0	63.6	84.2	19.7	25.5	265.1	78.4	186.7	56.1	37.1	31.0	62.4
1982	211.2	37.3	173.9	57.7	76.5	17.2	22.4	247.6	62.0	185.7	48.6	38.4	34.3	64.3
1983	201.8	37.1	164.7	52.7	71.7	18.5	21.8	268.9	55.1	213.8	53.7	43.7	43.0	73.3
1984	219.9	38.4	181.5	56.8	77.0	22.4	25.3	332.4	58.1	274.4	66.1	60.4	56.5	91.4
1985	215.9	29.6	186.3	54.8	79.3	24.9	27.2	338.1	51.4	286.7	62.6	61.3	64.9	97.9
1986	223.3	27.2	196.2	59.4	82.8	25.1	28.9	368.4	34.3	334.1	69.9	72.0	78.1	114.2
1987	250.2	29.8	220.4	63.7	92.7	27.6	36.4	409.8	42.9	366.8	70.8	85.1	85.2	125.7
1988	320.2	38.8	281.4	82.6	119.1	33.4	46.3	447.2	39.6	407.6	83.1	102.2	87.9	134.4
1989[1]	359.9	41.1	318.8	90.4	136.9	35.0	56.4	477.7	50.9	426.8	84.6	112.4	87.2	142.5
1990	387.4	40.2	347.2	97.0	153.1	36.1	61.1	498.4	62.3	436.1	83.0	116.3	88.4	148.5
1991	414.1	40.1	374.0	101.6	166.7	39.7	66.0	491.0	51.7	439.3	81.3	121.0	85.7	151.4
1992	439.6	44.1	395.5	101.7	176.5	46.7	70.6	536.5	51.6	484.9	89.1	134.6	91.7	169.5
1993	456.9	43.6	413.3	105.1	182.9	51.3	74.1	589.4	51.5	537.9	100.7	152.9	102.4	181.9
1994	502.9	47.1	455.8	112.6	205.8	57.3	80.0	668.7	51.3	617.4	113.7	185.0	118.1	200.6
1995	575.2	57.3	518.0	135.5	234.5	61.3	86.7	749.4	56.0	693.3	128.8	222.2	123.6	218.7
1996	612.1	61.5	550.6	137.9	254.0	64.2	94.4	803.1	72.7	730.4	136.8	228.5	128.7	236.4
1997	678.4	58.5	619.9	147.7	295.9	73.3	103.0	876.5	71.7	804.7	145.5	253.4	139.5	266.3
1998	670.4	53.2	617.3	138.5	299.9	72.4	106.5	917.1	50.6	866.5	152.1	269.5	148.7	296.2
1999	684.0	49.7	634.3	140.3	311.3	75.3	107.5	1,030.0	67.8	962.2	156.3	295.7	179.0	331.2
2000	772.0	52.8	719.2	163.9	357.0	80.4	117.9	1,224.4	120.2	1,104.2	181.9	347.0	195.9	379.4
2001	718.8	54.9	663.9	150.5	321.7	75.4	116.2	1,145,9	103.6	1,042.3	172.5	298.0	189.8	382.0
2000: I	184.5	12.9	171.6	40.2	82.0	20.7	28.6	290.9	27.0	264.0	44.3	80.2	49.3	90.2
II	191.4	13.1	178.3	39.7	89.2	20.2	29.3	303.6	29.5	274.1	44.1	86.8	49.0	94.2
III	199.6	13.6	186.1	41.8	94.0	20.0	30.2	314.8	32.0	282.8	46.1	90.4	49.5	96.8
IV	196.5	13.2	183.2	42.2	91.7	19.5	29.9	315.1	31.8	283.3	47.4	89.6	48.1	98.3
2001: I	193.3	13.6	179.6	40.6	90.7	18.3	30.0	306.3	29.2	277.2	48.8	84.6	47.1	96.7
II	184.8	13.6	171.2	39.1	82.7	19.3	30.1	292.6	28.5	264.0	44.5	75.4	47.9	96.3
III	173.3	13.6	159.6	35.8	76.2	19.3	28.4	279.0	25.6	253.4	40.6	69.9	47.9	94.9
IV	167.4	14.0	153.4	34.9	72.2	18.6	27.7	268.0	20.2	247.8	38.7	68.1	46.9	94.1
2002: I	164.6	13.8	150.9	34.4	71.1	18.5	26.9	271.1	19.2	251.9	38.7	69.3	47.6	96.3
II	172.4	13.5	158.9	37.4	73.5	20.1	27.9	294.9	27.0	267.9	41.5	72.1	51.9	102.4
III *p*	175.7	13.4	162.3	37.8	75.4	20.6	28.4	298.9	27.7	271.2	42.5	71.5	52.7	104.5

[1] End-use commodity classifications beginning 1978 and 1989 are not strictly comparable with data for earlier periods. See *Survey of Current Business*, June 1988 and July 2001.

Note.—Data are on a balance of payments basis and exclude military.

In June 1990, end-use categories for goods exports were redefined to include reexports; beginning with data for 1978, reexports (exports of foreign goods) are assigned to detailed end-use categories in the same manner as exports of domestic goods.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–105.—*U.S. international trade in goods by area, 1993–2002*

[Billions of dollars]

Item	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002 first 3 quarters at annual rate[1]
EXPORTS	456.9	502.9	575.2	612.1	678.4	670.4	684.0	772.0	718.8	683.7
Industrial countries	270.5	295.7	338.5	354.3	385.4	389.6	401.5	438.3	406.2	381.9
Canada	100.7	114.7	127.4	134.3	151.9	156.7	166.7	178.9	163.3	161.3
Japan	47.0	52.4	63.6	66.5	64.4	56.5	56.1	63.5	55.9	50.6
Western Europe[2]	111.3	115.4	132.5	136.9	152.4	159.3	162.7	178.7	171.4	153.1
Australia, New Zealand, and South Africa	11.5	13.2	15.0	16.6	16.7	17.1	16.0	17.2	15.6	17.0
Australia	8.1	9.6	10.5	11.7	11.7	11.6	11.5	12.2	10.6	12.7
Other countries, except Eastern Europe	180.0	201.7	231.0	250.5	285.1	273.3	276.9	327.8	305.8	295.4
OPEC[3]	18.3	16.3	17.4	19.2	23.7	22.9	18.3	17.6	19.5	18.4
Other[4]	161.7	185.4	213.6	231.3	261.4	250.3	258.6	310.2	286.3	277.1
Eastern Europe[2]	6.2	5.3	5.7	7.3	7.9	7.4	5.6	5.9	6.8	6.4
International organizations and unallocated	.2	.1	.....	.....	.....	.1	.....	.....	.....	.....
IMPORTS	589.4	668.7	749.4	803.1	876.5	917.1	1,030.0	1,224.4	1,145.9	1,153.2
Industrial countries	347.7	389.9	425.2	442.9	476.7	502.0	557.3	636.3	599.4	588.4
Canada	113.1	131.1	146.9	158.5	170.1	175.8	201.3	233.7	218.7	214.4
Japan	107.2	119.1	123.5	115.2	121.7	121.9	130.9	146.5	126.5	119.6
Western Europe[2]	121.1	133.0	147.7	161.6	176.0	194.2	214.9	243.4	241.0	241.7
Australia, New Zealand, and South Africa	6.4	6.7	7.0	7.6	9.0	10.1	10.2	12.7	13.1	12.8
Australia	3.3	3.2	3.4	3.8	4.9	5.4	5.3	6.4	6.5	6.5
Other countries, except Eastern Europe	238.1	273.0	317.2	353.2	391.3	404.3	460.9	572.0	532.2	550.7
OPEC[3]	32.6	31.7	34.3	42.7	44.0	33.7	42.0	67.0	59.8	52.0
Other[4]	205.5	241.3	282.9	310.5	347.3	370.6	419.0	505.0	472.5	498.7
Eastern Europe[2]	3.5	5.8	7.0	7.0	8.5	10.9	11.8	16.1	14.3	14.0
International organizations and unallocated	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
BALANCE (excess of exports +)	–132.5	–165.8	–174.2	–191.0	–198.1	–246.7	–346.0	–452.4	–427.2	–469.4
Industrial countries	–77.2	–94.2	–86.7	–88.6	–91.3	–112.3	–155.7	–198.0	–193.2	–206.5
Canada	–12.4	–16.5	–19.5	–24.3	–18.2	–19.1	–34.6	–54.8	–55.4	–53.1
Japan	–60.2	–66.7	–59.9	–48.7	–57.3	–65.4	–74.8	–83.0	–70.6	–69.0
Western Europe[2]	–9.8	–17.5	–15.2	–24.7	–23.6	–34.9	–52.1	–64.7	–69.6	–88.6
Australia, New Zealand, and South Africa	5.2	6.6	7.9	9.0	7.7	7.0	5.8	4.5	2.5	4.2
Australia	4.8	6.4	7.1	7.9	6.9	6.2	6.3	5.8	4.1	6.2
Other countries, except Eastern Europe	–58.1	–71.2	–86.2	–102.6	–106.2	–131.0	–184.0	–244.2	–226.5	–255.3
OPEC[3]	–14.3	–15.4	–16.9	–23.5	–20.3	–10.7	–23.6	–49.4	–40.3	–33.7
Other[4]	–43.8	–55.9	–69.3	–79.2	–85.9	–120.2	–160.4	–194.8	–186.2	–221.6
Eastern Europe[2]	2.7	–.5	–1.3	.3	–.6	–3.5	–6.3	–10.2	–7.5	–7.6
International organizations and unallocated	.2	.1	.....	.....	.....	.1	.....	.....	.....	.....

[1] Preliminary; seasonally adjusted.

[2] The former German Democratic Republic (East Germany) included in Western Europe beginning fourth quarter 1990 and in Eastern Europe prior to that time.

[3] Organization of Petroleum Exporting Countries, consisting of Algeria, Ecuador (through 1992), Gabon (through 1994), Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

[4] Latin America, other Western Hemisphere, and other countries in Asia and Africa, less members of OPEC.

Note.—Data are on a balance of payments basis and exclude military.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–106.—*U.S. international trade in goods on balance of payments (BOP) and Census basis, and trade in services on BOP basis, 1978–2002*

[Billions of dollars; monthly data seasonally adjusted]

Year or month	Goods: Exports (f.a.s. value) [1] [2]							Goods: Imports (customs value, except as noted) [5]							Services (BOP basis)	
		Census basis (by end-use category)							Census basis (by end-use category)							
	Total, BOP basis [3]	Total, Census basis [3] [4]	Foods, feeds, and beverages	Industrial supplies and materials	Capital goods except automotive	Automotive vehicles, parts, and engines	Consumer goods (nonfood) except automotive	Total, BOP basis	Total, Census basis [4]	Foods, feeds, and beverages	Industrial supplies and materials	Capital goods except automotive	Automotive vehicles, parts, and engines	Consumer goods (nonfood) except automotive	Exports	Imports
	F.a.s. value [2]							F.a.s. value [2]								
1978	142.1	145.8	.....	.....	.....	.....	.....	176.0	176.1	.....	.....	.....	.....	.....	36.4	32.2
1979	184.4	186.4	.....	.....	.....	.....	.....	212.0	210.3	.....	.....	.....	.....	.....	39.7	36.7
1980	224.3	225.6	.....	.....	.....	.....	.....	249.8	245.3	.....	.....	.....	.....	.....	47.6	41.5
								Customs value								
1981	237.0	238.7	.....	.....	.....	.....	.....	265.1	261.0	.....	.....	.....	.....	.....	57.4	45.5
1982	211.2	216.4	31.3	61.7	72.7	15.7	14.3	247.6	244.0	17.1	112.0	35.4	33.3	39.7	64.1	51.7
1983	201.8	205.6	30.9	56.7	67.2	16.8	13.4	268.9	258.0	18.2	107.0	40.9	40.8	44.9	64.3	55.0
1984	219.9	224.0	31.5	61.7	72.0	20.6	13.3	332.4	[6] 330.7	21.0	123.7	59.8	53.5	60.0	71.2	67.7
1985	215.9	[7] 218.8	24.0	58.5	73.9	22.9	12.6	338.1	[6] 336.5	21.9	113.9	65.1	66.8	68.3	73.2	72.9
1986	223.3	[7] 227.2	22.3	57.3	75.8	21.7	14.2	368.4	365.4	24.4	101.3	71.8	78.2	79.4	86.7	80.1
1987	250.2	254.1	24.3	66.7	86.2	24.6	17.7	409.8	406.2	24.8	111.0	84.5	85.2	88.7	98.7	90.8
1988	320.2	322.4	32.3	85.1	109.2	29.3	23.1	447.2	441.0	24.8	118.3	101.4	87.7	95.9	110.9	98.5
1989	359.9	363.8	37.2	99.3	138.8	34.8	36.4	477.7	473.2	25.1	132.3	113.3	86.1	102.9	127.1	102.5
1990	387.4	393.6	35.1	104.4	152.7	37.4	43.3	498.4	495.3	26.6	143.2	116.4	87.3	105.7	147.8	117.7
1991	414.1	421.7	35.7	109.7	166.7	40.0	45.9	491.0	488.5	26.5	131.6	120.7	85.7	108.0	164.3	118.5
1992	439.6	448.2	40.3	109.1	175.9	47.0	51.4	536.5	532.7	27.6	138.6	134.3	91.8	122.7	176.9	116.5
1993	456.9	465.1	40.6	111.8	181.7	52.4	54.7	589.4	580.7	27.9	145.6	152.4	102.4	134.0	185.9	122.3
1994	502.9	512.6	42.0	121.4	205.0	57.8	60.0	668.7	663.3	31.0	162.1	184.4	118.3	146.3	201.0	131.9
1995	575.2	584.7	50.5	146.2	233.0	61.8	64.4	749.4	743.5	33.2	181.8	221.4	123.8	159.9	219.2	141.4
1996	612.1	625.1	55.5	147.7	253.0	65.0	70.1	803.1	795.3	35.7	204.5	228.1	128.9	172.0	240.0	150.9
1997	678.4	689.2	51.5	158.2	294.5	74.0	77.4	876.5	869.7	39.7	213.8	253.3	139.8	193.8	256.6	166.3
1998	670.4	682.1	46.4	148.3	299.4	72.4	80.3	917.1	911.9	41.2	200.1	269.5	148.7	217.0	262.3	182.5
1999	684.0	695.8	46.0	147.5	310.8	75.3	80.9	1,030.0	1,024.6	43.6	221.4	295.7	179.0	241.9	273.2	189.4
2000	772.0	781.9	47.9	172.6	356.9	80.4	89.4	1,224.4	1,218.0	46.0	299.0	347.0	195.9	281.8	292.2	218.5
2001	718.8	729.1	49.4	160.1	321.7	75.4	88.3	1,145.9	1,141.0	46.6	273.9	298.0	189.8	284.3	279.3	210.4
2001: Jan	64.8	65.7	4.0	14.2	30.7	6.1	7.7	104.7	104.1	3.9	27.0	28.7	15.9	24.4	24.4	19.2
Feb	64.9	65.7	4.2	14.4	30.7	6.0	7.7	99.7	99.1	3.8	24.9	27.8	15.5	23.2	24.1	18.8
Mar	63.5	64.3	4.3	14.2	29.2	6.2	7.7	101.9	101.4	3.8	25.0	28.1	15.7	24.9	24.2	18.9
Apr	61.9	62.6	4.2	14.1	27.7	6.3	7.6	99.2	98.6	3.8	24.5	25.9	16.0	24.4	24.3	19.5
May	62.3	63.4	4.1	14.0	28.1	6.4	7.8	97.0	96.3	3.8	24.1	24.8	15.8	23.6	23.8	19.2
June	60.6	61.5	4.0	13.5	26.9	6.6	7.3	96.3	95.7	3.9	23.2	24.7	16.1	23.8	23.8	18.8
July	58.6	59.6	4.0	12.9	26.1	6.4	7.3	94.2	94.0	4.0	22.4	23.9	16.0	23.6	23.6	18.8
Aug	58.9	59.7	4.2	13.1	25.7	6.5	7.1	93.4	93.2	3.9	22.1	23.6	16.2	23.4	24.2	19.1
Sept	55.7	56.6	4.0	12.2	24.3	6.4	7.0	91.4	91.2	4.0	21.7	22.5	15.7	23.4	21.3	5.1
Oct	56.4	57.3	4.1	12.6	24.4	6.3	7.1	91.4	91.2	4.0	21.0	22.8	15.6	23.8	21.2	17.0
Nov	56.0	56.9	4.2	12.5	24.3	6.3	6.9	90.1	89.9	4.0	19.6	22.8	15.8	23.6	21.9	17.7
Dec	55.0	55.9	4.1	12.4	23.5	6.0	7.1	86.5	86.4	3.8	18.3	22.5	15.5	22.2	22.5	18.2
2002: Jan	55.0	55.7	4.2	12.3	23.7	6.0	7.0	88.5	88.2	3.9	18.9	22.9	15.3	23.2	22.5	18.9
Feb	54.7	55.5	4.3	12.2	23.3	6.2	6.9	91.0	90.8	4.0	19.0	23.1	16.4	24.4	22.7	19.4
Mar	55.0	56.0	3.9	12.3	24.1	6.2	6.7	91.6	91.3	4.0	19.9	23.4	16.0	23.7	23.4	19.4
Apr	56.8	57.7	3.9	13.1	24.1	6.7	7.1	97.0	96.7	4.1	22.8	23.8	17.0	25.0	23.7	19.3
May	57.3	58.3	4.0	13.3	24.3	6.8	6.9	99.0	98.7	4.1	23.1	24.1	17.7	25.6	24.2	19.4
June	58.2	59.1	4.3	13.3	25.1	6.7	7.1	98.9	98.6	4.1	22.5	24.2	17.2	26.1	24.2	20.2
July	59.1	60.0	4.3	13.2	25.3	7.1	7.3	98.1	97.9	4.2	22.8	24.0	17.2	25.6	24.2	20.4
Aug	58.3	59.3	4.0	13.4	25.0	6.8	7.1	100.6	100.3	4.2	23.8	23.8	17.6	26.9	24.9	20.6
Sept	58.3	59.1	4.0	13.3	25.2	6.7	7.1	99.6	99.3	4.1	23.4	23.6	17.7	26.3	24.6	20.4
Oct	57.4	58.3	3.9	13.1	24.6	6.6	7.2	96.9	96.6	4.0	24.5	22.2	16.8	25.0	24.9	20.6
Nov *p*	58.0	58.9	4.3	13.6	24.5	6.3	7.3	102.3	102.0	4.4	24.1	24.3	17.5	27.8	25.2	21.0

[1] Department of Defense shipments of grant-aid military supplies and equipment under the Military Assistance Program are excluded from total exports through 1985 and included beginning 1986.

[2] F.a.s. (free alongside ship) value basis at U.S. port of exportation for exports and at foreign port of exportation for imports.

[3] Beginning 1989, exports have been adjusted for undocumented exports to Canada and are included in the appropriate end-use categories. For prior years, only total exports include this adjustment.

[4] Total includes "other" exports or imports, not shown separately.

[5] Total arrivals of imported goods other than intransit shipments.

[6] Total includes revisions not reflected in detail.

[7] Total exports are on a revised statistical month basis; end-use categories are on a statistical month basis.

Note.—Goods on a Census basis are adjusted to a BOP basis by the Bureau of Economic Analysis, in line with concepts and definitions used to prepare international and national accounts. The adjustments are necessary to supplement coverage of Census data, to eliminate duplication of transactions recorded elsewhere in international accounts, and to value transactions according to a standard definition.

Data include trade of the U.S. Virgin Islands, Puerto Rico, and U.S. Foreign Trade Zones.

Source: Department of Commerce (Bureau of the Census and Bureau of Economic Analysis).

TABLE B–107.—*International investment position of the United States at year-end, 1993–2001*

[Billions of dollars]

Type of investment	1993	1994	1995	1996	1997	1998	1999	2000	2001 [p]
NET INTERNATIONAL INVESTMENT POSITION OF THE UNITED STATES:									
With direct investment at current cost	–307.0	–311.9	–496.0	–521.5	–833.2	–918.3	–784.1	–1,350.8	–1,948.1
With direct investment at market value	–144.3	–123.7	–343.3	–386.5	–835.2	–1,094.2	–1,053.6	–1,583.2	–2,309.1
U.S.-OWNED ASSETS ABROAD:									
With direct investment at current cost	2,753.6	2,998.6	3,452.0	4,012.7	4,567.9	5,091.1	5,959.0	6,191.9	6,196.1
With direct investment at market value	3,091.4	3,326.7	3,930.3	4,631.3	5,379.1	6,174.5	7,387.0	7,350.9	6,862.9
U.S. official reserve assets	164.9	163.4	176.1	160.7	134.8	146.0	136.4	128.4	130.0
Gold [1]	102.6	100.1	101.3	96.7	75.9	75.3	76.0	71.8	72.3
Special drawing rights	9.0	10.0	11.0	10.3	10.0	10.6	10.3	10.5	10.8
Reserve position in the International Monetary Fund	11.8	12.0	14.6	15.4	18.1	24.1	18.0	14.8	17.9
Foreign currencies	41.5	41.2	49.1	38.3	30.8	36.0	32.2	31.2	29.0
U.S. Government assets, other than official reserves	83.4	83.9	85.1	86.1	86.2	86.8	84.2	85.2	85.7
U.S. credits and other long-term assets	81.4	81.9	82.8	84.0	84.1	84.9	81.7	82.6	83.1
Repayable in dollars	80.7	81.4	82.4	83.6	83.8	84.5	81.4	82.3	82.9
Other	.8	.5	.4	.4	.4	.3	.3	.3	.3
U.S. foreign currency holdings and U.S. short-term assets	1.9	2.0	2.3	2.1	2.1	1.9	2.6	2.6	2.5
U.S. private assets:									
With direct investment at current cost	2,505.3	2,751.3	3,190.9	3,765.9	4,346.9	4,858.3	5,738.4	5,978.4	5,980.5
With direct investment at market value	2,843.1	3,079.3	3,669.1	4,384.4	5,158.1	5,941.7	7,166.3	7,137.3	6,647.3
Direct investment abroad:									
At current cost	723.5	786.6	885.5	989.8	1,068.1	1,196.2	1,377.3	1,515.3	1,623.1
At market value	1,061.3	1,114.6	1,363.8	1,608.3	1,879.3	2,279.6	2,805.2	2,674.2	2,289.9
Foreign securities	853.5	948.7	1,169.6	1,468.0	1,751.2	2,052.9	2,583.3	2,389.4	2,110.5
Bonds	309.7	321.2	392.8	465.1	543.4	576.7	556.7	557.0	545.8
Corporate stocks	543.9	627.5	776.8	1,002.9	1,207.8	1,476.2	2,026.6	1,832.4	1,564.7
U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	242.0	323.0	367.6	450.6	545.5	588.3	677.5	821.6	830.1
U.S. claims reported by U.S. banks, not included elsewhere	686.2	693.1	768.1	857.5	982.1	1,020.8	1,100.3	1,252.1	1,416.8
FOREIGN-OWNED ASSETS IN THE UNITED STATES:									
With direct investment at current cost	3,060.6	3,310.5	3,947.9	4,534.3	5,401.1	6,009.4	6,743.1	7,542.7	8,144.3
With direct investment at market value	3,235.7	3,450.4	4,273.6	5,017.8	6,214.3	7,268.6	8,440.5	8,934.0	9,172.1
Foreign official assets in the United States	509.4	535.2	682.9	820.8	873.7	896.2	945.6	1,008.9	1,021.7
U.S. Government securities	381.7	407.2	507.5	631.1	648.2	669.8	693.8	749.9	798.8
U.S. Treasury securities	373.1	396.9	490.0	606.4	615.1	622.9	617.7	625.2	650.7
Other	8.6	10.3	17.5	24.7	33.1	46.8	76.1	124.7	148.1
Other U.S. Government liabilities	22.1	23.7	23.6	22.6	21.7	18.4	15.6	13.7	11.9
U.S. liabilities reported by U.S. banks, not included elsewhere	69.7	73.4	107.4	113.1	135.4	125.9	138.8	153.4	123.1
Other foreign official assets	35.9	31.0	44.4	54.0	68.4	82.1	97.3	91.8	87.9
Other foreign assets in the United States:									
With direct investment at current cost	2,551.2	2,775.3	3,265.1	3,713.5	4,527.3	5,113.2	5,797.5	6,533.8	7,122.5
With direct investment at market value	2,726.3	2,915.2	3,590.7	4,197.0	5,340.6	6,372.4	7,494.9	7,925.1	8,150.3
Direct investment in the United States:									
At current cost	593.3	618.0	680.1	745.6	824.1	919.8	1,100.8	1,374.8	1,498.9
At market value	768.4	757.9	1,005.7	1,229.1	1,637.4	2,179.0	2,798.2	2,766.0	2,526.7
U.S. Treasury securities	221.5	235.7	330.2	440.8	550.6	562.0	462.8	401.0	388.8
U.S. securities other than U.S. Treasury securities	696.4	739.7	969.8	1,165.1	1,512.7	1,903.4	2,351.3	2,623.6	2,856.7
Corporate and other bonds	355.8	368.1	459.1	539.3	618.8	724.6	825.2	1,076.0	1,392.6
Corporate stocks	340.6	371.6	510.8	625.8	893.9	1,178.8	1,526.1	1,547.6	1,464.0
U.S. currency	133.7	157.2	169.5	186.8	211.6	228.3	250.7	251.8	275.6
U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	229.0	239.8	300.4	346.8	459.4	485.7	564.9	729.3	804.4
U.S. liabilities reported by U.S. banks, not included elsewhere	677.1	784.9	815.0	828.2	968.8	1,014.0	1,067.2	1,153.4	1,298.2

[1] Valued at market price.

Note.—For details regarding these data, see *Survey of Current Business*, July 2002.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–108.—*Industrial production and consumer prices, major industrial countries, 1979–2002*

Year or quarter	United States [1]	Canada	Japan	European Union [2]	France	Germany [3]	Italy	United Kingdom
	Industrial production (Index, 1997=100) [4]							
1979	65.3	68.6	63.1	76.4	82.3	82.1	71.9	80.1
1980	63.5	66.5	66.0	76.4	81.5	82.1	75.8	74.9
1981	64.3	66.8	66.7	75.1	80.6	80.6	74.2	72.5
1982	60.9	61.7	66.9	74.0	80.0	78.0	71.9	73.9
1983	62.5	65.1	69.0	74.8	80.1	78.4	70.2	76.6
1984	68.1	73.2	75.4	76.7	81.4	80.8	72.5	76.7
1985	68.8	76.9	78.2	79.0	82.5	84.8	72.6	80.9
1986	69.5	76.3	78.1	80.7	83.0	86.3	75.5	82.8
1987	72.8	79.5	80.8	82.3	84.1	86.6	77.6	86.1
1988	76.3	84.8	88.4	86.0	87.9	89.8	82.9	90.3
1989	77.0	84.6	93.5	89.5	91.2	94.2	86.1	92.2
1990	77.6	82.2	97.5	92.6	94.0	99.0	91.6	91.9
1991	76.3	79.3	99.2	92.8	93.8	102.5	91.2	88.9
1992	78.3	80.3	93.6	91.6	92.8	100.0	90.0	89.2
1993	80.9	84.2	90.4	88.3	89.3	92.1	88.1	91.1
1994	85.2	89.4	91.5	92.6	93.2	95.0	93.5	96.0
1995	89.3	93.5	94.4	95.8	95.4	95.8	98.2	97.7
1996	93.2	94.7	96.6	96.3	96.3	96.5	96.4	98.9
1997	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1998	105.6	103.5	93.5	103.7	105.2	104.2	101.1	101.0
1999	110.1	108.8	94.1	105.7	107.3	105.7	101.1	101.8
2000	115.3	115.0	99.5	110.7	111.0	112.3	105.9	103.4
2001	111.2	111.0	92.3	110.6	112.0	112.9	104.6	101.2
2002 *P*	110.5	.....	.....	.....	.....	.....	.....	.....
2001: I	113.6	113.2	97.7	112.7	112.5	115.5	107.2	103.3
II	111.8	112.6	94.2	111.0	111.9	113.3	105.6	101.9
III	110.5	109.8	90.2	110.7	113.0	112.7	104.8	100.9
IV	108.9	108.6	87.3	108.8	110.7	110.1	103.2	98.6
2002: I	109.3	111.1	87.9	109.3	111.0	110.9	103.3	97.5
II	110.5	112.5	91.0	109.9	111.6	111.3	102.6	97.7
III	111.4	113.8	93.1	109.9	111.1	112.2	103.1	98.1
IV *P*	110.7	.....	.....	.....	.....	.....	.....	.....
	Consumer prices (Index, 1982-84=100)							
1979	72.6	69.2	84.4	65.7	63.6	82.3	52.8	66.6
1980	82.4	76.1	90.9	74.5	72.2	86.7	63.9	78.5
1981	90.9	85.6	95.5	83.4	81.8	92.2	75.5	87.9
1982	96.5	94.9	98.0	92.4	91.7	97.0	87.8	95.4
1983	99.6	100.4	99.9	100.1	100.3	100.3	100.8	99.8
1984	103.9	104.7	102.1	107.4	108.0	102.7	111.4	104.8
1985	107.6	109.0	104.2	113.9	114.3	104.8	121.7	111.1
1986	109.6	113.5	104.9	118.2	117.2	104.6	128.9	114.9
1987	113.6	118.4	104.9	122.1	121.1	104.9	135.1	119.7
1988	118.3	123.2	105.6	126.5	124.3	106.3	141.9	125.6
1989	124.0	129.3	108.0	133.0	128.7	109.2	150.7	135.4
1990	130.7	135.5	111.4	140.9	132.9	112.2	160.4	148.2
1991	136.2	143.1	115.0	148.2	137.2	116.3	170.5	156.9
1992	140.3	145.3	117.0	154.9	140.4	122.2	179.5	162.7
1993	144.5	147.9	118.6	160.5	143.4	127.6	187.7	165.3
1994	148.2	148.2	119.3	165.4	145.8	131.1	195.3	169.3
1995	152.4	151.4	119.2	170.6	148.4	133.4	205.6	175.2
1996	156.9	153.8	119.3	174.8	151.4	135.2	213.8	179.4
1997	160.5	156.3	121.5	178.4	153.2	137.8	218.2	185.1
1998	163.0	157.8	122.2	181.6	154.2	139.1	222.5	191.4
1999	166.6	160.5	121.8	183.9	155.0	139.9	226.2	194.3
2000	172.2	164.9	121.0	188.5	157.6	142.6	231.9	200.1
2001	177.1	169.1	120.1	193.2	160.2	146.2	238.3	203.6
2002 *P*	179.9	172.9	.....	.....	163.3	148.0	244.3	207.0
2001: I	175.7	167.3	120.4	191.2	158.6	145.1	236.3	201.8
II	177.5	170.1	120.3	193.6	160.6	146.6	238.3	204.3
III	177.8	170.3	120.0	194.0	160.8	146.8	239.1	204.4
IV	177.3	168.8	119.6	194.1	160.9	146.2	239.9	204.2
2002: I	177.9	169.9	118.7	195.5	162.0	147.9	241.9	204.3
II	179.8	172.4	119.2	197.3	163.2	148.3	243.7	206.8
III	180.6	174.2	119.0	197.7	163.6	148.3	244.9	207.5
IV *P*	181.2	175.2	.....	.....	164.3	147.9	246.5	209.4

[1] See Note, Table B–51 for information on U.S. industrial production series.
[2] Consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.
[3] Prior to 1991 data are for West Germany only.
[4] All data exclude construction. Quarterly data are seasonally adjusted.

Sources: National sources as reported by Department of Commerce (International Trade Administration, Office of Trade and Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Board of Governors of the Federal Reserve System.

TABLE B–109.—*Civilian unemployment rate, and hourly compensation, major industrial countries, 1979–2002*

[Quarterly data seasonally adjusted]

Year or quarter	United States	Canada	Japan	France	Germany [1]	Italy	United Kingdom
	Civilian unemployment rate (Percent) [2]						
1979	5.8	7.3	2.1	6.1	2.9	4.4	5.4
1980	7.1	7.3	2.0	6.5	2.8	4.4	7.0
1981	7.6	7.3	2.2	7.6	4.0	4.9	10.5
1982	9.7	10.6	2.4	8.3	5.6	5.4	11.3
1983	9.6	11.5	2.7	8.6	[3] 6.9	5.9	11.8
1984	7.5	10.9	2.8	10.0	7.1	5.9	11.7
1985	7.2	10.2	2.6	10.5	7.2	6.0	11.2
1986	7.0	9.2	2.8	10.6	6.6	[3] 7.5	11.2
1987	6.2	8.4	2.9	10.8	6.3	7.9	10.3
1988	5.5	7.3	2.5	10.3	6.3	7.9	8.6
1989	5.3	7.1	2.3	9.6	5.7	7.8	7.2
1990	[3] 5.6	7.7	2.1	9.1	5.0	7.0	6.9
1991	6.8	9.8	2.1	9.5	[3] 5.6	[3] 6.9	8.8
1992	7.5	10.6	2.2	[3] 9.9	6.7	7.3	10.1
1993	6.9	10.8	2.5	11.3	8.0	[3] 10.2	10.4
1994	[3] 6.1	9.5	2.9	11.8	8.5	11.2	9.5
1995	5.6	8.6	3.2	11.3	8.2	11.8	8.7
1996	5.4	8.8	3.4	11.9	9.0	11.7	8.1
1997	4.9	8.4	3.4	11.8	9.9	11.9	7.0
1998	4.5	7.7	4.1	11.3	9.3	12.0	6.3
1999	4.2	7.0	4.7	10.6	8.6	11.5	6.0
2000	4.0	6.1	4.8	9.1	8.1	10.7	5.5
2001	4.8	6.4	5.1	8.5	8.0	9.6	5.1
2002	5.8	.....	.....	.....	.....	.....	.....
2001: I	4.2	6.2	4.8	8.5	7.9	10.0	5.1
II	4.5	6.3	4.9	8.4	8.0	9.7	5.0
III	4.8	6.5	5.2	8.5	8.0	9.5	5.1
IV	5.6	6.9	5.5	8.6	8.1	9.3	5.2
2002: I	5.6	7.1	5.3	8.6	8.2	9.2	5.1
II	5.9	6.9	5.4	8.7	8.4	9.1	5.2
III	5.7	7.0	5.5	8.8	8.5	9.1	5.3
IV	5.9	.....	.....	.....	.....	.....	.....
	Manufacturing hourly compensation in U.S. dollars (Index, 1992=100)[4]						
1979	49.6	44.0	32.0	44.2	42.0	38.6	31.9
1980	55.6	49.1	32.7	51.3	46.1	43.8	42.2
1981	61.1	54.2	36.0	46.1	39.3	39.1	42.8
1982	67.0	59.7	33.4	45.3	38.8	38.4	40.8
1983	68.8	64.0	36.0	43.2	38.6	39.4	38.1
1984	71.2	64.4	37.1	40.9	36.3	39.1	36.4
1985	75.1	63.6	38.5	43.0	37.2	40.7	38.9
1986	78.5	63.5	57.2	58.1	52.4	54.4	47.9
1987	80.7	68.1	68.2	69.5	66.0	66.0	59.7
1988	84.0	76.2	78.2	72.8	70.4	70.6	69.3
1989	86.6	84.3	77.1	71.6	69.1	72.7	68.4
1990	90.8	91.5	79.1	88.3	86.4	90.1	83.7
1991	95.6	100.1	90.8	90.4	86.0	93.5	93.9
1992	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1993	102.7	95.5	117.3	95.8	100.4	82.8	89.0
1994	105.6	91.7	130.1	101.1	107.6	81.7	92.5
1995	107.9	93.3	146.2	116.8	128.2	84.2	96.4
1996	109.4	94.8	127.2	116.0	127.0	95.0	96.7
1997	111.5	95.3	118.3	101.5	112.2	88.9	105.6
1998	117.4	90.0	112.0	101.0	112.3	86.7	113.1
1999	122.1	91.4	128.4	100.0	110.0	84.5	118.7
2000	131.1	92.6	134.7	90.0	98.4	75.1	116.0
2001	133.1	91.9	119.9	91.5	98.4	75.6	114.5

[1] Prior to 1991 data are for West Germany only.

[2] Civilian unemployment rates, approximating U.S. concepts. Quarterly data for France and Germany should be viewed as less precise indicators of unemployment under U.S. concepts than the annual data.

[3] There are breaks in the series for Germany (1983 and 1991), France (1992), Italy (1986, 1991, and 1993), and United States (1990 and 1994). Also, for Italy, data reflect new estimation procedures and updated population data introduced in July 1999. For details on break in series in 1990 and 1994 for United States, see footnote 5, Table B-35. For details on break in series for other countries, see U.S. Department of Labor *Comparative Civilian Labor Force Statistics, Ten Countries: 1959–2001*, March 2002.

[4] Hourly compensation in manufacturing, U.S. dollar basis. Data relate to all employed persons (employees and self-employed workers) in the United States, Canada, Japan, France, Germany, and United Kingdom, and to employees (wage and salary earners) in Italy. For Canada, France and United Kingdom, compensation adjusted to include changes in employment taxes that are not compensation to employees, but are labor costs to employers.

Data are as available as of August 2002.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–110.—*Foreign exchange rates, 1982–2002*

[Foreign currency units per U.S. dollar, except as noted; certified noon buying rates in New York]

Period	Canada (dollar)	EMU Members (euro)[1,2]	Belgium (franc)[1]	France (franc)[1]	Germany (mark)[1]	Italy (lira)[1]	Netherlands (guilder)[1]	Japan (yen)	Sweden (krona)	Switzerland (franc)	United Kingdom (pound)[2]
March 1973	0.9967	.....	39.408	4.5156	2.8132	568.17	2.8714	261.90	4.4294	3.2171	2.4724
1982	1.2344	.....	45.781	6.5794	2.4281	1354.00	2.6719	249.06	6.2839	2.0319	1.7480
1983	1.2325	.....	51.122	7.6204	2.5539	1519.32	2.8544	237.55	7.6718	2.1007	1.5159
1984	1.2952	.....	57.752	8.7356	2.8455	1756.11	3.2085	237.46	8.2708	2.3500	1.3368
1985	1.3659	.....	59.337	8.9800	2.9420	1908.88	3.3185	238.47	8.6032	2.4552	1.2974
1986	1.3896	.....	44.664	6.9257	2.1705	1491.16	2.4485	168.35	7.1273	1.7979	1.4677
1987	1.3259	.....	37.358	6.0122	1.7981	1297.03	2.0264	144.60	6.3469	1.4918	1.6398
1988	1.2306	.....	36.785	5.9595	1.7570	1302.39	1.9778	128.17	6.1370	1.4643	1.7813
1989	1.1842	.....	39.409	6.3802	1.8808	1372.28	2.1219	138.07	6.4559	1.6369	1.6382
1990	1.1668	.....	33.424	5.4467	1.6166	1198.27	1.8215	145.00	5.9231	1.3901	1.7841
1991	1.1460	.....	34.195	5.6468	1.6610	1241.28	1.8720	134.59	6.0521	1.4356	1.7674
1992	1.2085	.....	32.148	5.2935	1.5618	1232.17	1.7587	126.78	5.8258	1.4064	1.7663
1993	1.2902	.....	34.581	5.6669	1.6545	1573.41	1.8585	111.08	7.7956	1.4781	1.5016
1994	1.3664	.....	33.426	5.5459	1.6216	1611.49	1.8190	102.18	7.7161	1.3667	1.5319
1995	1.3725	.....	29.472	4.9864	1.4321	1629.45	1.6044	93.96	7.1406	1.1812	1.5785
1996	1.3638	.....	30.970	5.1158	1.5049	1542.76	1.6863	108.78	6.7082	1.2361	1.5607
1997	1.3849	.....	35.807	5.8393	1.7348	1703.81	1.9525	121.06	7.6446	1.4514	1.6376
1998	1.4836	.....	36.310	5.8995	1.7597	1736.85	1.9837	130.99	7.9522	1.4506	1.6573
1999	1.4858	1.0653	.....	.....	.....	.....	.....	113.73	8.2740	1.5045	1.6172
2000	1.4855	.9232	.....	.....	.....	.....	.....	107.80	9.1735	1.6904	1.5156
2001	1.5487	.8952	.....	.....	.....	.....	.....	121.57	10.3425	1.6891	1.4396
2002	1.5704	.9454	.....	.....	.....	.....	.....	125.22	9.7233	1.5567	1.5025
2001: I	1.5285	.9220	.....	.....	.....	.....	.....	118.25	9.7698	1.6636	1.4581
II	1.5411	.8736	.....	.....	.....	.....	.....	122.62	10.4477	1.7505	1.4212
III	1.5449	.8908	.....	.....	.....	.....	.....	121.63	10.5655	1.6930	1.4373
IV	1.5806	.8951	.....	.....	.....	.....	.....	123.74	10.5838	1.6473	1.4426
2002: I	1.5946	.8770	.....	.....	.....	.....	.....	132.42	10.4428	1.6802	1.4261
II	1.5552	.9186	.....	.....	.....	.....	.....	126.92	9.9831	1.5960	1.4615
III	1.5633	.9842	.....	.....	.....	.....	.....	119.27	9.3841	1.4872	1.5497
IV	1.5696	1.0003	.....	.....	.....	.....	.....	122.52	9.0974	1.4664	1.5714

Period	Trade-weighted value of the U.S. dollar						
	Nominal				Real[7]		
	G–10 index (March 1973=100)[3]	Broad index (January 1997=100)[4]	Major currencies index (March 1973=100)[5]	OITP index (January 1997=100)[6]	Broad index (March 1973=100)[4]	Major currencies index (March 1973=100)[5]	OITP index (March 1973=100)[6]
1982	116.6	44.2	114.2	5.3	105.9	109.0	99.1
1983	125.3	49.9	118.1	7.1	110.1	110.5	108.3
1984	138.2	57.0	125.8	9.4	117.1	117.7	114.9
1985	143.0	64.1	130.5	12.8	122.2	121.7	122.8
1986	112.2	59.9	107.2	16.0	107.0	99.2	126.7
1987	96.9	58.3	94.8	19.3	98.4	88.7	124.2
1988	92.7	59.0	88.2	23.4	91.8	83.5	113.7
1989	98.6	65.1	91.9	29.0	93.3	87.7	108.4
1990	89.1	70.2	87.9	39.5	92.0	84.7	111.3
1991	89.8	73.3	86.4	46.1	90.6	82.9	110.8
1992	86.6	76.1	84.9	52.6	88.7	81.8	107.3
1993	93.2	82.9	87.1	63.1	89.5	84.4	104.4
1994	91.3	90.4	85.6	80.6	89.2	84.0	104.3
1995	84.2	92.5	80.8	92.6	86.7	80.2	103.9
1996	87.3	97.4	84.6	98.3	88.7	85.3	100.8
1997	96.4	104.4	91.2	104.7	93.4	92.6	101.9
1998	98.8	116.5	95.8	126.0	101.6	97.7	115.3
1999	.....	116.9	94.1	129.9	100.8	97.1	114.3
2000	.....	119.7	98.3	130.3	104.3	103.2	114.5
2001	.....	126.1	104.3	136.3	110.4	110.7	119.2
2002	.....	127.3	103.1	141.2	110.9	109.7	121.9
2001: I	.....	124.0	102.0	135.1	108.6	108.3	118.1
II	.....	126.7	105.4	136.1	111.2	111.8	119.6
III	.....	126.4	104.5	136.9	110.9	110.9	120.0
IV	.....	127.2	105.4	137.3	111.0	112.0	119.0
2002: I	.....	129.5	108.2	138.4	112.8	115.0	119.4
II	.....	127.4	104.3	139.8	111.3	110.8	121.1
III	.....	125.5	100.0	142.0	109.5	106.4	122.9
IV	.....	126.6	100.0	144.7	110.2	106.5	124.2

[1] European Economic and Monetary Union members include Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, and beginning in 2001, Greece.

[2] U.S. dollars per foreign currency unit.

[3] G-10 comprises the individual countries shown in this table. Discontinued after December 1998.

[4] Weighted average of the foreign exchange value of the dollar against the currencies of a broad group of U.S. trading partners.

[5] Subset of the broad index. Includes currencies of the euro area, Australia, Canada, Japan, Sweden, Switzerland, and the United Kingdom.

[6] Subset of the broad index. Includes other important U.S. trading partners (OITP) whose currencies are not heavily traded outside their home markets.

[7] Adjusted for changes in the consumer price index.

Source: Board of Governors of the Federal Reserve System.

TABLE B–111.—*International reserves, selected years, 1962–2002*

[Millions of SDRs; end of period]

Area and country	1962	1972	1982	1992	2000	2001	2002	
							Aug	Sept
All countries	62,851	146,658	361,239	752,566	1,581,173	1,732,843	1,831,975	1,855,046
Industrial countries [1]	53,502	113,362	214,025	424,229	678,199	710,768	742,676	754,198
United States	17,220	12,112	29,918	52,995	52,598	55,030	57,784	58,175
Canada	2,561	5,572	3,439	8,662	24,544	27,061	27,790	27,521
Euro area:								
Austria	1,081	2,505	5,544	9,703	11,414	10,345	9,647	9,555
Belgium	1,753	3,564	4,757	10,914	7,961	9,255	8,950	9,186
Finland	237	664	1,420	3,862	6,178	6,408	6,706	6,974
France	4,049	9,224	17,850	22,522	31,831	28,667	26,133	25,992
Germany	6,958	21,908	43,909	69,489	47,567	44,717	42,593	43,165
Greece	287	950	916	3,606	10,452	4,239	5,591	5,790
Ireland	359	1,038	2,390	2,514	4,120	4,452	3,866	3,947
Italy	4,068	5,605	15,108	22,438	22,382	22,190	21,165	22,986
Luxembourg	.....	.....	.....	.....	61	87	118	117
Netherlands	1,943	4,407	10,723	17,492	8,427	8,184	8,892	8,637
Portugal	680	2,129	1,179	14,474	7,520	8,374	8,759	9,002
Spain	1,045	4,618	7,450	33,640	24,373	24,128	24,465	25,129
Australia	1,168	5,656	6,053	8,429	13,996	14,377	14,836	15,111
Japan	2,021	16,916	22,001	52,937	273,251	315,292	338,615	343,164
New Zealand	251	767	577	2,239	2,555	2,394	1,939	2,223
Denmark	256	787	2,111	8,090	11,671	13,690	19,130	19,910
Iceland	32	78	133	364	301	271	310	421
Norway	304	1,220	6,273	8,725	15,518	12,366	13,358	13,416
Sweden	802	1,453	3,397	16,667	11,616	11,330	12,874	12,620
Switzerland	2,919	6,961	16,930	27,100	27,492	27,936	29,333	30,670
United Kingdom	3,308	5,201	11,904	27,300	34,236	30,067	30,885	31,128
Developing countries: Total [2]	9,349	33,295	147,213	328,337	902,975	1,022,075	1,089,299	1,100,848
By area:								
Africa	2,110	3,962	7,737	13,044	42,633	52,309	53,754	54,262
Asia [2]	2,772	8,130	44,490	190,363	547,584	631,039	690,326	697,066
Europe	381	2,680	5,359	16,006	98,637	112,275	131,551	134,322
Middle East	1,805	9,436	64,039	44,149	93,328	99,498	96,674	97,077
Western Hemisphere	2,282	9,089	25,563	64,774	120,792	126,954	116,993	118,120
Memo:								
Oil-exporting countries	2,030	9,956	67,108	46,144	103,734	111,826	108,991	109,437
Non-oil developing countries [2]	7,319	23,339	80,105	282,193	799,240	910,249	980,308	991,411

[1] Includes data for Luxembourg 1962–92. Includes data for European Central Bank (ECB) beginning 1999. Detail does not add to totals shown.

[2] Includes data for Taiwan Province of China.

Note.—International reserves is comprised of monetary authorities' holdings of gold (at SDR 35 per ounce), special drawing rights (SDRs), reserve positions in the International Monetary Fund, and foreign exchange.

U.S. dollars per SDR (end of period) are: 1962—1.00000; 1972—1.08571; 1982—1.10311; 1992—1.37500; 2000—1.3029; 2001—1.2567; August 2002—1.3275; and September 2002—1.3227.

Source: International Monetary Fund, *International Financial Statistics.*

TABLE B–112.—*Growth rates in real gross domestic product, 1984–2002*

[Percent change at annual rate]

Area and country	1984–93	1994	1995	1996	1997	1998	1999	2000	2001	2002[1]
World	3.3	3.7	3.7	4.0	4.2	2.8	3.6	4.7	2.2	2.8
Advanced economies	3.2	3.4	2.7	3.0	3.4	2.7	3.4	3.8	.8	1.7
Major advanced economies	3.0	3.1	2.4	2.8	3.2	2.8	3.0	3.4	.6	1.4
United States	3.2	4.0	2.7	3.6	4.4	4.3	4.1	3.8	.3	2.2
Japan	3.7	.9	1.7	3.6	1.8	–1.2	.8	2.4	–.3	–.5
Germany	2.8	2.3	1.7	.8	1.4	2.0	2.0	2.9	.6	.5
France	2.0	1.9	1.8	1.1	1.9	3.5	3.2	4.2	1.8	1.2
Italy	2.1	2.2	2.9	1.1	2.0	1.8	1.6	2.9	1.8	.7
United Kingdom	2.4	4.7	2.9	2.6	3.4	2.9	2.4	3.1	1.9	1.7
Canada	2.6	4.8	2.8	1.6	4.2	4.1	5.4	4.5	1.5	3.4
Other advanced economies	3.8	4.6	4.3	3.8	4.3	2.2	5.0	5.3	1.6	2.6
Memorandum:										
European Union	2.4	2.8	2.4	1.7	2.6	2.9	2.8	3.5	1.6	1.1
Euro area	2.4	2.4	2.2	1.4	2.3	2.9	2.8	3.5	1.5	.9
Newly industrialized Asian economies	8.0	7.7	7.5	6.3	5.8	–2.4	8.0	8.5	.8	4.7
Developing countries	5.1	6.7	6.2	6.5	5.9	3.5	4.0	5.7	3.9	4.2
Africa	2.0	2.3	3.0	5.6	3.1	3.4	2.8	3.0	3.5	3.1
Developing Asia	7.6	9.7	9.0	8.3	6.6	4.0	6.1	6.7	5.6	6.1
Middle East and Turkey[2]	3.5	.5	4.4	4.7	6.2	3.6	1.2	6.1	1.5	3.6
Western Hemisphere	2.9	5.0	1.8	3.6	5.2	2.3	.2	4.0	.6	–.6
Countries in transition	–1.4	–8.5	–1.6	–.5	1.6	–.7	3.7	6.6	5.0	3.9
Central and eastern Europe	.....	3.2	5.2	4.1	2.6	2.4	2.2	3.8	3.0	2.7
CIS and Mongolia[3]	.....	–14.5	–5.5	–3.3	1.1	–2.8	4.6	8.4	6.3	4.6
Russia	.....	–13.5	–4.2	–3.4	.9	–4.9	5.4	9.0	5.0	4.4

[1] All figures are forecasts as published by the International Monetary Fund.
[2] Includes Malta.
[3] CIS—Commonwealth of Independent States.

Sources: Department of Commerce (Bureau of Economic Analysis) and International Monetary Fund.

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