A CBO REPORT

THE ECONOMIC AND BUDGET OUTLOOK: FISCAL YEARS 2000-2009

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NOTES

Unless otherwise indicated, all years referred to in Chapter 1 and Appendix E are calendar years, and all years in other chapters and appendixes are fiscal years.

Some figures in this report indicate periods of recession by using shaded vertical bars. The bars extend from the peak to the trough of the recession.

Unemployment rates throughout the report are calculated on the basis of the civilian labor force.

Numbers in the text and tables may not add up to totals because of rounding.

Preface

This volume is one of a series of reports on the state of the economy and the budget that the Congressional Budget Office (CBO) issues each year. It satisfies the requirement of section 202(e) of the Congressional Budget Act of 1974 for CBO to submit periodic reports to the Committees on the Budget with respect to fiscal policy and to provide five-year baseline projections of the federal budget. In accordance with CBO's mandate to provide objective and impartial analysis, the report contains no recommendations.

The analysis of the economic outlook presented in Chapter 1 was prepared by the Macroeconomic Analysis Division under the direction of Robert Dennis and John F. Peterson. Juann Hung was the lead author for the chapter. John F. Peterson, Michael Simpson, and Robert Arnold carried out the economic forecast and projections. David Brauer, Douglas Hamilton, Kim Kowalewski, Mark Lasky, Randy Mariger, Angelo Mascaro, Benjamin Page, Frank Russek, Matthew Salomon, John Sturrock, and Christopher Williams contributed to the analysis. David Arnold, Ezra Finkin, and Michael Simpson provided research assistance.

The baseline spending projections were prepared by the staff of the Budget Analysis Division under the supervision of Paul N. Van de Water, Robert Sunshine, Priscilla Aycock, Thomas Bradley, Paul Cullinan, Peter Fontaine, James Horney, and Michael Miller. The revenue estimates were prepared by the staff of the Tax Analysis Division under the supervision of Thomas Woodward and Richard Kasten. Jeffrey Holland wrote Chapter 2 with assistance from Benjamin Page. Thomas Woodward and Richard Kasten wrote Chapter 3; Jennifer Winkler wrote Chapter 4; and Kim Kowalewski, Robert Sunshine, and Thomas Woodward wrote Chapter 5 using calculations made by Mark Booth, Jeffrey Holland, Mark Lasky, Larry Ozanne, and Matthew Salomon. Jennifer Winkler wrote Appendixes A and D; James Horney wrote Appendix B; Taman Morris wrote Appendixes C and F; and John F. Peterson wrote Appendix E. Jennifer Smith coordinated the revision of the glossary. James Horney wrote the summary of the report.

An early version of the economic forecast underlying this report was discussed at a meeting of CBO's Panel of Economic Advisers. Members of the panel are Alan Auerbach, Martin Baily, Jagdish Bhagwati, Michael Boskin, Barry P. Bosworth, Robert Dederick, Martin Feldstein, Robert J. Gordon, Robert E. Hall, Marvin Kosters, Anne Krueger, N. Gregory Mankiw, Allan Meltzer, William Nordhaus, Rudolph Penner, James Poterba, Robert Reischauer, Sherwin Rosen, Joel Slemrod, and John Taylor. William Brown, William Dudley, Franklin Edwards, Robert Litan, and Neal Soss attended as guests. Although these outside advisers provided considerable assistance, they are not responsible for the contents of this document.

Sherry Snyder supervised the editing of the report, and Kathryn Quattrone supervised production. Major portions were edited by Sherry Snyder, Leah Mazade, Christian Spoor, and Liz Williams. The authors owe thanks to Marion Curry, Linda Lewis Harris, Denise Jordan, Dorothy Kornegay, and Simone Thomas, who assisted in the preparation of the report. Kathryn Quattrone prepared the report for final publication, and Laurie Brown prepared the electronic versions for CBO’s World Wide Web site, both assisted by Martina Wojak-Piotrow.

June E. O'Neill
Director

January 1999

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Summary

Total federal revenues exceeded spending in fiscal year 1998 by $70 billion, producing the first surplus in almost 30 years. The Congressional Budget Office (CBO) estimates that under current law, the total budget surplus will reach $107 billion in 1999 and $131 billion in 2000 (see Summary Table 1). When the off-budget spending and revenues of Social Security and the Postal Service are excluded, however, the remaining on-budget transactions show a deficit in those years—$19 billion in 1999 and $7 billion in 2000. But CBO projects that those on-budget deficits will give way to on-budget surpluses in 2001 and succeeding years as the total budget surplus climbs to $381 billion in 2009.

CBO's baseline projections are intended to provide the Congress with estimates of the spending and revenues that will occur if current laws affecting the budget remain unchanged. In the case of mandatory spending and revenues, which are generally governed by permanent law, the projections incorporate the effects of changes in benefit payments or tax rates that are provided in current law, as well as the effects of anticipated changes in the economy, demographics, or other factors that affect those parts of the budget. In the case of discretionary spending, which is controlled by annual appropriation acts, CBO's projections assume that enacted appropriations will be consistent with the statutory caps of the Balanced Budget and Emergency Deficit Control Act (the Deficit Control Act) that are in place through 2002. The projections of the surplus given above assume that discretionary spending will increase at the rate of inflation after the caps expire. If, instead, discretionary outlays are held to the dollar level of the 2002 caps through 2009, CBO projects that the total budget surplus will grow to $514 billion in that year.

The budget surplus is expected to increase in the next two years despite an anticipated slowing of the U.S. economy. CBO is forecasting real (inflation-adjusted) growth of about 2 percent annually over the next two years. That rate marks a significant drop from the 3.7 percent average annual growth of the past three years, but it still represents a healthy increase in the economy that will keep the budget in good shape. There is significant danger, however, that a worsening international financial situation or other developments could lead to a more precipitous slowdown in the United States, which in turn could threaten the anticipated budget surpluses in the near term. But it is also possible that the U.S. economy will continue to surprise most analysts and taxable incomes will continue to grow rapidly for another year or more—in which case, surpluses are likely to be even larger than projected. In the longer term, CBO projects, real growth will average 2.3 percent a year from 2001 through 2009, taking into account the possibility of booms and recessions during that period.

CBO is now projecting budget surpluses that are much larger than those it projected last August, when CBO published its previous economic and budget outlook. Cumulative surpluses over the 1999-2008 period are $745 billion higher. Legislation enacted since August—primarily the Omnibus Consolidated and Emergency Supplemental Appropriations Act—lowers projected surpluses by $51 billion over that period.

But that effect is more than offset by changes in economic and other factors that increase revenues and reduce spending.

Relatively small changes in CBO's economic projections boost surpluses by $348 billion in 1999 through 2008. In the short run, lower interest rates reduce projected net interest payments. But most of the improvement attributable to economic changes comes from a longer-term rise in revenues resulting from slightly higher gross domestic product (GDP) and a small increase in projected wage and salary disbursements as a percentage of GDP.

Changes in factors other than legislation and the economic outlook increase projected surpluses by $448 billion over the 1999-2008 period. A variety of those so-called technical factors raise projected revenues by almost $160 billion and reduce mandatory spending by nearly $185 billion (excluding debt-service savings) over that period. A substantial reduction in projected spending for Medicare and smaller reductions in several income security programs are only partially offset by increases in projected Medicaid costs.

The Economic Outlook

Along with other forecasters, CBO expects that after three years of rapid growth, the economy will grow at a decidedly more moderate pace in the next two years. But moderate growth is not the only possibility. International financial instabilities or other forces could instead trigger a much sharper slowdown. Alternatively, there may be very little or no slowing of economic growth in the near future; there are no definitive signs yet that the anticipated slowdown has begun, and CBO and other analysts have been wrong in the recent past in assuming that a slowdown was imminent.

The Forecast for 1999 and 2000

In CBO's forecast, real economic growth, which was 3.7 percent in calendar year 1998, falls to 2.3 percent in 1999 and 1.7 percent in 2000 (see Summary Table 2). With inflation, as measured by the GDP price index, expected to rise in 1999 and 2000, the growth rate of nominal GDP declines less rapidly—from 4.8

Summary Table 1.
The Budget Outlook Under Current Policies (By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total Budget Surplus	70	107	131	151	209	209	234	256	306	333	355	381
Off-Budget Surplus	99	127	138	145	153	161	171	183	193	204	212	217
On-Budget Deficit (-) or Surplus	-29	-19	-7	6	55	48	63	72	113	130	143	164
Memorandum:												
Total Budget Surplus Assuming a Freeze in Discretionary Spending After 2002	70	107	131	151	209	225	265	305	374	421	465	514

SOURCE: Congressional Budget Office.

NOTE: The projections assume that discretionary spending will equal the statutory caps on such spending in 2000 through 2002 and, with the exception of the memorandum item, will increase at the rate of inflation thereafter.

Summary Table 2.
Comparison of CBO Economic Projections for Calendar Years 1999-2009

	Estimate	Forecast		Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Nominal GDP (Billions of dollars)												
January 1999	8,499	8,846	9,182	9,581	10,015	10,476	10,960	11,465	11,988	12,528	13,089	13,688
August 1998	8,487	8,839	9,204	9,572	10,008	10,475	10,955	11,446	11,950	12,473	13,015	n.a.
Nominal GDP (Percentage change)												
January 1999	4.8	4.1	3.8	4.3	4.5	4.6	4.6	4.6	4.5	4.5	4.5	4.4
August 1998	4.6	4.2	4.1	4.0	4.6	4.7	4.6	4.5	4.4	4.4	4.3	n.a.
Real GDP (Percentage change)												
January 1999	3.7	2.3	1.7	2.2	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3
August 1998	3.4	2.2	1.9	1.8	2.4	2.5	2.4	2.3	2.3	2.2	2.2	n.a.
GDP Price Index[a] (Percentage change)												
January 1999	1.0	1.7	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
August 1998	1.2	2.0	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	n.a.
Consumer Price Index[b] (Percentage change)												
January 1999	1.6	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
August 1998	1.7	2.6	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	n.a.
Unemployment Rate (Percent)												
January 1999	4.5	4.6	5.1	5.4	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7
August 1998	4.6	4.7	5.1	5.5	5.7	5.7	5.7	5.7	5.7	5.7	5.7	n.a.
Three-Month Treasury Bill Rate (Percent)												
January 1999	4.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
August 1998	5.1	5.2	4.8	4.6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	n.a.
Ten-Year Treasury Note Rate (Percent)												
January 1999	5.3	5.1	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
August 1998	5.8	6.1	5.8	5.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4	n.a.
Tax Bases (Percentage of GDP)												
Corporate profits												
January 1999	9.7	9.2	8.5	8.5	8.6	8.6	8.6	8.6	8.5	8.4	8.3	8.2
August 1998	9.6	9.4	9.2	8.8	8.6	8.5	8.5	8.4	8.3	8.3	8.3	n.a.
Wages and salaries												
January 1999	48.8	49.3	49.7	49.5	49.3	49.2	49.1	49.1	49.1	49.1	49.1	49.1
August 1998	48.7	48.8	48.7	48.8	48.7	48.7	48.7	48.7	48.7	48.7	48.7	n.a.

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTE: n.a. = not applicable.

a. The GDP price index is virtually the same as the implicit GDP deflator.

b. The consumer price index for all urban consumers.

percent in 1998 to 4.1 percent in 1999 and 3.8 percent in 2000. The consumer price index is expected to grow a bit faster, the unemployment rate to rise a little, and interest rates to go up slightly from the levels of early January (which were below the average for 1998).

The rapid growth in recent years has been fueled by a boom in capital spending and strong personal consumption. The weakness in international economies, particularly in Asia, has restrained growth in the United States by reducing demand for U.S. exports, but it has also provided low-cost imports that have helped dampen inflation and alleviate the need for the Federal Reserve to tighten monetary policy. The international financial situation has also contributed to the continued expansion by increasing the supply of relatively low-cost foreign capital to U.S. businesses.

The spectacular six-year boom in business expenditures on plant and equipment and in consumer purchases appears to be moderating. Spending for real business fixed investment was weaker in the last half of 1998, and a slowdown in orders for capital goods, low capacity utilization in manufacturing, and a drop in corporate earnings suggest that investment is unlikely to rebound in the next two years. Growth in consumer spending is also expected to slow, from an unsustainable rate of over 5 percent in 1998 to less than 3 percent a year in 1999 and 2000. The persistent trade deficit and the slowdown in business fixed investment (which are likely to suppress growth in employment and personal income) and the anticipated drop in corporate profits (which may reduce gains in stock prices) are expected to restrain consumer spending.

CBO's forecast anticipates that the real U.S. trade deficit will remain at record highs in 1999 and 2000, although it will be less of a drag on GDP growth over the forecast period than in 1998. But the weakness in foreign economies will not be enough to hold inflation to 1998's rate. The underlying rate of inflation is expected to be subject to increasing upward pressure as labor markets remain tight and the recent fall in the value of the dollar keeps import prices from declining further. In addition, the drop in oil prices that helped mute inflation in 1998 is expected to be partially reversed in 1999.

The economic slowdown reflected in CBO's forecast is relatively moderate, in part because the Federal Reserve is not expected to tighten monetary policy. Moreover, corporations are much better prepared for a slowing in the growth of sales than they were in the years leading up to the 1990 recession, reducing the likelihood that investment will plummet. The slowdown in consumer spending is also likely to be gradual.

Nonetheless, certain events could lead to a more precipitous decline in economic growth late this year or next. Deterioration of the international financial situation or a significant drop in the stock market, for example, could undermine business and consumer confidence and seriously erode investment and consumption by the end of this year. If the special factors that have held down inflation in recent years fade more quickly than expected, inflation may accelerate and the Federal Reserve may have to tighten monetary policy, risking a recession in 2000. Although the economy could enter a recession sometime in the next two years, chances are equally good that the forces that have propelled the economy for the past three years will keep the boom alive even longer.

The Economic Projections for 2001 Through 2009

CBO does not attempt to forecast cyclical changes in the economy for more than two years. The economic projections for years beyond the forecast period—in this case, 2001 through 2009—are intended to represent the middle of a range of possible outcomes for the economy, taking into account the possibility of booms and recessions. CBO's estimates of the potential mid-range outcomes are based on analyses of underlying trends in the basic factors that determine economic performance—capital investment, the labor force, and productivity.

In CBO's projections, real GDP growth averages 2.3 percent a year in 2001 through 2009, inflation as measured by the consumer price index increases at an average rate of 2.6 percent a year, and the unemployment rate averages 5.7 percent. Short-term interest

rates on federal debt average 4.5 percent, and long-term interest rates average 5.4 percent.

Changes Since August

The current economic projections are not very different from those CBO published last August. Growth in real GDP is estimated to have been 0.3 percentage points higher in 1998 than was forecast. In 1999, however, it is likely to be similar to that previously forecast, and in 2000 it is expected to be a fraction lower. In the longer run, real GDP growth averages about 0.1 percentage point higher than was assumed in August, but that increase reflects a technical adjustment to account for changes in the measurement of the GDP price index and does not affect nominal GDP. In fact, projections of nominal GDP for any year have changed little since last summer.

Interest rates are now forecast to be significantly lower in 1999 and 2000 than CBO anticipated last August, but not very different in the longer run. The interest rate for three-month Treasury bills is expected to average 4.5 percent in 1999, down from the previous forecast of 5.2 percent. CBO assumes that the three-month bill rate will remain at 4.5 percent in 2000 and average that rate through 2009—a 0.3 percentage-point drop below the level projected for 2000 last summer, but a 0.1 percentage-point increase above the longer-run level projected at that time. The interest rate on 10-year Treasury notes is expected to be a full percentage point lower in 1999 and half a percentage point lower in 2000 than had been projected, but the average rate in the longer run is unchanged at 5.4 percent.

The forecast of wage and salary disbursements as a share of GDP in 1999 and 2000 is higher than it was in August, but that increase is partially offset by a reduction in the share of GDP represented by corporate profits. In the longer run, the projected share of corporate profits is the same as it was last summer, but the share of wage and salary disbursements is 0.4 percentage points higher by 2008.

CBO expects inflation, as measured by both the GDP price index and the consumer price index (CPI), to be slightly lower in 1999 and 2000 than it previously expected (the GDP index is down 0.3 percentage points in 1999 and 0.2 percentage points in 2000, and the CPI is down 0.1 percentage point in both years). In the longer run, the projected GDP price index is unchanged from August and the CPI is up by 0.1 percentage point a year. The projected difference between the two measures of inflation therefore rises to an average of 0.5 percentage points in 2000 through 2009, slightly lower than the average difference of 0.7 percentage points over the past four years.

The Budget Outlook

Under CBO's baseline assumptions, the first total budget surplus since 1969 will be followed by even larger surpluses in the next 11 years. The surplus grows from $70 billion (0.8 percent of GDP) in fiscal year 1998 to $107 billion (1.2 percent of GDP) in 1999 (see Summary Table 3). Those projections assume that discretionary spending will equal the statutory caps of the Deficit Control Act and that policies affecting other spending and revenues will remain unchanged. If discretionary spending increases at the rate of inflation after the caps expire in 2002, the surplus will reach $381 billion (2.8 percent of GDP) in 2009, compared with $514 billion (3.8 percent of GDP) if discretionary spending is instead held to the dollar level of the 2002 caps after that year.

Although a total budget surplus is expected in 1999 and 2000, on-budget outlays will continue to exceed on-budget revenues during those years—by $19 billion in 1999 and $7 billion in 2000. (That calculation excludes the transactions of the Social Security trust funds and the Postal Service, which are designated by law as off-budget.) CBO projects that the on-budget accounts will show a small surplus in 2001, however, which will grow to $164 billion in 2009 (assuming that discretionary spending grows with inflation after 2002).

CBO's current budget projections are considerably more favorable over the next decade than the projections published last August. Slightly less than half of the improvement results from the more advan-

Summary Table 3.
CBO Baseline Budget Projections, Assuming Compliance with the Discretionary Spending Caps
(By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					In Billions of Dollars							
Revenues												
Individual income	829	863	893	919	958	990	1,035	1,085	1,138	1,195	1,258	1,323
Corporate income	189	193	188	191	202	214	226	238	250	259	267	273
Social insurance	572	610	640	666	691	717	746	783	816	852	885	923
Other	132	148	148	154	164	170	177	182	188	194	200	208
Total	1,721	1,815	1,870	1,930	2,015	2,091	2,184	2,288	2,393	2,500	2,611	2,727
On-budget	1,306	1,368	1,402	1,443	1,508	1,563	1,634	1,711	1,791	1,871	1,956	2,046
Off-budget	416	446	468	488	506	527	550	577	602	628	654	681
Outlays												
Discretionary spending[a]	554	575	574	573	568	583	598	614	630	646	663	680
Mandatory spending	939	982	1,028	1,086	1,141	1,210	1,280	1,365	1,425	1,511	1,609	1,708
Offsetting receipts	-84	-80	-81	-87	-99	-95	-98	-103	-108	-114	-121	-127
Net interest	243	231	218	207	195	183	170	156	140	123	104	85
Total	1,651	1,707	1,739	1,779	1,806	1,881	1,951	2,032	2,086	2,166	2,255	2,346
On-budget	1,335	1,388	1,409	1,437	1,453	1,515	1,572	1,639	1,678	1,741	1,813	1,882
Off-budget	317	320	330	343	353	366	379	393	409	425	442	464
Deficit (-) or Surplus	70	107	131	151	209	209	234	256	306	333	355	381
On-budget deficit (-) or surplus	-29	-19	-7	6	55	48	63	72	113	130	143	164
Off-budget surplus	99	127	138	145	153	161	171	183	193	204	212	217
Debt Held by the Public	3,720	3,630	3,515	3,378	3,183	2,989	2,770	2,529	2,237	1,917	1,574	1,206
					As a Percentage of GDP							
Revenues												
Individual income	9.9	9.9	9.8	9.7	9.7	9.6	9.6	9.6	9.6	9.6	9.7	9.8
Corporate income	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0
Social insurance	6.8	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8
Other	1.6	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.5	1.5
Total	20.5	20.7	20.6	20.4	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2
On-budget	15.5	15.6	15.4	15.2	15.2	15.1	15.1	15.1	15.1	15.1	15.1	15.1
Off-budget	4.9	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.0
Outlays												
Discretionary spending[a]	6.6	6.6	6.3	6.0	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0
Mandatory spending	11.2	11.2	11.3	11.5	11.5	11.7	11.8	12.0	12.0	12.2	12.4	12.6
Offsetting receipts	-1.0	-0.9	-0.9	-0.9	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Net interest	2.9	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.6
Total	19.6	19.5	19.1	18.8	18.2	18.2	18.0	17.9	17.6	17.5	17.4	17.3
On-budget	15.9	15.8	15.5	15.2	14.7	14.6	14.5	14.5	14.2	14.1	14.0	13.9
Off-budget	3.8	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4
Deficit (-) or Surplus	0.8	1.2	1.4	1.6	2.1	2.0	2.2	2.3	2.6	2.7	2.7	2.8
On-budget deficit (-) or surplus	-0.3	-0.2	-0.1	0.1	0.6	0.5	0.6	0.6	1.0	1.0	1.1	1.2
Off-budget surplus	1.2	1.4	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Debt Held by the Public	44.3	41.4	38.6	35.6	32.1	28.9	25.6	22.3	18.9	15.5	12.2	8.9

SOURCE: Congressional Budget Office.

a. The projection assumes that discretionary spending will equal the statutory caps on such spending in 2000 through 2002 and will increase at the rate of inflation thereafter.

tageous assumptions about the economy. The rest of the improvement results from other factors that have increased projected revenues and reduced projected outlays.

Current Revenue Projections for 1999 Through 2009

Revenues grew by 9 percent (almost twice as fast as the growth of nominal GDP) in fiscal year 1998, increasing to $1,721 billion, or 20.5 percent of GDP. Revenues have not accounted for that large a share of GDP since 1944, when they equaled 20.9 percent. In CBO's projections, growth in revenues tapers to 5.4 percent in 1999, but that rate is still faster than the projected growth in national income and nudges revenues to a 20.7 percent share of GDP. Revenues are then expected to grow more slowly than the economy for three years before leveling off at 20.2 percent of GDP in 2003 through 2009.

In the absence of changes in tax laws, total revenues tend to grow over a period of years at the same average rate as the economy. But 1998 marked the fifth consecutive year in which growth in revenues outstripped growth in national income. Tax increases enacted in 1993 helped boost revenues in 1994 and 1995, but rapid growth in taxes on capital gains realizations, increases in taxable incomes as a share of GDP, and other exceptional factors have driven the increases relative to GDP since then. Revenues from capital gains are expected to grow little in 1999, but CBO anticipates that those other factors will keep revenues increasing slightly faster than the economy in 1999. In 2000, an expected leveling off of the total amount of highly taxed incomes as a share of GDP, the effects of changes in tax law enacted in the Taxpayer Relief Act of 1997, and a drop in tax receipts from capital gains will push revenues down as a share of the economy. After 2002, revenues are projected to expand once again in tandem with the economy.

Current Outlay Projections for 1999 Through 2009

Total outlays grew by 3.1 percent in 1998, more slowly than nominal GDP. They rose to $1,651 billion but fell to 19.6 percent of GDP. Outlays have not been that low as a percentage of GDP since 1974, when they equaled 18.7 percent. If policies remain unchanged and discretionary spending complies with the statutory caps and then increases with inflation after 2002, outlays will rise at an average annual pace of 3.2 percent over the next 11 years. With the economy expanding at an average rate of 4.4 percent a year (including the effects of inflation) over the same period, outlays will drop to 17.3 percent of GDP.

Reductions in net interest payments—which are projected to decline by 65 percent over the next 11 years (from $243 billion in 1998 to only $85 billion in 2009)—are a major contributor to the relatively slow growth of outlays. Those reductions follow directly from the large surpluses projected for that period. If they are actually realized, those surpluses will reduce the federal debt held by the public from $3,720 billion (44.3 percent of GDP) at the end of 1998 to $1,206 billion (9 percent of GDP) at the end of 2009. That would be less than half the lowest level of federal debt relative to GDP since World War II.

Discretionary spending also contributes to the relatively slow growth of total outlays. As a result of emergency appropriations provided in last year's Omnibus Consolidated and Emergency Supplemental Appropriations Act and other funding enacted in that and other appropriation bills, discretionary outlays are expected to climb by almost 4 percent in 1999 (after rising by less than 1 percent in 1998). To comply with the caps in the Deficit Control Act, discretionary outlays will have to decline in each of the next three years, shrinking from $575 billion in 1999 to $568 billion in 2002. Even if none of the funding that was designated as emergency spending (or that was provided for the International Monetary Fund) in 1999 is repeated next year and other appropriations are held to the same level in 2000 as was provided in 1999, discretionary spending will exceed the total allowed under the caps by an estimated $10 billion in budget authority and $13 billion in outlays. After the caps expire in 2002, discretionary spending continues to decline as a percentage of GDP in CBO's projections since it is assumed to grow only at the rate of inflation. CBO projects that discretionary outlays will fall from 6.6 percent of GDP in 1998 to 5.0 percent in 2009, half the level recorded as recently as 1986.

Entitlement programs, by contrast, are projected to grow at an average annual rate of 5.6 percent from 1998 to 2009, increasing as a share of GDP from 11.2 percent to 12.6 percent. The government's two big health care programs, Medicaid and Medicare, are the major contributors to that relatively rapid growth. Medicaid is the smaller of the two programs—$101 billion in 1998 outlays compared with $211 billion for Medicare—but its growth is expected to be faster (8.4 percent a year on average from 1998 to 2009 compared with 7 percent for Medicare). The growth rates for both programs are higher than those of the past few years but well below the rates of the early 1990s. Projections for each program assume that the number of eligible people and the per-person use of medical care services will increase and that medical care prices will rise faster than other prices. In addition, the projections for Medicaid reflect the likelihood that the states, which are important decisionmakers in this joint federal/state program, will expand the services and benefits they provide. Together, spending for Medicaid and Medicare is projected to rise from 3.7 percent of GDP in 1998 to 5.1 percent in 2009.

Spending for other mandatory programs is generally expected to increase more slowly. Social Security—the largest mandatory program (with outlays of $376 billion in 1998)—is projected to grow at an average annual rate of 4.8 percent over the next 11 years. Growth for all other mandatory spending combined ($250 billion in 1998) is expected to average 4.1 percent a year.

Changes Since August

Although legislative action since August 1998 has reduced projected surpluses somewhat, a slightly more favorable economic outlook and adjustments in revenues and the projected growth of some entitlement programs have increased the cumulative total budget surpluses that CBO projects by $745 billion from 1999 through 2008. CBO now expects the surplus for 1999 to be $27 billion higher than it anticipated in August; for 2008, the outlook for the surplus has improved by $105 billion (see Summary Table 4).

Those changes are hardly insignificant, but they result from relatively small changes in projected revenues and spending. The total change of $57 billion in projected revenues for 2008 represents a 2.2 percent increase above the level projected in August. When the debt-service savings that result from the increases in the surplus are excluded, the total reduction in projected outlays for 2008 is $13 billion, which represents only a 0.5 percent change from the level projected in August.

Legislation enacted since August reduced projected surpluses by $51 billion over the 1999-2008 period. Most of the effect was from enacted appropriation bills, including the Omnibus Consolidated and Emergency Supplemental Appropriations Act. CBO estimates that appropriation actions increased spending above last August's baseline levels by $17 billion in 1999, $5 billion in 2000, and lower amounts in succeeding years. Other legislation changed revenues or outlays by no more than $2 billion in any year (and the revenue and outlay changes were largely offsetting), but debt service on the total legislative changes increased projected outlays by $1 billion to $2 billion a year. The total reduction in the projected surplus stemming from changes in laws is $3 billion in 2008.

Changes related to revisions in CBO's projections of major economic variables account for significantly more of the differences in the budget projections. The revisions in the economic outlook are not large, but revenues and some spending programs are quite sensitive to changes in economic variables. In the short run, the largest budgetary effect comes from projected interest rates that are lower than CBO anticipated in August, and those changes in rates reduce estimated net interest payments by $8 billion in 1999 and $11 billion in 2000. CBO currently projects that interest rates in years after 2000 will be close to (or in the case of short-term rates, slightly higher than) those projected in August, and the effect on net interest will therefore fade. Projected inflation that is slightly lower in the next few years also produces a small effect, lowering cost-of-living increases in Social Security and other indexed entitlement programs. By 2002, however, CBO's new economic projections include slightly higher inflation than was previously anticipated, and the cost-of-living savings turn into small costs.

In the longer run, the largest effect of changes in the economic outlook is on revenues. After 2000,

GDP is slightly higher in CBO's current projections than in August's. In addition, CBO projects that wage and salary disbursements, which are taxed more heavily than other sources of income (such as interest and dividends), will be about 0.4 percentage points higher as a share of GDP. As a result of those and other economic factors, projected revenues are $39 billion higher in 2008 than was anticipated in August. In addition, CBO's projection of discretionary spending that assumes such spending increases at the rate of inflation after the caps expire is greater after 2002 (by as much as $4 billion in 2008) because of higher projected inflation. Debt-service savings, which stem from the other savings, total $16 billion in 2008.

A variety of factors other than newly enacted legislation and changes in the economic projections also affect revenues and spending. CBO lumps the changes resulting from such factors into a category it calls technical changes. Over the 1999-2008 period, a little less than half of the total technical differences in the surplus (excluding debt-service savings) result from changes in revenues. But in 2008, the increase in revenues ($19 billion) is slightly larger than the

Summary Table 4.
Changes in CBO Budget Projections Since August 1998 (By fiscal year, in billions of dollars)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
August 1998 Total Budget Surplus	80	79	86	139	136	154	170	217	236	251
Changes										
Legislative										
Revenues	a	2	b	-1	b	-1	-1	-1	a	a
Outlays[b]	-17	-8	-2	-3	-3	-3	-3	-3	-3	-3
Subtotal	-17	-6	-3	-4	-4	-3	-3	-4	-3	-3
Economic										
Revenues	3	5	12	19	22	25	31	35	37	39
Outlays[b]										
Other than debt service	9	14	12	10	7	4	2	a	-2	-3
Debt service	a	1	2	4	5	7	9	11	13	16
Subtotal	13	20	27	32	34	36	41	46	48	51
Technical										
Revenues	11	15	15	19	16	17	15	16	17	19
Outlays[b]										
Other than debt service	20	21	21	17	19	18	19	15	18	17
Debt service	1	3	5	7	9	11	14	16	19	21
Subtotal	32	38	41	42	43	47	48	47	53	57
Total Changes	27	52	65	70	74	79	85	90	98	105
January 1999 Total Budget Surplus	107	131	151	209	209	234	256	306	333	355
Memorandum:										
Total Change in Revenues	14	22	28	36	37	42	44	50	53	57
Total Change in Outlays	13	30	37	34	36	38	41	39	45	47

SOURCE: Congressional Budget Office.

a. Less than $500 million.

b. Increases in outlays are shown with a negative sign because they reduce surpluses.

change in outlays ($17 billion, excluding debt-service savings).

In the near term, the increase in projected revenues is largely attributable to higher estimates of capital gains realizations. In the longer run, it primarily reflects the expectation that more retirement income will be distributed than had previously been projected. Since those reestimates are not directly related to changes in CBO's projections of major economic variables, the resulting changes in projected revenues are classified as technical.

On the spending side, the largest technical changes are in Medicare and Medicaid, and those changes go in opposite directions. CBO's projection of Medicare spending has been reduced by $10 billion in 1999 and by increasing amounts in succeeding years (up to $18 billion in 2008). Those reductions reflect slower-than-anticipated growth in Medicare spending in recent months that has reduced estimated 1999 spending and lowered the starting point for projections of spending in 2000 and beyond. In addition, CBO believes that the Health Care Financing Administration's recently announced plan to adjust payment rates for Medicare+Choice providers on the basis of risk is likely to slow the growth of Medicare spending. Previously, CBO had assumed that the risk adjustments, which are required by the Balanced Budget Act of 1997, would be carried out on a cost-neutral basis.

CBO's estimate of Medicaid spending for 1999 has barely changed since August, but projected spending for future years has been boosted by amounts that gradually rise from $2 billion in 2000 to $15 billion in 2008. Those increases in part reflect recent discussions with state officials, who indicated that a number of states are likely to expand Medicaid coverage and benefits in the coming years more than had been anticipated.

Several other entitlement programs had significant technical changes, although none of them are nearly as large as the changes for Medicare and Medicaid. Lower projected caseloads in the Temporary Assistance for Needy Families (TANF) program and the Food Stamp program led CBO to reduce estimated outlays for TANF by $3 billion in 1999, $4 billion in 2000, and declining amounts in succeeding years through 2006 (the projection changes very little in 2007 and increases by nearly $1 billion in 2008) and outlays for Food Stamps by amounts increasing from $1 billion in 1999 to $3 billion in 2008. Revised estimates of the number of retired federal employees, based on information from actuaries at the Office of Personnel Management, lowered projections of spending from the Civil Service Retirement Fund by amounts that increase from $1 billion in 1999 to $5 billion in 2008. CBO also lowered its projections of spending from the Universal Service Fund by as much as $4.5 billion a year. (The fund provides subsidies for telephone service in high-cost areas as well as to low-income customers and schools, libraries, and health care providers.) The changes in outlays from the Universal Service Fund have little effect on the projected surplus, however, because they are largely offset by corresponding reductions in revenues received by the fund.

Uncertainty of the Projections

Actual budget outcomes could be considerably different from CBO's baseline projections even if current policies do not change. Unexpected economic results alone could significantly affect the budget. Such unexpected results could take two forms. CBO's projections of medium-term economic trends might be accurate, but cyclical disturbances could change the performance of the economy in certain years. Or CBO's projections of medium-term trends might be too optimistic or too pessimistic.

Cyclical disturbances could have a significant effect on the budget at any time during the projection period. A recession would temporarily push down taxable incomes, thus depressing the growth of federal revenues. A recession would also boost spending for unemployment insurance and other benefit programs. CBO estimates that a relatively mild recession (similar to the one in the early 1990s) that began this year could reduce the projected surplus by $55 billion in 2000. A similarly mild recession starting in 2000 could reduce the surplus by an estimated $85 billion in 2002. Alternatively, a temporary continuation of the high growth and low inflation experienced for the past three years could boost revenues and reduce spending, increasing the surplus by close to $41 billion in 2000

and by $83 billion in 2002. In all of those scenarios, the surplus for 2009 would not be greatly different from the one in CBO's baseline projections.

Changes in longer-term economic trends would not have quite so great an influence in the short run, but they could have a significantly larger effect on surpluses in 2009. For instance, if combined wages, salaries, and corporate profits grew at a higher-than-expected rate over the next 10 years, so that taxable income in 2009 was roughly 8 percent higher than CBO's baseline assumes, the budget surplus in 2009 would be about $250 billion higher than the $381 billion CBO is projecting. Slower-than-anticipated growth that pushed incomes similarly below the level CBO projects for 2009 would reduce the surplus by about the same amount.

Of course, the performance of the economy is not the only potential source of deviations from the projected path of the budget. Over the past few years, for instance, only a part of the unexpected increases in revenues can be explained by higher-than-anticipated national income. Other factors such as unexpectedly high levels of capital gains realizations (which are related to the performance of the economy but are not included in standard measures of economic performance) have boosted revenues. Similarly, the slower-than-anticipated growth of spending for entitlement programs—particularly Medicare, Medicaid, and some other programs for low-income people—cannot be explained fully by the performance of the economy.

Developing alternative scenarios that adequately capture the potential effects of such noneconomic, or technical, factors on the future path of the budget is difficult, but the estimated effects of a few specific alternative assumptions can illustrate the magnitude of possible changes. For example, CBO's baseline projection assumes that changes in the effective tax rate for the individual income tax (the ratio of taxes paid to adjusted gross income) will reflect only real income growth and scheduled changes in tax law over the next 10 years. If, however, the effective tax rate increased 1 percent a year faster than those factors would dictate (the extra growth has been higher than that, on average, during the 1990s), revenues in 2009 would be about $150 billion higher than currently projected. On the outlay side, CBO assumes that combined spending for Medicare and Medicaid will grow at an average annual rate of about 7.5 percent over the next decade. If, instead, that growth averaged 9.5 percent annually—which is in line with historical growth rates for both Medicare and Medicaid—spending could be increased by as much as $150 billion in 2009. Of course, it is also possible that the effective individual income tax rate and spending for Medicare and Medicaid will grow more slowly than CBO anticipates.

Technical and economic errors in CBO's projections may be offsetting, or they may reinforce each other. That is one reason why it is difficult to estimate with any confidence the probability that actual outcomes will be within any particular range around the baseline projection of the surplus. History, however, provides some guidance. CBO has compared the actual surpluses for 1988 through 1998 with the first projection of the surplus it produced five years before the start of the fiscal year. (CBO has only recently begun to produce 10-year estimates, so there is no historical comparison with actual outcomes yet.) Excluding the estimated effects of legislation on the actual outcomes, the remaining errors averaged about 13 percent of actual outlays. A deviation of 13 percent of projected outlays in 2004 would produce an increase or decrease in the surplus of about $250 billion. In 2009, an error equal to 13 percent of projected outlays would produce a swing of about $300 billion. But since the errors in projections made 10 years in advance are probably larger than the errors in estimates made five years ahead, an average deviation in 2009 is likely to produce a swing that is larger than that.

Conclusion

The outlook for the budget under current policies over the next decade continues to be bright. Although there are reasons to fear that the long economic expansion could come to an end this year or next, CBO believes the economy is more likely to continue growing in the near term, albeit at a more moderate pace than in the past few years. Revenue growth is not expected to continue to outpace economic growth, but revenues are still projected to increase at a healthy rate. The growth in spending for a number of entitlement pro-

grams has slowed significantly in recent years. For many of those programs, growth rates are expected to accelerate over the next few years, but they are unlikely to return to the high levels of the early 1990s. CBO projects that if policies remain unchanged, rising surpluses in the total budget will shrink the amount of federal debt held by the public by two-thirds over the next decade.

Chapter One

The Economic Outlook

In 1998, the U.S. economy once again expanded beyond expectations, despite the repercussions of the economic crisis in Asia and the global financial turmoil that followed Russia's default on its debt. Most analysts, however, expect that the growth of the economy will now slow, dropping from its 3.7 percent rate of the past three years. The Congressional Budget Office (CBO) forecasts a moderation of real economic growth to less than 2 percent over the next two years and a modest rise in inflation (see Table 1-1). The slackening of economic growth stems from the waning of the twin booms in investment and consumption and the persistence of a large trade deficit. The moderate increase in inflation reflects the continued tightness of labor markets as well as the abating of special factors that have helped keep a lid on inflation in recent years.

That outlook represents CBO's judgment of the most likely outcome for the economy, but it is by no means the only possible scenario. The outlook may be worse if the global financial turmoil has more pervasive effects than CBO anticipates. Alternatively, if growth in consumption and investment turns out to be more robust than CBO expects, the outlook for real growth may be better. Chapter 5 examines several alternative views of future economic developments and what those alternatives could mean for the federal budget.

For the years beyond 2000, CBO's projection for the path of the economy reflects a range of possibilities, taking into account the probability of booms and recessions. The projection is intended to represent the average of that range. In CBO's projections for 2001 through 2009, the growth of real (inflation-adjusted) gross domestic product (GDP) averages 2.3 percent a year, and inflation measured by the consumer price index (CPI) averages 2.6 percent a year (see Figure 1-1).[1] The unemployment rate averages 5.7 percent after 2001. Short-term interest rates are assumed to average 4.5 percent after 2001; long-term interest rates average 5.4 percent.

The State of the Economy

Against the background of the Asian crisis and global financial upheaval, the U.S. economy's 3.7 percent expansion in 1998 is extraordinary. In fact, the eight-year expansion that began in the spring of 1991 has been remarkable in many ways. The sustained boom in private investment and consumption has propelled the economy to grow buoyantly despite continuing fiscal restraint and a widening trade deficit. Stock prices have risen higher and for longer than most analysts had expected. Moreover, inflation has remained dormant even though labor markets have been tight since the middle of 1996.

A number of factors may have contributed to the economy's remarkable performance. Greater fiscal discipline may have helped keep long-term interest rates low. The enhanced credibility of the Fed-

1. Throughout this chapter, "CPI" refers to the consumer price index for all urban consumers.

Table 1-1.
The CBO Forecast for 1999 and 2000

	Estimate 1998[a]	Forecast 1999	Forecast 2000
	Fourth Quarter to Fourth Quarter (Percentage change)		
Nominal GDP	4.6	3.9	3.9
Real GDP[b]	3.6	1.8	1.9
GDP Price Index[c]	1.0	2.1	2.0
Consumer Price Index[d]	1.6	2.7	2.6
	Calendar Year Average (Percent)		
Real GDP[b]	3.7	2.3	1.7
Unemployment Rate	4.5	4.6	5.1
Three-Month Treasury Bill Rate	4.8	4.5	4.5
Ten-Year Treasury Note Rate	5.3	5.1	5.3

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. Estimates of nominal GDP, real GDP, and the GDP price index are based on data for the first three quarters of 1998 published November 24,1998, and on CBO's expectations for the fourth quarter of 1998. The consumer price index, the unemployment rate, the three-month Treasury bill rate, and the 10-year Treasury note rate are actual values for 1998.

b. Based on chained 1992 dollars.

c. The GDP price index is virtually the same as the implicit GDP deflator.

d. The consumer price index for all urban consumers.

eral Reserve during this expansion may also have helped tame inflation expectations and made monetary policies more effective. Moreover, the rise in the services component of GDP relative to manufacturing as well as more efficient management of inventories may have contributed to the economy's being less susceptible to cyclical swings. Finally, increases in trade and capital flows appear to have amplified the advantages to the United States of being the world's strongest economy (see Figures 1-2 and 1-3).

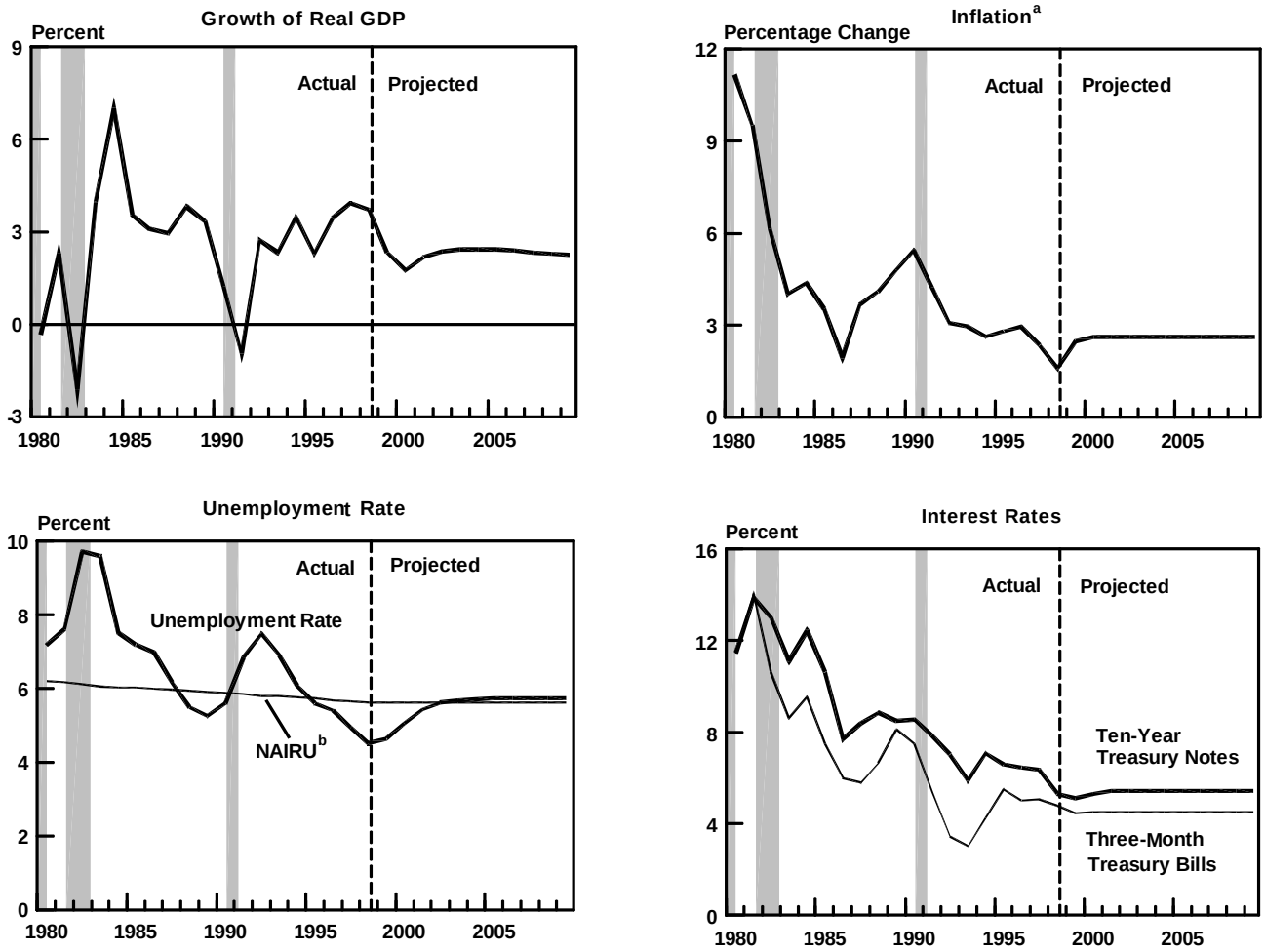
Weak economies abroad have helped keep inflation and the cost of capital low in this country. Lower rates of return on foreign assets—a by-product of excess capacity abroad—have helped attract foreign capital to the United States, sustaining the boom in investment and housing demand. Low rates of return abroad have also bolstered the dollar and thereby lowered import prices. In addition, insufficient foreign demand has made foreign producers eager to squeeze their profit margins to compete for market shares in this country, exerting further downward pressure on the prices of the imports. Consequently, three of the five special factors that have held down U.S. inflation during this expansion—namely, deflation in commodity and import prices and, to a lesser extent, an accelerated decline in computer prices—largely result from excess production capacity abroad.[2] At the cost of widening the U.S. trade deficit and hurting the domestic manufacturing sector, greater globalization and excess foreign capacity

2. The other two special factors are technical changes in the measurement of consumer prices and a decline in the growth of medical care prices.

have helped to mute inflation, deter the Federal Reserve from raising interest rates, and support the current boom. Thus, by dampening inflation, those factors that have rendered the U.S. economy vulnerable to external shocks such as the Asian crisis and the global financial turmoil have at the same time helped make room for monetary easing to counter those shocks.

The eight-year-old expansion is beginning to show its age, however, and some imbalances are emerging. Labor, the production factor least mobile

Figure 1-1.
The Economic Forecast and Projection



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics; Department of Commerce, Bureau of Economic Analysis; Federal Reserve Board.

NOTE: All data are annual values; growth rates are year over year.

a. The consumer price index for all urban consumers. The treatment of home ownership in that index changed in 1983. The inflation series in the figure uses a consistent definition of home ownership throughout.

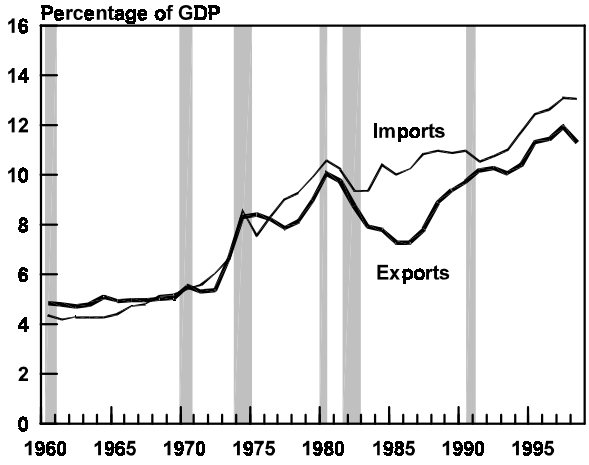
b. CBO's estimate of the nonaccelerating inflation rate of unemployment.

across national borders, is becoming scarce. Indeed, with the unemployment rate at 28-year lows, the labor market is extremely tight and threatens to end the expansion by squeezing corporate profits, slowing investment, and raising the likelihood of wage-push inflation and subsequent monetary tightening by the Federal Reserve. The stock market, now at record highs, is less likely to rise as rapidly farther down the road. Although analysts still disagree on whether stock prices are overvalued, the equity market's severe gyrations during the worldwide financial tumult clearly revealed the market's vulnerability. If stock markets begin a prolonged stagnation or decline, consumer spending and corporate investment are likely to weaken and undermine the expansion.

When the Asian crisis escalated into global turmoil after Russia's default on its debt in August 1998, U.S. stock and bond markets took off on a roller-coaster ride. Fears of defaults by hedge funds and other financial-market participants spread quickly. As a result, risk premiums (the additional return investors seek to compensate for added risk) surged, and liquidity, or trading activity, in risky markets virtually disappeared. The Federal Reserve became concerned that a liquidity crisis might erupt and stall growth in the U.S. economy, the health of which is vital to preventing a worldwide slide into recession. To calm the markets, the central bank cut the federal funds rate three times in seven weeks, lowering it by 75 basis points in all. (A basis point is a hundredth of a percentage point.) Following the cuts, the U.S. stock market rebounded, and risk premiums subsided somewhat. It appears that the United States has shrugged off—at least for now—any precipitous fallout from the international financial upheaval.

But the global crisis is not over by any stretch of the imagination. It is still inflicting economic pain and provoking political unrest in Russia, Indonesia, and Malaysia; it is also threatening to unravel the Brazilian economy and the rest of Latin America and even to renew the strains on the global financial system. Given the large loans that U.S. financial institutions have made in some of those emerging countries and the imbalances already present in the domestic economy, the undercurrent of worldwide financial unrest still poses a threat to the U.S. economic outlook (see Table 1-2).

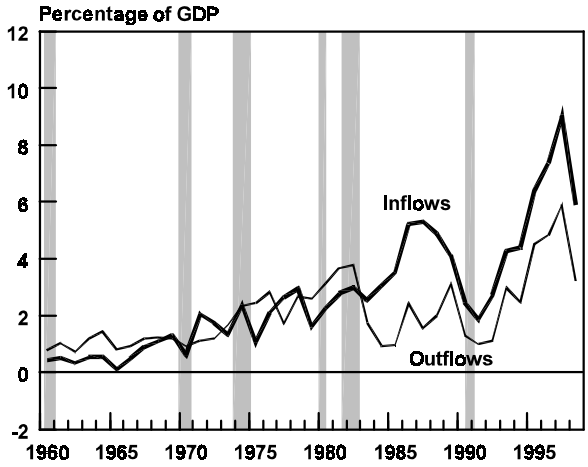
Figure 1-2.
U.S. Imports and Exports



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: Values for 1998 are estimated by CBO on the basis of data for three quarters.

Figure 1-3.
U.S. Private Capital Flows



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: Values for 1998 are estimated by CBO on the basis of data for three quarters.

The Federal Reserve Appears Ready to Calm Global Financial Volatility

Although the Federal Reserve was alert to the repercussions of the Asian crisis, it continued leaning toward a tighter monetary policy until the crisis reached global proportions. Before that point, tight conditions in labor markets had kept monetary policy focused on controlling inflation. The potentially devastating impact of a sharp U.S. slowdown on the struggling global economy, however, led the Federal Reserve to shift its attention from the threat of higher inflation to the fragility of the financial system.

Until the Federal Reserve acted to lower interest rates, the wild swings in U.S. financial markets raised the possibility that a liquidity crisis might emerge in the United States as it did abroad. Russia's default scared investors—whose confidence in risky investments was already shaken by the Asian crisis—and sent them stampeding toward safe havens. In particular, the absence of readily available information about the potential extent of losses by some U.S. financial institutions heightened investors' perceptions of the risk in holding stocks, bonds, and other instruments. Consequently, risk premiums jumped and sharply tightened financial conditions.

As investors retreated to safe assets such as U.S. Treasury securities, stock prices plummeted, interest rates on risky debt securities rose, and liquidity in such securities all but evaporated. Had those developments been allowed to persist, the cost of capital for many companies would have remained high, and some firms' sources of financing could have been shut off completely.

Fearing that a squeeze on liquidity and inordinately high risk premiums might hinder the workings of the financial system and tip the economy into re-

Table 1-2.
Net Amounts Owed to U.S. Banks by the Rest of the World During the First Half of 1998

	In Billions of Dollars	As a Percentage of U.S. Banks' Total Assets	As a Percentage of U.S. Banks' Total Capital[a]
Industrialized Nations			
Japan	37.6	0.7	8.6
Other nations	287.0	5.6	65.5
Subtotal	324.6	6.3	74.1
Emerging Nations			
Asia (Excluding Japan)	45.0	0.9	10.3
Russia	6.5	0.1	1.5
Brazil	26.4	0.5	6.0
Mexico	16.8	0.3	3.8
Latin America (Excluding Brazil and Mexico)	32.0	0.6	7.3
Other nations	31.9	0.6	7.3
Subtotal	158.6	3.1	36.2
Total, All Nations	483.2	9.4	110.3

SOURCE: Congressional Budget Office based on data from the Federal Financial Institutions Examination Council and the Federal Deposit Insurance Corporation.

a. Bank capital, which is the sum advanced and put at risk by the owners of a bank, determines the bank's ability to absorb losses. Thus, when a type of lending, such as that to foreigners, is large relative to bank capital, it may be a significant source of risk for the bank.

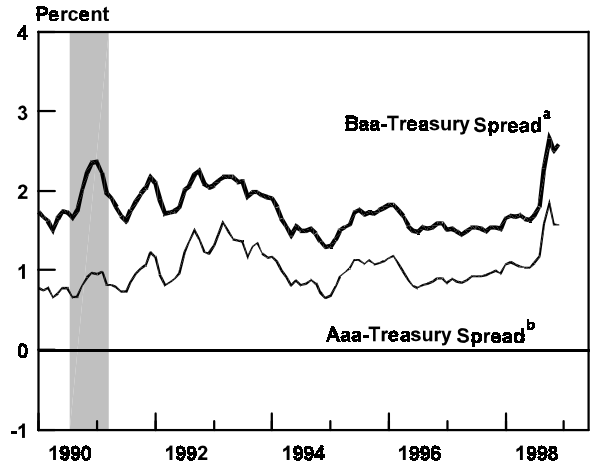
cession, the Federal Reserve acted on two broad fronts. First, it lowered the target federal funds rate three times in equal steps over seven weeks—on September 29, on October 15, and on November 17, cutting the rate from 5.50 percent to 4.75 percent. The cuts were intended to restore liquidity to the financial markets and send a calming signal that the Federal Reserve would act to alleviate undesired restraints on domestic credit. The 75-basis-point cut in the federal funds rate not only helped relieve the incipient credit squeeze in the United States but also gave emerging economies a much-needed reprieve. In addition, the central bank's readiness to act indicated to the world's jittery financial markets that U.S. economic growth was now less likely to stall and lead to a global recession.

A second action also symptomatic of the sense of urgency surrounding the turmoil was the decision by the Federal Reserve to assist in the recapitalization of a large hedge fund, Long-Term Capital Management (LTCM).[3] The firm's capital and liquid assets had been savaged when its investments turned sour following broad swings in the prices of financial assets. The New York Federal Reserve Bank encouraged private creditors and equity participants to replenish the firm's liquidity and its nearly depleted capital, although no Federal Reserve funds were involved.

Following the Federal Reserve's actions, risk premiums declined somewhat, and conditions in the financial markets have now become relatively stable. For example, stock prices recovered from their heavy losses by the end of 1998. However, as indicated by the movement in risk premiums, a resumption of volatility cannot be ruled out. At the height of concern over financial-market liquidity, the spread between yields on Aaa-rated corporate securities and 10-year Treasury notes rose sharply to about 200 basis points in mid-October. (Normally, the spread is about 100 basis points.) The spread fell to about 160 basis points in November and was still at that level in December (see Figure 1-4). Risk premiums for relatively riskier borrowers, though no longer soaring, are still above pre-crisis levels.

3. A hedge fund is an unregulated private investment partnership that finances its investments in financial assets with cash from partners and credit from lenders.

Figure 1-4.
Spreads Between Interest Rates for Corporate Securities and 10-Year Treasury Notes



SOURCES: Congressional Budget Office; Federal Reserve Board.

a. Difference between the yield on Baa-rated corporate securities and the rate for 10-year Treasury notes.

b. Difference between the yield on Aaa-rated corporate securities and the rate for 10-year Treasury notes.

One important reason for the quick return of relative calm to the financial markets following the Federal Reserve's actions was that the U.S. economy was basically sound in spite of some emerging imbalances. Low inflation has helped enhance the credibility of the Federal Reserve. In addition, most financial intermediaries, especially commercial and investment banks, have had adequate levels of capital to withstand the international turmoil. As a result, losses that in some cases were sizable could nevertheless be absorbed without jeopardizing the intermediaries' solvency. Moreover, greater participation than in past crises by nondepository intermediaries—mutual, pension, and other types of pooled funds—in the flow of credit has meant that the burden of adjusting to those losses is spread more widely than before.

International Economic Conditions Are Still Precarious

When Russia's default on its debt triggered the panicky flight of capital from emerging markets and

risky financial instruments, it unleashed a financial upheaval of global proportions that engulfed industrialized as well as emerging economies. Following a sequence of policy responses, the global financial turmoil seems to have subsided. The Federal Reserve's three consecutive rate cuts provided the first dose of tranquilizer. Then the announcement of a $42 billion support package for Brazil led by the International Monetary Fund (IMF) on November 13 provided additional relief by averting an immediate attack on the Brazilian currency. Most recently, the coordinated cuts in interest rates by 11 member countries of the European Union on December 3 lowered policy rates in 10 of those countries by 30 basis points to 3 percent. The cuts further reinforced the Federal Reserve's efforts to deter another outburst of financial turbulence.

Although those developments are heartening, they are no panacea for the ills of the world's shaky markets, much less a guarantee of speedy recovery for many of the countries that are gripped by deep recessions. Investors on the whole remain skittish and international financial markets, fragile. Capital is still scarce in emerging countries where it is badly needed for economic recovery. Moreover, the slumps in the real economy of many emerging nations and Japan are quite grave, straining the ability of the United States and European countries to continue propping up global growth. In sum, the world economy is by no means out of the woods.

The problems for Asia's economy run deep and could linger for years before the region's output returns to its pre-crisis level, even though there are some encouraging signs. Except in the case of Indonesia, the financial panic has subsided somewhat. The Thai baht and the Korean won have regained over half of their value relative to the dollar. And interest rates in Thailand, Korea, Singapore, and Hong Kong have dropped to the levels seen before the crisis.

However, the collapse in equity prices and exchange rates has meant a huge loss of wealth and purchasing power for those countries. Moreover, the credit crunch from the mounting bad loans in the banking system and the pullout of foreign capital are adding to the forces crippling the economy.

At its height, the crisis produced severe financial conditions for the afflicted Asian nations. Investment plunged while bankruptcy and unemployment soared. A large share of the population in many of the countries was pushed back into poverty, and consumption plummeted. Over the first three quarters of 1998, real GDP shrank at an annual rate of 7 percent in Hong Kong, 23 percent in Indonesia, 11 percent in Malaysia, 8 percent in South Korea, and about 8 percent in Thailand. Most analysts expect that although such alarming rates of economic contraction will slow, those economies are not likely to grow again before the second half of 1999.

Why is the recovery of the Asian countries stricken by the crisis so long in coming? Among other factors is that Japan, which receives 30 percent of the rest of Asia's exports, is now mired in its worst recession since World War II. Real GDP began to fall in the last quarter of 1997; it contracted 3.6 percent over the year ending in the third quarter of 1998. Worse, signs abound that the contraction could continue for another year. Japanese exports to the rest of Asia are falling. Worries about jobs and deflationary pressures have made consumers unwilling to spend, and firms are slashing investment.

Even though the Bank of Japan has lowered the country's official discount rate to near zero, consumer spending and capital investment continue to shrink amid widespread pessimism. According to some private estimates, the banking system is saddled with bad loans that approach $1.1 trillion, or about 30 percent of GDP. Because undercapitalized banks are unwilling or unable to lend, corporate Japan is also suffering a severe credit crunch, which has undermined the Bank of Japan's ability to stimulate the economy by increasing the monetary base (the money supply under its direct control). The crunch has made it difficult to transmit that increase into growth in broader monetary aggregates and credits, and thereby to growth in economic activity. In addition, the sharp 30 percent rise of the yen against the dollar since August has further damaged Japanese exporters' ability to recover.

The Japanese government now appears to be determined to tackle Japan's economic malaise. The parliament voted to make 60 trillion yen (about $530

billion, or 12 percent of GDP) available for recapitalizing the Japanese banks. In September, it passed a fiscal stimulus package totaling 16 trillion yen (about 3 percent of GDP) for Japan's fiscal year 1998 that included a tax cut of about 4 trillion yen. Another stimulus package of over 20 trillion yen for fiscal year 1998 was approved in December. To encourage private spending, that package also includes 0.7 trillion yen to provide cash vouchers to eligible individuals.

Whether all those efforts will achieve their objectives is uncertain. If troubled banks are reluctant to go through necessary restructuring in exchange for an injection of public money, the new banking bill will not help relieve the credit crunch. And although recapitalizing the banks may enhance their ability to lend again, it will not automatically stimulate domestic demand if consumer and investor confidence is not restored. The cash voucher disbursement may not go far in stimulating the economy because consumers may simply use the vouchers to buy things they were going to buy anyway. And even if the scheme actually works, the size of the operation may be too small to matter. Overall, it is questionable whether the fiscal packages will do more than offset the drags from the foreign and the private sectors. They may be more likely to mitigate the severity of the recession than to revive the economy.

Another vulnerable area outside the United States is Latin America, which has been adversely affected by Brazil's effort to defend its dollar-pegged currency regime. Brazil, the largest economy in the region, had to raise its short-term interest rate to more than 40 percent in 1998 to curb capital flight and fend off pressures of devaluation on its currency, the real. Because the country's inflation rate was modest, the steep rise in the inflation-adjusted interest rate crushed consumer spending and business investment. With weak commodity prices already choking growth and with unemployment near record highs, the government's contractionary efforts proved to be unsustainable despite the IMF-led support. In January 1999, Brazil finally allowed the real to float freely. The collapse of the real has once again pushed the international financial system into the realm of uncertainty.

Although economic conditions are better elsewhere in the world, they are showing signs of increasing fallout from the troubles in Asia and Latin America. The fall in Asia's demand for oil has helped push down oil prices, hurting many oil-exporting countries. Forecasts of GDP growth rates in Canada, Mexico, and Europe, though still positive for 1999 and 2000, have all been downgraded in the wake of the global turmoil.

In Canada, weak commodity prices and stiff foreign competition have stalled the growth of cash flows for the corporate sector, forcing companies to rely more heavily on external funding to finance capital spending. Canadian consumers, who have incurred record levels of personal debt and negative saving rates, have also become vulnerable to the sudden tightening of credit. Against such a backdrop, the marked slowdown in credit expansion in August and September raised the risk that both business investment and household spending might be hampered. The Canadian economy was able to avert a recession by lowering interest rates in step with the Federal Reserve. The prospects for Canada's economic growth, however, remain vulnerable to the developments in international financial conditions.

Mexico is also suffering significantly from the repercussions of the Asian crisis and international financial turbulence. The fall in oil prices—to a significant extent, a result of the fall in Asian demand—has forced the government to cut spending. The rise in risk premiums has also caused Mexican interest rates to climb sharply, curtailing business investment as well as household spending. Thus far, Mexico has withstood the effects of the global financial turmoil surprisingly well, thanks to its close links with the United States and its flexible exchange rate system. The system allows its currency to depreciate substantially without setting off an excessively disruptive speculative attack. However, if Brazil plunges into economic chaos following the sharp depreciation in the real, Mexico may find it more difficult to continue its recovery.

European countries are being increasingly hurt by the Asian crisis as well. Exports to Asia have been falling, pulling down industrial activity. Thus

far, the pickup in household spending has partially offset weak foreign demand. But if the manufacturing sector continues to weaken, it could slow employment gains and erode the strength in household demand. On the positive side, European fiscal policy is now turning modestly expansionary, and monetary policies have become more stimulative than was previously expected. As a result, most analysts expect Europe's real GDP to grow by about 2 percent both this year and next.

The rapid spread of financial crises around the globe since July 1997 vividly demonstrates how national borders are becoming less significant in separating the economic fates of sovereign nations. Decisive policy responses have helped to contain the global financial turmoil. Also, the general environment of low inflation leaves room for further policy action if needed. The many vulnerable spots of the world economy, however, call for continued vigilance.

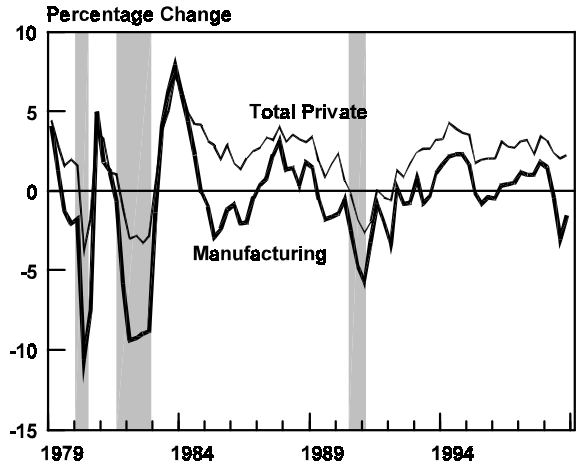
The U.S. Labor Market Is Unsustainably Tight

Unemployment in the United States has been on a downward trend since 1992. By now, three years have passed since the unemployment rate first fell significantly below the level that CBO estimates to be consistent with a steady rate of inflation—that is, the nonaccelerating inflation rate of unemployment (NAIRU). Although growth in employment has slowed somewhat in recent months and announcements of corporate layoffs have mounted, labor markets remain exceptionally tight. The unemployment rate fluctuated between 4.3 percent and 4.7 percent throughout 1998; by the end of the year, it was still more than a percentage point below CBO's estimate of the NAIRU for the year (5.6 percent). In the past, such conditions have normally been associated with upward pressure on wage and price inflation. However, because of a host of special factors to be discussed later, such inflationary pressures have been surprisingly muted over the past two years.

Thus far, only limited evidence points to an easing of the demand for labor. Data from the establishment survey, conducted monthly by the Bureau of Labor Statistics, indicate that employment in the manufacturing sector declined by 1.4 percent over the last nine months of 1998, reflecting the impact of the Asian crisis. That drop could eventually create ripple effects leading to cutbacks in other industries. And indeed, a similar decline in manufacturing employment throughout 1989 foreshadowed the 1990-1991 recession (see Figure 1-5). But there is no guarantee that this spillover effect will occur. Between the end of 1984 and the start of 1987, manufacturing employment fell by 3.2 percent, yet employment growth throughout the rest of the economy continued unabated, and no recession occurred.

The current pattern of growth could resemble that seen from 1985 to 1986 much more closely than that seen in 1989 because the recent decline in manufacturing employment (as in 1985 and 1986) mainly reflects the impact of a widening trade deficit on that sector. Of course, a significant acceleration in manufacturing layoffs could raise the likelihood of spillover effects, heralding a slowdown if not a recession. However, if external conditions do not worsen and further depress manufacturing, labor markets could remain tight in the short run.

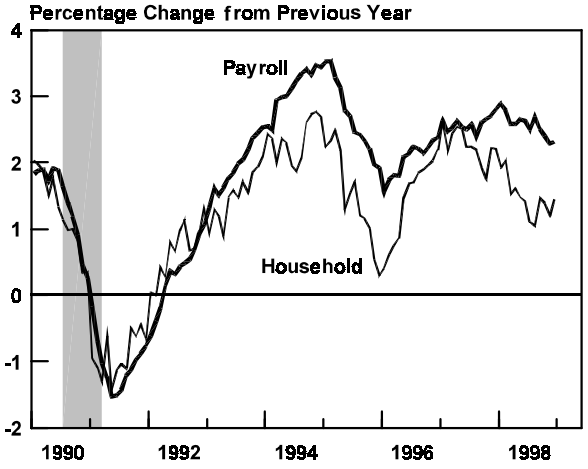
Figure 1-5.
Payroll Employment Growth for the Total Private Sector and for Manufacturing



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

NOTE: These values are annual growth rates based on quarterly data.

Figure 1-6.
Household Versus Nonfarm Payroll Employment



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

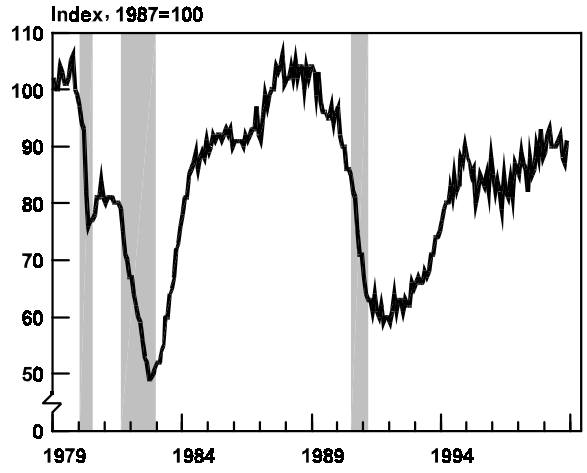
A clear reading of the conditions in the labor market is difficult, however, because of some puzzling developments in the labor-market data. To begin with, there is wide divergence between employment measures reported by the household survey, which measures the number of people working, and the establishment survey, which measures the number of people on employer payrolls. Typically, employment growth follows similar patterns in the two surveys with almost simultaneous turning points. However, over the last several years, and especially during the past year, payroll employment has grown faster than household employment (see Figure 1-6). The recent discrepancies cannot be explained by conceptual differences between the two surveys. Instead, they appear to reflect measurement problems leading to an overstatement of growth in payroll employment, an understatement of household employment, or both.

Another development clouding the picture of labor-market conditions is the recent spate of highly publicized announcements of job cuts—most notably, 20,000 at Boeing in addition to the 28,000 cuts that were announced in early 1998. To what extent such announcements are actually followed by net job losses remains unclear, however. Often they refer to reductions planned over a year or more, as opposed to immediate dismissals. Moreover, some announced cuts never actually materialize, and many that do are offset by hiring elsewhere within the same firm.

In any event, low rates of unemployment and of initial claims for employment insurance suggest one of two possibilities: either the actual rate of job destruction has not risen along with job-cut announcements, or most laid-off workers have been able to find new jobs fairly quickly, possibly without experiencing even a brief spell of unemployment. Initial claims are still well below the levels typically associated with a recession. Less information is available about rates of job creation, but the best indicator—the Conference Board's Help-Wanted Index—shows little appreciable slowing (see Figure 1-7). On balance, growth in labor demand is unlikely to drop significantly over the near term. Any slowdown in demand will probably be modest rather than drastic.

The labor supply shows no signs of expanding significantly to help ease the condition of the labor market. Barring an unforeseen rise in immigration, demographic trends suggest that the working-age population in coming years will increase only modestly at best. In addition, the labor force participation rate (the labor force as a percentage of the working-age population), already near historic highs, is unlikely to climb substantially above its current level of 67 percent—for several reasons:

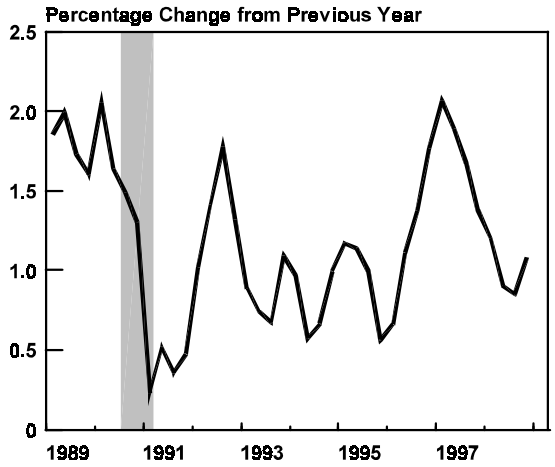
Figure 1-7.
Index of Help-Wanted Advertising in Newspapers



SOURCES: Congressional Budget Office; Conference Board.

NOTE: Values in the figure are seasonally adjusted.

Figure 1-8.
Labor Force



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

NOTE: The figures for 1994 reflect the redesign of the Current Population Survey (CPS) and are based on estimates from Anne Polivka and Stephen M. Miller, "The CPS After the Redesign: Refocusing the Economic Lens," in John Haltiwanger, Marilyn Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, National Bureau of Economic Research Studies in Income and Wealth (in press), pp. 249-286.

- The prolonged tight labor market has already induced people who normally do not work—for example, housewives and retirees—to enter the labor force.
- Most of welfare reform's effects on the labor force seem to have already occurred.[4]
- The long-standing trend toward greater participation among women may have, with the exception of older age groups, run its course.

With respect to the last point, the labor force status of women of the baby-boom generation has differed from that of previous cohorts, with significantly higher participation for the boomers at all stages of the life cycle. But with the boomers now coming into their 50s, further gains in participation rates due to cohort effects are unlikely.

The three factors discussed above are likely to help offset the growth in the labor supply from the rapidly growing share of college-educated people in the working-age population. (College-educated people tend to have significantly higher participation rates than less-educated groups.) Indeed, labor force growth, which climbed to an unusual high in the first quarter of 1997, has since dropped to a level closer to its average over the past decade (see Figure 1-8).

Consumer Spending Is Robust Though Moderating

Buoyed by strong employment growth, rising real wages, and substantial gains in wealth, households began 1998 with a burst of unusually strong consumption, but the growth in consumer spending slowed in the second half of the year. The dip does not necessarily presage a drastic slowdown; even after moderating, real personal consumption expenditures grew by nearly 4 percent in the second half of 1998.

Consumer spending remained robust at the end of 1998 for several reasons. First, solid wage growth, low inflation, and low interest rates all contributed to boost households' purchasing power. The tight labor market and falling import and oil prices meant rising real wages for households as well. In addition, during the recent surge in mortgage refinancing, people may have taken out some of their home equity, bolstering their ability to spend.

Second, employment continued to rise despite the already tight labor market. The 12-month growth rate of nonfarm payroll employment was 2.3 percent in December 1998, only slightly below its average of 2.7 percent for the first half of the year (see Figure 1-6). With both employment and real wages steaming ahead, real disposable personal income, which has been rising healthily at a 2.8 percent rate since 1994, advanced further in the second half of 1998.

Third, the household sector's financial conditions have remained healthy. Gains in stock prices

4. Between 1993 and 1997, the real value of the maximum earned income tax credit increased by 38 percent for single mothers with one child and by 116 percent for single mothers with two or more children. Those increases coincided with the period in which the proportion of single mothers in the labor force increased dramatically, from 73.7 percent in 1992 to 84.2 percent in 1997.

over the past four years have made households wealthier and encouraged consumption. Even though the stock market gains slowed in the second half of 1998, the cumulative gain over the past few years has kept household net wealth at a high level.

A fourth reason for the continued robust consumer spending is that easy credit has led consumers to spend more than they earn. Over the past four years, consumer spending has risen almost twice as fast as income, indicating that consumers have been drawing down their savings and expanding their borrowing.

The ongoing strength of the stock market could continue to support household demand a while longer, even though the record high level of consumer credit relative to disposable income may foreshadow a moderation of consumption. The stock market has more than regained all of the ground it lost during August and September. Even if stock prices do not rise further from their late-1998 level, the wealth effect of the extraordinary 160 percent rise in stock prices since the beginning of 1995 will still tend to support consumption in 1999.

The Boom in Capital Spending Is Waning

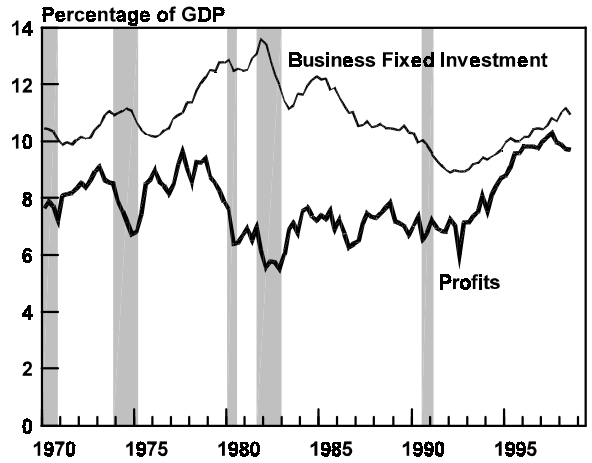
After a heady six-year performance that has rivaled the capital boom of the 1960s, growth in business expenditures for plant and equipment appears to be slowing. Following an 11 percent advance in 1997, growth of real business fixed investment accelerated in the first half of 1998 to an annual rate of 17 percent before decelerating sharply in the second half of the year. In the third quarter of 1998, fixed capital spending by businesses posted its first decline since the 1990-1991 recession, falling by more than an annual rate of 1 percent. Although a decline in one quarter alone is not conclusive evidence that the boom is over, other indicators over the past year suggest that the stage is set for a slowdown.

The capital spending boom has drawn strength from the remarkable growth in corporate profits during the 1990s. From 1993 through 1997, net nonresidential capital investment as a share of GDP soared in tandem with the surge in the profits share of GDP (see Figure 1-9). Rising profits tend to boost capital spending by allowing firms to rely more heavily on relatively cheaper internal financing and by indicating a promising rate of return on further investment. Correspondingly, falling profits tend to discourage capital spending by increasing firms' dependence on more costly external financing and by suggesting that the return to capital may deteriorate.

Since late 1997, growth in corporate profits has first slowed and then ceased, as growth in unit labor costs accelerated and inflation in product prices remained stable. By the third quarter of 1998, economic profits were 2 percent below the levels that had prevailed a year earlier. To a large extent, the stagnation in corporate profits reflects fallout from the Asian crisis, which resulted not only in falling demand for exports but also in falling import prices. The decline in import prices also makes it harder for U.S. producers to raise prices in response to rising labor costs.

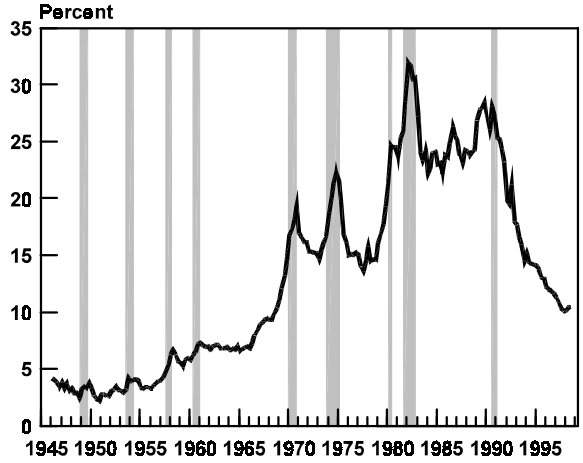
Other recent indicators also suggest that businesses may soon slow the pace of their capital purchases. Since the start of 1998, the growth of new orders for capital goods (excluding defense and aircraft) has been slowing. Capacity utilization in manufacturing averaged just above 80 percent in late

Figure 1-9.
Profits and Business Fixed Investment



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Figure 1-10.
Ratio of Debt Service to Net Capital Income for Nonfarm Corporations



SOURCES: Congressional Budget Office; Federal Reserve Board.

NOTE: Net capital income equals economic profits plus net interest payments. Debt service equals net interest payments.

1998, more than 2 percentage points below its historical average. The construction component of nonresidential investment, which began to slow in the second half of 1998, is expected to weaken further. Businesses tend to use external financing for construction projects, and some of the traditional external sources have been tightening up.

The slowdown in investment growth is likely to be gradual rather than drastic, however, even though that forecast is surrounded by uncertainty (see Chapter 5). In spite of a deteriorating outlook for profits, corporations are much better prepared for a downturn than was the case during the years leading up to the 1990-1991 recession. During the recession and throughout the long economic expansion, businesses have shifted away from the excessive accumulations of debt practiced in the 1980s. Consequently, the nonfinancial corporate sector now has healthier balance sheets. Surging equities markets combined with more balanced accumulation of debt have reduced the overall debt-to-equity ratio for nonfarm and nonfinancial corporations. The ratio has fallen from the peaks that were maintained throughout the past decade to a level that is much closer to the historical average before the inflationary 1970s. Moreover, debt-service burdens have declined throughout the 1990s (see Figure 1-10).

Inflation Has Remained Low But Is Facing Upward Pressure

Inflation has been subdued for the past three years, and during that time it has been more timid than the historical relationship between the unemployment rate and the underlying, or core, rate of inflation would indicate. Traditionally, the core rate of CPI inflation increases in the year following a low unemployment rate, but that pattern has not been evident over the past two years. Most of the estimates of the NAIRU vary between 5.8 percent and 5.0 percent, but none are as low as the current unemployment rate of 4.3 percent. CBO's estimate of the NAIRU is 5.6 percent, which implies that the unemployment rate has been significantly below the NAIRU since mid-1996. The absence of any acceleration in inflation can be traced to a number of unusual developments in certain components of consumer prices as well as to changes in the way inflation is measured. Changes in the methods for measuring consumer prices, however, explain only a small part of the lower-than-expected inflation rate (see Appendix E).

The surprising lack of inflation stems mainly from a fall in import prices and a deceleration in prices for medical care. A steeper-than-usual drop in computer prices has also dampened upward pressure on inflation in the GDP price index and the related personal consumption price index, although not in the CPI. Because those special factors have been operating for a number of years, their benign effects have probably helped to lower inflationary expectations as well.

Import Prices. Import prices fell sharply in 1996 and continued to decline in 1997 and 1998, undercutting the nascent inflationary pressures that started to build during 1996. The lower prices stem from excess foreign capacity and the rise in the dollar. During 1996, the European and Canadian economies were relatively weak. In 1997 and 1998, repercussions from the Asian crisis and the Russian debt crisis caused severe recessions in some countries and curbed growth in many others. Those events prolonged and intensified the drop in import prices,

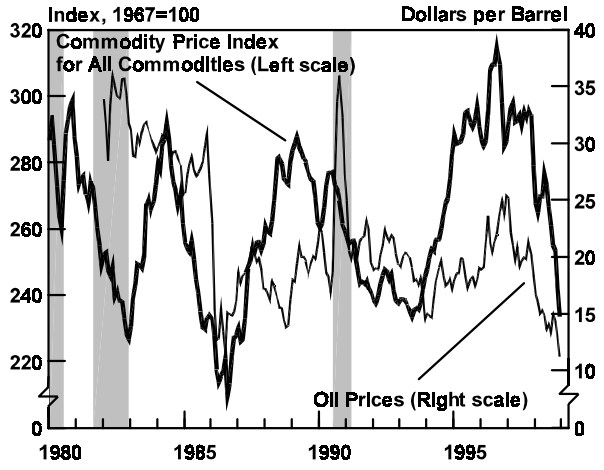
which helped lower U.S. inflation directly because imports are a significant part of consumption and are used as inputs to produce other goods and services. Moreover, falling import prices may have lowered U.S. prices indirectly by holding down the prices of domestically produced goods that compete with imports. The dollar has dropped sharply against the yen and European currencies since August 1998, however, making it unlikely that import prices will continue to fall as sharply as before.

Weak worldwide demand has also helped keep commodity prices down as U.S. demand was accelerating. Prices for commodities other than oil have fallen at an average annual rate of 5.5 percent since early 1997. Oil prices tumbled from more than $20 per barrel at the end of 1997 to less than $12 by the end of 1998 (see Figure 1-11).

Medical Care Inflation. The dramatic restructuring of the medical care insurance industry and the decline in medical care inflation in the 1990s helped hold down inflation in two ways. The direct effect of those factors on inflation was considerable. Medical care inflation in the CPI measure declined from 7.4 percent in 1992 to 2.7 percent in 1997 (see Figure 1-12). Correspondingly, medical care's contribution to overall CPI inflation fell to less than 0.2 percentage points during the 1997-1998 period from about 0.5 percentage points during the 1985-1995 period. Similarly, medical care's contribution to inflation measured by the price index for personal consumption expenditures (PCE) averaged about 0.9 percentage points during the 1985-1995 period, but that contribution fell to about 0.4 percentage points in the 1997-1998 period. Because medical care has a greater weight in the PCE price index than in the CPI, the effect of medical care restructuring on inflation is more pronounced when inflation is measured by the PCE index.[5]

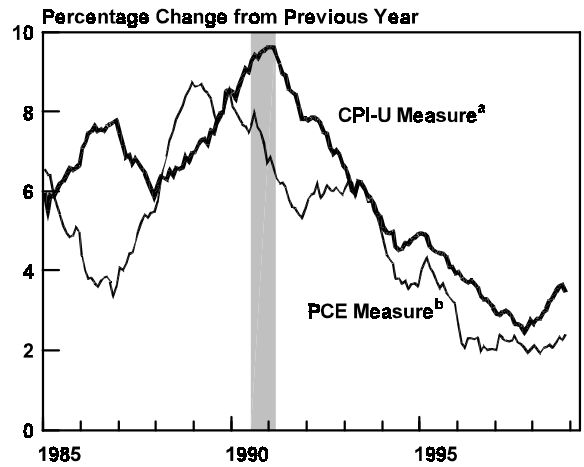
The secondary effect on inflation of changes in medical care was also important. Medical insurance benefits provided by employers, a significant cause of rising unit labor costs in the late 1980s and early 1990s, slowed dramatically during the 1990s. That reduction in the growth of benefits caused the growth of compensation per hour to remain low in 1997,

Figure 1-11.
Commodity and Crude Oil Prices



SOURCES: Congressional Budget Office; *Wall Street Journal*; K.R. Commodity Research Board, Commodity Index Report.

Figure 1-12.
Medical Care Prices as Measured by the CPI and PCE



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

a. The medical care price index in the consumer price index for all urban consumers.

b. Medical care price index for personal consumption expenditures in the national income and product accounts.

5. Medical care prices are measured differently in the CPI and in the PCE price index.

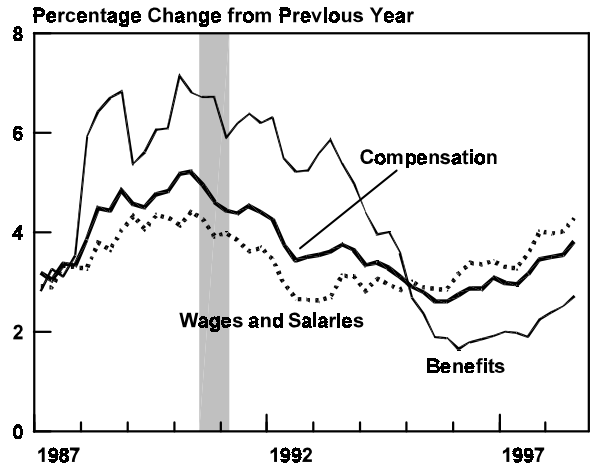
even though wage rates were increasing as a result of the tight labor market.

Computer Prices. Steep declines in computer prices between 1995 and 1998 also helped keep the growth of the GDP price index and the PCE price index low. Throughout the 1980s and into the early 1990s, the extraordinarily rapid pace of technological innovation slashed computer prices. For example, the prices of computers sold to households, adjusted for changes in quality, fell by more than 13 percent a year over the 1983-1994 period. Since 1995, those prices have plunged even more, dropping at an average annual rate of about 25 percent.

One important factor in the acceleration of computer price deflation has been excess production capacity worldwide for memory chips. Another factor is the competition among sellers of processor chips, which has driven down their prices. CBO estimates that the accelerated decline in computer prices has lowered the overall rate of GDP price inflation by 0.2 percentage points a year since 1995.

Labor Compensation. The tight labor market has begun to exert upward pressure on wages and compensation. Over the past two years, the employment cost index (ECI) and both of its components—wages and salaries, and benefits—have exhibited a modest upward drift (see Figure 1-13). Another compensation measure, based largely on compensation data from the national income and product accounts (NIPAs), has also risen somewhat since late 1997. In contrast, growth in average hourly earnings, the one wage measure available monthly but covering only wages and salaries, has turned sharply downward over the past several months. Average hourly earnings, however, do not hold constant either employment composition or overtime hours. Therefore, their lower growth could reflect some combination of increased hiring of the least-skilled workers as labor markets have tightened, cutbacks in the relatively high-paying manufacturing sector, or a slight decline in the level of overtime employment.

Figure 1-13.
Employment Cost Index



SOURCES: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics.

The Growth of the Federal Budget Surplus

The federal budget has improved dramatically since 1992, and CBO projects that it will continue to improve throughout the next 10 years under the assumption of no change in current law (see Table 1-3). In fiscal year 1998, the total budget turned to a surplus of $70 billion from a deficit of $22 billion in 1997, marking the first overall surplus since 1969. For the 1998-1999 period, the upward trend in the surplus as a percentage of GDP reflects a continuation of the recent pattern of higher revenues relative to GDP and a reduction in interest costs. The gains after 2000, however, stem from the continued decline in debt and the resulting reductions in interest payments, as well as the assumption that discretionary spending grows more slowly than GDP.

CBO's economic projections assume that no legislative action is taken that would affect the projections of revenues and spending, which are described in Chapters 2, 3, and 4.

The budget's move to a surplus in 1998, and the projected growth in the surplus in 1999, arise largely from rapid growth in revenues as a share of GDP and not from the general strength of the economy. Indeed, the standardized-employment measure of the budget, which tries to remove business-cycle effects

Table 1-3.
Measures of Fiscal Policy Under Baseline Assumptions (By fiscal year)

	Actual				Projected										
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
In Billions of Dollars															
Standardized-Employment Surplus or Deficit (-)[a]	-187	-127	-86	-1	17	87	137	185	211	237	271	305	333	361	388
Reconciliation with Budget Surplus or Deficit (-)															
Cyclical surplus or deficit (-)	-4	2	35	68	69	36	12	0	-5	-8	-9	-9	-10	-10	-11
Deposit insurance	18	8	14	4	4	2	1	0	0	-1	1	1	1	1	1
Timing shifts[b]	-1	5	-1	-14	12	0	-6	10	-1	0	-11	6	5	0	0
Spectrum auctions	8	0	11	3	1	2	4	9	2	1	1	1	1	0	0
Asset sales	2	4	5	10	4	4	4	4	4	3	3	3	3	3	3
Total Budget Surplus or Deficit (-)	-164	-107	-22	70	107	131	151	209	209	234	256	306	333	355	381
As a Percentage of Potential GDP															
Standardized-Employment Surplus or Deficit (-)[a]	-2.6	-1.7	-1.1	0	0.2	1.0	1.5	1.9	2.0	2.2	2.4	2.6	2.7	2.8	2.9
Reconciliation with Budget Surplus or Deficit (-)															
Cyclical surplus or deficit (-)	-0.1	0	.4	0.8	0.8	0.4	0.1	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Deposit insurance	0.2	0.1	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0
Timing shifts[b]	0	0.1	0	-0.2	0.1	0	-0.1	0.1	0	0	-0.1	0	0	0	0
Spectrum auctions	0.1	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0	0
Asset sales	0	0	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0
Total Budget Surplus or Deficit (-)	-2.3	-1.4	-0.3	0.9	1.3	1.5	1.6	2.1	2.0	2.2	2.3	2.6	2.7	2.7	2.8
Memorandum (Billions of dollars):															
Discretionary Spending	546	534	548	554	575	574	573	568	583	598	614	630	646	663	680
Net Interest Payments	232	241	244	243	231	218	207	195	183	170	156	140	123	104	85
Potential GDP	7,222	7,548	7,897	8,218	8,575	9,001	9,444	9,903	10,372	10,858	11,361	11,880	12,417	12,974	13,550
Primary Standardized Surplus[a] (As a percentage of potential GDP)	0.6	1.5	2.0	3.0	2.9	3.4	3.6	3.8	3.8	3.8	3.8	3.7	3.7	3.6	3.5

SOURCE: Congressional Budget Office.

a. These numbers exclude outlays for deposit insurance and offsetting receipts from both spectrum auctions and asset sales. They also reflect adjustments for fiscal years in which there are 11 or 13 monthly payments for various entitlement programs instead of the usual 12.

b. Includes an adjustment to account for shifts in the timing of excise tax receipts and mandatory spending, as well as an adjustment for the number of payments in a fiscal year (see footnote a).

(and also a few temporary elements, such as asset sales), shows much the same movement toward surplus. Recent legislation also does not explain much of the actual and projected improvement in the budget. Instead, the surplus has materialized sooner than anticipated largely because of the sharp increase in revenues relative to GDP. Revenues were 19.8 percent of GDP in fiscal year 1997, but they jumped in 1998 and are projected to be 20.7 percent of GDP in fiscal year 1999. The reasons for the increase are explored in Chapter 3.

Without new legislation, overall budget surpluses will grow steadily over the next decade, both absolutely and relative to GDP. Current law, which includes statutory caps for discretionary spending through 2002, and CBO's assumptions about appropriations in the years after 2002 play a role in the projection of surpluses over the medium term. The budget projections assume that spending will not exceed the caps during the 2000-2002 period and that discretionary spending will grow with inflation after the caps expire. Those assumptions mean that discretionary spending will grow more slowly than the economy.

For the most part, the surplus grows in the medium term because it drives down debt, thereby reducing interest payments and increasing future surpluses. The primary budget surplus—the standardized-employment budget surplus adjusted for net interest payments—does not increase relative to GDP between 2002 and 2009. In fact, the primary budget surplus is projected to be about the same share of GDP in 2009 as in 2000 (see Table 1-3).

Federal surpluses will make their largest sustained contribution to national saving since World War II under the assumptions of the budget projections, encouraging investment and capital accumulation and raising the potential growth rate of the economy. The federal contribution to saving is particularly important at present because personal saving has dried up and other private saving (in the corporate sector) is likely to grow, if at all, much less rapidly than it has since 1990.

By contrast, if legislative action reduced the prospective surpluses, CBO's projection of the growth of the capital stock—which depends on saving—would be correspondingly lower, as would the projected growth of potential GDP. And slow growth of potential GDP would have a secondary effect that would reduce the surplus further. As an example, legislative action that directly reduced the projected surplus between 2000 and 2009 by about 1 percent of GDP would raise debt-service costs and reduce the surplus by a total of about 1.6 percent of GDP in 2009. In addition, the economic effects of lower federal saving would erode the projected surpluses even more. By 2009, the secondary economic effects—in particular, lower real growth and higher interest rates—could whittle down the surpluses by an additional 0.2 percent of GDP.

The actual results of any legislative action would depend on its specific nature, that is, exactly how spending or transfers would be increased or taxes would be lowered. The example given here is intended only to provide a general indication of the overall budgetary effect of legislative actions that reduce the surplus.

The Economic Forecast for 1999 and 2000

Outlooks are always uncertain, and none more so than now, with nervousness pervading the financial markets and imbalances building in the economy. CBO's forecast is intended to be an "average" one, taking into account the probability of worse outcomes and better ones. (See Chapter 5 for some of the alternative ways in which the economy could develop.) In CBO's forecast, GDP growth slows but without falling into recession, and inflation rises moderately (see Tables 1-4 and 1-5). Growth in nominal GDP thus is expected to slow but to a lesser extent than real GDP growth. The moderation in GDP growth reflects a deceleration in investment and consumer spending as well as the persistence of the trade deficit. The modest pickup in CPI inflation reflects the abating of the special inflation-dampening factors and the continuing tightness of labor markets.

These forecasts do not differ greatly from those of the *Blue Chip* consensus—an average of the forecasts produced by approximately 40 to 50 private-

Table 1-4.
CBO Economic Projections for Calendar Years 1999-2009

	Estimate	Forecast		Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Nominal GDP (Billions of dollars)	8,499	8,846	9,182	9,581	10,015	10,476	10,960	11,465	11,988	12,528	13,089	13,668
Nominal GDP (Percentage change)	4.8	4.1	3.8	4.3	4.5	4.6	4.6	4.6	4.6	4.5	4.5	4.4
Real GDP[a] (Percentage change)	3.7	2.3	1.7	2.2	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3
GDP Price Index[b] (Percentage change)	1.0	1.7	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Consumer Price Index[c] (Percentage change)	1.6	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Unemployment Rate (Percent)	4.5	4.6	5.1	5.4	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Three-Month Treasury Bill Rate (Percent)	4.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Ten-Year Treasury Note Rate (Percent)	5.3	5.1	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Tax Bases (Billions of dollars)												
Corporate profits[d]	826	813	785	814	857	899	941	980	1,018	1,054	1,085	1,116
Wage and salary disbursements	4,146	4,365	4,566	4,747	4,938	5,155	5,387	5,632	5,887	6,152	6,429	6,715
Other taxable income	1,765	1,802	1,834	1,891	1,964	2,038	2,113	2,192	2,276	2,366	2,462	2,562
Tax Bases (Percentage of GDP)												
Corporate profits[d]	9.7	9.2	8.5	8.5	8.6	8.6	8.6	8.6	8.5	8.4	8.3	8.2
Wage and salary disbursements	48.8	49.3	49.7	49.5	49.3	49.2	49.1	49.1	49.1	49.1	49.1	49.1
Other taxable income	20.8	20.4	20.0	19.7	19.6	19.5	19.3	19.1	19.0	18.9	18.8	18.7

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. Based on chained 1992 dollars.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

d. Corporate profits are the profits of corporations, adjusted to remove the distortions in depreciation allowances caused by tax rules and to exclude capital gains on inventories.

Table 1-5.
CBO Economic Projections for Fiscal Years 1999-2009

	Actual	Forecast		Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Nominal GDP (Billions of dollars)	8,404	8,762	9,095	9,476	9,904	10,358	10,837	11,337	11,855	12,391	12,946	13,521
Nominal GDP (Percentage change)	5.0	4.3	3.8	4.2	4.5	4.6	4.6	4.6	4.6	4.5	4.5	4.4
Real GDP[a] (Percentage change)	3.8	2.8	1.7	2.1	2.3	2.4	2. 4	2.4	2.4	2.3	2.3	2.3
GDP Price Index[b] (Percentage change)	1.2	1.5	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Consumer Price Index[c] (Percentage change)	1.6	2.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Unemployment Rate (Percent)	4.6	4.6	5.0	5.4	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Three-Month Treasury Bill Rate (Percent)	5.0	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Ten-Year Treasury Note Rate (Percent)	5.6	5.0	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Tax Bases (Billions of dollars)												
Corporate profits[d]	824	822	786	803	848	888	932	970	1,009	1,045	1,078	1,108
Wage and salary disbursements	4,086	4,311	4,519	4,703	4,887	5,099	5,328	5,570	5,822	6,085	6,358	6,642
Other taxable income	1,750	1,796	1,824	1,875	1,945	2,020	2,094	2,172	2,255	2,343	2,437	2,536
Tax Bases (Percentage of GDP)												
Corporate profits[d]	9.8	9.4	8.6	8.5	8.6	8.6	8.6	8.6	8.5	8.4	8.3	8.2
Wage and salary disbursements	48.6	49.2	49.7	49.6	49.3	49.2	49.2	49.1	49.1	49.1	49.1	49.1
Other taxable income	20.8	20.5	20.1	19.8	19.6	19.5	19.3	19.2	19.0	18.9	18.8	18.8

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

a. Based on chained 1992 dollars.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

d. Corporate profits are the profits of corporations, adjusted to remove the distortions in depreciation allowances caused by tax rules and to exclude capital gains on inventories.

sector economists (see Table 1-6). Compared with the *Blue Chip* consensus, CBO's forecasts of real GDP growth are roughly the same for 1999, though less optimistic for 2000. Indeed, CBO's forecast of real GDP growth for 2000 is even below the average of the 10 lowest *Blue Chip* forecasts but only by a tenth of a percentage point. CBO's forecasts of inflation rates are slightly higher than the average of the 10 highest *Blue Chip* forecasts for 1999, but they are similar to those of the *Blue Chip* consensus for 2000.

CBO's forecasts have changed little from those published in its August 1998 report, *The Economic and Budget Outlook: An Update* (see Table 1-7). The forecast of growth in nominal GDP has been revised downward by a small amount for both 1999 and 2000. That revision reflects a slightly lower forecast of inflation in both years and a slightly lower forecast of real growth in 2000.

GDP Growth

CBO expects real GDP growth to slow from its 3.7 percent rate in 1998 to 2.3 percent in 1999 and 1.7 percent in 2000. The economy is gravitating toward slower growth for several reasons: falling corporate profits and low capacity utilization are combining to pull down capital spending, slower gains in personal income will tend to slow consumer spending, and weak foreign demand will continue to depress net exports. But the slowdown is likely to be gradual rather than drastic, thanks to the Federal Reserve's recent cuts in interest rates and a low-inflation environment that lends credibility to the Federal Reserve's signal that it is ready to counter any adverse shocks from the financial markets.

Business Spending. Real fixed investment by business, which grew by an estimated 10 percent in 1998, is expected to rise by less than 5 percent over the next two years. CBO's forecast is grounded in several observations. To begin with, after surging at an average annual rate of over 12 percent between 1993 and mid-1997, growth in corporate profits—especially in the manufacturing sector—has weakened substantially since the eruption of the Asian crisis. Moreover, capacity utilization in the manufacturing sector is at a five-year low, and foreign demand for exports is likely to remain depressed this year. Finally, increases in financial-market volatility and risk premiums in the wake of the global financial turmoil further add to the forces dragging down capital spending.

Household Demand. Growth in household demand is expected to lose some of its momentum. Growth in home sales, which had been rising at a pace greater than might be expected from the demographic trends, is likely to taper off. Consumer spending is also expected to moderate, dropping from its extraordinary growth rate of over 5 percent in 1998 to less than 3 percent in 1999 and 2000. What explains that decline? First, the persistent trade deficit and the slowdown in business fixed investment are likely to curtail gains in employment and personal income. Second, the expected drop in corporate profits may also pull down gains in stock prices, reducing the wealth effect on consumer spending. In sum, both personal consumption and housing demand are unlikely to add to economic growth in 1999 and 2000 as they did in 1998.

The External Sector. Net exports are expected to remain a drag on economic growth in 1999 but not in 2000. The nominal goods and services trade deficit widened to an annualized $161 billion in the third quarter of 1998 from only $94 billion in 1997. The real trade deficit has widened even further because falling import prices have helped constrain the nominal trade deficit. The real trade deficit is expected to widen a bit further in 1999 and then narrow somewhat in 2000. That pattern mainly reflects the inertia of large trade imbalances and the expectation that foreign economies will grow more slowly than the U.S. economy in 1999 but faster in 2000. The crisis in Asia has not only brought economic contraction to many of the region's economies, including Japan, but has also diminished the outlook for growth of other foreign economies in 1999 through trade and financial-market effects. In CBO's forecast, the growth rate of trade-weighted foreign GDP in 1999 has been downgraded to less than 2 percent, compared with the 4 percent that was assumed in CBO's August report.

The dollar is unlikely to fall by enough to outweigh the depressing effect of weak foreign demand and thereby significantly narrow the real trade deficit

Table 1-6.
Comparison of CBO and *Blue Chip* Forecasts for 1999 and 2000 (By calendar year, in percent)

	Estimate 1998[a]	Forecast 1999	Forecast 2000
Growth of Nominal GDP			
Blue Chip High 10	n.a.	4.6	4.9
CBO	4.8	4.1	3.8
Blue Chip Consensus	4.8	3.9	4.3
Blue Chip Low 10	n.a.	3.2	3.6
Growth of Real GDP			
Blue Chip High 10	n.a.	3.0	2.9
CBO	3.7	2.3	1.7
Blue Chip Consensus	3.7	2.4	2.3
Blue Chip Low 10	n.a.	1.9	1.8
Growth of GDP Price Index[b]			
Blue Chip High 10	n.a.	1.9	2.4
CBO	1.0	1.7	2.0
Blue Chip Consensus	1.0	1.4	2.0
Blue Chip Low 10	n.a.	1.1	1.5
Growth of CPI[c]			
Blue Chip High 10	n.a.	2.3	2.9
CBO	1.6	2.5	2.6
Blue Chip Consensus	1.6	2.0	2.4
Blue Chip Low 10	n.a.	1.7	2.0
Unemployment Rate			
Blue Chip High 10	n.a.	5.0	5.2
CBO	4.5	4.6	5.1
Blue Chip Consensus	4.5	4.7	4.8
Blue Chip Low 10	n.a.	4.4	4.4
Three-Month Treasury Bill Rate			
Blue Chip High 10	n.a.	4.6	5.0
CBO	4.8	4.5	4.5
Blue Chip Consensus	4.8	4.3	4.4
Blue Chip Low 10	n.a.	3.9	3.7
Ten-Year Treasury Note Rate			
Blue Chip High 10	n.a.	5.3	5.6
CBO	5.3	5.1	5.3
Blue Chip Consensus	5.3	4.9	5.1
Blue Chip Low 10	n.a.	4.5	4.5

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board; Capitol Publications, Inc., *Blue Chip Economic Indicators* (January 10, 1999).

NOTES: The *Blue Chip* High 10 is the average of the 10 highest *Blue Chip* forecasts. The *Blue Chip* Consensus is the average of all 50 *Blue Chip* forecasts. The *Blue Chip* Low 10 is the average of the 10 lowest *Blue Chip* forecasts.
n.a. = not available.

a. Estimates of nominal GDP, real GDP, and the GDP price index are based on data for the first three quarters of 1998 published November 24, 1998, and CBO's expectation for the fourth quarter of 1998. The consumer price index, the unemployment rate, the three-month Treasury bill rate, and the 10-year Treasury note rate are actual values for 1998.

b. The GDP price index is virtually the same as the implicit GDP deflator.

c. The consumer price index for all urban consumers.

Table 1-7.
Comparison of CBO Economic Projections for Calendar Years 1999-2009

	Estimate	Forecast		Projected								
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Nominal GDP (Billions of dollars)												
January 1999	8,499	8,846	9,182	9,581	10,015	10,476	10,960	11,465	11,988	12,528	13,089	13,688
August 1998	8,487	8,839	9,204	9,572	10,008	10,475	10,955	11,446	11,950	12,473	13,015	n.a.
Nominal GDP (Percentage change)												
January 1999	4.8	4.1	3.8	4.3	4.5	4.6	4.6	4.6	4.5	4.5	4.5	4.4
August 1998	4.6	4.2	4.1	4.0	4.6	4.7	4.6	4.5	4.4	4.4	4.3	n.a.
Real GDP (Percentage change)												
January 1999	3.7	2.3	1.7	2.2	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3
August 1998	3.4	2.2	1.9	1.8	2.4	2.5	2.4	2.3	2.3	2.2	2.2	n.a.
GDP Price Index[a] (Percentage change)												
January 1999	1.0	1.7	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
August 1998	1.2	2.0	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	n.a.
Consumer Price Index[b] (Percentage change)												
January 1999	1.6	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
August 1998	1.7	2.6	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5	n.a.
Unemployment Rate (Percent)												
January 1999	4.5	4.6	5.1	5.4	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7
August 1998	4.6	4.7	5.1	5.5	5.7	5.7	5.7	5.7	5.7	5.7	5.7	n.a.
Three-Month Treasury Bill Rate (Percent)												
January 1999	4.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
August 1998	5.1	5.2	4.8	4.6	4.4	4.4	4.4	4.4	4.4	4.4	4.4	n.a.
Ten-Year Treasury Note Rate (Percent)												
January 1999	5.3	5.1	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
August 1998	5.8	6.1	5.8	5.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4	n.a.
Tax Bases (Percentage of GDP)												
Corporate profits												
January 1999	9.7	9.2	8.5	8.5	8.6	8.6	8.6	8.6	8.5	8.4	8.3	8.2
August 1998	9.6	9.4	9.2	8.8	8.6	8.5	8.5	8.4	8.3	8.3	8.3	n.a.
Wages and salaries												
January 1999	48.8	49.3	49.7	49.5	49.3	49.2	49.1	49.1	49.1	49.1	49.1	49.1
August 1998	48.7	48.8	48.7	48.8	48.7	48.7	48.7	48.7	48.7	48.7	48.7	n.a.

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics; Federal Reserve Board.

NOTE: n.a. = not applicable.

a. The GDP price index is virtually the same as the implicit GDP deflator.

b. The consumer price index for all urban consumers.

over the forecast period. Although the dollar dropped sharply and unexpectedly against the yen and European currencies following Russia's default in August 1998, it has fluctuated within a narrower range since late October. For the moment, the 10-country trade-weighted dollar is only slightly below its level before the Asian crisis. The launch of the euro is not expected to have significant effects on the dollar over the near term, and the dollar is expected to stay roughly at its current level in 1999 but then decline slightly in 2000. Overall, the real U.S. trade deficit will remain high in 1999 and 2000 but will be less of a drag on GDP growth over the forecast period than in 1998.

Unemployment and Inflation

In CBO's forecast, the unemployment rate rises modestly to 4.6 percent in 1999 and then to 5.1 percent in 2000. That forecast reflects CBO's view that a soft-landing scenario is more likely than a hard-landing one and that the labor market will remain relatively tight over the forecast period as labor demand growth slows only slightly and labor supply growth remains relatively unchanged. Inflation, for both the CPI and the GDP price index, is forecast to be higher than in 1998. That forecast reflects CBO's expectations that labor cost growth will be under increasing upward pressure and that the special disinflationary factors will dissipate.

The forecast implies that the unemployment rate will remain well below the NAIRU over the next two years. (Although much uncertainty surrounds any estimate of the NAIRU, the rate is almost certainly not as low as the current unemployment rate.) Tight labor-market conditions thus will continue to exert upward pressure on labor cost growth, despite the possible decline in inflation expectations. The anticipated increase in medical insurance premiums—an important benefit component of the employment cost index—in early 1999 further adds to the upward pressure on labor cost inflation.

The underlying rate of growth of the CPI is projected to increase slightly over the next two years. The upward pressure on labor cost growth and the abating of the special disinflationary factors are expected to outweigh the 0.2 percentage-point reduction in the CPI measure of inflation implied by the January change in methodology for calculating the index (see Appendix E). Computer prices may continue to decline rapidly. However, the dollar's expected stagnation in 1999 and slight depreciation in 2000 will make it difficult for the sharp drop in import prices to resurface. A drop in medical care inflation similar to that in 1996 and 1997 also appears unlikely.

Overall CPI inflation in 1999 will also be affected by the uptick in cigarette prices at the end of 1998 and by the extent and timing of any rebound in petroleum prices. Cigarette prices increased by approximately 50 cents a pack following the recent settlement of the multiple suits brought by the states against the major tobacco companies. All else being equal, the increase in cigarette prices will cause the CPI to grow about 0.2 to 0.3 percentage points faster in 1999 than it would have if cigarette prices had not increased.[6]

CBO's forecast also assumes that the recent drop in oil prices will be partially reversed during 1999. The drop in energy prices shaved 0.7 percentage points off the CPI in 1998. If prices return to their mid-1998 level by the end of this year, as CBO assumes, energy prices will add slightly to inflation during 1999.

Interest Rates

Short-term interest rates in CBO's forecast stay roughly unchanged at 4.5 percent in 1999 and 2000. Holding the view that the odds of a Federal Reserve tightening in response to a surge in inflation are roughly balanced by those of an easing prompted by another outburst of global financial turmoil, CBO expects that the federal funds rate will remain near the current 4.75 percent throughout 1999 and 2000. The rate on three-month Treasury bills inches up from 4.3 percent in the fourth quarter of 1998 to 4.5 percent by the second half of 1999, where it remains during 2000. The rate on 10-year Treasury notes increases to 5.1 percent in 1999 and then to 5.3 percent in 2000.

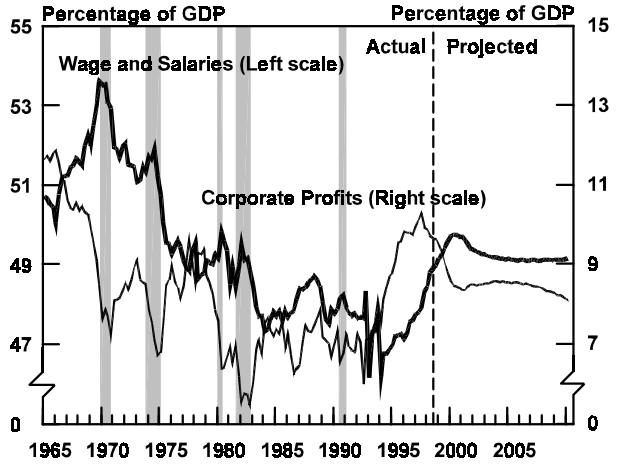
6. Cigarette prices will also be affected by an increase in the federal excise tax of 10 cents a pack in January 2000.

Taxable Incomes

Projections of federal revenues are closely linked to projections of national income, which is the sum of all incomes earned in producing national output. However, different components of income are taxed at different rates, and some are not taxed at all. Thus, the distribution of national income among the various components is one of the most important aspects of CBO's economic projections. Wage and salary disbursements and corporate profits are of special interest because almost all of that income is subject to tax. In contrast, substantial portions of other kinds of income—for example, interest income, proprietors' income, and rental income—escape taxation because they are underreported, exempt from tax, or accrue to untaxed entities.

Wage and salary disbursements relative to GDP are expected to rise over the forecast period to 49.7 percent of GDP in 2000 (see Tables 1-4 and 1-5 on pages 18 and 19 and Figure 1-14). That growth reflects the influence of tight labor markets on labor compensation. CBO believes that as long as the unemployment rate is below the NAIRU, wages will face upward pressure. Even though CBO forecasts that unemployment will gradually rise to 5.2 percent by the end of 2000, the negative gap between the forecast rate of unemployment and the NAIRU indicates that wage growth will remain high throughout 1999 and 2000.

Figure 1-14.
Wages and Salaries and Corporate Profits



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

Corporate profits will decline as a share of GDP in 1999 and 2000. Profits have already been squeezed in recent months by higher labor costs and the inability of firms to raise prices in the face of strong competition at home and abroad. Unless productivity rises faster than real wages, the expected wage inflation and resurgent growth in the benefits component of labor compensation will dampen the growth of corporate profits relative to GDP.

The Impact of the Year 2000 Computer Problem

Much attention has been devoted to avoiding disasters that the Year 2000 (Y2K) computer problem, or the so-called millennium bug, may cause. The Y2K problem has its origins in the early days of software development, when many programmers often used two digits to signify the year. Consequently, when such software attempts to deal with 2000, it will assume that the year is 1900. The problem affects operating systems, software compilers, and applications across the world.

The Y2K issue has many ramifications. Some analysts project that it will have a negative impact on the economy because some important computer systems may not be fixed in time. As a result, the flow of information in some vital areas of the economy could be interrupted, causing losses in efficiency and productivity. In particular, the Y2K problem poses a serious threat to domestic as well as international payments systems. Although large U.S. financial institutions are probably prepared for 2000, many foreign banks and smaller U.S. institutions may not be. (European banks, for example, have been preoccupied with the conversion to the single European currency.) Therefore, check clearing and securities trading in this country are unlikely to plunge into chaos; however, they may face disruption in foreign countries.

Although the millennium bug could upset the economy in many different ways, CBO expects any

disruption to be relatively brief and small in scale. Some firms will want to replace suspect computer-related equipment and stock up on supplies before January 1, 2000, thereby advancing some investment growth from 2000 to 1999. Consequently, the Y2K problem may have a mild effect on the pattern of U.S. economic growth over the 1999-2000 period. In addition, the growth of productivity and output may be slowed by 0.1 percentage point or less in 1999 and 2000 as firms and governments divert resources to checking, correcting, and litigating the problem. However, the effects of the millennium bug alone should not cause a sudden contraction of economic activity in either year.

The Outlook for the Medium Term, 2001 Through 2009

CBO projects that real GDP will grow at an annual average rate of 2.3 percent during the 2001-2009 period, which is slower than the growth rate of CBO's estimate of potential GDP by about a tenth of a percentage point. During the same period, CBO expects the unemployment rate to average 5.7 percent and inflation measured by the CPI to average 2.6 percent.

CBO's medium-term projections do not explicitly incorporate specific cyclical recessions and recoveries. Instead, recognizing the likelihood of cyclical swings in any 10-year interval, CBO attempts to incorporate the effects of an average cycle into its projections. The medium-term projections extend historical trends in underlying factors—such as the growth of the labor force, the growth of productivity, the rate of national saving, and the shares of various income categories. CBO's projections of real GDP, inflation, real interest rates, and tax revenues depend critically on those underlying trends.

Economic Growth

In CBO's projection, real economic growth will average 2.3 percent per year over the 2001-2009 period. Real GDP growth in the initial years is a bit slower than the growth in potential GDP in order to close the gap between the two that has opened up in recent years. Once the gap has returned to its historical average, real GDP is projected to grow at the same rate as potential GDP between 2005 and 2009.

CBO's projections include a technical adjustment to reflect the effects on inflation and real GDP of changes in the methods used to calculate the CPI and the NIPA-based GDP price index. Those technical changes, some of which have already occurred and some of which will occur later, reduce the measured rate of inflation without affecting nominal GDP—and thereby imply higher real GDP. CBO thus has adjusted its estimate of potential GDP upward by the same amount that the technical changes adjust inflation downward. That adjustment raises real GDP growth by an average of 0.3 percentage points annually between 1998 and 2009, about a tenth of a percentage point higher than the adjustment assumed in the projections that CBO reported in August 1998.

Apart from the revision to the technical adjustment, CBO's projection of real medium-term growth is relatively unchanged from last summer's, reflecting little change in the forecast for the labor force and the capital stock (see Table 1-7 on page 22). Growth in the labor force averages 1 percent between 1998 and 2009, the same pace as in last summer's projection (see Table 1-8). Underlying that estimate are the assumptions that the labor force participation rate will remain roughly constant at about 67 percent and population growth will follow the middle-range projections of the Bureau of the Census.[7] The stock of productive capital is projected to grow at a 3.6 percent pace during the 1998-2009 period, just below the rate projected last August.

The projection for total factor productivity (TFP)—defined as the growth in output beyond what is attributable to labor and capital—reflects the estimated effect of the technical adjustments on prices. CBO projects that cyclically adjusted TFP will grow at an average annual rate of 1 percent through 2009, a tenth of a percentage point faster than in CBO's summer projection. However, that revision to TFP is solely a reflection of the effect of the technical adjustment on price measurement; the underlying TFP

7. CBO adds 300,000 people to the projected labor force between 1998 and 2008 to reflect welfare reform.

trend rate of 0.6 percent per year is identical to that in the summer forecast. When combined with the projections for hours worked and capital accumulation, the projected TFP growth implies growth in labor productivity that averages 1.8 percent between 1998 and 2009. The adjustments for changes in the way prices are measured account for about 0.4 percentage points of the growth rate. Had no measurement changes occurred, labor productivity would have grown at a rate of 1.4 percent on average over the same period (see Box 1-1).

Table 1-8.
Accounting for Growth in Real GDP (Average annual rate of growth, in percent)

	Actual					Projected	
	1960-1998	1960-1973	1973-1981	1981-1990	1990-1998	1998-2003	2003-2009
Labor Force	1.8	1.9	2.5	1.6	1.1	1.1	1.0
Plus Employment Rate	0	0.1	-0.4	0.2	0.1	-0.2	0
Equals Employment	1.8	2.0	2.1	1.9	1.3	0.8	1.0
Plus Nonfarm Hours per Employee	0.1	0.2	-0.4	0	0.7	0	0
Equals Total Hours (Nonfarm business)	2.0	2.2	1.7	1.9	2.0	0.9	0.9
Plus Output per Hour (Nonfarm business)	1.5	2.5	0.7	1.2	1.0	1.7	1.8
Equals Nonfarm Business Output	3.5	4.7	2.4	3.2	3.0	2.5	2.7
Minus Nonfarm Business Output Share of GDP	0.3	0.4	0	0.2	0.4	0.2	0.3
Equals Real GDP	3.2	4.3	2.4	3.0	2.6	2.2	2.4
Plus Ratio of Potential to Actual GDP[a]	-0.1	-0.4	0.7	-0.3	-0.3	0.5	0
Equals Potential GDP[a]	3.1	3.9	3.1	2.6	2.3	2.7	2.4
Memorandum:							
Technical Adjustments[b]	n.a.	n.a.	n.a.	n.a.	0.1	0.3	0.3

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics.

NOTES: The years marking the ends of the historical intervals are years in which the business cycle peaked. The indicated arithmetical relationships may not hold exactly because of rounding.

n.a. = not applicable.

a. Estimated by CBO.

b. This line reports the effect on the measured growth of potential output of recent technical adjustments in the consumer price index. Those adjustments are also reflected in the growth rates reported for output per hour, nonfarm business output, real GDP, and potential GDP. For further discussion, see Box 1-1.

Unemployment, Inflation, and Interest Rates

The unemployment rate rises slightly during the 2001-2003 period, reflecting below-trend economic growth, before leveling off at 5.7 percent, or 0.1 percentage point above CBO's estimate of the NAIRU. That rate is consistent with the average historical relationship between actual GDP and CBO's estimate of potential GDP. Inflation is projected to flatten out during the period: it averages 2.6 percent per year in the CPI measure and 2.1 percent in the GDP price index.

The difference between the projected rates of growth of the GDP price index and the CPI affects projections of the federal budget. Indexed budget programs and personal income tax brackets are tied to inflation measured by the CPI, whereas overall incomes (and therefore the tax base) are most directly influenced by changes in the GDP price index. For a given rate of inflation in the GDP price index, a higher rate of CPI inflation results in a projection of a smaller budget surplus. Over the past four years, CPI inflation has exceeded the growth of the GDP price index by an average of 0.7 percentage points. CBO projects that the difference in the growth of the two price measures will average 0.5 percentage points from 2000 to 2009 (see Box 1-2).

CBO expects real interest rates on average to remain near their current levels over the medium term. The real rate on three-month Treasury bills holds at 1.9 percent, and the real rate on 10-year Treasury notes averages 2.8 percent.

Taxable Incomes

The share of GDP paid in the form of wages and salaries declines modestly over the medium term, from 49.5 percent of GDP in 2001 to 49.1 percent in 2009. However, CBO projects a very slight increase in the GDP share of fringe benefits and social insurance contributions between 2001 and 2009. Employee compensation includes wages and salaries as well as fringe benefits provided by employers—such as medical premium and pension contributions and the employer's share of social insurance contributions. On balance, the share of GDP paid as compensation declines only slightly over the medium term, from 59.4 percent in 2001 to 59.1 percent in 2009.

Corporate profits as a share of GDP fall slightly between 2001 and 2009, primarily because of a projected increase in the GDP share devoted to depreciation (wear and tear on business equipment and structures). Corporate profits, which are quite sensitive to business-cycle fluctuations, have been quite strong in recent years. Thus, some decline from recent levels is inevitable; CBO expects the GDP share of profits to return to its average of the 1970s.

In recent years, the problem of projecting incomes has been confounded by a sizable discrepancy in the NIPAs. The design of the accounts stems from the basic premise that the money spent in the economy as the result of the demand for goods and services is at the same time received as income. In theory, the sum of all expenditures should equal the sum of all incomes. However, because the Bureau of Economic Analysis uses different sources of data to estimate the expenditure and income sides of the accounts, a discrepancy between aggregate expenditures and aggregate incomes often occurs.

Since 1995, the measure of aggregate incomes has grown faster than that of aggregate expenditures, and the income measure is now larger by about 1 percent of GDP. In its projection, CBO assumes that this disparity will shrink slightly over the medium term, thereby limiting the degree of excess total income for a given level of total expenditure. Such an assumption is arbitrary, however, and the unpredictability of the disparity will contribute to uncertainty in projecting income shares for any given GDP path.

Box 1-1.
CBO's Projection for Growth in Labor Productivity

The Congressional Budget Office's (CBO's) projection for labor productivity growth averages 1.8 percent during the 1999-2009 period.[1] That rate is considerably higher than the 1.1 percent growth trend measured since 1973. The trend rate of growth in labor productivity has been quite stable for many years; as a result, CBO's projection may look optimistic. What accounts for the 0.7 percentage-point difference between CBO's projection and a simple extension of the 1.1 percent trend rate? The answer lies in two factors: technical adjustments to real gross domestic product (GDP) that arise from changes in the way prices are measured and rapid growth in the ratio of capital to labor as a consequence of the recent boom in business investment.

The technical adjustments that affect CBO's labor productivity projections reflect changes in the methods used to calculate the consumer price index and the price indexes found in the national income and product accounts. Those changes lowered the measured rate of inflation without affecting nominal GDP, thus raising real GDP (see the discussion in the text). CBO used estimates of how the changes affect price measures (primarily estimates from the Bureau of Economic Analysis and the Bureau of Labor Statistics) to adjust upward its projection of growth in real GDP—increasing it by an average of 0.3 percentage points annually between 1999 and 2009. Given that those adjustments are concentrated in the nonfarm business sector, it is reasonable to assume that their influence on productivity in that sector will be greater than their influence on overall GDP. Consequently, CBO estimates that the effect of the adjustments to growth in productivity in the nonfarm business sector will average 0.4 percentage points between 1999 and 2009. That explanation accounts for just over half of the difference between CBO's projection and the post-1973 trend. Those technical adjustments, however, have no effect on the projections of nominal GDP or any nominal incomes.

The remaining discrepancy between CBO's projection and the post-1973 trend stems from a surge in the growth of the stock of productive capital caused by the recent capital investment boom. To develop its projection of labor productivity growth, CBO used a neoclassical growth model, a standard framework that economists employ to analyze economic activity in the long term.[2] In such models, an increase in the ratio of capital to hours worked leads to faster labor productivity growth (in the nonfarm business sector).[3]

1. Labor productivity is defined for the nonfarm business sector, which covers all of the nation's gross domestic product except the farm, residential housing, government, private household, and nonprofit institution components.

2. A neoclassical growth model uses a production function to explain growth in output. The production function uses three factors: labor hours, an index of capital services, and total factor productivity. CBO's variant of the model measures capital services by using a Tornqvist index—similar to the one used by the Bureau of Labor Satistics to calculate multifactor productivity—that includes computers, noncomputer equipment, nonresidential structures, and inventories. The index weights the growth in the different capital assets using their respective shares of total capital assets spending, which are meant to reflect differing marginal productivities. Using an index of that type means that the recent surge in the ratio of capital to labor is not an artifact of plunging computer prices.

3. Unlike the increase in labor productivity growth that arises because of changes in measurement methods (which is permanent), any increase from faster capital accumulation is temporary. As the boom in the growth of capital per labor hour tapers off and as depreciation slows the growth of the capital stock, growth in labor productivity also slows.

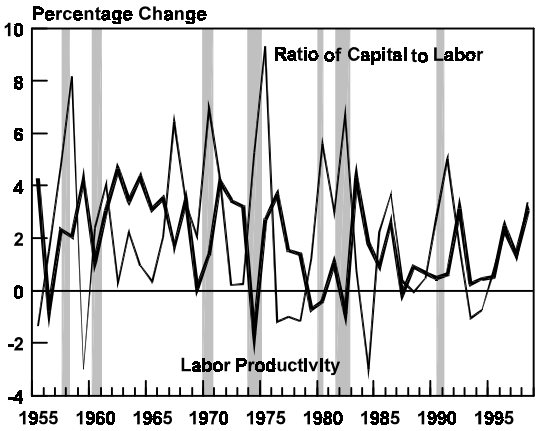
Box 1-1.
Continued

CBO's projection for labor productivity growth follows from a key prediction of the neoclassical model, which states that labor productivity and the ratio of capital to labor are positively correlated. On the surface, that prediction seems to be at odds with the observation that the trend in labor productivity has remained stable at 1.1 percent per year since 1973, despite the considerable variation during that time in the growth of the capital-to-labor ratio. Indeed, year-to-year changes in labor productivity and the ratio of capital to labor appear to be negatively correlated over time (see the left-hand panel in the figure). A different picture emerges, however, if the data are averaged to smooth out the short-run influences of business cycles, errors in measurement, and lags from adjustment costs that make it difficult to discern trends. For example, using a centered, 10-year moving average (which considers data both five years back and five years forward from a particular point) to filter out high-frequency variation reveals a positive correlation between labor productivity growth and the ratio of capital to labor (see the right-hand panel).

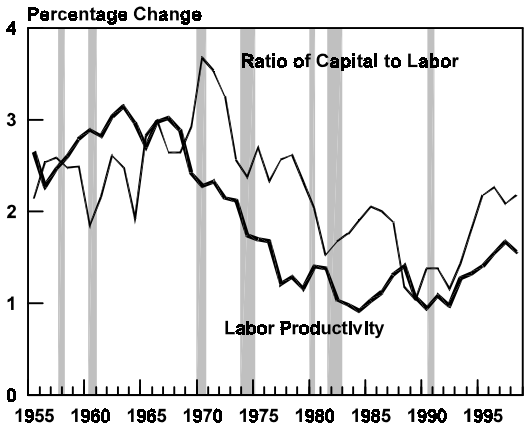
A more rigorous way to discern the relationship between the two trends is to use econometric methods to account for the influence of other variables. CBO's econometric analysis suggests that a 1 percent increase in capital per labor hour will raise labor productivity by about 0.26 percent to 0.42 percent. Those results support CBO's estimate that the recent rise in the growth of capital per labor hour will add another 0.3 percentage points to labor productivity growth above the post-1973 trend rate of 1.1 percent.

Growth in Labor Productivity and the Ratio of Capital to Labor

Measured Year to Year



Measured Using a Centered, 10-Year Moving Average[a]



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics.

a. Data after 1992 are a mix of historical and forecast values.

Box 1-2.
Projecting the Difference Between Rates of Inflation in the CPI and in the GDP Price Index

The difference between the rates of inflation measured in the gross domestic product (GDP) price index and in the consumer price index (CPI) affects the federal budget. Indexed budget programs—for example, Social Security—and personal income tax brackets are tied to CPI inflation, whereas tax bases are influenced by changes in the GDP price index. For a given rate of inflation in the GDP price index, a higher rate of CPI inflation results in a smaller budget surplus.

The projections of the Congressional Budget Office (CBO) assume that CPI inflation will average about half a percentage point more than inflation in the GDP price index over the next 10 years. The projection of that "wedge" is based on the relationship between the two price measures in recent history and on assumptions about the growth of several components of the CPI and the GDP price index.

CBO's projection of the wedge is about 0.2 percentage points less than the size of the average wedge over the past four years. During that time, the CPI grew faster than the GDP price index by an average annual rate of 0.7 percentage points. The difference in the two rates during those years to a large extent resulted from a new method of aggregating prices for some of the consumption price indexes in the GDP measure, which slowed the growth of the overall GDP price index. In January 1999, however, the Bureau of Labor Statistics, the agency that publishes the CPI, introduced a similar change in methods in the CPI that is expected to reduce CPI growth by about 0.2 percentage points. If nothing else changes, that modification to the CPI will bring the difference in the growth rates of the two price measures down to about 0.5 percentage points.

Prices for three categories of consumption that tended to reduce the wedge in recent years are expected to increase it in the future. Gasoline prices, which have greater weight in the CPI than in the GDP price index, fell by more than 10 percent between early 1995 and late 1998. The drop tended to reduce the wedge slightly; that is, if gasoline prices had not fallen, the wedge would have been even larger. Over the next 10 years, gasoline prices are forecast to grow at a rate slightly above that for overall inflation, implying a larger wedge in the future than in the past few years.

Rent and the prices of new vehicles are also expected to increase the wedge. Rent of primary residences, which affects the CPI more than the GDP price index, grew only slightly faster than overall inflation during the 1995-1998 period. CBO expects that relative inflation of rents will increase, thereby adding to the wedge compared with recent years. Similarly, new vehicle inflation is also expected to average more over the 2001-2009 period than the 0.9 percent growth of the past several years. Like gasoline, vehicles have slightly greater weight in the CPI than in the GDP price index.

In contrast, the behavior of prices for two important GDP categories is expected to reduce the wedge in the future. Medical care and computers have greater weight in the GDP price index than in the CPI. If, as expected, medical care inflation picks up relative to overall inflation, the growth of the GDP price index will accelerate faster than that of the CPI, narrowing the wedge. Similarly, the prices of computers for business investment, which fell extremely rapidly in recent years, are expected to fall somewhat less rapidly in the future, again decreasing the wedge.

On balance, CBO's analysis shows that over the next 10 years, the wedge is likely to average about the same as it has in the recent past—once it is adjusted to reflect January's change in methodology for the CPI.

Chapter Two

The Budget Outlook

In fiscal year 1998, total federal revenues exceeded total federal outlays by $70 billion—the first time in almost 30 years that the balance has tipped in the positive direction. Assuming that current policies do not change and the economy stays on its projected course, the Congressional Budget Office anticipates that such surpluses will grow over the next 10 years. Higher revenues, which are rising approximately in tandem with incomes, and lower outlays for a variety of entitlement programs continue to improve the fiscal picture.

The budget outlook is considerably more optimistic than it was just a couple of years ago, when the phrase "deficits as far as the eye can see" was commonly used in conjunction with budget projections. CBO estimates that the total budget surplus will increase from $107 billion in 1999 to $381 billion in 2009 under current policies—for a cumulative total of nearly $2.7 trillion in 10 years. If those projected surpluses are actually realized, a substantial amount of the government's past borrowing from the public will be repaid, and debt held by the public will fall to $1.2 trillion by the end of 2009. As a percentage of gross domestic product, debt held by the public will decline even more dramatically, plummeting from 44 percent in 1998 to 9 percent in 2009. Reductions of that magnitude in federal borrowing will release resources for private investment, thereby enhancing productivity and economic growth.

Much of that favorable outlook is predicated on the fact that changes in the government's fiscal position tend to feed on themselves, producing larger changes in the same direction. In the current projections, for example, budget surpluses reduce the publicly held debt, which in turn reduces outlays for interest on that debt, which in turn increases surpluses even further, and so on. As a result of declining debt, net interest outlays plunge to $85 billion in 2009 from the $243 billion recorded in 1998. However, a reversal of those forces of positive feedback could all too quickly eliminate the budget surpluses now envisioned.

Total government inflows and outflows include the Social Security trust funds—Old-Age and Survivors Insurance and Disability Insurance—which have their own earmarked sources of revenue. Legislation in 1985 gave those trust funds off-budget status, and legislation in 1989 did the same for the much smaller net outlays of the Postal Service. CBO estimates that the off-budget surplus will total $127 billion this year, leaving an on-budget deficit of $19 billion. However, that on-budget deficit is projected to give way to surpluses in 2001.

Improvement in the budgetary picture since August 1998 (when CBO published its previous *Economic and Budget Outlook*) results from economic and so-called technical factors that affect budget estimates. Legislation enacted since August, by contrast, has reduced the projected surpluses. The healthy economy is expected to continue having a positive influence on the federal budget. For example, the greater projected strength of the economy helps boost CBO's estimate of revenues by $3 billion in 1999 and $39 billion in 2008 compared with the projections of five months ago. It also contributes to smaller esti-

mates of outlays through lower cost-of-living adjustments for entitlement programs and lower interest rates in the near term than were previously projected. Technical adjustments to the revenue estimates (for factors that do not result directly from the economy or new legislation) increase the surplus by between $11 billion and $19 billion a year through 2008. On the outlay side of the budget, technical changes contribute even more to raising the projected surplus—accounting for as much as $38 billion in 2008 (including debt service).

Outlook for the Surplus

The total budget measures the federal government's net transactions with the public. A deficit indicates that in any one year, the government paid more to the public than it collected in taxes and other revenues; a surplus means that total revenues exceeded total outlays. When the budget runs a deficit, the government covers that deficit primarily by borrowing from the public. Conversely, a surplus allows borrowing to be repaid.

The Total Surplus

Since the record total deficit of $290 billion in 1992, the federal budgetary picture has shown annual improvement. From that high mark seven years ago, the deficit fell rapidly before leaping to a $70 billion surplus last year. Under the assumptions of CBO's economic forecast, and presuming that current policies remain the same, the positive outlook for the budget is projected to continue (see Table 2-1). CBO anticipates that the baseline total surplus will rise to $107 billion in 1999, break the $200 billion mark in 2002, and eventually reach $381 billion in 2009.

Rapidly rising revenues have accounted for much of the improvement in that outlook. Between 1992 and 1998, annual revenues grew by $630 billion, or 58 percent. As a share of GDP, they climbed from 17.7 percent to 20.5 percent. During the same period, annual outlays rose by just $270 billion, or 20 percent. And as a share of GDP, outlays dipped from 22.5 percent to 19.6 percent. Over the coming decade, the pace of revenue growth is expected to slow to rates approximating those of GDP; however, outlays are estimated to continue growing more slowly than that, and as a result, surpluses are projected to mount.

Since 1991, spending from annual appropriation acts—discretionary spending—has been restrained by statutory limits, or caps. The estimates in Table 2-1 assume that the Congress adheres to those caps through 2002, when they are set to expire. The caps (along with lower defense spending linked to the end of the Cold War) have restricted the total growth of discretionary outlays between 1991 and 1998 to less than 4 percent, a decline of 13 percent after adjusting for inflation. However, discretionary spending is estimated to jump substantially in 1999, in part because of emergency spending built into the Omnibus Consolidated and Emergency Supplemental Appropriations Act for 1999. Total discretionary outlays are projected to rise by nearly 4 percent this year alone.

Once the caps expire, no overarching dollar total set in legislation will control discretionary appropriations. Unlike mandatory spending and revenues, which are governed by permanent laws, discretionary spending is voted on by the Congress each year. Thus, in projecting discretionary spending, the assumption that current policy will continue is ambiguous after 2002. Yet some kind of benchmark is necessary to use in projections of total spending and the surplus. One such benchmark is the maintenance of real funding—that is, current levels of spending adjusted for inflation. CBO's baseline assumes that discretionary budget authority and outlays grow at the rate of inflation once the caps expire in 2002. Under that assumption, CBO projects that the surplus will rise to $381 billion in 2009.

An alternative is to fix the benchmark at a constant nominal (or dollar) level, which is close to the course that the Congress and the President chose from 1991 through 1998. If future discretionary outlays remained frozen at their 2002 level, the surplus in 2009 would reach $514 billion. However, holding discretionary outlays to that level would represent a loss in purchasing power of 30 percent over the next decade.

The On-Budget Deficit or Surplus

Although the total surplus is the most common measure of the difference between revenues and outlays, some people cite another measure. (One additional measure, which is used by economic forecasters, is the national income and product accounts, or NIPA, measure of the surplus; see Appendix D for more details.) The on-budget deficit or surplus is rooted in legislation that gave special off-budget status to particular programs run by the government. The two Social Security trust funds were granted off-budget status in the Balanced Budget and Emergency Deficit Control Act. Legislation enacted four years later also excluded the Postal Service, which has much smaller net outlays, from on-budget totals.

The fiscal picture looks noticeably different if those off-budget programs are excluded (see Table 2-1). Although CBO's baseline projections show a total budget surplus for this year, the on-budget measure indicates deficits until 2001. By 2009, however, the on-budget accounts are projected to show a surplus of $164 billion.

Table 2-1.
The Budget Outlook Under Current Policies (By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					In Billions of Dollars							
Baseline Total Surplus[a]	70	107	131	151	209	209	234	256	306	333	355	381
On-Budget Deficit (-) or Surplus (Excluding Social Security and the Postal Service)[a]	-29	-19	-7	6	55	48	63	72	113	130	143	164
Memorandum:												
Off-Budget Surplus												
Social Security	99	126	137	144	153	161	171	183	193	204	212	217
Postal Service	b	b	b	b	1	0	0	0	0	0	0	0
Total	99	127	138	145	153	161	171	183	193	204	212	217
Total Surplus If Discretionary Spending Was Frozen at the 2002 Level from 2003 to 2009	70	107	131	151	209	225	265	305	374	421	465	514
					As a Percentage of GDP							
Baseline Total Surplus[a]	0.8	1.2	1.4	1.6	2.1	2.0	2.2	2.3	2.6	2.7	2.7	2.8
On-Budget Deficit (-) or Surplus (Excluding Social Security and the Postal Service)[a]	-0.3	-0.2	-0.1	0.1	0.6	0.5	0.6	0.6	1.0	1.0	1.1	1.2

SOURCE: Congressional Budget Office.

a. Assumes that discretionary spending will equal the statutory caps on such spending through 2002 and will grow at the rate of inflation thereafter.

b. Less than $500 million.

In isolation, Social Security has been running a surplus since 1983; its income from taxes paid by workers and employers, interest received from the Treasury, and a few other sources exceeds its outlays for administrative costs and benefits to retired and disabled workers, their families, and their survivors. The surplus for the Social Security trust funds is projected to rise from $126 billion in 1999 to $217 billion in 2009. A large part of that surplus (41 percent) stems not from the program's excess of taxes over benefits but from interest on its holdings of Treasury securities. By 2009, those interest receipts will constitute nearly two-thirds of the program's surplus. For its part, the Postal Service is projected to have no net outlays in 2003 through 2009—and small ones until then—because the agency is supposed to be self-financing.

Social Security benefits alone account for more than one-fifth of federal spending, and the program's payroll taxes account for about one-fourth of government revenues. Therefore, most economists, policymakers, and participants in credit markets look at the total budget figures, including Social Security, when they seek to gauge the government's role in the economy and its drain on credit resources.

Recent Changes in the Budget Outlook

The budget outlook has continued to improve since CBO published its August 1998 projections. The surplus for 1998, $70 billion, was $7 billion higher than CBO had expected in August. There are some signs that the forces that brought about that surplus—surging revenues, slower growth in federal health care programs, and reduced demand for various entitlement programs—are diminishing somewhat. However, enough of those forces are expected to remain that surpluses will continue to mount. Lower forecast interest rates in the near term, increases in projected revenues, and anticipated reductions in the growth of Medicare spending relative to CBO's previous baseline continue to improve the budget outlook even further. Overall, CBO's estimate of the surplus for 1999 is up by $27 billion. By 2008, CBO projects the surplus to be $105 billion larger than estimated five months ago (see Table 2-2).

CBO ascribes those revisions in its budget projections since August to three factors: recently enacted legislation, changes in the overall economic outlook, and other factors that affect the budget, which are labeled technical factors.

Recent Legislation

The only legislation enacted since last August that will have a significant impact on the budget is the Omnibus Consolidated and Emergency Supplemental Appropriations Act for 1999. That act rolled eight regular appropriation bills into one and added $21.4 billion in emergency budget authority that was not subject to the statutory spending caps (about $5.6 billion of which was granted for agricultural programs and actually appears now on the mandatory side of the budget). That $21.4 billion is the highest level of emergency spending enacted in the 1990s, excluding spending for the Persian Gulf War. The additional emergency funds address myriad purposes, including increased security at U.S. embassies, a continuation of peacekeeping efforts in Bosnia, Year 2000 compliance for government computers, assistance for victims of Hurricane George, and aid for farmers affected by bad weather and other adverse conditions.

Compared with CBO's August 1998 baseline, which assumed a level of discretionary spending equal to the outlay caps as they existed at that time, the omnibus appropriation act is anticipated to increase discretionary outlays by $17 billion in 1999, $5 billion in 2000, and smaller amounts thereafter. The legislation is also expected to have a minor effect on both revenues and mandatory spending over the next 10 years.

Economic Changes

Revisions that can be traced to changes in the macroeconomic forecast increase the surplus by about $13 billion in 1999 and $51 billion in 2008. Over the next couple of years, the majority of changes attributed to new macroeconomic assumptions result from lower projected interest rates and reduced cost-of-living adjustments. By the end of the next decade, however, additional revenues from higher projected levels of taxable income (along with associated debt-service

Table 2-2.
Changes in Baseline Surpluses Since August 1998 (By fiscal year, in billions of dollars)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
August Baseline Surplus[a]	80	79	86	139	136	154	170	217	236	251
Legislative Changes										
Revenues	b	2	b	-1	b	-1	-1	-1	b	b
Outlays										
Discretionary	17	5	2	1	1	1	1	1	1	1
Mandatory										
Debt service	b	1	1	1	2	2	2	2	2	2
Other	b	2	b	1	1	b	b	b	b	b
Subtotal, outlays	17	8	2	3	3	3	3	3	3	3
Total[c]	-17	-6	-3	-4	-4	-3	-3	-4	-3	-3
Economic Changes										
Revenues	3	5	12	19	22	25	31	35	37	39
Outlays										
Discretionary	0	0	0	0	1	1	2	2	3	4
Mandatory										
Debt service	b	-1	-2	-4	-5	-7	-9	-11	-13	-16
Net interest (Rate effects)	-8	-11	-9	-5	-3	-2	-1	b	1	1
Other	-2	-2	-4	-4	-4	-3	-3	-2	-2	-1
Subtotal, outlays	-10	-15	-15	-13	-12	-11	-11	-11	-12	-13
Total[c]	13	20	27	32	34	36	41	46	48	51
Technical Changes										
Revenues	11	15	15	19	16	17	15	16	17	19
Outlays										
Discretionary	-7	b	2	1	1	1	1	1	1	1
Mandatory										
Medicare	-10	-11	-15	-15	-17	-17	-19	-16	-18	-18
Medicaid	b	2	3	5	6	8	9	11	13	15
Family support (Including child care)	-3	-4	-4	-3	-2	-2	-1	-1	b	1
Food Stamps	-1	-2	-2	-2	-2	-3	-3	-3	-3	-3
Civil Service Retirement	-1	-1	-1	-2	-2	-2	-3	-4	-4	-5
Universal Service Fund	-2	-4	-5	-1	-1	-1	-1	-1	-1	-1
Debt service	-1	-3	-5	-7	-9	-11	-14	-16	-19	-21
Other	3	-2	1	b	-2	-3	-2	-2	-4	-5
Subtotal, outlays	-21	-23	-25	-24	-28	-29	-33	-31	-36	-38
Total[c]	32	38	41	42	43	47	48	47	53	57
Total Changes										
All Changes Since August	27	52	65	70	74	79	85	90	98	105
January Baseline Surplus[a]	107	131	151	209	209	234	256	306	333	355
Memorandum:										
Total Change in Revenues	14	22	28	36	37	42	44	50	53	57
Total Change in Outlays	-13	-30	-37	-34	-36	-38	-41	-39	-45	-47

SOURCE: Congressional Budget Office.
NOTE: Revenue gains are shown with a positive sign because they increase the surplus.
a. The baseline assumes that discretionary spending will equal the statutory caps on such spending through 2002 and will grow at the rate of inflation thereafter.
b. Less than $500 million.
c. Includes changes in both revenues and outlays. The figure shown is the effect on the surplus. Increases in the surplus are shown as positive.

savings) are almost solely responsible for the economic differences.

Changes attributed to the economic forecast lift revenues by just $3 billion in 1999; however, by 2008 those changes raise annual revenues by $39 billion. Most of the increases occur in revenues from individual income taxes or social insurance taxes. Increases in projected levels of wage and salary disbursements cause those two sources of revenue, which are based on payrolls, to rise by $6 billion in 1999, $18 billion in 2000, and $30 billion in 2008.

Corporate profits, in contrast, are projected to be lower through 2002 than in CBO's previous economic forecast. As a result, estimates of corporate taxes have been reduced by $4 billion in 1999 and $12 billion in 2000 compared with the August baseline. Slightly higher projected profits from 2003 through 2008, though, bring in $4 billion to $11 billion more annually in corporate taxes than previously projected.

As for outlays, most of the economic changes occur in the category of net interest. Projected interest rates during the next three years are as much as a full percentage point lower than in CBO's previous forecast. Such changes reduce anticipated interest costs by an average of $10 billion per year through 2001. From 2003 through 2008, though, short-term rates are 0.1 percentage point higher than previously projected and long-term rates are unchanged, thereby diminishing the economic impact on interest. However, debt-service savings from the increases in CBO's revenue projections and other economic changes add as much as $16 billion to annual surpluses by 2008.

Other economic changes have relatively minor effects. Lower inflation over the next three years restrains the size of required cost-of-living adjustments for benefit programs such as Social Security and slows the growth of Medicare spending. However, inflation projections that are around 0.1 percentage point higher in the latter part of the projection period offset some of the savings from those earlier years. All told, spending for mandatory programs is between $1 billion and $4 billion lower each year because of CBO's updated economic forecast.

Technical Reestimates

Technical revisions are defined as any changes that are not ascribed to new legislation or revisions in the macroeconomic forecast. Those changes could be economic in nature but not directly tied to CBO's economic forecast—for example, realizations of capital gains from selling assets. They could also reflect a variety of other factors, such as changes in the use of services by Medicare beneficiaries or adjustments in the rate at which discretionary programs are able to spend their budget authority. Such revisions account for more than half of the improvement in CBO's budget outlook.

Technical changes throughout the 1999-2008 period enlarge the surplus by an average of about $45 billion per year. Revisions in revenues and Medicare each account for around one-third of that amount. A variety of other programs account for the remaining third, since most major mandatory programs other than Medicaid have had their projected outlays reduced in this baseline.

Revenues. Upward technical revisions to revenues range from $11 billion in 1999 to $19 billion in 2008. In the early years, those changes mostly result from increased projections of capital gains realizations because of the continued strength of the stock market. Technical reestimates in later years predominantly relate to pensions and individual retirement account (IRA) distributions. The booming stock market has increased the value of retirement holdings, thus leading to more tax revenue when they are eventually cashed in. Also, people who invested in IRAs in the 1980s—when such instruments were relatively new—are beginning to retire, so the fraction of the population receiving IRA distributions will grow.

Medicare and Medicaid. On the outlay side, the largest technical changes are in the major federal health care programs, Medicare and Medicaid. Technical reductions in Medicare spending that average $16 billion per year are partially offset by increased estimates for Medicaid. Medicaid spending is anticipated to be $2 billion greater in 2000 and gradually grow to $15 billion above last year's baseline in 2008.

CBO's projections for Medicare reflect lower outlays in 1998 than previously estimated and a reduction in the expected growth rate of spending during the 1999-2003 period. Medicare outlays, net of premiums paid by beneficiaries, totaled $193 billion in 1998—$3.5 billion lower than anticipated in August and only 1.5 percent higher than in 1997. CBO assumes that the lower outlays resulted largely from two factors: changes in the behavior of health care providers after several well-publicized antifraud initiatives, and slower processing of claims caused by more extensive scrutiny for fraud as well as by delays associated with implementing new payment systems and preparing computers for 2000.

The effects of antifraud initiatives and claims-processing delays are expected to limit the growth rate of Medicare spending to 4 percent in 1999 (as opposed to the 7 percent assumed in the August baseline). Projected growth rates for the 2000-2003 period have also been reduced because the Health Care Financing Administration is expected to begin adjusting payments to Medicare+Choice plans on the basis of risk—to account for variations in costs based on the health status of enrollees—in a manner that will reduce spending. (Previously, CBO had assumed that the risk adjustment would be done on a spending-neutral basis.) CBO's projection that Medicare outlays will grow at an average annual rate of 7.9 percent after 2003 remains unchanged.

Expenditures for Medicaid in 1998 were slightly higher than projected and were consistent with expectations of renewed growth in the program. After two years of historically low growth (between 3 percent and 4 percent annually), spending rose by almost 6 percent last year. That renewed growth may be attributable to states' completing the implementation of cost-containment efforts and to increased spending on high-cost services such as pharmaceutical products and noninstitutional long-term care.

Because of the higher level of spending in 1998, expectations by states that their spending will rise in the next fiscal year, and new evidence about the strength of long-term spending pressures, CBO projects continued increases in Medicaid's growth rate over the coming years. Although Medicaid spending is unlikely to grow at the double-digit rates of the early 1990s, it is projected to climb by 7 percent in 1999 and by more than 8 percent a year over the next decade, reaching 9 percent annual growth by 2009. Those rates are around 1 percentage point higher than the level assumed in CBO's August baseline.

Other Programs. Continued declines in participation in public assistance programs led CBO to reduce its projections for Temporary Assistance for Needy Families (TANF) and Food Stamps. Caseloads for both programs have been steadily dropping over the past couple of years (see Box 4-2 on page 75). Those for TANF are expected to decline further over the next two years before stabilizing. As a result, the program's outlays are projected to be $3 billion to $4 billion lower each year through 2002 than CBO anticipated in August. Food Stamp caseloads are projected to start increasing, but more slowly than the previous baseline assumed, leading to outlay projections that are $1 billion lower this year and $3 billion lower in later years.

In a similar vein, on the basis of information from actuaries at the Office of Personnel Management, the number of retirees in the Civil Service Retirement System is expected to be lower than previously assumed. Therefore, outlays for Civil Service Retirement are expected to be $1 billion lower in 1999 and $5 billion lower in 2008 than CBO projected last August.

Both outlays and revenues for the Universal Service Fund (which provides subsidies for telephone service in high-cost areas and to low-income customers, as well as to schools, libraries, and health care providers) are assumed to be $2 billion lower in 1999, $4 billion lower in 2000, $5 billion lower in 2001, and $1 billion lower thereafter compared with the August baseline. Payments into the fund are designed to correspond to spending for the program; since the fund's activities have been slower in starting up than anticipated earlier, projections of future spending—and thus revenues—have been reduced.

Measures of Federal Debt

Measurements of federal debt in recent decades have basically moved in one direction—up. However, that

is not the case in the current projections. All three of the aggregate measures used to gauge the U.S. government's indebtedness are calculated to be declining by the end of the projection period.

Debt held by the public is the amount of money that the federal government has borrowed to finance all of the deficits accumulated over the nation's history (minus any surpluses) as well as other, considerably smaller, financing needs. At the end of 1998, debt held by the public totaled $3.72 trillion—a drop of $51 billion from the previous year.

In addition to debt held by the public, two other measures of indebtedness are often cited. Gross federal debt counts debt issued to government accounts as well as debt held by the public. Debt subject to limit measures obligations that are subject to the statutory

Table 2-3.
CBO Projections of Federal Debt (By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
						In Billions of Dollars						
Debt Held by the Public at the Beginning of the Year	3,771	3,720	3,630	3,515	3,378	3,183	2,989	2,770	2,529	2,237	1,917	1,574
Changes												
Surplus[a]	-70	-107	-131	-151	-209	-209	-234	-256	-306	-333	-355	-381
Credit financing accounts	12	15	14	12	13	14	14	13	13	12	12	11
Other	7	3	1	1	1	1	1	1	1	1	1	1
Subtotal	-51	-90	-115	-137	-194	-194	-219	-241	-292	-320	-342	-369
Debt Held by the Public at the End of the Year	3,720	3,630	3,515	3,378	3,183	2,989	2,770	2,529	2,237	1,917	1,574	1,206
Debt Held by Government Accounts												
Social Security	730	857	994	1,139	1,291	1,453	1,624	1,807	2,000	2,204	2,416	2,633
Other government accounts	1,028	1,092	1,160	1,227	1,298	1,368	1,437	1,503	1,567	1,633	1,692	1,748
Subtotal	1,759	1,949	2,154	2,365	2,589	2,821	3,060	3,310	3,568	3,837	4,107	4,382
Gross Federal Debt	5,479	5,579	5,669	5,743	5,772	5,810	5,831	5,839	5,805	5,753	5,682	5,587
Debt Subject to Limit[b]	5,439	5,540	5,631	5,706	5,736	5,774	5,796	5,806	5,772	5,722	5,651	5,557
						As a Percentage of GDP						
Debt Held by the Public at the End of the Year	44.3	41.4	38.6	35.6	32.1	28.9	25.6	22.3	18.9	15.5	12.2	8.9

SOURCE: Congressional Budget Office.

NOTE: Projections of interest and debt assume that discretionary spending will equal the statutory caps on such spending through 2002 and will grow at the rate of inflation thereafter.

a. Surpluses are shown here as negative because they decrease the debt.

b. Differs from gross federal debt primarily because most debt issued by agencies other than the Treasury is excluded from the debt limit.

ceiling set by the Congress. Those two balances are both anticipated to begin falling in 2006 if the projected baseline surpluses are realized.

Debt Held by the Public

To cover the difference between revenues and expenditures, the Department of the Treasury raises money by selling securities to the public. Between 1969 and 1997, the Treasury sold ever-increasing amounts of those securities to finance continuing deficits, thus causing debt held by the public to climb from year to year. CBO's current baseline forecast points to a different scenario. If the surpluses projected in the baseline materialize, debt held by the public will decline from today's level of $3.7 trillion to $1.2 trillion in 2009 (see Table 2-3).

In most years, the amount that the Treasury borrows closely parallels the total deficit or surplus. However, a number of factors broadly labeled "other means of financing" also affect the government's need to borrow money from the public. Those factors include reductions (or increases) in the government's cash balances, seigniorage, and other, miscellaneous changes. The largest of those other borrowing needs reflects the capitalization of financing accounts used for credit programs. Direct student loans, rural housing programs, loans by the Small Business Administration, and other credit programs require the government to disburse money up front on the promise of repayment at a later date. Those up-front outlays are not counted toward the deficit, which reflects only the estimated subsidy costs of such programs. Because the amount of the loans being disbursed is larger than the repayments and interest flowing back into the financing accounts, the government's annual borrowing needs are $11 billion to $15 billion higher than they otherwise would be.

As a percentage of GDP, debt held by the public reached a plateau from 1993 through 1995 at about 50 percent (see Figure 2-1). Since then, it has fallen to 44 percent of GDP. By 2005, that share is expected to plunge below its post-World War II low point of 24 percent (achieved in 1974). Further declines in debt held by the public as a percentage of GDP are projected to bring that share to just 9 percent in 2009.

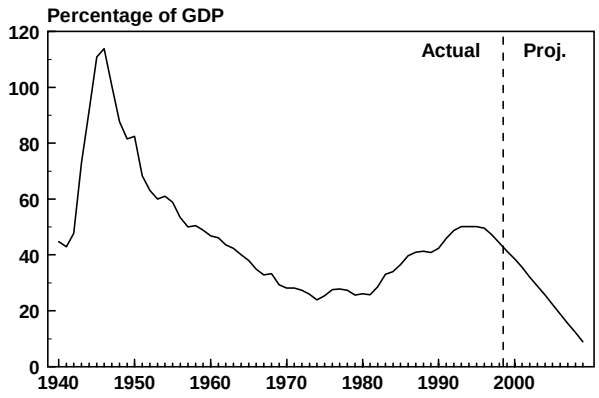
That shrinking debt would generate considerable savings in government interest payments over time. In fact, net interest spending is projected to total just $85 billion in 2009—$159 billion lower than its level in 1998.

How Do We Pay Down the Debt?

As a matter of course, the Treasury issues and redeems securities every week. When the government ran large deficits, the Treasury would normally sell enough securities at each auction to roll over any maturing debt plus a little extra to raise new cash. By those means, the debt has essentially grown by increments—auction by auction and week by week. The Treasury uses the same means to reduce the size of the outstanding debt. Depending on cash needs at any given time, the Treasury may issue a little bit less than necessary to fully refinance maturing debt.

The Treasury can also eliminate auctions of certain maturities if they are no longer necessary to raise cash. The relatively sudden emergence of sizable surpluses led the Treasury to take that approach last year. In May 1998, the Treasury announced that it was eliminating the three-year note. In addition, it reduced the frequency of five-year notes from monthly to quarterly issuance.

Figure 2-1.
Debt Held by the Public as a Share of GDP
(By fiscal year)



SOURCE: Congressional Budget Office.

Achieving the projected surpluses would reduce the debt held by the public by more than $2.4 trillion between 1999 and 2009. By contrast, if the budget remained exactly in balance during that period, debt held by the public would stabilize at around its current level of $3.7 trillion. The effects of that change on the budget would compound over time. By 2009, using the projected surpluses to increase spending or cut taxes rather than to pay down the debt would boost annual interest payments by $123 billion from their baseline level (not including the effects of the likely increase in interest rates). Conversely, reducing debt in the near term would substantially decrease interest payments in the future, when spending on programs such as Social Security and Medicare is expected to soar with the retirement of the baby boomers.

Gross Federal Debt

Besides selling securities to the public, the Treasury has also issued more than $1.75 trillion in securities to various government accounts, mostly trust funds. The largest balances are in the Social Security trust funds ($730 billion at the end of 1998) and the retirement funds for federal civilian employees ($461 billion). The total holdings of government accounts grow approximately in step with projected trust fund surpluses. The funds redeem securities when they need to pay benefits; in the meantime, the government both pays and collects interest on those securities.

Investments by trust funds and other government accounts are handled within the Treasury, and the purchases and sales (with very rare exceptions) do not flow through the credit markets. Similarly, interest on those securities is simply an intragovernmental transfer: it is paid by one part of the government to another part and does not affect the total deficit or surplus. Thus, participants in financial markets view trust fund holdings (if they think about them at all) as a bookkeeping entry—an intragovernmental IOU. Those holdings are, however, an indicator of federal commitments for future spending.

Debt Subject to Limit

The Congress sets a limit on the Treasury's authority to issue debt. That ceiling—which currently stands at $5.95 trillion—applies to securities issued to federal trust funds as well as those sold to the public. Debt subject to limit is practically identical to gross federal debt and is widely cited as the measure of the government's indebtedness. (The minor differences between the two arise chiefly because securities issued by agencies other than the Treasury, such as the Tennessee Valley Authority, are exempt from the debt limit.)

Since trust funds and other government accounts as a whole will continue to swell even as surpluses are projected to continue in the total budget, debt subject to limit will keep growing through 2005 from its level of $5.4 trillion at the end of 1998. In 2006, however, debt subject to limit is projected to decline after reaching a maximum level of $5.8 trillion. Therefore, CBO projects that under current laws and policies, such debt will not reach the Congressionally imposed limit through 2009.

Federal Funds and Trust Funds

The budget comprises two groups of funds: trust funds and federal funds. Trust funds are simply those programs that are so labeled in legislation; federal funds include all other transactions with the public. Over 60 percent of federal spending is derived from federal funds.

More than 150 federal government trust funds exist, although fewer than a dozen account for the vast share of trust fund dollars. Among the largest are the two Social Security trust funds and those dedicated to Civil Service Retirement, Hospital Insurance (also known as Medicare Part A), and Military Retirement. Trust funds have no particular economic significance; they function primarily as accounting mechanisms to track receipts and spending for programs that have specific taxes or other revenues earmarked for their use.

When a trust fund receives payroll taxes or other income that is not currently needed to pay benefits, the excess is loaned to the Treasury. If the rest of the budget is in deficit, the Treasury borrows less from the public than would otherwise be required to finance

current operations. If the rest of the budget is in balance or in surplus, the Treasury uses the cash to retire outstanding debt.

The process is reversed when the time comes for a trust fund to draw down its reserves to pay benefits. The Treasury must repay (with interest) what it has borrowed from the trust fund and must raise the cash somewhere else. The government must then either boost taxes, reduce other spending, borrow more from the public, or (if the total budget is in surplus) retire less debt.

In assessing the effect of federal activities on the Treasury's cash borrowing needs, it is essential to include the cash receipts and expenditures of the trust funds in the budget totals along with other federal programs. CBO, the Office of Management and Budget, and other fiscal analysts therefore focus on the total deficit or surplus because it is a comprehensive measure of the federal budget, including the trust funds.

In 1999, the total surplus is estimated to be $107 billion, which can be divided into a federal funds deficit of $88 billion and a trust fund surplus of $195 bil-

Table 2-4.
Trust Fund Surpluses (By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Social Security	99	126	137	144	153	161	171	183	193	204	212	217
Medicare												
Hospital Insurance (Part A)	2	8	9	8	14	12	10	5	8	1	-3	-9
Supplementary Medical Insurance (Part B)	5	2	4	5	3	7	6	8	3	10	8	9
Subtotal	7	10	14	14	17	19	17	14	11	11	5	a
Military Retirement	8	7	7	7	8	8	9	9	9	10	11	11
Civilian Retirement[b]	29	30	30	30	30	28	28	27	26	26	25	24
Unemployment	9	9	9	8	7	5	4	5	5	5	4	6
Highway and Mass Transit	-4	7	1	1	1	2	3	3	3	3	3	3
Airport and Airway	2	3	2	2	3	3	4	4	5	6	7	8
Other[c]	3	3	3	3	3	4	4	4	4	4	4	4
Total Trust Fund Surplus[d]	153	195	203	209	222	231	238	249	257	268	270	273
Federal Funds Deficit (-) or Surplus[d]	-83	-88	-73	-59	-13	-21	-4	7	49	66	86	108
Total Surplus	70	107	131	151	209	209	234	256	306	333	355	381
Memorandum:												
Net Transfers from General Fund to Trust Funds	265	275	292	311	327	355	378	410	422	462	491	523

SOURCE: Congressional Budget Office.

a. Less than $500 million.

b. Civil Service Retirement, Foreign Service Retirement, and several smaller funds.

c. Primarily Railroad Retirement, employees' health and life insurance, Hazardous Substance Superfund, and various veterans' insurance trust funds.

d. Assumes that reductions in discretionary spending are made in non-trust-fund programs.

lion (see Table 2-4). The line between federal funds and trust funds is not neat, however, because trust funds receive much of their income from transfers within the budget. Such transfers shift money from the general fund (thereby boosting the federal funds deficit) to trust funds (thus swelling the trust fund surplus). Those intragovernmental transfers will total nearly $275 billion in 1999. Prominent among them are interest paid to trust funds ($119 billion), government contributions to retirement funds on behalf of present and past federal employees ($72 billion), and contributions by the general fund to Medicare, principally Part B ($71 billion). Clearly, each of those transfers was instituted for a purpose—for example, to force agencies to weigh the costs of cash retirement benefits in their hiring decisions. But it is equally clear that transferring money from one part of the government to another does not change the total surplus or the government's borrowing needs. Without intragovernmental transfers, the trust funds would have an overall deficit every year, ranging from about $80 billion in 1999 to $250 billion in 2009.

All major trust funds except the Hospital Insurance fund are now generating surpluses and are projected to continue doing so through 2009 under current policies. The Hospital Insurance fund is projected to begin running deficits in 2008. Medicare Part B runs a small surplus every year by design, getting roughly one-fourth of its income from enrollees' premiums and tapping the general fund for the rest of its $80 billion-plus outlays.

The two Social Security trust funds, Old-Age and Survivors Insurance and Disability Insurance, are currently running a combined surplus of about $125 billion a year. By 2009, that surplus will approach $220 billion. But it will start to shrink when the baby boomers begin to retire around 2012. CBO's detailed baseline estimates do not extend past 2009, but according to the intermediate estimates of the Social Security actuaries, payroll tax revenues will be insufficient to cover outflows from the funds starting in 2013. Total income (including interest) is expected to fall short of outflows beginning in 2021, and the funds are likely to be exhausted in 2032.

CBO's Long-Term Budget Outlook

The federal budget continues to face long-term pressures from demographic changes and rising health care costs, although the buoyant outlook over the near term will help delay the onset of serious fiscal problems for several decades. The large and rising surpluses projected for the next 10 years (under current laws and policies) will reduce the federal debt and the interest cost of servicing it and thus provide a substantial cushion against future expenses. Over the following decades, however, the budget will face mounting pressure as the baby-boom generation begins to draw benefits from Social Security and Medicare, the average life span increases, and the costs per beneficiary of federal health care programs continue to rise faster than average wages. To analyze the magnitude of that pressure, CBO produces long-term projections of the federal budget.

In contrast to CBO's 10-year baseline projections, the long-term projections extend many spending and revenue categories using simple rules based on historical patterns rather than current law. For example, CBO assumes that tax revenues and government purchases of goods and services remain constant as a share of GDP. However, projections for Medicare and Social Security, which account for most of the long-run pressure on the budget, are based on the forecasts of the trustees of the Social Security and Medicare trust funds. The trustees assume current law in developing their projections.[1] In addition, because CBO's long-term projections focus on macroeconomic relationships, those projections use the budget categories defined by the national income and product accounts, not the categories of the total budget, which CBO focuses on in its 10-year projections.

The long-term projections indicate that debt held by the public, driven by continued budget surpluses,

1. See Congressional Budget Office, *An Economic Model for Long-Run Budget Simulations*, CBO Memorandum (July 1997), for a detailed description of the methods that CBO uses for its long-term projections.

Table 2-5.
Projections of Federal Receipts and Expenditures Under CBO's Base Scenario, 1998-2060
(By calendar year, as a percentage of GDP)

	1998	2010	2020	2030	2040	2050	2060
NIPA Receipts	22	21	21	21	21	21	21
NIPA Expenditures							
Federal consumption expenditures	5	4	4	4	4	4	4
Federal transfers, grants, and subsidies							
Social Security	4	5	6	6	6	7	7
Medicare	2	3	5	6	6	6	7
Medicaid	1	2	2	3	3	3	3
Other	5	4	4	4	4	4	4
Net interest	3	a	-1	a	1	4	11
Total	21	18	20	22	24	27	35
NIPA Deficit (-) or Surplus	1	3	1	-1	-3	-6	-14
Debt Held by the Public	44	5	-12	-7	16	53	129
Memorandum:							
Gross Domestic Product (Trillions of dollars)	8.5	14.3	21.1	30.3	43.2	60.6	82.1

SOURCE: Congressional Budget Office.

NOTES: The base scenario assumes that rising deficits affect interest rates and economic growth.

NIPA = national income and product accounts.

a. Less than 0.5 percent.

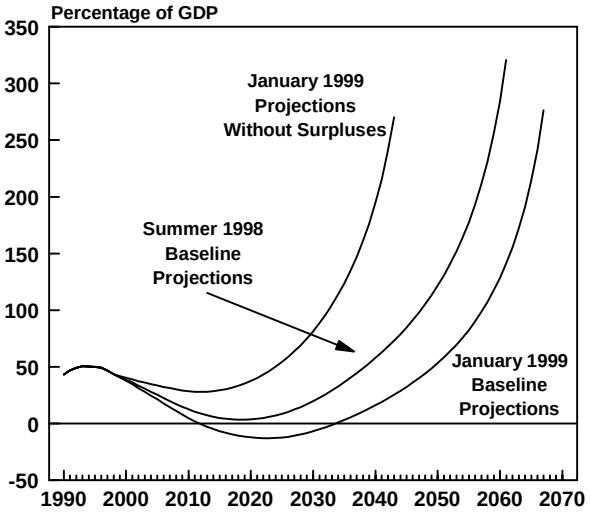
will fall below zero by 2012.[2] Within about 20 years, however, debt will again rise to positive levels and will reach 100 percent of GDP before 2060 (see Table 2-5). That outlook represents an improvement over the long-term projections that CBO made in August 1998.[3] At that time, CBO projected that debt would exceed 100 percent of GDP by 2048. The change stems almost entirely from changes in CBO's 10-year projections. Both sets of long-term projections depend on maintaining surpluses in the near term. If tax cuts or spending increases eliminated the surpluses projected for the next 10 years, the outlook would be significantly worse—in those circumstances, CBO projects, debt would rise above 100 percent of GDP by 2033 (see Figure 2-2).

The degree of long-term imbalance in the budget can be summarized in a single number: the fiscal gap. That gap is the size of the immediate and permanent revenue increase, or spending cut, that would be necessary to result in a debt-to-GDP ratio in 2070 equal to today's ratio. CBO now estimates that the fiscal gap is 0.6 percent of GDP, compared with its 1.2 percent estimate last August. Thus, the improved 10-year projections for the budget have reduced the long-term imbalance by about half. If the surpluses were eliminated, leaving the budget exactly in balance over the next 10 years, the estimated fiscal gap would reach 2.2 percent of GDP.

2. CBO assumes that once federal debt is eliminated, the government will use surpluses to purchase assets that pay on average the same rate of interest as government debt. The projections ignore any possible effects of the elimination of federal debt on financial markets.

3. Congressional Budget Office, *The Economic and Budget Outlook: An Update* (August 1998), p. 37.

Figure 2-2.
Long-Term Projections of Debt as a Share of GDP (By calendar year)



SOURCE: Congressional Budget Office.

The changes in CBO's long-term projections over the past year highlight the uncertainty inherent in long-range estimates. Not only are the long-term projections sensitive to the 10-year outlook, but they are also sensitive to assumptions about the future path of population growth, productivity, interest rates, and health care costs—assumptions whose accuracy will not be clear for many years.[4]

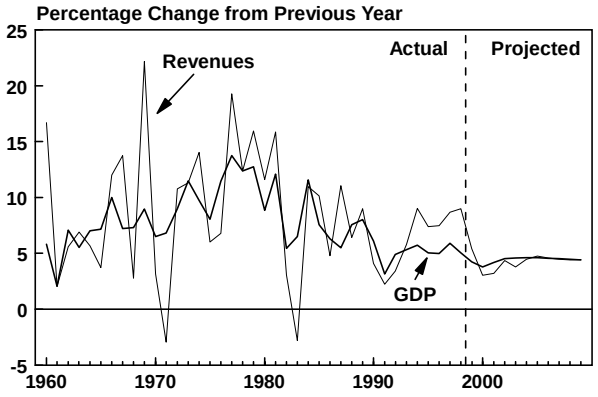
4. See Congressional Budget Office, *Long-Term Budgetary Pressures and Policy Options* (May 1998), pp. 23-27, for an analysis of the sensitivity of the projections to alternative assumptions.

Chapter Three

The Revenue Outlook

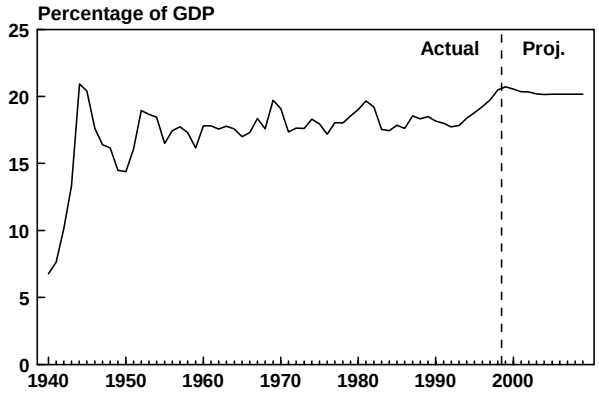
The Congressional Budget Office estimates that total federal revenues will exceed $1.8 trillion in fiscal year 1999 if current policies remain unchanged. That will be the sixth consecutive year in which the growth of revenues will outstrip the growth of the country's nominal gross domestic product (see Figure 3-1). Revenues are expected to rise more slowly than nominal GDP in 2000 through 2004 and then at about the same rate as GDP for the rest of the projection period. In 2009, revenues will total $2.7 trillion, or 20.2 percent of GDP.

Figure 3-1.
Annual Growth of Federal Revenues and GDP
(By fiscal year)



SOURCE: Congressional Budget Office.

Figure 3-2.
Total Revenues as a Share of GDP
(By fiscal year)



SOURCE: Congressional Budget Office.

During the past five years, federal revenues have increased at an average rate of 8.3 percent a year, well in excess of the growth in total output. Consequently, revenues as a percentage of GDP have risen from 18.4 percent in 1994 to 20.5 percent in 1998 and will reach a postwar high of 20.7 percent in 1999, a level surpassed only once, in 1944 (see Figure 3-2). Individual income tax receipts—bolstered primarily by higher capital gains realizations and increases in the effective tax rate—were the main source of that rapid growth. The higher realizations of capital gains have resulted partly from the sharp rise in equity prices. Increases

in the effective tax rate have resulted from the especially rapid growth in income among high-income taxpayers, who are taxed at high marginal rates. Neither phenomenon is expected to persist indefinitely, but how long each persists is uncertain. CBO expects receipts to remain high as a percentage of GDP but not to continue increasing more rapidly than overall GDP growth. (The revenue effects of alternative assumptions about capital gains and the effective tax rate are discussed in Chapter 5.)

In CBO's forecast, revenue growth slows in 1999 to 5.4 percent, but that rate is still faster than the 4.3 percent forecast for GDP. In 2000 and 2001, revenues are expected to grow only slightly more than 3 percent, less than the average 4 percent growth in GDP projected for those years. After that, revenues increase at an average annual rate of about 4.4 percent. Nonetheless, revenues will remain at near-historic highs as a percentage of GDP, staying above 20 percent through 2009.

CBO's current revenue projections are slightly higher than those made last August. Revenues in fiscal year 1999 are expected to be slightly greater, reaching a new high as a share of GDP. After 1999, that share of GDP in the current forecast does not recede as quickly from its peak, nor fall as much, as CBO expected last summer. Although the average annual rate of economic growth that CBO projects

Table 3-1.
CBO Revenue Projections (By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
						In Billions of Dollars						
Individual Income Taxes	829	863	893	919	958	990	1,035	1,085	1,138	1,195	1,258	1,323
Corporate Income Taxes	189	193	188	191	202	214	226	238	250	259	267	273
Social Insurance Taxes	572	610	640	666	691	717	746	783	816	852	885	923
Excise Taxes	58	69	66	68	71	73	75	77	79	81	83	86
Estate and Gift Taxes	24	26	27	28	29	30	31	32	33	35	37	39
Customs Duties	18	18	19	20	20	22	23	24	25	27	28	29
Miscellaneous	32	35	36	38	44	45	47	49	51	51	52	54
Total	1,721	1,815	1,870	1,930	2,015	2,091	2,184	2,288	2,393	2,500	2,611	2,727
On-budget	1,306	1,368	1,402	1,443	1,508	1,563	1,634	1,711	1,791	1,871	1,956	2,046
Off-budget[a]	416	446	468	488	506	527	550	577	602	628	654	681
						As a Percentage of GDP						
Individual Income Taxes	9.9	9.9	9.8	9.7	9.7	9.6	9.6	9.6	9.6	9.6	9.7	9.8
Corporate Income Taxes	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0
Social Insurance Taxes	6.8	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8
Excise Taxes	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6
Estate and Gift Taxes	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Customs Duties	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Miscellaneous	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total	20.5	20.7	20.6	20.4	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2
On-budget	15.5	15.6	15.4	15.2	15.2	15.1	15.1	15.1	15.1	15.1	15.1	15.1
Off-budget[a]	4.9	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.0

SOURCE: Congressional Budget Office.

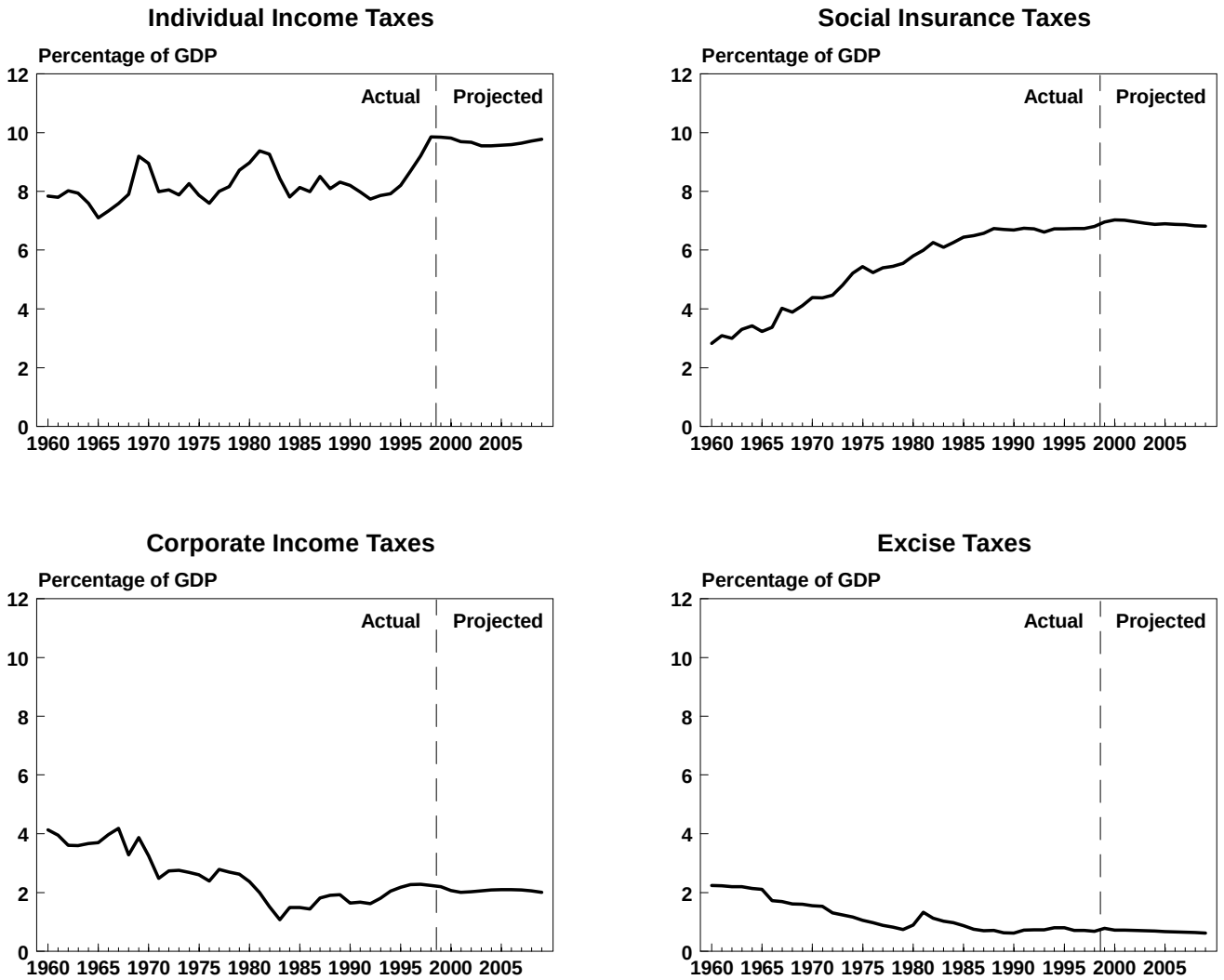
a. Social Security.

for the 1998-2008 period still hovers close to 4.4 percent, revenue growth for that period increases to an average annual rate of 4.3 percent, up from 4 percent.

Federal revenues consist of receipts from individual income taxes, corporate income taxes, social insurance taxes, excise taxes, estate and gift taxes, customs duties, and miscellaneous receipts. Individual income tax receipts make up almost 50 percent of total revenues and nearly 10 percent of GDP (see Table 3-1 and Figure 3-3). Corporate income taxes contribute about 10 percent of revenues and represent approximately 2 percent of GDP. Social insurance taxes (including Social Security payroll taxes, which are off-budget) are the second largest source of revenues, equaling about a third of total receipts and about 7 percent of GDP. The other taxes and miscellaneous receipts, including profits of the Federal Reserve System, make up the balance.

Although the relative importance of social insurance taxes has increased since 1960, largely because of the establishment of the Medicare program and increases in Social Security taxes, those taxes have

Figure 3-3.
Revenues, by Source, as a Share of GDP (By fiscal year)



SOURCE: Congressional Budget Office.

changed little as a percentage of GDP in the past decade. Individual income taxes have fluctuated between 7.5 percent and 9.5 percent of GDP since the mid-1950s and only recently reached nearly 10 percent of GDP. Reliance on receipts from corporate income taxes and excise taxes as a percentage of GDP has diminished since the 1960s (see Figure 3-3).

Individual Income Taxes

Individual income taxes are responsible for most of the recent rise in revenues as a percentage of GDP. They also account for the significant underestimates of receipts that characterized the past few years' revenue forecasts. The importance of individual income taxes in those underestimates stems in part from the huge size of the revenues; even small percentage errors in revenue projections produce large dollar misestimates. In addition, as the most comprehensive tax category, individual income taxes are more sensitive to surprises in macroeconomic activity than any other revenue category.

As a percentage of GDP, individual income tax receipts reached a postwar peak in fiscal year 1998. They are expected to recede slowly from the 9.9 percent share of GDP achieved in 1998 to 9.6 percent by 2004 and then to creep back up to 9.8 percent by 2009. Although many of the factors responsible for the high level of individual income tax receipts are likely to persist, they are expected to keep receipts high rather than growing rapidly. Tax credits enacted under the Taxpayer Relief Act of 1997 and a temporary decline in capital gains realizations will tend to reduce receipts as a percentage of GDP in the next few years. Over time, growth in real income and increasing retirement income distributions will tend to boost individual income tax receipts as a percentage of GDP.

Sources of Recent Growth in Individual Income Tax Receipts

For five consecutive years, receipts have grown faster than GDP, largely propelled by rising individual income taxes. That pattern is unusual: in general, individual income taxes tend to grow only slightly faster than GDP, although exceptions have occurred. For example, a 1969 surtax caused income tax receipts to increase significantly faster than GDP; and inflation, before the tax code was indexed, pushed the growth of revenues well above that of the economy because it effectively increased income tax rates. But those phenomena tended to be short term and were often followed by years in which revenue growth fell below that of GDP.

The Omnibus Budget Reconciliation Act of 1993 raised rates for higher-income taxpayers and caused the growth of individual income tax receipts to exceed the growth of GDP in fiscal year 1994. But from 1995 through 1998, the annual growth in those receipts has surpassed economic growth for reasons unrelated to legislation. Analysis of administrative data on tax liabilities indicates that the surge in individual income tax liabilities from 1993 to 1997 (the 1997 data are preliminary) can be traced to four sources.

One source is the rapid growth of components of GDP that are taxable to individuals. Taxable personal income, which is measured in the national income and product accounts (NIPAs), is the sum of wages, interest, dividends, proprietors' income, and rental income. From 1993 to 1997, it grew faster than GDP. The resulting rise in the proportion of taxable personal income in GDP has raised the tax base for the individual income tax and accounts for more than a tenth of the growth of income tax liabilities in excess of GDP growth.

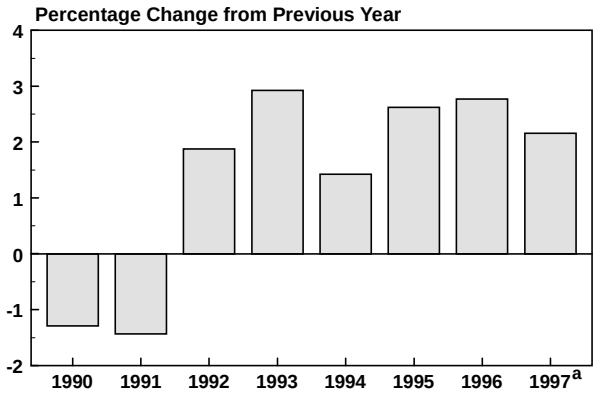
The next two sources are found among the components of adjusted gross income (AGI), the actual tax base of the individual income tax, which has been increasing even more rapidly than taxable personal income. Capital gains realizations, which are not included in the measure of taxable personal income in the NIPAs, account for a large part of the growth in AGI. Realizations of capital gains increased by 150 percent between 1993 and 1997, and most of that growth occurred before the 1997 cut in the tax rates on capital gains. Although gains realizations are still only about 7 percent of AGI, they accounted for nearly a third of the growth of tax liability relative to GDP from 1993 to 1997.

Other components of AGI have also risen more rapidly than taxable personal income and GDP—especially retirement income in the form of pensions and distributions from 401(k) plans and individual retirement accounts (IRAs) and income from partnerships and subchapter S corporations. The growth in those other components accounted for more than 15 percent of the increase in tax liability relative to GDP growth from 1993 to 1997.

The most significant source of income tax growth is the increase in the effective tax rate. In tax years 1993-1997, increases in the effective rate (on income other than capital gains) accounted for roughly 40 percent of the growth of tax liabilities in excess of GDP growth. (The tax year is the year in which the tax liability is incurred.) The effective tax rate on overall AGI has been rising since 1992 (see Figure 3-4). Because it is the ratio of total taxes paid to total AGI, the effective tax rate can rise from increases in both statutory rates and real incomes. Statutory increases in the marginal tax rates for higher-income taxpayers increased the effective tax rate in tax year 1993, and changes in real incomes have fueled the rise since then.

Across-the-board growth of real incomes of all taxpayers placed more income into higher tax brackets. More important, income growth concentrated at the top of the income distribution raised the effective tax rate by increasing the proportion of income taxed at the highest rates. Even though no income group was taxed more heavily, a larger share of income accrued to those groups with the highest tax rates. The share of AGI going to taxpayers with AGI greater than $200,000 (in 1997 dollars) rose from 14.4 percent in tax year 1993 to 19.9 percent in tax year 1997 (see Table 3-2). Two factors accounted for that increase: more taxpayers had AGIs of over $200,000, and those taxpayers experienced a higher-than-average growth in income. Their share of tax liability increased from 29.5 percent to 37.2 percent during the same period. The growth for those with more than $1 million in AGI is even more dramatic. The increased share of taxes from high-income taxpayers, moreover, occurred without an increased effective tax rate for that group.

Figure 3-4.
Recent Growth in the Effective Income Tax Rate (By calendar year)



SOURCE: Congressional Budget Office.

a. Data are based on tax returns processed through November 1998.

Some of the factors that account for the rapid growth in individual income tax receipts have in turn been fueled by the extraordinary boom in the stock market. The rising prices of financial assets increase capital gains accruals, which ultimately lead to taxable capital gains realizations. Those rising prices also produce higher balances in retirement accounts, which become taxable when taxpayers choose (or in some cases are required) to withdraw them. Moreover, the higher retirement account balances may mean that current workers need to make smaller tax-exempt contributions to their retirement accounts, raising their taxable income. The market has also generated large partnership income for financial firms. In addition, the rising prices of assets produce taxable income from stock options and bonuses (those items are deductible expenses by firms, generating nearly offsetting reductions in corporate income tax receipts). Although capital gains, bonuses, and partnership income do not dominate receipts, they are concentrated among high-income taxpayers, where they may have a disproportionate effect on the growth of receipts.

The stock market, however, may not be the fundamental cause of the revenue surge. Instead, other economic forces may be driving both asset prices and the other factors that have pushed up tax receipts. Not all of the increase in partnership and S corporation income, for instance, can be attributed to rising equity prices. But the rise in those forms of income, like the

behavior of the stock market, may have resulted from some underlying economic force that is not reflected in conventional measures of overall economic performance. In any case, the stock market is inherently unpredictable. The prices, volatility, and volume that have characterized the stock market's recent performance differ so much from those in the historical record that normal statistical methods do not allow reliable inferences to be drawn about the market's current effects on key variables in the revenue forecast.

Unexpected Revenues in 1998

Fiscal year 1998 revenues exceeded the level forecast by CBO in January 1998 by $57 billion (see Table 3-3). Individual income tax receipts accounted for $60 billion of the underestimate, which was partly offset by overestimates of roughly $3 billion in other categories of receipts. A stronger-than-expected economy explains about $8 billion of the $60 billion, and the rest is explained by underestimates of the amount of taxes that would be collected at the projected levels of economic activity. Of the roughly $52 billion underestimate of individual income tax receipts not attributable to a stronger-than-expected economic performance, about 40 percent stemmed from underestimates of tax liabilities incurred in 1997 and paid in 1998. Underestimates of liabilities for 1998 paid in the form of withholding and estimated tax payments throughout the year accounted for the other 60 percent.

One can only speculate about the reasons for the unexpected growth in tax liabilities incurred in 1998. Detailed information on those liabilities will not even exist until tax forms are filed during 1999. Therefore, the sources of underestimates of those taxes will not be completely known until mid-2000, after late returns have been filed and processed. Preliminary information from 1997 tax filings suggests that the underestimate of liabilities results about equally from underestimates of taxable income (especially wage and salary income, income from partnerships and subchapter S corporations, and retirement distributions) and from the effective tax rate on that income.

Table 3-2.
Share of Returns, AGI, and Tax Liabilities for High-Income Taxpayers, 1993-1997 (By fiscal year)

AGI in 1997 Dollars	1993	1994	1995	1996	1997[a]
Share of Returns					
200,000 and above	1.1	1.1	1.2	1.3	1.5
500,000 and above	0.3	0.3	0.3	0.2	0.3
1 million and above	0.1	0.1	0.1	0.1	0.1
Share of AGI					
200,000 and above	14.4	14.6	15.8	18.1	19.9
500,000 and above	7.6	7.6	8.6	10.3	11.8
1 million and above	4.9	4.9	5.6	7.0	8.2
Share of Tax Liabilities					
200,000 and above	29.5	29.9	31.9	35.2	37.2
500,000 and above	17.3	17.1	19.0	21.7	23.6
1 million and above	11.3	11.1	12.5	15.0	16.6

SOURCE: Congressional Budget Office.

NOTE: AGI = adjusted gross income.

a. Data are based on tax returns processed through November 1998.

Capital gains realizations, an important part of CBO's underestimate of revenues in fiscal year 1997, probably did not contribute to the underestimate in fiscal year 1998. In fact, CBO overestimated the volume of capital gains realized in 1997 (which are largely reflected in fiscal year 1998 receipts) by a relatively small amount. The actual taxes collected from those gains depend, however, on the distribution of short-term versus long-term gains and on gains before and after May 1997, which were all taxed at different rates. Consequently, exactly how close the CBO estimate of taxes on capital gains came to the actual taxes must await detailed analysis of the 1997 returns later this year.

Expected Pattern of Future Receipts

Individual income tax revenue, which has grown more than 10 percent in each of the past three years, is expected to grow by 4.2 percent in 1999, 3.5 percent in 2000, and 2.9 percent in 2001 (see Table 3-4). The cooling of the economy is partly responsible for that slowdown. In CBO's economic forecast, growth of nominal GDP slows from 5 percent in fiscal year 1998 to 4.3 percent in 1999 and to 3.8 percent in 2000. Growth in wages and salaries is expected to slow even more, from 6.9 percent in 1998 to 5.5 percent in 1999 and 4.8 percent in 2000.

Table 3-3.
Actual Federal Revenues in Fiscal Year 1998, by Source, Compared with CBO's January 1998 Projections (In billions of dollars)

Source	Actual 1998 Revenues	CBO's January 1998 Projections	Difference
Individual Income Taxes			
Withheld	647	614	33
Nonwithheld	282	255	26
Refunds	-99	-101	1
Subtotal	829	768	60
Corporate Income Taxes	189	197	-8
Social Insurance Taxes	572	573	-1
Excise Taxes	58	55	3
All Other Revenue Sources	75	72	2
Total	1,721	1,665	57

SOURCE: Congressional Budget Office.

Tax credits for children and education enacted in the Taxpayer Relief Act of 1997 reduced tax liabilities starting in tax year 1998. The forecast reflects the likelihood that most taxpayers did not adjust their 1998 withholding for the reduction in tax liabilities from the new child tax credit. Consequently, the credits will show up largely as increased refunds and reduced final payments in 1999. CBO expects that some taxpayers will adjust their withholding in calendar year 1999 to reduce their refunds in 2000, but others will continue to be overwithheld. The net effect will reduce the 1999 growth rate in individual income tax receipts by about 2 percentage points. The increase in the child tax credit from $400 to $500 in tax year 1999 will further reduce revenue in 2000 compared with what it would have been otherwise.

The forecast of capital gains realizations incorporates the high levels of the past few years, the continued stock market boom during 1998, and the effects of the lower tax rate on long-term gains enacted in 1997. Those factors will probably lead to increased realizations in tax year 1998, showing up as receipts in fiscal year 1999. Volatility in the stock market, however, may have allowed taxpayers to reduce taxable gains with offsetting losses, making the projection for tax year 1998 especially uncertain. (Chapter 5 discusses the effects of uncertainty in the capital gains projections.) The rate of growth in realizations is projected to slow. Realizations decline in the next few years and grow slowly after that, as the temporary effects of the tax reduction give way to the longer-term effects and as gains cease to be fueled by additional surges in asset prices (see Figure 3-5). In addition, the lower tax rate on gains reduces the receipts collected from a given level of realizations.

The revenue forecast assumes that most of the higher proportion of total income now made up by income from partnerships and S corporations is permanent but does not increase further. Similarly, the

Table 3-4.
CBO Projections of Individual Income Tax Receipts and Tax Base (By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Individual Income Tax Receipts												
In billions of dollars	829	863	893	919	958	990	1,035	1,085	1,138	1,195	1,258	1,323
As a percentage of GDP	9.9	9.9	9.8	9.7	9.7	9.6	9.6	9.6	9.6	9.6	9.7	9.8
Annual growth rate	12.4	4.2	3.5	2.9	4.2	3.3	4.6	4.8	4.9	5.0	5.2	5.2
Taxable Personal Income												
In billions of dollars	5,836	6,107	6,343	6,578	6,832	7,119	7,422	7,742	8,077	8,428	8,796	9,178
As a percentage of GDP	69.4	69.7	69.7	69.4	69.0	68.7	68.5	68.3	68.1	68.0	67.9	67.9
Annual growth rate	5.6	4.6	3.9	3.7	3.9	4.2	4.3	4.3	4.3	4.4	4.4	4.3
Individual Receipts as a Percentage of Taxable Personal Income	14.2	14.1	14.1	14.0	14.0	13.9	13.9	14.0	14.1	14.2	14.3	14.4

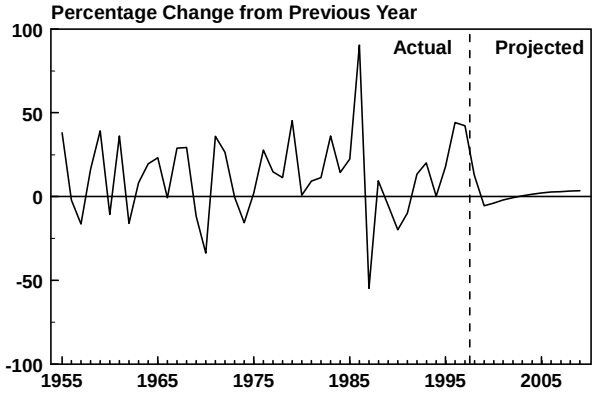
SOURCE: Congressional Budget Office.

NOTE: The tax base in this table reflects income as measured by the national income and product accounts rather than as reported on tax returns.

forecast incorporates the effects of past changes in the income distribution on the effective tax rate but assumes no additional shifts to drive the rate up further. (Chapter 5 illustrates the effects of an alternate path for the effective tax rate.) Individual income tax receipts are therefore likely to remain a large share of GDP, but the factors accounting for their increase in the past few years will cease to grow.

After 2003, individual income tax receipts as a share of GDP are expected to begin a slow, steady climb back nearly to the level projected for 1999. Even without any further changes in the distribution of income, income growth above the rate of inflation pushes taxpayers into higher tax brackets, causing more income to be taxed at higher rates. In addition, the alternative minimum tax (AMT) is not indexed for inflation, and unless the law is changed, many more taxpayers will begin paying that tax in the next decade. CBO estimates that the number of tax returns affected by the AMT will grow from 0.5 million in 1996 to more than 12 million in 2009, while the AMT's share of individual income tax liabilities will grow from less than 0.5 percent to about 2 percent. Another significant source of growth in adjusted gross income and individual tax receipts will be income from pensions and IRA withdrawals. Retirement income is expected to grow faster than overall personal income, reflecting the rapid growth in the stock market during the 1990s and the expected increase in the population eligible for withdrawals.

Figure 3-5.
Annual Growth of Taxable Capital Gains Realizations (By calendar year)



SOURCE: Congressional Budget Office.

Table 3-5.
CBO Projections of Corporate Income Tax Receipts and Tax Base (By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Corporate Income Tax Receipts												
In billions of dollars	189	193	188	191	202	214	226	238	250	259	267	273
As a percentage of GDP	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0
Annual growth rate	3.5	2.1	-2.2	1.4	5.7	5.9	5.8	5.3	4.9	3.8	3.0	2.3
Corporate Profits												
In billions of dollars	824	822	786	803	848	888	932	970	1,009	1,045	1,078	1,108
As a percentage of GDP	9.8	9.4	8.6	8.5	8.6	8.6	8.6	8.6	8.5	8.4	8.3	8.2
Annual growth rate	2.5	-0.2	-4.5	2.2	5.6	4.7	4.9	4.1	4.0	3.5	3.2	2.8
Taxable Corporate Profits[a]												
In billions of dollars	582	593	561	585	629	664	705	739	772	799	822	840
As a percentage of GDP	6.9	6.8	6.2	6.2	6.3	6.4	6.5	6.5	6.5	6.5	6.3	6.2
Annual growth rate	2.3	1.8	-5.4	4.3	7.5	5.6	6.0	4.9	4.5	3.5	2.8	2.2
Corporate Receipts as a Percentage of Taxable Profits	32.4	32.5	33.6	32.7	32.1	32.2	32.1	32.2	32.3	32.4	32.5	32.5

SOURCE: Congressional Budget Office.

NOTE: The tax base in this table reflects income as measured by the national income and product accounts rather than as reported on tax returns.

a. Taxable corporate profits are defined as economic profits net of the capital consumption and inventory valuation adjustments; profits earned by the Federal Reserve System, transnational corporations, and S corporations; and payments of state and local corporate taxes. They include capital gains realized by corporations.

Corporate Income Taxes

Projections of corporate income tax receipts are subject to much uncertainty, although the relatively small size of receipts collected from that source dampens the effect of that uncertainty on estimates of total revenues. Much of the uncertainty stems from the variability of corporate profits, which are essentially the residual income in an economy—what remains for the owners of firms after all the other productive inputs have been paid. As a result, profits tend to fluctuate much more over time than do other sources of taxable income, making them extremely difficult to project.

Uncertainty arises not only from the unpredictability of profits but also from unexpected movements in the average tax rate—total corporate receipts as a percentage of total taxable profits. Those unexpected movements have been greatest following major changes in corporate tax law, such as occurred in 1986.[1] In the past several years, however, the average tax rate has been relatively stable, and most of CBO's forecast error stemmed from profits growing much more strongly than anticipated.

In the past four years, corporate income tax receipts as a percentage of GDP have reached levels not achieved since 1980. That performance was largely driven by the strong growth in corporate profits, which is not expected to persist. CBO forecasts a gradual decline in corporate profits as a share of GDP to levels

1. See Congressional Budget Office, *The Shortfall in Corporate Tax Receipts Since the Tax Reform Act of 1986*, CBO Memorandum (May 1992).

more like those of the 1970s. The economic forecast does not call for a decline to the even lower levels of the 1980s; profitability in those years was severely impaired by rising debt burdens, a condition not expected to occur during the forecast period.

CBO forecasts small declines in corporate profits for 1999 and 2000 (see Table 3-5). After that, profits recover in dollar terms but remain lower as a percentage of GDP. That share falls from 9.8 percent in 1998 to 8.6 percent in 2000, hovers close to that level for several years, and then begins dropping again to 8.2 percent in 2009.

Taxable corporate profits follow a similar pattern but fall somewhat less, from 6.9 percent of GDP in 1998 to 6.2 percent in 2000. It then rises again as a fraction of GDP through 2005, falling back to 6.2 percent of GDP in 2009.

Corporate (economic) profits and taxable corporate profits do not move exactly in tandem largely because of differences in measuring asset depreciation. Between 2000 and 2004, depreciation for tax purposes is projected to grow substantially more slowly than depreciation used to measure corporate profits. Since depreciation is a deduction when calculating profits, slower growth in depreciation for tax purposes raises the growth of taxable profits relative to corporate profits.

The average tax rate varies only slightly over the forecast period, from 32.1 percent to 33.6 percent. The average corporate tax rate tends to be slightly higher when the outlook for profits is weak. When total corporate profits are relatively flat—as projected from 1998 to 2001—it typically means that more companies are losing money (negative profits). In general, firms cannot completely use those losses to reduce tax payments because the corporate income tax does not treat gains and losses symmetrically. To the extent that such losses reduce total profits without reducing tax payments, the average tax rate rises.

Corporate income tax receipts rise very modestly in 1999 and fall in 2000. As a percentage of GDP, they drop from 2.2 percent of GDP in 1998 and 1999 to 2.0 percent in 2001. Their growth recovers in 2002 and remains strong through 2006. But as a percentage of GDP, corporate income tax receipts hover between

Table 3-6.
CBO Projections of Social Insurance Tax Receipts and Tax Base (By fiscal year)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Social Insurance Tax Receipts												
In billions of dollars	572	610	640	666	691	717	746	783	816	852	885	923
As a percentage of GDP	6.8	7.0	7.0	7.0	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8
Annual growth rate	6.0	6.7	4.9	4.0	3.7	3.8	4.1	4.9	4.3	4.3	4.0	4.2
Wages and Salaries												
In billions of dollars	4,086	4,311	4,519	4,703	4,887	5,099	5,328	5,570	5,822	6,085	6,358	6,642
As a percentage of GDP	48.6	49.2	49.7	49.6	49.3	49.2	49.2	49.1	49.1	49.1	49.1	49.1
Annual growth rate	6.9	5.5	4.8	4.1	3.9	4.3	4.5	4.5	4.5	4.5	4.5	4.5
Social Insurance Receipts as a Percentage of Wages and Salaries	14.0	14.2	14.2	14.2	14.1	14.1	14.0	14.1	14.0	14.0	13.9	13.9

SOURCE: Congressional Budget Office.

NOTE: The tax base in this table reflects income as measured by the national income and product accounts rather than as reported on tax returns.

Table 3-7.
CBO Projections of Social Insurance Tax Receipts, by Category (By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Social Security	416	446	468	488	506	527	550	577	602	628	654	681
Medicare	120	128	133	139	144	150	157	165	172	180	188	196
Unemployment Insurance	28	28	30	30	31	31	31	32	34	35	35	38
Railroad Retirement	4	4	4	5	5	5	5	5	5	5	5	5
Other Retirement	4	4	5	5	5	4	4	4	4	3	3	3
Total	572	610	640	666	691	717	746	783	816	852	885	923

SOURCE: Congressional Budget Office.

2.0 percent and 2.1 percent for the rest of the projection period.

Social Insurance Taxes

Receipts from social insurance taxes largely track the behavior of wages and salaries (see Table 3-6). The largest components are Social Security (Old Age, Survivors, and Disability Insurance, or OASDI) and Medicare (Hospital Insurance) taxes (see Table 3-7). Those components are calculated as a percentage of covered wages, the former up to a taxable maximum that is indexed to wage growth over time. Consequently, Social Security taxes tend to remain stable as a proportion of GDP as long as covered wages as a proportion of GDP and the distribution of wages among taxpayers remain stable, as CBO projects for the next decade (see Table 3-6). That stability is reflected in the projections of social insurance tax receipts as a whole: they grow from a 6.8 percent share of GDP in 1998 to 7 percent in 1999, then drift back to their 1998 level in 2008.

Social Security taxes boost social insurance taxes as a share of wages in 1999. The taxable maximum (the amount of wages subject to the tax, currently $72,600) is increased with wages, but with a two-year lag. The increase in the taxable maximum for 1999 was based on the growth in average wages between 1996 and 1997—about 6 percent. The two-year lag leads to an increased average tax rate when the percentage growth in wages declines, as it did in 1998 and is forecast to do again. The projected increase in average wages this year is only 4.4 percent. For workers below the taxable maximum, Social Security taxes will grow with wages, at 4.4 percent. But workers with wages at or above the taxable maximum will have a tax increase of 6 percent. Social Security taxes thus grow faster than wages.

In addition, the estimate for 1999 includes an adjustment to Social Security to correct a small misestimate during 1998, further boosting revenues as a share of taxes. The adjustment occurred because when OASDI and Hospital Insurance taxes are withheld from paychecks and remitted to the Treasury, they are indistinguishable from the individual income tax withholding that is remitted at the same time. The social insurance portions of the payments are estimated and assigned to the respective trust funds on the basis of Treasury projections. As an accounting of the payments becomes available in the following years, the trust funds are adjusted to make up for any shortfall or excess in the estimates. As a result, lump-sum

adjustments of receipts in the social insurance category (with an offsetting adjustment in individual income tax receipts) may occur in years other than those in which the payments were received or liabilities were incurred. That adjustment is not expected to be made again in 2000, but another increase in the taxable maximum in excess of average wage growth will keep the average tax rate constant.

The slow decline in social insurance tax receipts as a fraction of wages after 2001 is the result of unemployment insurance and other retirement revenue. Other retirement revenue falls during the decade, when surcharges imposed on federal workers' retirement contributions expire and workers under the old federal retirement system (which has higher contribution rates than the newer system) retire. Unemployment tax receipts fall because the extended period of high employment in the forecast reduces benefit outlays and permits states to lower their contributions. In addition, CBO projects that the federal government will begin making payments to states from the Federal Unemployment Tax Act trust fund in 2003, permitting states to lower their unemployment tax rates.

The extended period of high employment is a consequence of projecting a smooth trend growth for the economy after 2001. The payment of benefits is sensitive to cyclical variations in unemployment, however. If the 10-year period included a recession—a high probability—the pattern of unemployment would vary more. States' payments of unemployment benefits would run down their insurance revenue trust funds, forcing states to increase contributions to rebuild them.

Excise Taxes

Excise tax receipts are expected to continue their long-term decline as a percentage of GDP, falling to 0.6 percent by 2009 from their 1998 share of 0.7 percent. Most excise taxes—those representing about 80 percent of total excise revenues—are levied per unit of good or per transaction rather than as a percentage of value. Thus, although receipts will grow with real output, they will not rise with inflation. Hence, excise receipts do not grow in tandem with nominal GDP.

Table 3-8.
CBO Projections of Excise Tax Receipts, by Category (By fiscal year, in billions of dollars)

	1998[a]	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Highway	29	37	34	34	35	36	37	37	38	39	40	41
Airport	7	10	9	10	10	11	12	12	13	14	15	15
Telephone	5	6	6	6	7	7	8	8	9	9	10	10
Alcohol	7	7	7	7	7	7	7	7	7	7	7	8
Tobacco	6	5	7	7	8	8	8	8	8	8	8	8
All Other	3	3	3	3	3	3	3	3	3	3	3	3
Total	58	69	66	68	71	73	75	77	79	81	83	86

SOURCE: Congressional Budget Office.

a. Total excise revenue is known for 1998, but the revenues by category are estimates.

Nearly half of all excise tax receipts are for the Highway Trust Fund—primarily from gasoline and diesel taxes (see Table 3-8). Airport taxes and telephone taxes are mostly levied on a percentage basis, so they grow faster than the other excise taxes. A small rise in tobacco taxes enacted in 1997 increases the level of receipts in 2000 and again in 2002; however, tobacco tax receipts in the forecast also reflect the relative reduction in tobacco consumption expected to result from higher prices caused by the tobacco industry's settlements with the states.

The 1999 level of excise tax receipts is high compared with the 1998 and 2000 levels, a result of the Taxpayer Relief Act of 1997, which permitted taxpayers to postpone some highway and airport excise tax payments from August and September 1998 to the beginning of fiscal year 1999. Consequently, 1998 excise tax receipts are artificially low, while those for 1999 are boosted.

Other Sources of Revenue

Smaller amounts of revenue come from estate and gift taxes, customs duties, and numerous miscellaneous sources. Estate and gift taxes tend to grow more rapidly than income because the unified credit for those taxes, which effectively exempts some assets from the tax, is not indexed for inflation. (The annual $10,000 exclusion for gifts has been indexed for inflation, but the $10,000 level will not change until the cumulative price change since 1997 is at least 10 percent.) In the next decade, however, the phasing in of higher unified credits enacted in the Taxpayer Relief Act of 1997 will offset the absence of indexing. The projected GDP share of estate and gift taxes in 2009 remains at 1998's figure.

Customs duties grow over time in tandem with imports. Their growth is retarded in the next few years, however, as tariff reductions enacted in 1994 are phased in.

The largest part of miscellaneous receipts is the profits of the Federal Reserve System, which are turned over to the Treasury and counted as revenues. They depend on interest rates and the system's gains and losses on its foreign currency holdings. Another significant part of miscellaneous receipts is the Universal Service Fund. The fund, collected from the telecommunications industry, is intended to finance Internet service for libraries and schools and subsidize basic telephone service for high-cost areas and low-income households. Its phase-in over the next few years accounts for most of the growth in the miscellaneous receipts category.

Expiring Provisions

CBO's revenue projections assume that current tax law remains unchanged and that scheduled changes and expirations occur on time. The sole exception to that approach is the expiration of excise taxes dedicated to trust funds. Under the rules governing the construction of CBO's baseline, those taxes are included in the revenue projections even if they are scheduled to expire.

The largest trust fund excise taxes that are slated to expire during the next decade finance the Highway Trust Fund. Some of the taxes for that fund are permanent, but most of them expire on September 30, 2005. Extending those taxes at today's rates contributes about $32 billion to CBO's revenue projections by 2009—about 38 percent of total excise tax receipts.

The assumed extensions of other expiring trust fund taxes contribute smaller amounts in 2009. Taxes dedicated to the Airport and Airway Trust Fund, scheduled to expire at the end of 2007, contribute $15 billion in revenues in 2009. Taxes for the Leaking Underground Storage Tank Trust Fund, set to expire on March 31, 2005, contribute $219 million in 2009.

No other expiring tax provisions are automatically extended in CBO's projections. One provision —included in the Tax and Trade Relief Extension Act that was part of last year's omnibus appropriations bill—expired in December 1998. That act allowed individuals to claim personal credits against the AMT, but the provision only affected tax liabilities incurred in 1998. Without that provision, some families would be unable to claim the new child tax credits when they

Table 3-9.
Effect of Extending Tax Provisions That Will Expire Before 2009 (In billions of dollars)

Tax Provision	Expiration Date	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Recently Expired Provisions												
Treatment of Nonrefundable Personal Credits Under the AMT	12/31/98	-0.2	-1.0	-1.2	-1.7	-2.3	-3.0	-4.0	-5.1	-6.5	-8.4	-10.7
Provisions Expiring in 1999												
Credits for Electricity Production from Wind and Biomass	5/31/99-wind 6/30/99-biomass	a	a	a	a	a	a	-0.1	-0.1	-0.1	-0.1	-0.2
Credit for Research and Experimentation	6/30/99	-0.2	-1.4	-1.8	-2.2	-2.5	-2.7	-2.8	-3.0	-3.1	-3.3	-3.4
Extension of Generalized System of Preferences	6/30/99	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6
Work Opportunity Tax Credit	6/30/99	a	-0.2	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Welfare-to-Work Tax Credit	6/30/99	a	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Extension of Subpart F for Active Financing Income	12/31/99	n.a.	-0.2	-0.8	-1.0	-1.2	-1.4	-1.6	-1.8	-2.1	-2.4	-2.8
Provisions Expiring in 2000												
Exclusion for Employer-Provided Education Assistance	5/31/00	n.a.	a	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3
District of Columbia First-Time Homebuyer Credit	12/31/00	n.a.	n.a.	a	a	a	a	a	a	a	a	a
Brownfields Environmental Remediation	12/31/00	n.a.	a	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Corporate Contributions of Computers to Schools	12/31/00	n.a.	n.a.	a	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Provisions Expiring in 2001												
Andean Trade Preference Initiative	12/04/01	n.a.	n.a.	n.a.	a	a	a	a	a	a	a	a
Tax Credit for Electric Vehicles	12/31/01	n.a.	n.a.	n.a.	a	a	a	a	a	-0.1	-0.1	-0.2
Deductions for Clean-Fuel Vehicles and Refueling Property	12/31/01	n.a.	n.a.	n.a.	a	a	a	a	a	a	a	a
Provisions Expiring in 2002												
Luxury Tax on Passenger Vehicles	12/31/02	n.a.	n.a.	n.a.	n.a.	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Tax Incentive for Investment in the District of Columbia	12/31/02	n.a.	n.a.	n.a.	a	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3
Increased Federal Civilian Retirement Contributions	12/31/02	n.a.	n.a.	n.a.	n.a.	0.5	0.7	0.7	0.7	0.8	0.8	0.8
Provisions Expiring in 2003												
IRS User Fees	9/30/03	n.a.	n.a.	n.a.	n.a.	n.a.	0.1	0.1	0.1	0.1	0.1	0.1
Provisions Expiring in 2007												
FUTA Surtax of 0.2 Percentage Points	12/31/07	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0

SOURCES: Joint Committee on Taxation and Congressional Budget Office.

NOTE: AMT = alternative minimum tax; n.a. = not applicable; IRS = Internal Revenue Service; FUTA = Federal Unemployment Tax Act.

a. Loss of less than $50 million.

file 1998's tax return. Making the provision permanent would reduce revenue by $44 billion through 2009 (see Table 3-9). The revenue loss grows rapidly during the decade because each year more families will be subject to the AMT.

Six provisions affecting businesses are scheduled to expire during 1999. Four of them were extended last fall but are scheduled to expire again in midyear. The expiration of the credit for research and experimentation and a provision that affects the income of multinational financial companies would affect revenues the most. If the Congress extended all six at least through the projection period, revenues would be about $5 billion less than projected in 2004 and about $8 billion less in 2009.

Another 12 tax provisions are slated to expire between 2000 and 2009. Eight of them reduce revenues. Extending the exclusion for employer-provided educational assistance would reduce revenues by $200 million to $300 million per year after 2000. In addition, extending incentives for investment in the District of Columbia and for remediation of polluted brownfields sites would each reduce revenues by about $1.5 billion through 2009. Other expiring provisions would have small effects on the budget.

The remaining expiring provisions add to revenues. The Balanced Budget Act of 1997 gradually raised retirement contributions of federal civilian employees, with the first increase beginning in 1999. If the rate for 2002, which is 0.5 percentage points higher than the rate in 1998, continued through the projection period, revenues would be $5 billion higher through 2009. Extending the luxury tax on passenger vehicles beyond 2002 would raise revenues by about $1.5 billion through 2009, and extending Internal Revenue Service user fees would add $0.3 billion. Although the Federal Unemployment Tax Act surcharge brings in nearly $2 billion per year, that revenue increases rebates to the states by the same amount. CBO assumes that states use those rebates to lower their unemployment insurance tax rates, so extending the surcharge would have no net effect on revenue.

Chapter Four

The Spending Outlook

The Congressional Budget Office expects federal spending to total $1.7 trillion in fiscal year 1999. Under current policies, that figure will rise to more than $2.3 trillion by 2009—an average increase of 3.2 percent a year. Federal spending can be divided into several categories based on its treatment in the budget process:

- *Discretionary spending*—which pays for such things as defense, education, transportation, national parks, the space program, and foreign aid—accounts for about one-third of the budget. Discretionary programs are controlled by annual appropriation acts. Policymakers decide afresh each year how many dollars to devote to continuing current activities and funding new ones. CBO's baseline projections depict the path of discretionary spending as a whole, assuming that the Congress complies with the statutory caps on such spending in effect through 2002.

- *Entitlements and other mandatory spending* constitute more than half of the federal budget and consist overwhelmingly of benefit programs such as Social Security, Medicare, and Medicaid. The Congress generally controls spending for those programs by setting rules for eligibility, benefit formulas, and so on rather than by voting for dollar amounts each year. CBO's baseline projections of mandatory spending assume that existing policies remain unchanged.

- *Offsetting receipts*—fees and similar charges that are recorded as negative outlays—are collected without legislative action unless the Congress revisits the underlying laws. They differ from revenues in that revenues are collected on the basis of the government's powers of taxation, whereas offsetting receipts are generally collected from other government accounts or paid by the public for business-type transactions (such as rents and royalties from leases for oil and gas drilling on the Outer Continental Shelf).

- *Net interest* spending is driven by the size of government debt held by the public and by market interest rates. It includes the borrowing activities of the Treasury Department, interest that the government pays (for example, on late refunds issued by the Internal Revenue Service), and interest that the government collects from various sources (such as direct loan financing accounts).

In all, federal spending now represents 19.5 percent of the country's gross domestic product (see Table 4-1). But that number is projected to drop slowly—to 17.3 percent by 2009, assuming that discretionary spending grows at the rate of inflation once the caps expire in 2002. Federal spending averaged about 19 percent of GDP in the 1960s and about 20 percent and 22 percent in the 1970s and 1980s, respectively. Despite that relative stability for federal spending as a whole, the categories of spending have exhibited different patterns over time (see Figure 4-1). The government today spends more as a share of GDP on entitlement programs, and less on discretionary activities, than it did in the past. (For detailed annual data on

each of the broad categories of spending since 1962, see Appendix F.)

Discretionary Spending

Each year, the Congress starts the appropriation process anew. It votes on budget authority (the authority to commit money) for discretionary budget activities, which then translates into outlays when the money is actually spent. In any given year, discretionary outlays also include spending from budget authority appropriated in previous years.

In 1999, discretionary spending is expected to make up one-third of total outlays, or $575 billion—up $21 billion from the 1998 level (see Table 4-2). Under the statutory limits on discretionary spending, those outlays will remain almost constant in dollar terms between 1999 and 2002. But they will fall as a share of total spending, from 34 percent to 31 percent. Assuming that discretionary spending grows at the rate of inflation after the limits expire in 2002, CBO projects that such spending will rise to $680 billion by 2009. As a share of total outlays, however, it will decline to 29 percent.

Discretionary Spending and the Statutory Caps Through 2002

Since 1991, dollar caps set by the Balanced Budget and Emergency Deficit Control Act have restricted spending for discretionary programs. Those caps appear to have played a key role in controlling the deficit. They were aided by lower defense spending brought about by the end of the Cold War, which

Table 4-1.
CBO Outlay Projections, Assuming Compliance with the Discretionary Spending Caps (By fiscal year)

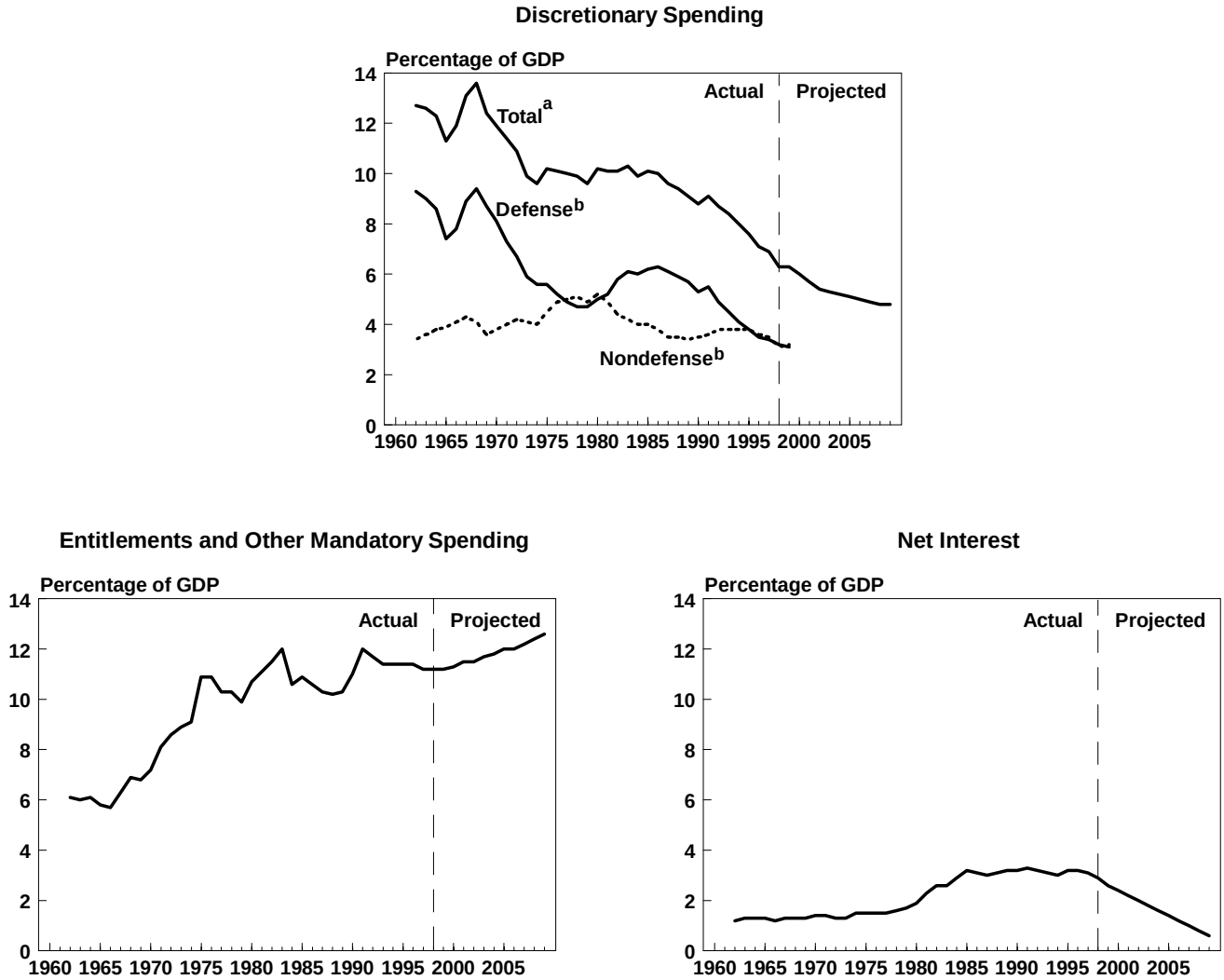
	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
						In Billions of Dollars						
Discretionary Spending	554	575	574	573	568	583	598	614	630	646	663	680
Mandatory Spending	939	982	1,028	1,086	1,141	1,210	1,280	1,365	1,425	1,511	1,609	1,708
Offsetting Receipts	-84	-80	-81	-87	-99	-95	-98	-103	-108	-114	-121	-127
Net Interest	243	231	218	207	195	183	170	156	140	123	104	85
Total	1,651	1,707	1,739	1,779	1,806	1,881	1,951	2,032	2,086	2,166	2,255	2,346
On-budget	1,335	1,388	1,409	1,437	1,453	1,515	1,572	1,639	1,678	1,741	1,813	1,882
Off-budget	317	320	330	343	353	366	379	393	409	425	442	464
						As a Percentage of GDP						
Discretionary Spending	6.6	6.6	6.3	6.0	5.7	5.6	5.5	5.4	5.3	5.2	5.1	5.0
Mandatory Spending	11.2	11.2	11.3	11.5	11.5	11.7	11.8	12.0	12.0	12.2	12.4	12.6
Offsetting Receipts	-1.0	-0.9	-0.9	-0.9	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Net Interest	2.9	2.6	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.6
Total	19.6	19.5	19.1	18.8	18.2	18.2	18.0	17.9	17.6	17.5	17.4	17.3
On-budget	15.9	15.8	15.5	15.2	14.7	14.6	14.5	14.5	14.2	14.1	14.0	13.9
Off-budget	3.8	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4

SOURCE: Congressional Budget Office.

meant that when discretionary spending needed to be restrained, defense programs could bear the brunt.

For 1999, the Deficit Control Act splits discretionary spending into five categories: defense, nondefense, violent crime reduction, highways, and mass transit. In the first three categories, separate limits apply to budget authority and outlays, whereas in the highway and mass transit categories, the caps apply only to outlays. Budget authority always precedes actual outlays, with a short lag for fast-spending activities (such as meeting payrolls or directly providing services) and a longer lag for slow-spending activities (such as procuring weapons or building roads and other infrastructure). When the caps on spending re-

Figure 4-1.
Outlays, by Category, as a Share of GDP (By fiscal year)



SOURCE: Congressional Budget Office.

a. Includes unspecified reductions necessary to comply with the discretionary spending caps from 2000 through 2002.

b. Shown only through 1999 because its future path depends on unspecified reductions.

strict both budget authority and outlays, the more stringent of the two prevails.

For fiscal year 2000, the Deficit Control Act combines defense and nondefense spending into an overall discretionary category while retaining separate categories for violent crime reduction, highway, and mass transit spending. For 2001 and 2002, the act groups violent crime reduction spending under the overall discretionary cap, so only three categories remain. (For more information about the discretionary spending caps, see Appendix A.)

The Congress appropriated more than $573 billion in discretionary budget authority for 1999—$42 billion higher than for 1998. Those appropriations included nearly $18 billion in budget authority for the International Monetary Fund (a periodic commitment last made in 1993 that results in no outlays) and more than $21 billion in emergency budget authority, which is customarily used for unpredictable spending needs that may not recur. The caps are automatically adjusted for those and other specified appropriations.

Between this year and next year, the limits on discretionary spending will tighten considerably and will require some cuts or offsets even if the IMF funding is not repeated in 2000. The exact level of those cuts or offsets depends on whether the appropriations designated as emergency spending in 1999 are repeated as nonemergency appropriations in 2000. If they are repeated next year, budget authority will have to be held almost $26 billion below the 1999 level (with no increase for inflation). Even if the appropriations designated as emergency spending in 1999 are not repeated, budget authority in 2000 will still have to be held $10 billion below the 1999 level (see Table 4-3).

Because of the multiple factors that determine the level of annual outlays, the caps on outlays may be even harder to meet than those on budget authority. Outlays are expected to rise by $21 billion in 1999 from their 1998 level, but the caps will require a decrease in 2000. Next year's outlay cap of $574 billion is almost $13 billion less than the outlays that would result from freezing appropriations (excluding emergency spending) at their 1999 dollar level.

Table 4-2.
CBO Projections of Discretionary Outlays, Assuming Compliance with the Spending Caps
(By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002
Defense	270	275	a	a	a
Domestic and International	257	268	a	a	a
Violent Crime Reduction	4	5	6	a	a
Highways	19	22	26	28	28
Mass Transit	4	5	5	5	6
Overall Discretionary[b]	n.a.	n.a.	538	541	535
Total	554	575	574	573	568

SOURCE: Congressional Budget Office.

NOTES: The estimated caps are based on those published in CBO's *Sequestration Preview Report for Fiscal Year 2000* (included as Appendix A of this volume), modified by small technical adjustments.

n.a. = not applicable.

a. After these caps expire, this amount is reflected in the "Overall Discretionary" category.

b. In 2000 through 2002, this category comprises defense and nondefense (domestic and international) discretionary spending.

Table 4-3.
How Tight Are the Discretionary Caps in Fiscal Year 2000? (In billions of dollars)

	Including 1999 Emergencies	Excluding 1999 Emergencies[a]
Budget Authority		
Caps[b]	536	536
Amount to Preserve 1999 Real Resources		
Defense	289	281
Domestic and international[c]	286	278
Violent crime reduction	6	6
Total[d]	581	565
Amount over caps	45	29
Amount to Freeze 1999 Dollar Resources		
Defense	280	272
Domestic and international[c]	276	268
Violent crime reduction	6	6
Total[d]	562	546
Amount over caps	26	10
Outlays		
Caps[b]	574	574
Amount to Preserve 1999 Real Resources		
Defense	286	282
Domestic and international	284	281
Violent crime reduction	5	5
Highways	25	25
Mass transit	5	5
Total	605	598
Amount over caps	31	24
Amount to Freeze 1999 Dollar Resources		
Defense	280	276
Domestic and international	279	277
Violent crime reduction	5	5
Highways	25	25
Mass transit	5	5
Total	594	587
Amount over caps	20	13

SOURCE: Congressional Budget Office.
NOTE: Amounts needed to freeze 1999 dollar resources include no adjustment for inflation.

a. In fiscal year 1999, $15.812 billion in discretionary appropriations was designated as emergency spending, which indicates that the funding was provided to meet unpredictable spending needs that may not recur. The totals here exclude the estimated budget authority and outlays that result from assuming that those appropriations are repeated in 2000.
b. The estimated caps are based on those published in CBO's *Sequestration Preview Report for Fiscal Year 2000* (included as Appendix A of this volume), modified by small technical adjustments.
c. In fiscal year 1999, an appropriation of $17.861 billion was provided for the International Monetary Fund to meet a periodic commitment for which funding was last provided in 1993. Such appropriations result in no outlays. The domestic and international totals here exclude the estimated budget authority that results from assuming that this appropriation is repeated in 2000.
d. This level does not include mass transit budget authority, which is not subject to a cap. Mass transit budget authority totals $1.138 billion in 1999.

In trying to comply with the various caps, the Congress relies on CBO's projections of discretionary spending as a guide. The accuracy of those projections is therefore crucial. Last summer, the Congressional Budget Office conducted a comprehensive analysis of its outlay estimates for appropriation bills; see Box 4-1 for an explanation of how that analysis has been useful in systematically helping CBO improve its estimating techniques.

Discretionary Spending After 2002

The budget outlook after the caps expire in 2002 hinges in part on the amount of annual appropriations provided in those years. If discretionary spending keeps pace with inflation after 2002, the projected baseline surplus will reach $381 billion in 2009. Alternatively, if policymakers opt to keep discretionary outlays frozen at the 2002 level, the surplus will be $514 billion in 2009. Holding discretionary outlays at that level through 2009, however, would represent a reduction of nearly 30 percent in real terms from the level of spending in 1999.

Defense Discretionary Spending

The percentage of the economy that is devoted to defense has generally shrunk over the past three decades. Whereas defense spending totaled 9.3 percent of GDP in 1962, today it totals only about 3.1 percent (see Figure 4-1 on page 63). There have been only two major interruptions in that declining trend: in the late 1960s (during the Vietnam War) and in the early 1980s (with the Reagan-era defense buildup). Even the costs of the Persian Gulf War appear as barely a blip in the downward trend. In addition, defense spending constituted nearly half of the federal budget in 1962, but today that figure is only around 16 percent. In dollar terms, defense outlays are expected to total $275 billion in 1999.

As defense spending has declined in recent years, the number of military personnel has been reduced and purchases of weapons have been postponed. Attrition, early retirement, other voluntary incentives, and involuntary separations have pared the armed services from around 2 million uniformed personnel in 1991 to 1.4 million in 1998. Likewise, civilian employment by the Department of Defense has declined from a little over 1 million six years ago to 750,000 today. (It is expected to drop by another 20,000 people by the end of 1999.) Cuts in forces have also entailed retiring some older equipment without replacing it. Soon after the turn of the century, however, large blocks of equipment bought during the buildup of the early 1980s will require refurbishing or replacement. Thus, defense spending may rise in the next decade.

Nondefense Discretionary Spending

Even as defense spending generally drifted downward as a share of GDP in the 1960s and 1970s, other discretionary spending climbed slowly, peaking at 5.2 percent of GDP in 1980 before its rise was reversed. Today, nondefense discretionary spending totals about 3.2 percent of GDP, slightly less than two-thirds of the 1980 peak.

Nondefense discretionary spending is expected to make up 18 percent of total outlays, or $300 billion, in 1999. It encompasses a broad array of federal activities (see Figure 4-2). By program category, nondefense outlays for 1999 include $47 billion for education, training, and social services; $42 billion for transportation; $40 billion for income security—chiefly housing subsidies—and the administrative costs of running benefit programs; $38 billion for the administration of justice, violent crime reduction, and general government activities, such as running the Internal Revenue Service; $27 billion for health research and public health; $23 billion for natural resources and the environment; $19 billion for medical care and other noncash benefits for veterans; $19 billion for foreign aid and other international programs; and $18 billion for space and science. Of those outlays, approximately 30 percent pays the costs of federal employees at nondefense agencies.

Box 4-1.
CBO's Analysis of Outlay Estimates for Appropriation Bills

Each time the Congress considers an appropriation bill, the Congressional Budget Office (CBO) estimates the budget authority and outlays provided by that bill. The House and Senate budget committees typically use those estimates to determine whether the bills are consistent with the levels of discretionary spending set forth in that year's Congressional budget resolution. (Those levels are supposed to be no greater than the amount of discretionary spending allowed under the statutory caps of the Balanced Budget and Emergency Deficit Control Act). If CBO estimates that the budget authority or outlays in an appropriation bill exceed the budget resolution amounts, the bill may encounter procedural hurdles. Thus, the accuracy of CBO's estimates is of particular concern to the appropriations committees. They are largely concerned about estimates of outlays, since budget authority is generally provided in specific amounts and need not be estimated.

At the direction of the House Committee on Appropriations, CBO last summer compiled its outlay estimates for appropriation bills covering fiscal years 1993 through 1997 and compared them, account by account, with actual outlays in those years to gauge the accuracy of the estimates.[1] The scope of that analysis covered about one-third of federal spending—or about $550 billion. CBO's cost estimators usually undertake similar analyses of their individual accounts as part of each year's baseline revision process. But the comprehensive study gave analysts and managers at CBO better data about the agency's overall track record and about outcomes in all areas of the budget.

For total discretionary outlays over the 1993-1997 period, CBO's estimates were very close to the actual results (0.1 percent lower). Estimated outlays were too low for three years (1994, 1995, and 1997) and too high for the other two years. However, in every year, the estimates were within 0.7 percent of actual outlays, and the average difference, disregarding the direction of the error, was 35 cents per $100 —less than 0.4 percent.

That aggregate outcome, however, masks different results for defense and nondefense spending. CBO's estimates of defense spending—which accounts for about half of discretionary spending—were too low in four of the five years (by an average of 1.3 percent), whereas its estimates of nondefense spending were too high in all five years (by an average of 1.1 percent).

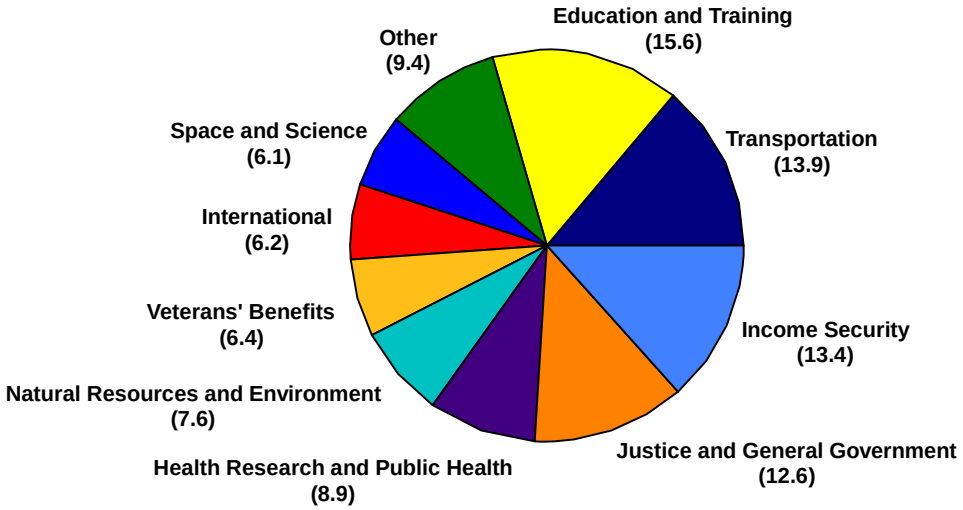
One reason that the defense estimates were too low may be the legal requirement (imposed in the late 1980s) that CBO and the Office of Management and Budget (OMB) issue a joint report on the outlay rates and prior-year outlays that defense agencies intend to use during the upcoming budget cycle. The clear purpose of that requirement is to minimize differences between CBO's and OMB's estimates of defense spending. But unlike CBO, the Administration has had a strong incentive to seek lower outlay estimates in order to obtain its requested levels of budget authority. Although CBO's estimates of outlays have consistently been higher than the Administration's, it has still underestimated actual defense spending.

CBO's overestimates of nondefense outlays have no clear cause or unifying theme. But experience suggests one possible contributing factor: nondefense agencies appear sometimes to be overly optimistic about what they will accomplish and spend in the coming year (especially if a program is new or receiving an influx of new monies), and more often than not, various events tend to delay the actions necessary to obligate and disburse funds. That tendency may lead to an upward bias in both the agencies' and CBO's estimates.

The results of CBO's systematic multiyear comparison of estimated and actual discretionary outlays are reflected in the new baseline projections. The analysis reinforced CBO's hesitation to adopt the Administration's estimates of defense outlays. In addition, CBO has reduced its estimates of spending for some nondefense programs and has been particularly cautious about projecting outlay growth for programs that are new or receiving substantial increases in funding.

1. See Congressional Budget Office, *An Analysis of CBO's Outlay Estimates for Appropriation Bills, Fiscal Years 1993-1997*, CBO Memorandum (October 1998).

Figure 4-2.
Nondefense Discretionary Spending, by Category, Fiscal Year 1999 (In percent)



SOURCE: Congressional Budget Office.

Entitlements and Other Mandatory Spending

Currently, more than half of the $1.7 trillion in federal spending goes for entitlement programs and other types of mandatory spending (other than net interest). Mandatory programs make payments to recipients—a wide variety of people, as well as businesses, nonprofit institutions, and state and local governments—that are eligible and apply for funds. Payments are governed by formulas set in law and are not constrained by annual appropriation bills.

As a share of total outlays, mandatory spending has jumped from 32 percent in 1962 to 57 percent in 1998. If current policies remain unchanged, it will continue to grow faster than other spending, reaching 63 percent in 2002 (or twice the size of discretionary outlays) and 73 percent in 2009.

The Deficit Control Act lumps mandatory programs (other than Social Security) together with receipts and makes legislation that affects those budget categories subject to pay-as-you-go discipline through 2002. In other words, increases in those programs must be funded by cutbacks in other mandatory spending, or by increases in taxes or fees, as measured on an annual basis. (Similarly, tax cuts must be offset by tax increases or reductions in mandatory spending.) Violation of the pay-as-you-go rules triggers a sequestration—an across-the-board cut in mandatory spending—to offset any net reduction in the surplus. Social Security has its own set of procedural safeguards, which the Congress established to prevent policy actions that would worsen the long-term condition of the program's trust funds.

Less than one-fourth of entitlements and mandatory spending, or approximately one-eighth of all federal spending, is means-tested—that is, paid to people who must document their need on the basis of income or assets (and often other criteria, such as family status). The remainder of that spending has no such restrictions and is labeled non-means-tested.

Means-Tested Programs

Since the 1960s, spending on means-tested benefit programs has risen more than threefold as a share of the economy—from 0.8 percent of GDP in 1962 to a high of 2.6 percent in 1995. The spending pattern for those programs reflects a number of factors: new legislation, fluctuating unemployment, varying participa-

tion rates, and growth of the eligible populations. Since 1995, means-tested outlays have declined slightly as a share of GDP; however, that trend is not expected to continue. Largely because Medicaid is expected to start growing more quickly than it has in recent years, CBO projects that spending for means-tested programs will grow a bit more rapidly than the economy and reach 3.1 percent of GDP in 2009.

Medicaid. Medicaid, the joint federal/state program that provides medical care to many of the nation's poor people, makes up nearly half of all spending for means-tested entitlements. It is projected to grow more rapidly in the next decade than other means-tested programs, with its federal outlays rising from $101 billion in 1998 to $245 billion in 2009 (see Table 4-4). Over 85 percent of Medicaid spending goes for acute and long-term care services. Those costs are projected to climb from $87 billion in 1998 to $224 billion in 2009. Spending for payments to hospitals that serve a disproportionate share of Medicaid beneficiaries or other low-income people—so-called DSH payments—is projected to decline from $9 billion to $8.4 billion between 1998 and 2002 as state allotments and other limitations constrain spending. DSH spending is then projected to increase to $10 billion by 2009 as those allotments rise with inflation. Administrative expenses account for the rest of Medicaid's spending, rising from $5 billion in 1998 to $11 billion in 2009.

The program's expenditures in fiscal year 1998 were consistent with expectations of renewed growth. After historically low growth—between 3 percent and 4 percent a year in 1996 and 1997—spending increased by almost 6 percent in 1998. That renewed growth may have come about because states finished implementing cost-containment efforts and because spending on such high-cost services as pharmaceutical products and noninstitutional long-term care increased.

CBO anticipates that Medicaid's growth rate will continue to rise over the coming years. Spending growth is unlikely to reach the double-digit rates of the early 1990s, but it is expected to be 7 percent in 1999 and to average more than 8 percent a year thereafter. By 2009, Medicaid spending could be increasing by as much as 9 percent annually.

In the short term, several factors appear likely to contribute to that acceleration in spending growth. First, a few large states are launching Medicaid expansions under waivers from the Health Care Financing Administration that allow more people to enroll in the program. Second, the Medicare Part B premium for people who are eligible for both Medicaid and Medicare is rising, as are the costs of inputs (such as wages) for long-term care services. Third, the continued phase-in of changes in the way welfare-related administrative costs are allocated will lead to growth in those costs. However, lower projections of the number of adults enrolled in Medicaid (because of the strength of the economy and the effects of welfare reform) serve to dampen those increases.

In the longer term, several factors will combine to push program growth above 8 percent a year. Although states are likely to be successful in restraining payments to health care providers, cost-containment efforts for the Medicare program will result in new Medicaid spending, as will increased use of noninstitutional long-term care services and pharmaceuticals. Furthermore, higher payment rates for some nonhospital providers and institutions may allow states to maximize federal funds and thereby counteract recent spending limitations in their DSH programs. Also, recent judicial interpretations of the Americans with Disabilities Act may eventually increase the number of disabled people receiving long-term care services at home or in the community.

In addition, states will face pressure to increase their capitation rates to keep managed care plans in the Medicaid market. Those increases could result in states' raising rates closer to federal ceilings or finding ways to cross-subsidize plans through other means—both of which would diminish the savings that come from greater use of managed care. States are also expected to expand Medicaid eligibility for pregnant women and other adults and to increase enrollment of children, which will contribute to continued program growth. Finally, states may use the revenues from their recent settlements with the tobacco industry to expand Medicaid enrollment or to finance increases in payment rates. However, CBO assumes that federal recoveries of Medicaid-related funds from the settlements are likely to offset some of the growth in state Medicaid spending beginning in 2001.

Table 4-4.
CBO Projections of Mandatory Spending, Including Deposit Insurance
(By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Means-Tested Programs												
Medicaid	101	108	117	126	136	147	160	174	190	207	225	245
State Children's Health Insurance	a	1	2	3	4	4	4	4	4	5	5	5
Food Stamps	20	21	21	22	23	24	25	25	26	27	27	28
Family Support[b]	18	17	18	19	21	22	23	23	24	25	26	27
Supplemental Security Income	27	28	30	32	33	35	37	42	41	40	46	48
Veterans' Pensions	3	3	3	3	3	4	4	4	4	3	4	4
Child Nutrition	9	9	9	10	10	11	11	12	12	13	14	14
Earned Income Tax Credit[c]	23	26	27	27	28	28	29	30	30	31	31	32
Student Loans	3	4	5	5	6	6	5	5	5	6	6	6
Foster Care	4	5	5	6	6	6	7	7	8	8	9	9
Total	209	222	238	253	270	287	305	328	345	364	392	419
Non-Means-Tested Programs												
Social Security	376	387	404	423	443	464	487	511	538	566	596	631
Medicare	211	220	232	248	258	282	304	336	347	383	413	444
Subtotal	587	607	636	671	701	746	791	847	885	948	1,008	1,075
Other Retirement and Disability												
Federal civilian[d]	47	49	51	53	56	58	61	64	67	70	74	77
Military	31	32	33	34	35	36	37	38	39	40	42	43
Other	5	5	5	5	5	5	5	5	5	5	5	6
Subtotal	83	86	89	92	96	100	103	108	112	116	120	125
Unemployment Compensation	20	21	23	25	26	28	29	30	31	32	34	35
Deposit Insurance	-4	-4	-2	-1	a	a	1	-1	-1	-1	-1	-1
Other Programs												
Veterans' benefits[e]	21	22	22	23	23	24	24	27	26	24	27	27
Farm price and income supports	9	15	7	6	5	5	5	5	5	5	5	5
Social services	5	5	5	5	5	5	5	5	5	5	5	5
Credit reform liquidating accounts	-7	-7	-8	-6	-6	-6	-7	-7	-6	-7	-7	-6
Universal Service Fund	2	4	6	7	12	12	13	13	13	13	13	13
Other	16	13	12	12	11	12	11	11	11	11	12	12
Subtotal	44	50	44	46	49	51	51	53	52	51	54	56
Total	730	760	790	833	871	924	975	1,037	1,080	1,147	1,216	1,289
Total												
All Mandatory Spending	939	982	1,028	1,086	1,141	1,210	1,280	1,365	1,425	1,511	1,609	1,708

SOURCE: Congressional Budget Office.

NOTE: Spending for the benefit programs shown above generally excludes administrative costs, which are discretionary. Spending for Medicare also excludes premiums, which are considered offsetting receipts.

a. Less than $500 million.

b. Includes Temporary Assistance for Needy Families, Family Support, Aid to Families with Dependent Children, Job Opportunities and Basic Skills, Contingency Fund for State Welfare Programs, Child Care Entitlements to States, and Children's Research and Technical Assistance.

c. Includes outlays from the child tax credit enacted in the Taxpayer Relief Act of 1997.

d. Includes Civil Service, Foreign Service, Coast Guard, other retirement programs, and annuitants' health benefits.

e. Includes veterans' compensation, readjustment benefits, life insurance, and housing programs.

Other Means-Tested Programs. Outlays for other means-tested programs are projected to grow more slowly than for Medicaid. Food Stamp outlays are expected to increase slightly from the 1998 level to $21 billion in 1999 and then continue growing moderately, topping $28 billion in 2009 (see Table 4-4). Spending for Temporary Assistance for Needy Families (TANF) and other family support programs hit unexpectedly low levels in 1998, which are projected to continue in 1999 and 2000. After that, spending will gradually rebound, reaching $27 billion in 2009. Spending for Supplemental Security Income (SSI) benefits is projected to escalate from $28 billion in 1999 to $48 billion in 2009. Roughly half of that growth results from cost-of-living adjustments to benefits, and most of the rest springs from the growth in and shifting mix of SSI caseloads. Outlays for refundable tax credits—the earned income credit and the child tax credit—are expected to grow from $26 billion in 1999 to $32 billion in 2009.

One set of programs that is not easily characterized as means-tested or non-means-tested is student loans. CBO includes those programs in the means-tested category because the majority of loans currently have interest subsidies and are limited to students from families with relatively low income and financial assets. However, the fastest-growing category of loans is for students from middle- and upper-income families whose current income is insufficient to pay for college. The programs expect to disburse about $32 billion in loans guaranteed or directly provided by the federal government in 1999 and more than $450 billion over the 1999-2009 period. Of that total, the share of loans that are non-means-tested is projected to increase from 36 percent in 1999 to 42 percent in 2009.

Despite the magnitude of the funds involved, the costs included in the federal budget for student loans reflect only a small portion of the disbursements. Under the Credit Reform Act, only the subsidy costs of the loans are treated as outlays. (Those outlays are estimated as the future costs in today's dollars of in-school interest subsidies, default costs, and other expected costs over the life of the loans.) CBO estimates that those subsidy costs will range from $4 billion to $6 billion a year through 2009.

Non-Means-Tested Programs

Social Security, Medicare, and other retirement and disability programs dominate non-means-tested entitlements. Social Security is by far the largest federal program, with expected outlays of $387 billion in 1999. It pays benefits to more than 44 million people—a number that is projected to increase to almost 54 million in 2009. Most Social Security beneficiaries also participate in Medicare, which is expected to cost $220 billion in 1999. Together, those two programs account for more than one out of every three dollars that the federal government spends (up from about one in four dollars in 1980). The two programs combined are projected to add nearly $500 billion to annual spending by 2009—even before the surge in beneficiaries that is expected to begin shortly thereafter as the first of the baby boomers retire.

Social Security. During the past decade, Social Security grew by an average of 6 percent a year. During the next decade, that growth rate is projected to average 5 percent a year. However, the share of the economy devoted to Social Security will remain fairly constant—rising from 4.4 percent of GDP in 1999 to 4.7 percent in 2009. In 2009, spending for Social Security will total $631 billion.

The Social Security program for Old-Age and Survivors Insurance (OASI) will pay about $337 billion in benefits in 1999. OASI is relatively easier to make projections about, in the near term, than other non-means-tested programs because the forces that drive its costs are quite predictable. More than 90 percent of people over age 65, and more than half of those ages 62 to 64, collect Social Security benefits from that program on the basis of their past earnings (or the earnings of a deceased spouse). Therefore, CBO bases its projections of OASI benefits chiefly on estimates of the size of the elderly population and on the assumption that the average benefit will continue to grow slightly faster than the rate of inflation.

Social Security's Disability Insurance program will pay about $50 billion in benefits in 1999 to disabled workers between the ages of 18 and 65 and their dependents. Projections of those costs are more uncer-

tain because that program's growth will depend on how many people suffer from serious medical impairments that lead them to seek disability benefits. Thus, in the short run, inaccuracies in projections of Social Security spending are most likely to stem from misestimates of the number of disabled beneficiaries or of the cost-of-living adjustments made to all Social Security benefits each year, which depend on economic conditions.

Medicare. Although Medicare spending is not as large as Social Security spending, it is still substantial. By 2009, CBO projects, spending for the program will total more than $444 billion, and Medicare's share of the economy will have risen by almost a full percentage point, from 2.5 percent of GDP in 1999 to 3.3 percent.

Historically, Medicare's growth rate has varied widely, and such fluctuations are expected to continue. During the 1990s, the program's outlays increased by an average of 10 percent a year; in the coming decade, that rate is projected to average 7.3 percent a year. Growth will accelerate midway through that 10-year period, however, averaging 6.4 percent through 2003 (when most of the changes required by the Balanced Budget Act of 1997 will have been implemented) but 7.9 percent a year afterward.

About 60 percent of Medicare's projected growth in the next 10 years will result from increases in enrollment and automatic updates to payment rates (statutory increases to account for inflation). The remaining 40 percent will come from other program changes required by the Balanced Budget Act and such factors as changes in technology, practice patterns, billing behavior, and the age distribution of enrollees.

The number of enrollees in Medicare's Hospital Insurance (Part A) program is projected to rise by 16 percent, from 39 million to 45 million, between 1998 and 2009. However, enrollment growth will accelerate throughout the period, increasing from 1.0 percent in 1999 to 2.2 percent in 2009.

Payment rates for most services in the fee-for-service sector (including hospital inpatient care and services furnished by physicians, home health agencies, and skilled nursing facilities) are subject to automatic updates based on changes in input prices in those settings. The Balanced Budget Act restricted many of those automatic updates to less than the rate of increase in input prices through 2002. Thus, annual updates will average about 2.7 percent through 2002 but about 3.2 percent in 2003 through 2009.

Historically, Medicare spending has grown at a rate 3 to 4 percentage points higher than would result simply from increases in enrollment and updates to payment rates. However, the rate of growth attributable to other factors (some of which were mentioned above) varies considerably. In 1998, for example, that rate was about -0.5 percent. Implementation of the Balanced Budget Act provisions (other than restricted updates) and changes in practice patterns and billing behavior associated with antifraud efforts are expected to hold that rate to about 2.5 percent a year—substantially below the historical average—through 2003. After 2003, growth due to other factors is projected to rise at a yearly rate of about 3 percent. That number is at the low end of the historical average because a rapid increase in enrollment (especially after 2005) will be accompanied by an increase in the proportion of Medicare enrollees who are relatively young and therefore less costly.

Other Non-Means-Tested Programs. Other federal retirement and disability programs, totaling $86 billion in 1999, are less than one-fourth the size of Social Security. They are dominated by benefits for the federal government's civilian and military retirees and the Railroad Retirement program. Those programs are expected to grow slightly faster than inflation.

Spending for both unemployment compensation and deposit insurance has declined from the crests reached in the early 1990s. Outlays for unemployment compensation peaked at $37 billion in 1992, but low unemployment stemming from the growing economy has brought them down to nearly half that amount. As the economy slows and the unemployment rate rises, spending for unemployment compensation is projected to creep up.

Outlays for deposit insurance reached their pinnacle of $66 billion in 1991; these days, though, the deposit insurance funds are collecting more from the sale of acquired assets and the interest on their balances than they are spending to resolve failed banks and thrift institutions. However, CBO assumes that

they will need to make annual payments of $1.5 billion for six years beginning in 1999 to certain savings and loan institutions. The payments result from court decisions that found that the government had breached contracts with those institutions. (In the Financial Institutions Reform, Recovery, and Enforcement Act of 1989, the government rescinded permission to use goodwill as a capital asset, which federal regulators had granted to thrifts to induce them to buy failing institutions. In 1996, the Supreme Court ruled that that action constituted a breach of contract.) Those outlays, which used to be categorized under other non-means-tested entitlements, are now included with deposit insurance spending.

Other non-means-tested entitlements constitute a diverse set of programs—mainly veterans' benefits, farm price supports, certain social service grants to the states, and the Universal Service Fund. In 1999, spending for those programs is projected to total $50 billion, up from $44 billion the year before. Feeding that increase is $6 billion in additional farm price and income supports. Because those payments represent one-time emergency spending, total non-means-tested outlays in 2000 will return to a level only slightly higher than in 1998.

Total outlays for the category of other non-means-tested entitlements are expected to rise to $56 billion by 2009. The primary contributors to that upswing are continued increases in outlays from the Universal Service Fund and from programs (such as veterans' compensation) that grow at roughly the same rate as inflation.

Why Does Mandatory Spending Increase?

As a whole, spending for entitlements and other mandatory programs has doubled since 1985—rising faster than both nominal growth in the economy and the rate of inflation. CBO's baseline projections expect that trend to continue.

Why does mandatory spending grow so fast? One convenient way to analyze that growth is to break it down by its major causes. Such a breakdown shows that rising caseloads, automatic increases in benefits, and greater use of medical services will account for more than 85 percent of the growth in entitlements and other mandatory programs between 1998 and 2009.

Mounting caseloads produce more than one-fifth of the total growth. Compared with this year's outlays, higher caseloads will increase spending by $12 billion in 2000 and $161 billion in 2009 (see Table 4-5). The majority of that growth is concentrated in Social Security and Medicare and is traceable to continued expansion of the elderly and disabled population. Much of the rest is in Medicaid. The growth of caseloads alone will boost outlays in each of those programs by at least 15 percent during the 2000-2009 period.

Not all programs have seen their caseloads increase, however. Food Stamps, TANF, and unemployment insurance, among others, have experienced diminishing caseloads over the past few years (see Box 4-2). But CBO does not expect those declines to continue.

Automatic increases in benefits account for more than one-third of the growth in entitlement programs. All of the major retirement programs grant automatic cost-of-living adjustments (COLAs) to their beneficiaries. Those adjustments, which are pegged to the consumer price index, are expected to rise to 2.6 percent a year by 2000 and remain at that level thereafter. In 1999, outlays for programs with COLAs total more than $500 billion. COLAs are projected to add an extra $11 billion to that amount in 2000 and $153 billion in 2009.

Several other programs—chiefly the earned income tax credit (EITC), Food Stamps, and Medicare—are also automatically indexed to changes in prices. The income thresholds above which the EITC begins to be phased out are automatically adjusted for inflation using the consumer price index (the credit is administered through the personal income tax but is recorded as an outlay in the budget). The Food Stamp program makes annual adjustments to its benefit payments according to changes in the Department of Agriculture's Thrifty Food Plan index. Medicare's payments to providers are based in part on special price indexes for the medical sector. The combined effect of indexing for those programs is an extra $7 billion in outlays in 2000 and $117 billion in 2009.

The remaining 35 percent to 40 percent of the boost in entitlement spending comes from increases that cannot be attributed to rising caseloads or automatic adjustments to benefits. Two of those sources of growth are expected to become even more important over time. First, Medicaid spending grows with inflation even though it is not formally indexed. Medicaid payments to providers are determined by the states, and the federal government matches those payments. If states increase their benefits to account for inflation, federal payments will rise correspondingly. Second, the health programs have faced steadily escalating costs per participant beyond the effects of inflation; that trend, which is often termed an increase in "intensity," reflects the consumption of more health services per participant and the growing use of more costly procedures. The residual growth in Medicare and Medicaid from both of those sources amounts to $12 billion in 2000 and $201 billion in 2009.

In most retirement programs, the average benefit grows faster than the COLA alone. Social Security is a prime example. Because new retirees have recent earnings that were bolstered by real wage growth, their benefits generally exceed the monthly check of a long-time retiree who last earned a salary a decade or two ago and has been receiving only cost-of-living adjustments since then. And because more women are working today, more new retirees receive benefits based on their own earnings rather than a smaller, spouse's benefit. In Social Security alone, such phenomena are estimated to add $4 billion in outlays in 2000 and $61 billion in 2009.

Table 4-5.
Sources of Growth in Mandatory Spending (By fiscal year, in billions of dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Estimated Mandatory Spending for Base Year 1999	982	982	982	982	982	982	982	982	982	982
Sources of Growth										
Increases in caseloads	12	25	38	51	65	81	98	116	137	161
Automatic increases in benefits										
Cost-of-living adjustments	11	25	39	54	70	87	101	116	135	153
Other[a]	7	16	25	36	47	59	72	86	101	117
Other increases in benefits										
Increases in Medicare and Medicaid[b]	12	22	37	55	76	100	121	148	174	201
Growth in Social Security[c]	4	9	12	16	21	27	34	41	50	61
Irregular number of benefit payments[d]	0	3	-3	0	0	11	-6	-5	0	0
Changes in outlays for deposit insurance	2	3	4	4	4	3	3	3	3	3
Other sources of growth	-2	2	9	13	15	17	20	25	27	30
Total	46	104	160	229	298	384	443	530	627	726
Projected Mandatory Spending	1,028	1,086	1,141	1,210	1,280	1,365	1,425	1,511	1,609	1,708

SOURCE: Congressional Budget Office.

a. Automatic increases in Food Stamp and child nutrition benefits, certain Medicare reimbursement rates, and the earned income tax credit under formulas specified by law.

b. All growth not attributed to caseloads and automatic increases in reimbursement rates.

c. All growth not attributed to caseloads and cost-of-living adjustments.

d. Represents baseline differences that result from variations in the number of benefit checks that will be issued in a fiscal year. Normally, benefit payments are made once a month. However, Medicare will pay 13 months of benefits in 2001 and 2005 and 11 in 2002 and 2006. Supplemental Security Income and veterans' benefits will be paid 13 times in 2005, 12 times in 2006, and 11 times in 2007.

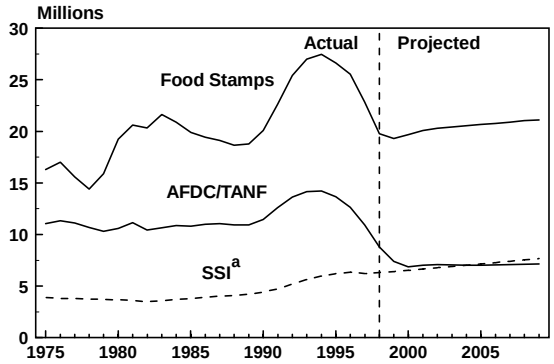
Box 4-2.
Caseloads for Nonhealth Means-Tested Entitlements

The Congressional Budget Office (CBO) projects that federal spending on the three largest nonhealth means-tested entitlements—Food Stamps, Temporary Assistance for Needy Families (TANF), and Supplemental Security Income (SSI)—will decline by about 3 percent (to $61 billion) in 1999. After that, it will increase by about 5 percent a year, reaching $96 billion in 2009. Spending on those programs depends on the number of recipients and the level of benefits. Of those factors, the first is the less predictable, and forecasts of TANF and Food Stamp recipients tend to be more uncertain than forecasts of SSI recipients.

Caseloads for the Food Stamp program and for TANF (and its predecessor, Aid to Families with Dependent Children) have followed similar trends, especially over the past decade (see the figure below). Participation in those programs increased rapidly from 1989 to 1994 and then declined rapidly from 1995 to the present. Both the increase and the subsequent decline occurred at much faster rates than changes in economic and demographic factors would have suggested. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 accounts for only a portion of the rapid decline in 1996 and 1997.

The drop in Food Stamp participation already seems to be slowing. CBO projects that average monthly participation will fall to about 19.3 million people in fiscal year 1999 and then grow slowly over the next 10 years. The number of participants is expected to increase by 1 percent to 2 percent a year from 2000 to 2002, partially in response to a rise in unemployment. After 2002, participation should grow in line with the population. Much of the projected increase in Food Stamp spending after 2002 results from increases in the average level of benefits.

Number of Recipients of Means-Tested Entitlements
(By fiscal year)



SOURCE: Congressional Budget Office.

NOTE: AFDC = Aid to Families with Dependent Children; TANF = Temporary Assistance for Needy Families; SSI = Supplemental Security Income.

a. SSI figures are for December of each calendar year.

The decline in caseloads in TANF, like that in Food Stamps, cannot continue indefinitely. CBO projects that the number of TANF recipients will continue to fall in 1999 and 2000 but at a lesser rate than in the past few years. Higher unemployment will prompt small increases in participation in 2001 and 2002. Thereafter, the number of recipients will grow slowly, at a rate comparable with the growth in Food Stamp participation but dampened slightly as states apply time limits to assistance. Although projections of TANF recipients are as uncertain as projections of Food Stamp recipients, errors have less effect on the forecast of TANF spending because that program is a block grant to states and not an open-ended entitlement to individuals.

Participation in SSI has grown significantly since 1975, rising from 3.9 million recipients to 6.3 million in 1998. Much of that growth took place in the early 1990s, when large increases in the number of disabled child and adult recipients caused the total SSI caseload to jump from 4.2 million to 6.2 million. The increase in disabled children resulted primarily from the Supreme Court's 1990 decision in *Sullivan v. Zebley*, which made it substantially easier for such children to receive SSI. The increase in the number of disabled adults, by contrast, remains largely unexplained. SSI's caseload declined slightly in 1997 as a result of welfare reform, which tightened the definition of childhood disability.

The SSI caseload is expected to grow steadily over the next 10 years. Disabled children and adults now make up about 80 percent of the program's recipients, and (except in 1997) caseloads for both types of recipients have risen every year since 1982. Future increases in SSI participation can therefore be expected, although they will be moderated by welfare reform and will be well below the growth rates of the early 1990s.

Depending on flukes of the calendar, Supplemental Security Income, veterans' compensation and pension programs, and Medicare (for payments to health maintenance organizations) may send out 11, 12, or 13 monthly checks in a fiscal year. Irregular numbers of benefit payments will affect mandatory spending in 2001, 2002, and 2005 through 2007. Most of the remaining growth in spending for benefit programs derives from the following sources: rising benefits for new retirees in the Civil Service, Military, and Railroad Retirement programs (fundamentally the same phenomenon as in Social Security); larger average benefits in unemployment compensation (a program that lacks an explicit COLA but pays amounts that are automatically linked to the recent earnings of its beneficiaries); a reduction in net income to bank and thrift insurance funds; and other sources. All of those factors together, however, contribute just $33 billion of the cumulative $726 billion increase in mandatory spending by 2009.

Legislation Assumed in the Baseline

The general baseline concept for mandatory spending is that budget authority and outlays are projected in accordance with current law. However, in the case of programs with outlays of more than $50 million in the current year, the Deficit Control Act directs CBO to assume that the programs continue when their authorization expires. The bulk of projected spending associated with such programs occurs after 2002, when the current authorizations for the Food Stamp and TANF programs expire (see Table 4-6). In addition, the act directs CBO to assume that cost-of-living adjustments for veterans' compensation are granted each year.

Offsetting Receipts

Offsetting receipts are income that the government records as negative spending. Those receipts are either intragovernmental (reflecting payments from one part of the federal government to another) or proprietary (reflecting payments from the public in exchange for goods or services).

A decision to collect more (or less) money in the form of offsetting receipts usually requires a change in the laws that generate such collections. Thus, offsetting receipts resemble mandatory spending and revenues—which are also subject to pay-as-you-go discipline—rather than discretionary appropriations.

Intragovernmental transfers representing the contributions that federal agencies make to their employees' retirement plans account for more than 40 percent of offsetting receipts—a share that is expected to remain relatively constant through 2009 (see Table 4-7). Agency contributions are paid primarily to the trust funds for Social Security, Hospital Insurance, Military Retirement, and Civil Service Retirement. Some contribution rates are set by statute; others are determined by actuaries. The contributions that agencies are required to make for their employees are charged against their budgets in the same way as other elements of their employee compensation. Future retirement benefits are an important part of the compensation package for the government's 4.3 million civilian, military, and postal workers. The budget treats those contributions as outlays and handles the deposits made in retirement funds as offsetting receipts. The transfers thus wash out in the budgetary totals, leaving only the funds' disbursements—for retirement benefits and administrative costs—reflected in total outlays.

The largest proprietary receipt that the government collects is made up of premiums from the 37 million people enrolled in Supplementary Medical Insurance (SMI, or Part B of Medicare), which primarily covers physicians' and outpatient hospital services. Premium collections from those enrollees are estimated to increase from $22 billion in 1999 to $55 billion in 2009 as the monthly charge climbs from $45.50 to $105.20. Premiums are set to cover one-quarter of the costs of SMI.

Other proprietary receipts come mostly from charges for energy, minerals, and timber and from various fees levied on users of government property or services. Continued auctions by the Federal Communications Commission of rights to use parts of the electromagnetic spectrum are expected to bring in between $1 billion and $4 billion each year through 2001. In 2002, those receipts are projected to rise to $9 billion, after which they will quickly diminish.

Table 4-6.
Program Continuations Assumed in the CBO Baseline (By fiscal year, in billions of dollars)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Commodity Credit Corporation Fund[a]											
Budget authority	n.a.	n.a.	n.a.	n.a.	4.4	4.4	4.4	4.4	4.5	4.4	4.4
Outlays	n.a.	n.a.	n.a.	n.a.	4.4	4.4	4.4	4.4	4.5	4.4	4.4
Ground Transportation Programs Controlled by Obligation Limitations[b]											
Budget authority	n.a.	n.a.	n.a.	n.a.	n.a.	36.2	36.2	36.2	36.2	36.2	36.2
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0	0	0
Ground Transportation Programs Not Subject to Annual Obligation Limitations											
Budget authority	n.a.	n.a.	n.a.	n.a.	n.a.	0.6	0.6	0.6	0.6	0.6	0.6
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	0.1	0.3	0.5	0.5	0.6	0.6
Air Transportation Programs Controlled by Obligation Limitations[b,c]											
Budget authority	1.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Outlays	0	0	0	0	0	0	0	0	0	0	0
Family Preservation and Support											
Budget authority	n.a.	n.a.	n.a.	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Outlays	n.a.	n.a.	n.a.	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Rehabilitation Services and Disability Research											
Budget authority	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.8	2.9	3.0
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.0	2.8	2.9
Food Stamps											
Budget authority	n.a.	n.a.	n.a.	n.a.	23.9	24.6	25.3	26.0	26.7	27.4	28.2
Outlays	n.a.	n.a.	n.a.	n.a.	23.4	24.6	25.3	26.0	26.7	27.4	28.2
Child Nutrition[d]											
Budget authority	n.a.	n.a.	n.a.	n.a.	n.a.	0.5	0.5	0.6	0.6	0.6	0.6
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	0.4	0.5	0.6	0.6	0.6	0.6
Child Care Entitlements to States											
Budget authority	n.a.	n.a.	n.a.	n.a.	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Outlays	n.a.	n.a.	n.a.	n.a.	2.1	2.7	2.7	2.7	2.7	2.7	2.7
Temporary Assistance for Needy Families											
Budget authority	n.a.	n.a.	n.a.	n.a.	16.8	16.8	16.8	16.8	16.8	16.8	16.8
Outlays	n.a.	n.a.	n.a.	n.a.	15.3	16.0	16.6	17.3	18.0	18.7	19.4
Veterans' Compensation COLAs											
Budget authority	n.a.	0.4	0.9	1.4	1.9	2.4	3.1	3.5	4.0	4.6	5.2
Outlays	n.a.	0.4	0.8	1.3	1.8	2.3	3.1	3.5	3.7	4.6	5.2
Total											
Budget authority	1.2	2.8	3.3	4.1	52.5	91.0	92.5	93.5	97.7	99.0	100.5
Outlays	0	0.4	0.8	1.4	47.2	50.9	53.3	55.2	58.9	62.1	64.3

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable; COLAs = cost-of-living adjustments.

a. Agricultural commodity price and income supports under the Federal Agriculture Improvement and Reform Act of 1996 (FAIR) generally expire after 2002. Although permanent price support authority under the Agricultural Adjustment Act of 1939 and the Agricultural Act of 1949 would then become effective, section 257(b)(2)(iii) of the Deficit Control Act provides that the baseline must assume continuation of the FAIR provisions.

b. Authorizing legislation provides contract authority, which is counted as mandatory budget authority. However, because spending is subject to obligation limitations specified in annual appropriation acts, outlays are considered discretionary.

c. Authorizing legislation expires March 31, 1999.

d. The expiring child nutrition programs are the Summer Food Service Program and state administrative expenses.

Table 4-7.
CBO Projections of Offsetting Receipts (By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employer Share of Employee Retirement												
Social Security	-7	-7	-8	-8	-9	-10	-10	-11	-12	-13	-14	-15
Military Retirement	-10	-11	-11	-11	-11	-11	-12	-12	-12	-13	-13	-13
Civil Service Retirement and other	-17	-18	-18	-19	-20	-20	-21	-22	-23	-24	-25	-26
Subtotal	-35	-36	-37	-38	-40	-42	-44	-46	-47	-49	-52	-54
Medicare Premiums	-21	-22	-24	-26	-29	-32	-35	-39	-42	-46	-50	-55
Energy-Related Receipts[a]	-6	-6	-5	-5	-5	-5	-5	-5	-4	-5	-5	-5
Natural Resource-Related Receipts[b]	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3
Electromagnetic Spectrum Auctions	-3	-1	-2	-4	-9	-2	-1	-1	-1	-1	c	0
Other[d]	-17	-13	-11	-11	-13	-11	-10	-10	-10	-10	-10	-10
Total	-84	-80	-81	-87	-99	-95	-98	-103	-108	-114	-121	-127

SOURCE: Congressional Budget Office.

a. Includes proceeds from the sale of power, various fees, and naval petroleum reserve and Outer Continental Shelf receipts.

b. Includes timber and mineral receipts and various fees.

c. Less than $500 million.

d. Includes asset sales.

Net Interest

Interest costs are a sizable portion of the federal budget, representing almost 15 percent of government outlays. Under CBO's assumptions of stable interest rates and rising surpluses through 2009, outstanding government debt is projected to decline significantly (see Chapter 2). In turn, annual interest payments will drop from $243 billion in 1998 to $85 billion—just 4 percent of the budget—in 2009 (see Table 4-8). As a percentage of GDP, those interest costs are projected to decline slowly from 2.9 percent last year to 0.6 percent in 2009.

In general, interest costs are not covered by the enforcement provisions of the Deficit Control Act because they are not directly controllable. Rather, interest payments depend on the amount of outstanding government debt and on interest rates. The Congress and the President influence the former by making decisions about taxes and spending and thus about government borrowing. Beyond that, they exert no direct control over interest rates, which are determined by market forces and Federal Reserve policy.

Interest rates have a powerful effect on budget projections (see Appendix C). If they end up being 1 percentage point higher than CBO assumes in the 1999-2009 period, annual net interest costs will be $5 billion to $20 billion greater than under the baseline scenario. Those extra costs stem from additional financing requirements and the rollover of existing debt by the Treasury.

Net or Gross?

Net interest is the most useful measure of what it costs the government to service its debt. However, some budget-watchers stress gross interest (and its counterpart, the gross federal debt) instead of net interest (and its counterpart, debt held by the public). But that choice exaggerates the government's debt-service burden because it overlooks billions of dollars in interest income that the government receives.

The government has sold around $3.7 trillion worth of securities to finance deficits over the years. But it has also issued approximately $1.75 trillion worth of securities to its own trust funds (mainly the Social Security and other retirement trust funds). Those securities represent the past surpluses of the trust funds, and their total amount grows approximately in step with the projected trust fund surpluses (see Chapter 2). The funds redeem the securities as needed to pay benefits; in the meantime, the government both pays and collects the interest on those securities. It also receives interest income from loans and cash balances. Broadly speaking, gross interest encompasses all interest paid by the government (even to its own funds) and ignores all interest received. Net interest, by contrast, is the net flow to people and organizations outside the federal government.

Net interest is only about two-thirds as large as gross interest. CBO estimates that the government will pay $357 billion in gross interest costs this year (see Table 4-8). Of that amount, however, $119 billion is credited to trust funds and does not leave the government or add to the total deficit. The government is also projected to collect more than $7 billion in other interest income this year. Therefore, net interest costs will total $231 billion.

Table 4-8.
CBO Projections of Federal Interest Outlays (By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Interest on Public Debt (Gross interest)[a]	364	357	350	347	345	342	340	337	334	330	324	318
Interest Received by Trust Funds												
Social Security	-47	-52	-58	-64	-71	-79	-87	-96	-105	-115	-126	-137
Other trust funds[b]	-67	-67	-67	-69	-71	-73	-75	-77	-79	-82	-84	-86
Subtotal	-114	-119	-125	-133	-142	-152	-162	-173	-185	-197	-210	-223
Other Interest[c]	-7	-7	-6	-7	-7	-8	-8	-9	-9	-10	-10	-10
Total (Net interest)	243	231	218	207	195	183	170	156	140	123	104	85

SOURCE: Congressional Budget Office.

NOTE: Projections of interest assume that discretionary spending will equal the statutory caps that are in effect through 2002 and will grow at the rate of inflation thereafter.

a. Excludes interest costs of debt issued by agencies other than the Treasury (primarily the Tennessee Valley Authority).

b. Principally Civil Service Retirement, Military Retirement, Medicare, unemployment insurance, and the Highway and the Airport and Airway Trust Funds.

c. Primarily interest on loans to the public.

Other Interest

The $7 billion in other interest expected in 1999 comprises some interest payments and some interest collections. On balance, however, the government receives more in interest in that category than it pays out. Among the expenditures are Treasury payments for interest on individual, corporate, and excise tax refunds that are held up for more than 45 days after the filing date (those payments total approximately $3 billion a year). An example of other collections is the interest received from the financing accounts of direct loan programs. As those programs (student loans, for instance) make more loans, they borrow money from and pay interest to the Treasury. The size of all interest payments for direct loan programs is expected to rise from $5 billion in 1999 to $14 billion in 2009, mostly because of the growth of the direct student loan program.

Chapter Five

Uncertainty in Budget Projections

The baseline projections in Chapters 1 and 2 represent the Congressional Budget Office's (CBO's) estimates of the most likely paths of the economy and the budget in light of past and current trends and assuming current policies are not changed. Considerable uncertainty surrounds those estimates, however, because the U.S. economy and the federal budget are highly complex and are affected by many economic and technical factors that are difficult to predict. Consequently, actual budget outcomes almost certainly will differ from the baseline projections because actual economic activity will differ from predicted activity and because the technical factors that affect outlays and revenues will differ from their assumed values. In addition, new legislation is likely to alter the paths of spending and revenue outlooks.

The distinction between economic and technical factors is not always clear-cut. The major variables that underlie a macroeconomic forecast—gross domestic product (GDP), incomes, unemployment, inflation rates, and interest rates, for example—are what CBO refers to as economic factors. Other variables that may have an economic basis but are not important for a macroeconomic forecast or are difficult to incorporate into one are referred to as technical factors. Examples of such variables are the distribution of income among taxpayers, realizations of capital gains by asset holders, and the maturity structure of Treasury debt.

This chapter describes how budget projections can be affected by the assumptions about economic and technical factors that CBO incorporates into its baseline. To illustrate the potential impact of economic factors that differ from their baseline assumptions, CBO has projected the budgetary effects of five alternative macroeconomic scenarios. Three of the scenarios reflect detailed sets of assumptions about economic activity, and two reflect simple alternatives of trend growth (measured over a 10-year period) in taxable income that is faster and slower than in the baseline. The analysis of the five scenarios demonstrates that the budget surplus is quite sensitive to different assumed paths for the economy.

Numerous technical factors will also affect the budget in coming years. On the revenue side, shifts in the distribution of income among individual taxpayers could significantly change the effective tax rate (the ratio of taxes paid to adjusted gross income) and thus total revenues. In addition, even though capital gains realizations do not have a large effect on revenues, their volatility adds another element of uncertainty to the revenue projections. An analysis of previous estimates indicates that technical factors have caused CBO's revenue estimates for the fifth year in the future to differ from actual revenues by an average of about 4 percent in one direction or the other.

On the outlay side, a variety of technical factors can affect program spending, sometimes temporarily and sometimes over a long period of time. In the short term, events like Operation Desert Storm and the savings and loan crisis have significantly affected outlays in particular years. Over the longer term,

outlay projections are more vulnerable to trends affecting major entitlement programs, such as Medicare, Medicaid, and the Food Stamp program. In recent years, technical factors have caused CBO's outlay estimates for the fifth year in the future to differ from actual outlays by an average of about 6 percent.

Taken together, economic and technical factors lend a considerable element of uncertainty to multiyear projections. CBO's projections of the baseline deficit or surplus for fiscal years 1988 through 1998, prepared five years beforehand, were off in one direction or the other by an average of about 13 percent of the projected outlays for reasons other than policy changes. In most cases, the deviations resulted in an understatement of the deficit. Deviations attributable to the economic assumptions frequently reinforced rather than offset those attributable to the technical assumptions. Applying that 13 percent average error to the current baseline projection for outlays in 2004 suggests that the projected surplus of $234 billion for that year could be off by about $250 billion. Estimates for more than five years into the future are even more uncertain.

The Budgetary Impact of Alternative Economic Assumptions

Assumptions about GDP, incomes, inflation, short- and long-term interest rates, and the unemployment rate have a large influence on projections of the federal surplus. To illustrate such budgetary effects, CBO examined three alternative economic scenarios. CBO also looked at how faster and slower trend growth in two important components of the tax base —wage and salary disbursements and corporate profits—might affect the budget.

Effect of Differences in Economic Scenarios

The economic forecast for 1999 to 2000 presented in Chapter 1 reflects CBO's judgment of the most likely path for the economy considering a variety of possible outcomes. In CBO's baseline forecast, economic activity slows and inflation and interest rates rise modestly this year and next—a soft landing for the economy. A consensus forecast of approximately 50 prominent forecasters published in *Blue Chip Economic Indicators* also shows a soft landing. Nevertheless, recent events, such as the turmoil in world financial markets and the strong growth in domestic spending and tax revenues, suggest that other outcomes for the economy are possible.

CBO chose three alternative economic scenarios to illustrate some possible outcomes for economic activity and their effects on the budget. One scenario, "continued good news," assumes that the economy continues to grow with low inflation. A second scenario, "boom-bust," assumes that the economy follows a more typical end-of-cycle pattern, with a buildup in inflation followed by monetary tightening and a recession. The third scenario, "financial turmoil," assumes that overinvestment by businesses in the past few years and recent imbalances in financial markets lead to an immediate drop in the availability of credit and in domestic spending, which produces a recession beginning this year. CBO assumes that the recessions in the latter two scenarios are similar in magnitude to the 1990-1991 recession. The primary differences between the scenarios and CBO's baseline economic projections occur in the next few years. In all scenarios, the economy eventually moves back toward the baseline.

Continued Good News Scenario. A continuation of strong economic performance and low inflation would have a dramatic impact on the federal surplus. During the past few years, forecasters have generally underestimated overall economic growth and the size of the taxable income base and overestimated inflation and interest rates. If the economy continued to surpass CBO's baseline projections for several more years, the surplus could be $170 billion in fiscal year 2000, about $40 billion above the baseline value (see Table 5-1). By 2004, the surplus could rise to $305 billion, about $70 billion above the baseline value of $234 billion.

In this scenario, the improvement in the surplus for the next few years arises from growth of real

Table 5-1.
Illustrative Economic Scenarios and Resulting Federal Surpluses

	1999	2000	2001	2002	2003	2004
Economic Scenarios and CBO's January Baseline Economic Projections (By calendar year)						
Nominal GDP Growth (Percent)						
Continued Good News	4.5	4.5	4.6	4.5	4.2	4.4
Boom-Bust	5.0	4.2	1.8	4.8	5.5	6.2
Financial Turmoil	2.5	1.9	5.0	5.6	5.7	4.6
January Baseline	4.1	3.8	4.3	4.5	4.6	4.6
Real GDP Growth (Percent)						
Continued Good News	2.7	2.7	2.7	2.5	2.1	2.1
Boom-Bust	3.0	1.2	-0.8	2.8	3.4	3.9
Financial Turmoil	0.7	0.5	3.3	3.7	3.7	2.4
January Baseline	2.3	1.7	2.2	2.4	2.4	2.4
Inflation in the Consumer Price Index (Percent)[a]						
Continued Good News	2.4	2.3	2.4	2.4	2.5	2.6
Boom-Bust	2.8	3.7	2.8	2.3	2.6	2.8
Financial Turmoil	2.3	2.1	2.3	2.3	2.5	2.6
January Baseline	2.5	2.6	2.6	2.6	2.6	2.6
Interest Rate on Three-Month Treasury Bills (Percentage points)						
Continued Good News	4.4	4.3	4.3	4.5	4.5	4.5
Boom-Bust	4.8	6.7	5.1	3.9	3.9	4.2
Financial Turmoil	3.9	3.0	3.0	3.3	3.9	4.4
January Baseline	4.5	4.5	4.5	4.5	4.5	4.5
Wages, Salaries, and Corporate Profits as a Share of GDP (Percent)						
Continued Good News	58.9	59.2	59.1	58.8	58.5	58.2
Boom-Bust	58.5	57.5	57.0	57.2	57.4	57.6
Financial Turmoil	58.4	58.4	58.5	58.6	58.6	58.3
January Baseline	58.5	58.3	58.1	57.9	57.8	57.7
Federal Surplus (By fiscal year, in billions of dollars)						
Continued Good News	115	170	220	290	290	305
Boom-Bust	120	135	85	125	150	215
Financial Turmoil	85	75	105	195	235	265
January Baseline	107	131	151	209	209	234

SOURCE: Congressional Budget Office.

a. The consumer price index is the index for all urban consumers.

(inflation-adjusted) GDP and taxable incomes that is faster, and inflation and interest rates that are lower, than in the baseline projection. The higher levels of wages, salaries, and corporate profits boost revenues, which account for most of the improvement in the surplus in 2000. By 2004, lower outlays account for a larger portion of the improvement than they did in 2000. Interest payments are smaller because interest rates are lower and more federal debt is retired. Other outlays fall primarily as a consequence of lower spending in mandatory programs that are indexed to the consumer price index for all urban consumers (CPI).

Because the good news eventually disappears, the surplus moves back toward the baseline in this scenario, but it is still larger than the baseline surplus after 2004. That favorable result stems primarily from the lower interest rates and larger surpluses in the preceding years, which push the level of federal debt and federal interest payments below the baseline.

Boom-Bust Scenario. For this scenario, CBO assumes that economic activity remains strong and boosts inflationary pressures this year, precipitating a monetary tightening. The tightening slows the economy too much and produces a recession in 2000. Taxable incomes fall as a share of nominal GDP, and interest rates initially rise above their baseline values. The surplus initially rises slightly above the baseline in response to the stronger economic activity in the near term, but then falls below the baseline as the effects of the higher interest rates and the recession take hold. The surplus moves back to the baseline after 2004, when the economy has recovered from the recession.

During the "boom" phase of this scenario, the surplus rises very slightly above its baseline value because the greater tax revenues from higher taxable incomes are partially offset by greater interest payments resulting from higher interest rates. The higher real GDP, combined with the end of the special factors mentioned in Chapter 1 that have held down inflation in recent years, add enough pressure to raise the CPI inflation rate by about 1 percentage point above the baseline value of 2.6 percent in 2000. Seeing that pressure building in 1999, the Federal Reserve begins tightening credit conditions, which raises the interest rate on three-month Treasury bills by about 2 percentage points above the baseline value of 4.5 percent in 2000.

The "bust" phase of this scenario occurs when the higher interest rates push the economy into recession in 2000. The combination of lower taxable incomes, greater unemployment, and previously higher interest rates produces a surplus that is about $85 billion below its baseline value of $209 billion by 2002. The Federal Reserve loosens credit conditions after the recession begins, which lays the foundation for the economy's eventual recovery.

Financial Turmoil Scenario. This scenario assumes that a recession is precipitated by the end of the surge in business investment in the United States and by financial instability originating from abroad; the recession occurs without any monetary tightening. Even though the country has not experienced such a recession since World War II, the upheaval in global financial markets last year convinced several influential private forecasters that one might happen. Their main concern is that the continued rapid growth of private investment (like that of the stock market) over the past year seems to assume a growth in sales and profits that cannot be sustained. Indeed, capacity utilization in the industrial sector has fallen since last fall. Any sharp reduction in investment would cause production cutbacks in capital goods industries that could spread to the rest of the economy. Such a scenario would be more likely to come about if the fragility of parts of the financial system exposed by the crisis of last summer turned out to be more widespread than it now appears, leading to a continued large drop in U.S. exports.

In this scenario, turmoil in global financial markets pushes the economy into recession this year. The growth of real GDP falls to less than 1 percent in 1999 and to ½ percent in 2000. Interest rates also fall below their baseline values, with the three-month Treasury bill rate 1½ percentage points below its baseline value of 4.5 percent in 2000. Consequently, the projected surplus is $75 billion in 2000, about $55 billion lower than was assumed in the baseline. By 2004, the economy's recovery from the recession boosts the surplus to $265 billion, or about $30 billion above the baseline. The surplus is lower than its baseline value after 2004 as a consequence of lower

inflation, which reduces revenues more than outlays. (See Appendix C for a discussion of the impact of inflation on the budget.)

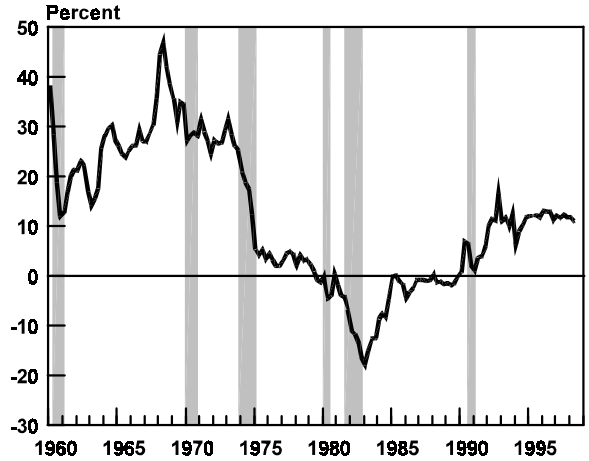
Effect of Differences in the Trend Growth of the Tax Base

In Chapter 1, CBO presented its projection of the main components of the tax base: wage and salary disbursements, corporate profits, and other taxable income. This section discusses the impact of two alternatives for the sum of wage and salary disbursements and corporate profits. Those components account for the bulk of tax revenues and have similar effective tax rates. In one alternative, wage and salary disbursements and corporate profits grow faster than in the baseline; in the other, their growth is correspondingly slower. Interest rates, inflation, and the unemployment rate follow their baseline paths in both alternatives, as do federal outlays (with the exception of interest payments on the federal debt).

The two alternative growth rates are based on an analysis of historical variations in the sum of real wages and profits for domestic industries (measured at book value) per member of the potential labor force (the labor force adjusted for cyclical variations in the economy). Changes in the growth of the potential labor force were excluded from the analysis because that is the least uncertain component of growth. The variation in the growth rate of real wages and profits per member of the potential labor force largely reflects changes in the growth rate of labor productivity (and thus the growth of real GDP) and in the share of income going to wages and profits.

CBO examined the growth rate of real wages and profits per member of the potential labor force over different 10-year periods between 1960 and 1998, shown in Figure 5-1, and used the results of that analysis to estimate the likely variability in the growth rate over the next 10 years. The drop in the 10-year growth rate between the 1960s and the 1980s reflects the slowdown in the trend growth of labor productivity after 1973 as well as the rise in net interest payments by businesses, which slowed the growth of corporate profits. The standard deviation of the 10-year growth rate has been about 0.7 percentage points for the 10-year periods from 1984 to 1998, an interval that excludes the effects of the slowdown in the trend growth of labor productivity.[1]

Figure 5-1.
Growth of Real Wages, Salaries, and Corporate Profits per Member of the Potential Labor Force



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis; Department of Labor, Bureau of Labor Statistics.

NOTES: Growth rates are from the same quarter 10 years ago.

Corporate profits are book values for domestic industries.

CBO used that standard deviation to illustrate the enormous impact that variations in the growth of the tax base can have on the budget outlook. In the high-growth alternative, the sum of wages and profits rises faster than in the baseline, reaching almost 8 percent above the baseline value in 2009, which produces a corresponding increase in revenues. The federal budget surplus is almost $100 billion larger than the baseline surplus of $234 billion by 2004 and about $260 billion larger than the baseline surplus of $381 billion by 2009 (see Table 5-2). The low-

1. The standard deviation is a range that encompasses nearly 70 percent of the data. Thus, the 10-year growth rate was more than a standard deviation below its mean about 15 percent of the time and, correspondingly, more than a standard deviation above its mean about 15 percent of the time.

Table 5-2.
Federal Surpluses Under Alternative Trend Growth Rates of the Tax Base
(By fiscal year, in billions of dollars)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
High-Growth	115	150	185	260	285	330	380	460	520	575	640
CBO Baseline	107	131	151	209	209	234	256	306	333	355	381
Low-Growth	100	110	115	155	140	140	140	160	160	145	135

SOURCE: Congressional Budget Office.

growth alternative, in which the sum of wages and profits is similarly below the baseline value, has a more or less equal but opposite effect on the surplus.

Other Uncertainties in the Revenue Projections

Uncertainties in forecasting the economy are not the only source of error in budget estimates. Even if income, inflation, unemployment, and interest rates are correctly forecast, projections of revenues may be off —in some cases significantly—because of the behavior of variables that are typically not part of an economic forecast. Realizations of capital gains and changes in the distribution of income are two such variables, or technical factors, that have played a role in recent underestimates of revenues.

Capital gains are an example of income that can be deferred for tax purposes (most retirement income is another example). Gains are not taxed as they accrue but are included in taxable income when they are realized at a later date (and may escape taxation altogether at death). Taxpayers therefore have considerable discretion over when and even whether the tax is paid. Realizations are related to overall economic activity, but they also depend on past accruals and other factors that are not necessarily correlated with current economic activity. Consequently, realizations must be projected largely independently of the economic forecast and are subject to a high likelihood of error.

Because of the progressivity of the individual income tax system, the more real income that is earned, the more, on average, it is taxed. A given amount of aggregate income, depending on how it is distributed among taxpayers, will yield different tax liabilities. The more unevenly income is distributed, the higher the effective tax rate will be. The added taxes from the higher-income taxpayers are greater than the reduction in taxes from the lower-income taxpayers because the latter taxpayers are taxed at a lower rate.

The distribution of individual income does not stay constant, but neither does it change in a systematic or predictable way. More significantly, a number of different distributions are consistent with a given level of GDP. Economists lack a reliable means of forecasting changes in the distribution. Consequently, even with an economic projection that is on target, the revenue projection may go awry if the income distribution shifts.

Alternative Capital Gains Realizations

Capital gains realizations are always volatile, which makes them hard to predict. The decision of a taxpayer to realize a gain is an economic one, but the economic factors that influence the timing of realizations are largely unobserved. Consequently, projecting the general trend in realizations (and revenues thus produced) is easier than projecting the year-to-year variations around that trend. Large errors in the projections are therefore common.

Even though the behavior of the stock market and income for most of 1998 is known, the projection of capital gains realizations still reflects large uncertainties. CBO's estimate of gains realized in 1998 has nearly a 70 percent chance of being within 13 percent of the actual level (that is, 13 percent is the standard deviation). In 2009, when CBO must predict realizations with no information about the stock market, the standard deviation grows to about 17 percent, assuming that income is forecast correctly.

To illustrate the kind of error that can reasonably be expected, CBO calculated the effect on revenues of capital gains realizations that are one standard deviation above the amount projected. The effect is no more than $20 billion in any year. (Revenues would be reduced by the same amount if realizations fell short by one standard deviation.) The potential errors shown in Table 5-3 refer to the error in any given year. Thus, although realizations are very likely to be off by that magnitude in a particular year, they are not likely to be off by that much in the same direction throughout the 10-year period. Errors in projecting capital gains run in both directions; errors in one year tend to be followed in the next year by errors in the opposite direction. The more likely pattern would be for errors to swing from underestimating to overestimating gains, with possibly more than one such swing during the projection period. Consequently, the figures in Table 5-3 are not an alternative projection of capital gains. Instead, they illustrate the kind of error that can reasonably be expected to occur in a given year.

Although the magnitude of the standard deviation is large, the effect on revenues is relatively small —$11 billion in 1999, rising to $17 billion in 2009. The reason is that taxable capital gains realizations account for only about 5 percent of adjusted gross income. Consequently, even though large errors in the forecast of capital gains realizations are possible and even likely, the resulting revenue error is small as a percentage of total revenues. For example, in 1996, realizations jumped 42 percent, well outside the standard deviation of the estimate. The result was about $20 billion in unexpected revenues—approximately 3 percent of individual income tax liabilities from that year and less than 2 percent of total receipts.

Income of High-Income Taxpayers

The effective tax rate is a critical factor in determining the amount of individual income tax receipts that will accrue from a given level of projected economic activity. Because the individual income tax base is so large, even small changes in the effective tax rate can produce large changes in receipts. Given the progressivity of individual income tax rates, an important determinant of the effective tax rate is how overall income is distributed among taxpayers.

Table 5-3.
Illustrative Effects on Revenues of Alternative Assumptions About Capital Gains Realizations and the Effective Tax Rate (Additions to receipts in billions of dollars)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Capital Gains Realizations Are One Standard Deviation Above the Projection	11	12	12	13	13	14	14	15	16	17	17
Annual Growth of the Effective Tax Rate Is 1 Percent Higher	8	18	27	38	50	63	77	93	110	130	152

SOURCE: Congressional Budget Office.

The distribution of income does not have to change for the effective tax rate to go up or down. Aside from legislated changes in tax rates, real economic growth will place more income in the hands of all taxpayers regardless of where they stand in the distribution of income in the economy. The growth of income will tend to push taxpayers into higher tax brackets, so that the additional income they earn is taxed at a higher rate. Although they still end up with more after-tax income than they had previously, they pay more taxes as a percentage of total income earned, and the effective tax rate rises.

But the effective tax rate can rise without changes in legislation or real income. Even if total income in the economy remains constant, a shift in the pattern of income can place more of that income in the hands of those already paying high marginal tax rates by virtue of their high-income status.[2] Since that extra income will be taxed at a higher rate than the income lost by lower-income taxpayers, total taxes will rise and the effective tax rate will be higher.

Moreover, a shift in the distribution of taxable income can occur as part of the growth of overall income. All taxpayers may experience an increase in real income. But if the incomes of upper-bracket taxpayers grow faster than those of lower-bracket taxpayers, the effective tax rate would be higher than if the distribution of additional income was the same as that of existing income.

Throughout the 1990s, the effective tax rate rose about 1 percent a year faster than the rate that changes in tax law and real income growth alone would have generated. In the past few years, the rate of growth in the effective tax rate has been higher than that. That additional rise reflects a pattern of income growth that has provided high-income taxpayers with large income gains. CBO's baseline assumes that no further changes in the effective tax rate will result from shifts in the income distribution. Baseline changes in the effective tax rate reflect only the expected effects of enacted legislation and real income growth.

An alternative assumption would be that the effective tax rate continues to grow 1 percent a year more than it would from changes in legislation and real income growth alone. Table 5-3 illustrates how such a pattern in the effective tax rate would affect receipts through 2009.

In the earlier years, the effect is relatively small —$8 billion in 1999. But it very quickly increases and is about $150 billion in 2009. In contrast with the alternative assumption about capital gains, in which large potential errors produce relatively small revenue effects, in this instance relatively small potential errors in estimating the effective tax rate produce large revenue effects. That result reflects the importance of the effective tax rate in projecting individual income tax receipts.

An effective tax rate that grows 1 percent a year more than it would in the absence of distributional changes is not improbable. However, such growth is not likely to persist through another decade. In particular, an economic downturn would almost certainly reverse some of the recent trend toward higher effective tax rates.

Other Uncertainties in the Outlay Projections

Like revenues, outlays can also vary for reasons unrelated to macroeconomic developments. Programs may be affected by administrative decisions or changes in administrative procedures, court rulings, military actions, program delays, actions by health care providers, the proceeds or timing of asset sales, changes in the financial condition of banks or in the cost of particular items or services provided by the government, natural disasters, unanticipated changes in the behavior or number of program beneficiaries, or simple year-to-year variations in the pace of program activity. Some of those occurrences have only short-term ramifications, but others may significantly affect long-run spending projections.

2. The marginal tax rate is the tax rate that applies to an additional dollar of income.

Short-Term Projections of Outlays

Even partway through a fiscal year, outlays for that year cannot be projected with absolute precision. Sometimes, specific, identifiable events can significantly affect the budget during the year. In 1991, for example, outlays fell below projections in part because the United States received $43 billion in payments from other countries to defray the costs of Operations Desert Shield and Desert Storm, substantially more than the additional outlays for those operations in that year. (Much of the spending to replace items consumed in the conflict occurred in later years.) Deposit insurance was another major source of short-term uncertainty in the past decade. Outlays surged to $58 billion in 1990, almost triple the 1989 level, but spending in each of the following two years was tens of billions of dollars below CBO's projections, in part because funding shortages interrupted the savings and loan cleanup.

Even without dramatic occurrences or unique circumstances, a variety of events, decisions, and responses take place continually in each government program, ensuring that spending will not follow a routine and predictable pattern every year. Changes in long-term trends—some gradual and some sudden—and short-term deviations from such trends are inevitable in many programs. Nevertheless, in the absence of unusual circumstances like those mentioned above, CBO's estimates of outlays for the current fiscal year, prepared in December of each year (2½ months into the fiscal year), are typically within about 1 percent of the actual outlays for the year. But with current spending at roughly $1.7 trillion a year, even such small percentage errors could cause outlays for 1999 to differ by $10 billion to $20 billion from the current projection. In recent years, entitlement and other mandatory programs have accounted for the bulk of such errors. In total, CBO's December estimates for those programs have been off by about 2 percent; Medicaid, Medicare, and liquidating accounts for various credit programs have been the source of the largest differences.

Projections made before the beginning of the fiscal year are less accurate. As shown in Appendix B, CBO has compared the outlay levels in the budget resolution with the actual outcomes since 1980. The CBO estimates that form the basis for the budget resolutions are usually prepared in February, seven months before the beginning of the fiscal year in question. The technical errors in those estimates, which exclude the effects of macroeconomic developments and most Congressional policy decisions, generally fall in the range of 1.0 percent to 2.5 percent of total outlays. CBO's analysis of outlay estimates for appropriation bills in recent years indicates that those estimates have been off by an average of less than 0.4 percent in one direction or the other. Errors in projections of mandatory programs have been somewhat larger. If experience is any guide, the current outlay projection for 2000 could miss the mark by $20 billion to $40 billion.

Long-Term Projections of Outlays

In assessing the implications of the projections for 2008 or 2009, one-time or short-term variations from the baseline estimates are less significant, and possible errors in projecting long-term trends are much more so.

Some programs are fairly predictable. In the absence of legislative changes, the costs of Social Security's Old-Age and Survivors Insurance and other federal retirement programs over the next several years can be projected with reasonable confidence for any given set of economic assumptions. But the dramatic changes in growth rates experienced by a number of other major entitlement programs indicate that projections of their costs over a 10-year period are subject to great uncertainty.

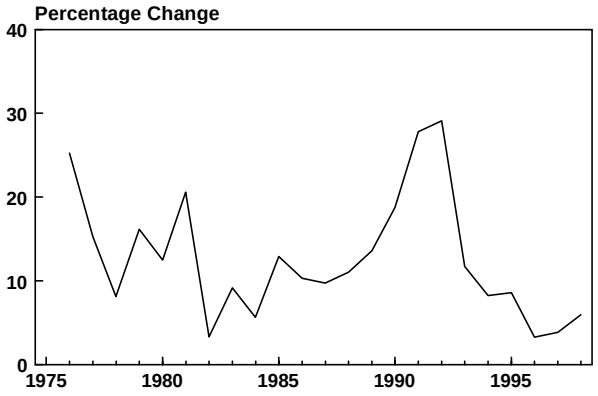
Medicaid, for example, has been a major source of budgetary surprises in the past several years. Outlays for that program grew by an average of less than 10 percent a year from 1981 to 1989. From 1989 to 1992, however, the growth of outlays suddenly jumped to an average of more than 25 percent a year, almost doubling outlays over that period (see Figure 5-2). Even with baseline projections that included additional spending for recent expansions in program coverage, Medicaid outlays in 1992 were more than 30 percent above the baseline estimate that CBO had projected three years earlier for 1992. Since then, the growth in Medicaid spending has slowed dramati-

cally to an average of less than 7 percent a year, which is well below the rate CBO projected in 1993. As a result, 1998 outlays were about 25 percent below CBO's 1993 baseline estimate.

Spending for the Food Stamp program has also been volatile. Rapid growth in the early 1980s gave way to several years of virtual stability in spending, only to be followed by a return to double-digit growth rates during the 1990-1992 period. By 1997 and 1998, spending in the program was falling by more than 10 percent annually. Neither the rapid increase in caseloads in the early 1990s nor the recent decline can be fully explained as the direct result of legislative or economic changes. Consequently, long-term projections of spending have often proved to be substantially in error. For example, in 1989, CBO projected a gradual increase in expenditures for Food Stamps, from $13 billion spent in 1988 to $17 billion for fiscal year 1994; instead, outlays turned out to be $25 billion. Conversely, projections completed after the surge in participation in the early 1990s proved to be much too high.

Medicare costs and payments to the disabled under Social Security and the Supplemental Security Income program have also been particularly difficult to project several years into the future. Those three programs plus Medicaid and Food Stamps accounted for about one-quarter of the budget in 1998, and the potential variation from the baseline projection for 10 years from now is significant. For example, CBO is now projecting growth that averages about 7.5 percent a year for Medicare and Medicaid combined over the next decade. If, instead, the average growth in those two programs was 2 percentage points higher or lower (5.5 percent or 9.5 percent), the difference in outlays would be about $50 billion in 2004 and would grow to between $125 billion and $150 billion by 2009. The potential variation in total outlays by 2009—for technical reasons—might well amount to 10 percent, or more than $200 billion in either direction, even without accounting for the changes in debt-service costs that would result.

Figure 5-2.
Growth in Medicaid Outlays
(By fiscal year)



SOURCE: Congressional Budget Office.

Conclusion

It is difficult to use alternative economic scenarios and illustrative technical changes in projected revenues and outlays such as those described above to develop meaningful estimates of the likely error in CBO's projection of the surplus. The scenarios and alternative paths analyzed in this chapter only begin to suggest the ways in which outcomes could differ from CBO's projections. In addition, technical and economic errors in the projections may be offsetting or may reinforce each other.

History, however, can provide some guidance about the likely size of total errors in the projections of the surplus. CBO has compared the actual surpluses for 1988 through 1998 with the first projection of the surplus it produced five years before the start of the fiscal year. (CBO has only recently begun to produce 10-year estimates, so there is no historical comparison with actual outcomes yet.) Excluding the estimated effects of legislation on the actual outcomes, the remaining errors averaged about 13 percent of actual outlays. A deviation of 13 percent of projected outlays in 2004 would produce an increase or decrease in the surplus of about $250 billion. In 2009, an error equal to 13 percent of projected outlays would produce a swing of about $300 billion. But since the errors in projections made 10 years in advance are probably larger than the errors in estimates made five years ahead, an average deviation in 2009 is likely to produce a larger swing.

Appendixes

Appendix A

Sequestration Preview Report for Fiscal Year 2000

The Congressional Budget Office (CBO) estimates that the statutory limits on discretionary spending detailed in this sequestration report would require the Congress and the President to enact lower levels of discretionary spending for fiscal year 2000 than they did for 1999. However, they could increase mandatory spending or reduce revenues by nearly $3 billion in 2000 without triggering a pay-as-you-go sequestration.[1]

Discretionary Sequestration Report

The Balanced Budget and Emergency Deficit Control Act (the Deficit Control Act) sets limits on discretionary spending and provides for across-the-board cuts—known as sequestration—if annual appropriations exceed those limits. The caps are in effect through fiscal year 2002.

For 1999, the act splits discretionary spending into five categories: defense, nondefense, violent crime reduction, highways, and mass transit. Separate limits apply to budget authority and outlays in the defense, nondefense, and violent crime reduction categories. The caps for the highway and mass transit categories apply only to outlays.

For 2000, the Deficit Control Act combines defense and nondefense spending into an overall discretionary category while retaining separate categories for violent crime reduction, highway, and mass transit spending. For 2001 and 2002, the act folds violent crime reduction spending into the overall discretionary category, so the limits for those years apply to highway spending, mass transit spending, and all other discretionary spending. By law, those limits are adjusted each year to account for such things as the enactment of emergency appropriations and changes in budgetary concepts and definitions.

Incorporation of the Caps from OMB's December Final Report

The Office of Management and Budget (OMB) estimates whether a sequestration is required to eliminate a breach of the discretionary spending caps. CBO's estimates are merely advisory. Consequently, CBO uses the estimated caps in OMB's most recent sequestration report—the final sequestration report for fiscal year 1999, published in December—as the starting point for the cap adjustments it is required to make in this sequestration preview report for fiscal year 2000.

The limits in CBO's final sequestration report for 1999 (published in October) differed from those in

1. This sequestration preview report is a Congressional Budget Office report to the Congress and the Office of Management and Budget pursuant to section 254 of the Balanced Budget and Emergency Deficit Control Act.

OMB's final report for three reasons—all related to estimates of emergency spending. First, when CBO calculates emergency spending, it includes contingent emergency appropriations, which must first be designated by the President as emergency requirements before they can be made available. CBO counts those appropriations as emergency spending at the time they are enacted because the Congress does not need to take any further action to make them available. OMB, by contrast, does not include those appropriations until the President has released them as emergency requirements.

Because of that difference in treatment, CBO's estimate of emergency budget authority from the fiscal year 1999 Omnibus Consolidated and Emergency Supplemental Appropriations Act was more than $7 billion higher than OMB's. Approximately $4.2 billion of that difference was in the defense category (see Table A-1). The other $3 billion was in the nondefense category (largely monies for the Federal Emergency Management Agency and for the Executive Office of the President to address the anticipated Year 2000 computer problem). CBO's estimates of defense and nondefense outlays in 1999 and overall discretionary outlays in 2000 through 2002 were also higher than OMB's for the same reason.

Second, CBO and OMB have different estimates of the rate at which noncontingent emergency funds provided in that act will be spent. Most of the difference involves two accounts—one in the defense discretionary category and the other in the nondefense discretionary category. The disparity in the defense discretionary category resulted largely from the estimated spending rates for almost $1.9 billion in funding for the Department of Defense's (DoD's) overseas contingency operations transfer account, whereas the difference in the nondefense discretionary category resulted largely from the outlay projections for $748 million in funding for diplomatic and consular affairs.

Third, two contingent emergency appropriations that were released by the President before CBO's October final report were not included in that report. Budget authority of $50 million for the Low Income Home Energy Assistance Program (LIHEAP) was released on August 14, 1998, and another $50 million in budget authority for various purposes ($10 million for LIHEAP, $5 million for the Federal Emergency Management Agency, and $35 million for the Federal Highway Administration) was released on September 22, 1998. OMB estimated that a portion of the outlays from those releases would not be spent until fiscal year 1999 or beyond. The outlays from the release for the Federal Highway Administration represent the entire technical difference between CBO's and OMB's final sequestration reports in the highway category for 1999 through 2002.

Emergency Funding Made Available Since OMB's Final Report

As required by law, CBO has also adjusted the limits on discretionary spending to reflect emergency appropriations made available since the previous sequestration report. Since the release of OMB's final report in December, no new emergency appropriations have been enacted. However, the President has released $1,407 million in contingent emergency spending since December. Of that amount, budget authority of $966 million and outlays of $451 million are reflected in the 1999 limits on defense spending. The remaining budget authority of $441 million and outlays of $321 million are reflected in the 1999 caps for nondefense discretionary spending. CBO must make those adjustments because it adopts OMB's estimates as its starting point, and as noted above, OMB's estimates do not include the effects of contingent emergency appropriations until they are released by the President. The outlays for 2000 through 2002 from the release of contingent emergency monies are reflected in the limits on overall discretionary spending (see Table A-1).

Changes in Concepts and Definitions

The Deficit Control Act requires that the discretionary caps be adjusted to take account of changes in budgetary concepts and definitions. Those adjustments generally reflect a movement of spending from one budget category to another, such as from discretionary to mandatory, or vice versa.

CBO and OMB (after consultation with the Congressional budget committees) have agreed to change the classification of several programs for fiscal year 2000. Those reclassifications increase the budget au-

thority and outlay caps for overall discretionary spending by almost $700 million a year in 2000 through 2002 (see Table A-1). Three programs that had previously been classified as mandatory will be reclassified as discretionary beginning in 2000: the portion of the Department of Education's Rehabilitation Services and Disability Research program other than basic state grants, the Department of Health and Human Services' National Vaccine Injury Compensation Program, and small-airport customs fees. Of those reclassifications, the Rehabilitation Services and Disability Research program involves the largest sums of money (more than $300 million a year in 2000 through 2002).

In addition, three programs that had previously been classified as discretionary will be reclassified as mandatory beginning in 2000: the National Oceanic and Atmospheric Administration's (NOAA's) damage assessment revolving fund for restoration of Prince William Sound, retirement benefits for officers in the NOAA corps, and receipts for the Federal Housing Administration's Mutual Mortgage Insurance program. The last of those three items is the largest (almost $350 million a year in negative outlays in 2000 through 2002).

Under the scorekeeping rules that apply to the procedures of the Deficit Control Act, the effect of changes in mandatory spending that are made in an appropriation act is counted as discretionary spending. CBO, OMB, and the budget committees have determined that the effect in the current year or budget year of such legislation is counted as discretionary in the act's cost estimate, but beyond the budget year it is reflected as an adjustment to the discretionary caps. For example, an appropriation act containing a provision that decreases mandatory spending will be credited with the savings from that provision for the budget year; savings for future years will be reflected as increases in the discretionary caps. Similarly, when changes in discretionary spending result from a provision in authorizing legislation, they are shown on the pay-as-you-go scorecard for all years, with a corresponding adjustment to the discretionary caps in future years to account for the increase or decrease in amounts that will be counted as discretionary in those years.

The appropriation acts for fiscal year 1999 contained various changes that affect mandatory spending. Those changes require a net decrease of $634 million in budget authority and $395 million in outlays for the 2000 limits on overall discretionary spending (see Table A-1). After 2000, they require net reductions of roughly $500 million a year in both the budget authority and outlay limits for the overall discretionary category.

Among the largest changes to mandatory spending contained in appropriation acts are a number of emergency provisions for agriculture programs in the Omnibus Consolidated and Emergency Supplemental Appropriations Act. Those provisions were designated as emergencies (and contributed to the cap adjustments that CBO and OMB made in their final sequestration reports), so CBO has already accounted for them in its aforementioned incorporation of the caps from OMB's final report. As a result, the estimate of total changes in mandatory spending contained in appropriation acts that is shown in Table A-1 includes OMB's estimates of budget authority and outlays for those programs.

Changes in appropriated spending contained in authorizing legislation require a net increase of $57 million in the budget authority limit and $75 million in the outlay limit on overall discretionary spending for fiscal year 2000 (see Table A-1). After 2000, they require net increases of roughly $80 million a year in both the budget authority and outlay caps for the overall discretionary category. The largest of those adjustments reflects changes to DoD's appropriations for military health programs.

Revised Assumptions in the Highway and Mass Transit Categories

The Deficit Control Act requires that adjustments be made to the caps on highway and mass transit spending in each year's sequestration preview report. Those adjustments are designed to reflect changes in assumptions since the caps were established (in the Transportation Equity Act for the 21st Century, or TEA-21).

Table A-1.
CBO Estimates of Discretionary Spending Limits for Fiscal Years 1999-2002 (In millions of dollars)

	1999		2000		2001		2002	
	Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Total Discretionary Spending Limits in CBO's October Final Report	572,798	577,686	536,126	573,518	540,951	571,310	549,981	567,461
Defense Discretionary Category[a]								
Spending limits in CBO's October final report	279,891	271,978	*	*	*	*	*	*
Adjustments								
Incorporation of the caps from OMB's December final report	-4,240	-1,772	*	*	*	*	*	*
Contingent emergency appropriations designated since OMB's December final report	966	451	*	*	*	*	*	*
Spending limits as of January 15, 1999	276,617	270,657	*	*	*	*	*	*
Nondefense Discretionary Category[a]								
Spending limits in CBO's October final report	287,107	274,377	*	*	*	*	*	*
Adjustments								
Incorporation of the caps from OMB's December final report	-3,017	-378	*	*	*	*	*	*
Contingent emergency appropriations designated since OMB's December final report	441	321	*	*	*	*	*	*
Spending limits as of January 15, 1999	284,531	274,320	*	*	*	*	*	*
Violent Crime Reduction Category[b]								
Spending limits in CBO's October final report	5,800	4,953	4,500	5,554	*	*	*	*
Adjustments	0	0	0	0	*	*	*	*
Spending limits as of January 15, 1999	5,800	4,953	4,500	5,554	*	*	*	*

Table A-1.
Continued

	1999		2000		2001		2002	
	Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays	Budget Authority	Outlays
Overall Discretionary Category[c]								
Spending limits in CBO's October final report	*	*	531,626	538,731	540,951	539,894	549,981	534,762
Adjustments								
Incorporation of the caps from OMB's December final report	*	*	68	-2,658	0	-924	0	-681
Contingent emergency appropriations designated since OMB's December final report	*	*	0	445	0	114	0	38
Reclassifications	*	*	661	660	680	678	699	697
Changes in mandatory spending contained in appropriation acts	*	*	-634	-395	-528	-469	-510	-541
Changes in appropriated spending contained in authorizing legislation	*	*	57	75	80	87	85	85
Spending limits as of January 15, 1999	*	*	531,778	536,858	541,183	539,380	550,255	534,360
Highway Category								
Spending limits in CBO's October final report	d	21,977	d	24,472	d	26,226	d	26,990
Adjustments								
Incorporation of the caps from OMB's December final report	d	14	d	6	d	4	d	2
Revised trust fund revenue assumptions	*	*	d	443	d	690	d	279
Revised technical assumptions	*	*	d	404	d	256	d	177
Spending limits as of January 15, 1999	d	21,991	d	25,325	d	27,176	d	27,448
Mass Transit Category								
Spending limits in CBO's October final report	d	4,401	d	4,761	d	5,190	d	5,709
Adjustment (Revised technical assumptions)	*	*	d	-128	d	-225	d	-167
Spending limits as of January 15, 1999	d	4,401	d	4,633	d	4,965	d	5,542
Total Discretionary Spending Limits as of January 15, 1999	566,948	576,322	536,278	572,370	541,183	571,521	550,255	567,350

SOURCE: Congressional Budget Office.

NOTE: * = not applicable; OMB = Office of Management and Budget.

a. This category is folded into the overall discretionary category after fiscal year 1999.

b. This category is folded into the overall discretionary category after fiscal year 2000.

c. This category comprises defense and nondefense spending in fiscal year 2000, plus violent crime reduction spending in 2001 and 2002.

d. There are no limits on budget authority for the highway and mass transit categories. All of the spending in the highway category, and most of the spending in the mass transit category, is controlled by obligation limitations, which are not counted as budget authority.

The cap on highway spending is adjusted for changes in two types of assumptions: estimates of revenues and various technical assumptions. The adjustment to reflect revised revenue estimates is calculated by taking the difference between actual revenues for 1998 and the revenues estimated for 1998 in TEA-21, plus the difference between the current estimate of revenues for 2000 and the revenues estimated for 2000 in TEA-21; determining the outlays that would result from additional highway obligations in 2000 equal to that sum; and then adjusting the caps for 2000 through 2002 by the amount of the outlays estimated for each year. Those adjustments to the highway cap total $443 million for 2000, $690 million for 2001, and $279 million for 2002 (see Table A-1).

The second adjustment to the highway cap accounts for technical changes in spending rates and estimates of outlays from prior-year obligations that have occurred since the enactment of TEA-21. Those technical adjustments total $404 million for 2000, $256 million for 2001, and $177 million for 2002.

The cap on mass transit spending must also be adjusted to account for technical changes in spending rates and estimates of outlays from prior-year obligations. Those adjustments total -$128 million for 2000, -$225 million for 2001, and -$167 million for 2002.

How the 2000 Caps Compare with Projected Discretionary Spending

Complying with the caps in fiscal year 2000 will require holding appropriations below the dollar amount enacted for 1999. Even excluding the 1999 appropriation of $18 billion for the International Monetary Fund, the level of budget authority provided this year is almost $26 billion higher than the caps for 2000, and total outlays flowing from that level of funding in 2000 will be nearly $20 billion higher. Even if this year's appropriation for emergencies (which is presumably for nonrecurring expenditures) is also excluded, budget authority and outlays are still almost $10 billion and $13 billion higher, respectively, than their 2000 caps (see Table 4-3 on page 65).

Pay-As-You-Go Sequestration Report

The Deficit Control Act also contains a mechanism to ensure that any legislative changes in direct spending or receipts enacted since the Budget Enforcement Act of 1997 and before 2003 do not increase the deficit. If legislative changes enacted through the end of a session of Congress increase the deficit (or reduce a projected surplus), a pay-as-you-go, or PAYGO, sequestration is required at the end of the session. Under that sequestration, mandatory programs (other than those specifically exempt) are cut to eliminate the increase. The PAYGO discipline applies to legislation enacted through 2002, but the sequestration procedure applies through 2006 to eliminate any increase in the deficit or decrease in a projected surplus caused by that legislation.

Both CBO and OMB are required to estimate the net change in the deficit that results from direct spending or receipt legislation. As with the discretionary spending limits, however, OMB's estimates determine whether a sequestration is necessary. CBO has therefore adopted the estimated effects of legislation from OMB's December final sequestration report as the starting point for this report. OMB estimates that legislation enacted between the passage of the Budget Enforcement Act of 1997 and December 10, 1998, will have a favorable effect of $2,927 million on the net deficit in 2000 (see Table A-2). Smaller balances of -$833 million and -$164 million are estimated for 2001 and 2002, respectively. Consequently, the Congress could enact legislation that increases mandatory spending or decreases revenues by those amounts without triggering PAYGO sequestrations in those years.

OMB also estimated a favorable balance of $872 million for fiscal year 1999. However, pursuant to the Deficit Control Act, that balance is no longer available to offset increases in mandatory spending. As a result, it is shown as zero in Table A-2.

Table A-2.
Budgetary Effects of Direct Spending or Receipt Legislation
Enacted Since the Budget Enforcement Act of 1997 (By fiscal year, in millions of dollars)

Legislation	1999	2000	2001	2002	2003	2004
Total for OMB's December Final Report[a]	0	-2,927	-833	-164	-1,092	0

SOURCE: Congressional Budget Office.

NOTE: OMB = Office of Management and Budget.

a. Under Section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended, only the effect on the deficit of legislation not reflected in the OMB final sequestration report is carried over to the pay-as-you-go (PAYGO) calculations for the following preview report. Thus, the 1999 balance of -$872 million in OMB's December report is shown as zero here because it cannot be included in calculating the 2000 PAYGO balance. Section 254 of that act calls for a list of all bills that are included in the pay-as-you-go calculation. Because the data in this table assume OMB's estimate of the total change in the deficit resulting from bills enacted through the date of its report, readers are referred to the list of those bills included in Tables 7 and 8 of the *OMB Final Sequestration Report to the President and Congress,* issued on December 10, 1998, and in previous sequestration reports issued by OMB.

Appendix B

Budget Resolution Targets and Actual Outcomes: 1980-1998

Actual spending, revenue, and deficit levels for fiscal year 1998 turned out to be quite different from those that were set forth in the budget resolution for 1998. Adopted in June 1997, almost four months before the start of fiscal year 1998, the budget resolution anticipated a total budget deficit of $90 billion for the year. Instead, 1998 had a surplus of $70 billion—a difference of $160 billion from the amount assumed in the budget resolution. Revenues were $120 billion higher than anticipated by the budget resolution, and outlays were $41 billion lower than expected.

This appendix analyzes those differences and also compares the 1998 differences with historical experience since 1980. Fiscal year 1998 was the sixth straight year in which the actual outcome was more favorable than was anticipated by the budget resolution. Before fiscal year 1993, the actual deficit exceeded the target in the budget resolution for 13 years in a row. Over the entire period, the difference between budget resolution targets and actual deficits has ranged from less than 1 percent to more than 11 percent of actual outlays. For fiscal year 1998, the difference between the assumed deficit and the actual surplus represents about 10 percent of total outlays for the year.

The 1998 budget resolution proposed significant policy changes aimed at achieving a balanced budget in 2002, but those changes were estimated to increase the expected 1998 deficit by $14 billion. Although a surplus was actually achieved in 1998, legislation enacted since the budget resolution did not improve the budget outcome in that year. In fact, the Congressional Budget Office (CBO) estimates that legislation reduced the eventual surplus by $21 billion—$7 billion more than would have occurred if the policies assumed by the resolution had been adopted. Thus, the significant improvement in the 1998 budget outcome can be attributed to two factors: economic conditions that were more favorable than expected and other misestimates that CBO labels technical.

Sources of Differences

The Congressional Budget Office divides the difference between budget resolution levels and actual outcomes into three categories: policy, economic, and technical. Although those categories help to explain the reasons for differences, the lines between them are necessarily somewhat arbitrary.

Policy differences are relatively straightforward—they can arise because of the passage of legislation that the budget resolution did not explicitly anticipate or because the costs or savings from legislation that was anticipated are more or less than was originally assumed. An example of the former is emergency appropriations, such as those for aid to victims of natural disasters, which by definition are hard to antici-

pate. Policy differences can also reflect the failure to enact legislation that the resolution assumed.

The actual performance of the economy is bound to differ from the economic forecast underlying the budget resolution. Every budget resolution is based on assumptions about several economic variables in the national income and product accounts (NIPAs)—chiefly, gross domestic product (GDP), taxable income, unemployment, inflation, and interest rates—needed to estimate revenues and spending for benefit programs and net interest. Typically (as in the 1998 budget resolution), the economic assumptions are drawn from a CBO forecast. In 1982, however, and for most of the years between 1988 and 1992, the Congress chose a different forecast, generally the Administration's.

Information available at the end of the fiscal year is used to determine the portion of the difference between estimates in the budget resolution and actual revenue and outlay totals that should be ascribed to economic factors. (That allocation is not subsequently adjusted, even though revisions of data about GDP and taxable income continue to trickle in over a number of years.) Only differences that can be directly linked to the major NIPA variables are labeled economic in CBO's analysis. Other differences that might be tied to economic performance (such as capital gains realizations) are not included in this category because they are not included in the NIPAs.

Differences that do not arise directly from legislative or economic sources are classified as technical differences. The largest dollar impacts of such differences are concentrated in revenues and in open-ended commitments of the government such as entitlement programs. In the case of revenues, technical differences arise from various factors, including changes in administrative tax rules, differences in sources of taxable income not captured by the NIPA accounts, and changes in the relative amounts of income taxed at the various income tax rates. As noted above, changes to revenues and entitlement programs that are related to the state of the economy but are not tied directly to the NIPA forecast are classified as technical. Large technical differences often prompt both CBO and the Administration to review their projection methods, but some differences are to be expected given the size and complexity of the federal budget. The portions of the budget that have contributed the largest technical differences since 1980 are noted at the end of this appendix.

The Budget Resolution for Fiscal Year 1998

In the winter of 1997, CBO projected a deficit under then-current policies of $122 billion in 1998 and larger amounts in succeeding years. Because Congressional leaders and the President had agreed on a goal of balancing the total budget by 2002, CBO produced an alternative set of budget projections. Those projections were based on economic assumptions that were consistent with achieving a balanced budget by 2002 but did not include the direct policy savings that would lead to a balanced budget and produce a fiscal dividend. Such postpolicy projections that built in the fiscal dividend in advance could be used to focus attention on the amount of direct policy savings needed to balance the budget. The projected deficit for 1998 was $121 billion in the postpolicy projections. (The fiscal dividend from the assumed improvement in the economy grew from $1 billion in 1998 to $34 billion in 2002.)

The budget resolution adopted the underlying economic and technical assumptions of CBO's postpolicy baseline with several relatively minor and one large adjustment. First, the budget resolution assumed that real GDP would grow 0.04 percentage points a year faster than CBO's postpolicy baseline projections. That assumption increased estimated revenues by almost $1 billion in 1998 and larger amounts in succeeding years. The budget resolution also assumed that the consumer price index would grow more slowly than CBO projected starting in 1999, but that assumption had no effect on the budget in 1998. More significantly, reflecting CBO's analysis of an unexpected surge in 1997 revenues collected after the baseline had been completed and how that surge would affect projected revenues in future years, the budget resolution assumed that revenues would be higher in every year than CBO had projected. Together with the debt-service savings from the additional revenues, the pro-

jected baseline deficits were reduced by $45 billion a year to account for the unexpected revenues in 1997.

Following a bipartisan budget agreement between the President and the Congressional leadership, the Congressional budget resolution for 1998, which was adopted in June 1997, proposed policies that were intended to eliminate the deficit by 2002. The resolution proposed tax cuts that would reduce revenues by $7 billion in 1998 and by larger amounts in succeeding years. Those effects were more than offset by proposed reductions in spending in all years except 1998. In that year, the resolution boosted spending by $7 billion above CBO's baseline projections. Thus, the policies proposed by the budget resolution would have increased the deficit for 1998 by $14 billion.

The resolution called for total 1998 outlays of $1,692 billion, revenues of $1,602 billion, and a deficit of $90 billion (see Table B-1). Ultimately, outlays were $41 billion lower than envisioned and revenues were $120 billion higher, resulting in a $160 billion improvement in the bottom line. Policies actually enacted reduced the surplus by $7 billion more than the budget resolution assumed. A better-than-anticipated economic performance contributed $71 billion of the improvement (mostly from increased revenues), and technical factors accounted for $96 billion.

Table B-1.
Comparison of the 1998 Budget Resolution and the Actual Budget Totals for Fiscal Year 1998
(In billions of dollars)

	Budget Resolution[a]	Actual[b]	Actual Minus Budget Resolution
Revenues	1,602	1,721	120
Outlays	1,692	1,651	-41
Deficit (-) or Surplus	-90	70	160

SOURCE: Congressional Budget Office.

NOTE: Totals include Social Security and the Postal Service, which are off-budget.

a. Concurrent Resolution on the Budget for Fiscal Year 1998.

b. From Department of the Treasury, *Final Monthly Treasury Statement*, Fiscal Year 1998 (October 1998).

Changes in Policies

The enactment of policies that were slightly different from those assumed in the budget resolution reduced the 1998 surplus by $7 billion. The policies in the budget resolution would have reduced the surplus (or increased the deficit that was anticipated at that time) by $14 billion, but the legislation actually enacted reduced it by an estimated $21 billion.

The budget resolution assumed that revenues would be reduced by $7 billion in 1998 but did not specify the anticipated tax cuts. Legislation actually enacted reduced revenues by an estimated $8 billion. Most of the tax changes were included in the Taxpayer Relief Act of 1997, one of two reconciliation bills considered pursuant to instructions in the budget resolution. That act and the other reconciliation bill (the Balanced Budget Act, or BBA) together reduced revenues by an estimated $9 billion. A variety of tax increases and cuts generated a net increase in revenues in 1998 (the child tax credit and education incentives will not have a significant effect on revenues until taxpayers claim them on the tax returns they file in 1999). That increase was offset, however, by timing changes (delay of collections from the excise tax on fuels and a temporary liberalization of requirements for tax withholding and estimated tax payments) that shifted $14 billion in revenues from 1998 into 1999.

Under the budget resolution, mandatory spending was supposed to be reduced a total of $2 billion below the baseline projection in 1998, but enacted legislation actually increased such spending by about $0.5 billion. The budget resolution assumed several modifications to the Personal Responsibility and Work Opportunity Act of 1996 (affecting Supplemental Security Income, the Food Stamp program, and Temporary Assistance for Needy Families) that would increase spending by an estimated $3 billion in 1998. It also assumed more than $2 billion in spending for new health insurance benefits for children. Those increased costs were supposed to be more than offset by savings in other mandatory programs, primarily more

than $6 billion in Medicare savings. The BBA included most of the program changes assumed by the budget resolution, but the estimated cost of the children's health insurance program actually enacted was more than $4 billion in 1998. Although a number of relatively small changes in mandatory programs that were not consistent with the budget resolution assumptions were enacted in legislation other than the BBA, the $2 billion difference in the cost of health insurance for children explains most of the difference between the budget resolution assumption and actual mandatory outlays that is attributable to policy changes.

The budget resolution assumed that discretionary spending in 1998 would be $8.5 billion higher than CBO's estimate of the total amount allowed under the statutory caps on discretionary outlays in place when the resolution was adopted. The BBA increased the caps by $10.8 billion. Subsequent action on appropriation bills (including emergency and other appropriations that trigger automatic cap increases) raised discretionary spending by another $0.7 billion, so that legislative action resulted in $3 billion more in discretionary spending than was assumed in the budget resolution.

Economic Factors

The economic assumptions of the 1998 budget resolution, which were essentially the same as the postpolicy projections published by CBO in January 1997, proved to be too pessimistic: differences between assumed and actual economic performance accounted for an estimated improvement of $71 billion in the budget's bottom line.

That economic difference resulted in almost $62 billion in higher-than-expected revenues, primarily because the growth in actual nominal GDP from 1996 to 1998 was about $150 billion more than the budget resolution had assumed. Economic differences reduced mandatory outlays, but by a much smaller amount—$8 billion. Most of the reduction was the result of lower-than-anticipated unemployment rates and inflation, which reduced the costs of Social Security and a number of other benefit programs. Net interest payments were about $1 billion lower, largely because of the debt-service savings resulting from the increase in revenues attributable to economic improvements.

Table B-2.
Sources of Differences Between the Actual Budget Totals for Fiscal Year 1998 and the 1998 Budget Resolution (In billions of dollars)

	Policy Differences	Economic Differences	Technical Differences	Total Difference
Revenues	-1	62	59	120
Outlays				
Mandatory spending[a]	2	-8	-31	-36
Discretionary spending	3	0	-3	b
Net interest	b	-1	-5	-5
Total	5	-9	-38	-41
Surplus	-7	71	96	160

SOURCE: Congressional Budget Office.

a. Includes offsetting receipts.

b. Less than $500 million.

Technical Factors

More than half of the unexpected improvement in the budget outcome for 1998—$96 billion—resulted from higher revenues and lower outlays that cannot be traced to legislative actions or economic assumptions. CBO attributes such differences to technical factors (see Table B-2). About $38 billion of the improvement came from reductions in outlays and the other $59 billion from increases in revenues. Most of the additional revenues resulted from unexpectedly high individual income tax receipts, largely because partnership and retirement income grew faster than expected and a greater amount of personal income was taxed at the top-bracket rate. Although such factors are fundamentally economic in nature, they are classified as technical because they are not included in the NIPA measure.

More than $30 billion of the overestimate of outlays occurred in the category of mandatory spending. Spending for the major health programs accounted for roughly half of that amount. Medicare outlays were almost $10 billion lower and Medicaid outlays more than $6 billion lower than was anticipated in the budget resolution. Spending for the Food Stamp and Temporary Assistance for Needy Families programs was lower by more than $3 billion each. Spending for a variety of other mandatory programs was lower by smaller amounts.

Discretionary spending and net interest outlays accounted for much smaller overestimates than the total change in entitlement and other mandatory spending. Discretionary outlays were $3 billion lower than CBO's estimate of spending provided by appropriation bills. Net interest was $5 billion lower, primarily from debt-service savings on the other technical increases in the surplus.

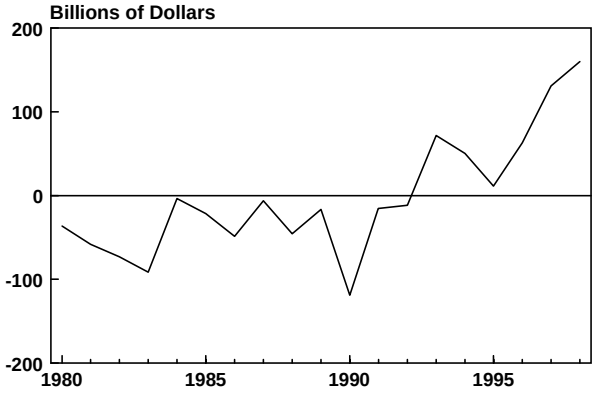
Budget Resolutions for 1980 Through 1998

From 1980 through 1992, the actual deficit consistently exceeded the target in the budget resolution by amounts ranging from $4 billion in 1984 to $119 billion in 1990 (see Table B-3). That pattern changed in 1993 because spending for deposit insurance was lower than expected. In 1994 through 1998, the actual outcome continued to be more favorable than the resolutions' targets, but in each of those years the improvement was more broadly based (see Figure B-1).

Policy action or inaction (the failure to achieve savings called for in the budget resolutions) has added an average of $10 billion a year to the deficit. In only four of the years since 1980 did policymakers trim the deficit by more, or add to it by less, than the resolution provided. The reasons vary: in fiscal year 1982 (the first Reagan-era budget), the first-year tax cut in the Economic Recovery Tax Act of 1981 was smaller than the resolution assumed; in 1987, the Tax Reform Act of 1986 temporarily swelled collections; in 1991, $43 billion in contributions was received from foreign nations to help finance Operation Desert Storm, lowering total outlays commensurately; and in 1997, the tax reductions assumed in the resolution were enacted a year later than planned—too late to affect 1997 revenues significantly.

Forecasting the economy is always an uncertain business, and the forecast for the budget resolution is usually made nine months before the start of the fiscal

Figure B-1.
Differences Between Actual Deficits or Surpluses and Deficits in the Budget Resolution, Fiscal Years 1980-1998



SOURCE: Congressional Budget Office.

NOTE: Negative numbers indicate an increase in the deficit.

Table B-3.
Sources of Differences Between Actual Budget Totals and Budget Resolution Estimates, Fiscal Years 1980-1998 (In billions of dollars)

	Policy Differences	Economic Differences	Technical Differences	Total Difference	Difference as a Percentage of Actual
			Revenues		
1980	6	8	-4	11	1.9
1981	-4	5	-13	-11	-2.0
1982	13	-52	-1	-40	-6.5
1983	-5	-58	-3	-65	-11.0
1984	-14	4	-4	-13	-2.1
1985	a	-20	3	-17	-2.3
1986	-1	-23	-2	-27	-3.4
1987	22	-27	7	2	0.2
1988	-11	4	-17	-24	-2.6
1989	1	34	-8	26	2.7
1990	-7	-36	9	-34	-3.3
1991[b]	-1	-31	-24	-56	-5.3
1992	3	-46	-34	-78	-7.1
1993	4	-28	3	-20	-1.8
1994	-1	12	4	15	1.2
1995	a	16	1	17	1.3
1996	-1	24	12	36	2.4
1997	20	44	46	110	7.0
1998	-1	62	59	120	7.0
Average	1	-6	2	-3	-1.2
Absolute Average[c]	6	28	13	38	3.7
			Outlays		
1980	20	12	16	48	8.1
1981	25	6	16	47	6.9
1982	1	24	8	33	4.4
1983	18	a	8	26	3.2
1984	1	7	-18	-9	-1.2
1985	23	-5	-13	5	0.5
1986	14	-12	20	22	2.2
1987	7	-12	13	8	0.8
1988	-2	12	12	22	2.1
1989	17	14	12	43	3.8
1990	13	13	59	85	6.8
1991[b]	-19	1	-22	-40	-3.0
1992	15	-21	-60	-66	-4.8
1993	16	-19	-90	-92	-6.6
1994	10	-9	-36	-35	-2.4
1995	2	17	-14	6	0.3
1996	25	-24	-29	-28	-1.8
1997	15	7	-43	-21	-1.3
1998	5	-9	-38	-41	-2.5
Average	11	a	-10	1	0.8
Absolute Average[c]	13	12	28	36	3.3

(Continued)

Table B-3.
Continued

	Policy Differences	Economic Differences	Technical Differences	Total Difference	Difference as a Percentage of Actual
			Deficit[d, e]		
1980	-13	-4	-19	-36	-6.1
1981	-28	-1	-29	-58	-8.6
1982	12	-76	-9	-73	-9.8
1983	-22	-59	-11	-92	-11.4
1984	-15	-3	14	-4	-0.5
1985	-23	-15	16	-22	-2.3
1986	-16	-11	-22	-49	-4.9
1987	15	-15	-6	-6	-0.6
1988	-9	-8	-29	-46	-4.3
1989	-17	20	-20	-17	-1.5
1990	-20	-49	-50	-119	-9.5
1991[b]	19	-32	-2	-15	-1.1
1992	-12	-25	26	-11	-0.8
1993	-12	-9	93	72	5.1
1994	-11	21	40	50	3.4
1995	-2	-2	15	11	0.7
1996	-25	48	40	63	4.0
1997	5	37	89	131	8.2
1998	-7	71	96	160	9.7
Average	-10	-6	12	-3	-1.6
Absolute Average[c]	15	26	33	54	4.9

SOURCE: Congressional Budget Office.

NOTES: Differences are actual outcomes minus budget resolution assumptions.

The allocation of revenue differences between economic and technical factors is done soon after the fiscal year in question and is not changed later to incorporate revisions in economic data.

a. Less than $500 million.

b. Based on the fiscal year 1991 budget summit agreement, as assessed by CBO in December 1990.

c. The absolute average disregards whether the differences are positive or negative.

d. Negative numbers indicate an increase in the deficit.

e. Differences in the deficit are calculated as a percentage of actual outlays.

year. The attribution of each fiscal year's economic errors shown in Table B-3 was based on the economic data available shortly after the end of the fiscal year. Those data in fact continue to be revised for years, often by large amounts. Although CBO does not attempt to make reassessments based on revised economic data, doing so could significantly alter the attribution of errors in past years. Nevertheless, those data suggest that until fiscal year 1993, budget resolutions tended to use short-term economic assumptions that proved overly optimistic. The largest errors, not surprisingly, were in years marked by recession or the early stages of recovery—namely, in 1982 and 1983 and again in the 1990-1992 period. Since 1993, that pattern has largely been reversed. Short-term economic assumptions in fiscal years 1993 through 1998

either proved quite accurate or tended to be overly pessimistic.

Regardless of the direction of the error in the short-term forecast, economic differences primarily affect revenues and, on the spending side of the budget, net interest. Such economic differences have caused the deficit target in the budget resolution to be off, in absolute terms, by an average of $26 billion a year in one direction or another—mostly because the assumptions were too optimistic. Despite the recent pattern, economic differences have still caused Congressional drafters, on average, to underestimate the deficit by $6 billion.

Over the 1980-1998 period, the average effect of technical differences between the budget resolution and the actual fiscal year outcome has been to lower the deficit by $12 billion. In absolute terms, disregarding whether the errors were positive or negative, such differences caused the estimate of the deficit to be off, on average, by $33 billion.

The causes of such large technical estimating errors have varied over the years. On the revenue side, such misestimates were generally not very great through 1990, but they ballooned in 1991 and 1992, when tax collections were weaker than economic data seemed to justify. Over the past two years, however, revenues have been much higher than expected. On the outlay side, farm price supports, receipts from offshore oil leases, defense spending, and benefit programs dominated the errors through the mid-1980s. Underestimates of benefit outlays, especially for health care programs, swelled again in 1991 and 1992, but in the past four years spending for both Medicare and Medicaid has been overestimated. Deposit insurance, a major source of technical errors during the height of the savings and loan crisis, has become a less significant factor over the past three years.

Because the size of the federal budget has grown considerably since 1980, differences between the revenue and spending levels set forth in the budget resolutions and the actual outcomes are best compared as a percentage of total revenues or outlays. Over the 1980-1998 period, disregarding the direction of the error, total differences for both revenues and outlays averaged between 3 percent and 4 percent of the actual levels (see Table B-3). The $120 billion total difference in revenues for 1998—7 percent of actual revenues for the year—was above that average but not without precedent. For example, in 1983 the budget resolution's total overestimate of revenues was 11 percent of actual revenues in that year, and in 1992 the difference in revenues from that year's budget resolution target was 7.1 percent of the actual revenue level. In 1997, the difference was also 7 percent.

In 1998, the total difference in outlays from the budget resolution target was 2.5 percent of actual outlays for the year—below the 3.3 percent absolute average difference for the 1980-1998 period. Historically, differences between outlay targets specified in budget resolutions and actual outcomes have ranged from a high of 8.1 percent of outlays in 1980 to a low of 0.3 percent of outlays in 1995.

The magnitude of the total difference between actual deficits and those amounts specified in budget resolutions, viewed as a percentage of total outlays, depends greatly on whether or not the revenue and outlay differences offset each other. For years in which the errors in revenues and outlays went in opposite directions relative to the deficit, the difference in the deficit dropped to as low as 0.5 percent of actual outlays. In other years, however, where the errors in revenues and outlays both raised or lowered the deficit, that difference was as high as 11.4 percent of outlays. For fiscal year 1998, misestimates of revenues and outlays combined to produce a total difference in the deficit that was 9.7 percent of actual outlays for the year. Over the 1980-1998 period, the revenue and outlay errors went in the same direction relative to the deficit for 11 years. In two of those years—1982 and 1983—the total difference in the deficit as a percentage of the actual outlays for the year exceeded the 1998 figure.

Appendix C

How the Economy Affects the Budget

The federal budget is highly sensitive to the economy. Revenues depend on taxable incomes—including wages and salaries, interest and other nonwage income, and corporate profits—which generally move in step with overall economic activity. Many benefit programs are pegged to inflation, either directly (like Social Security) or indirectly (like Medicare). And the Treasury continually borrows and refinances the government's debt at market interest rates.

The Congressional Budget Office has described some of the links between key economic assumptions and federal budget projections by using three rules of thumb. For CBO's purposes, the rules of thumb are defined as rough orders of magnitude for gauging the effects on the baseline budget projections of changes in individual economic variables taken in isolation. Those rules illustrate the impact on budget totals of changes in real growth, inflation, and interest rates. The real growth rule shows the effects of growth that is 0.1 percentage point slower than in CBO's baseline, starting in January 1999. The inflation and interest rate rules assume that each rate is 1 percentage point greater than CBO's baseline, starting in January 1999. Each of the three rules is roughly symmetrical; the impact of faster growth, lower inflation, or lower interest rates would be about the same size as those shown in Table C-1 but with the opposite sign. Sustained errors of 0.1 or 1 percentage point are used for the sake of simplicity; they do not represent typical forecasting errors. The rule-of-thumb calculations should be used carefully beyond those limited changes because they do not incorporate the impact of large changes on the full range of economic assumptions and budget projections. Furthermore, budget projections are also subject to other kinds of technical errors not directly related to economic forecasting; however, developing rules of thumb for those other uncertainties would be very difficult.

Each year, CBO presents rules of thumb in its annual report. Their magnitudes change somewhat from year to year because of the intervening growth in the economy (principally affecting revenues), changes in interest rates, new projections of growth in benefit programs, and changes in laws limiting annual appropriations. The rule of thumb for economic growth illustrates the change in the budget if the growth of potential gross domestic product (GDP) departs from the baseline, not the effects of a cyclical change. The rule of thumb is based on a permanent decline of 0.1 percentage point in real growth instead of a larger temporary change. Although it is not unreasonable to assume that real growth could be 1 percentage point lower than CBO's baseline over the next few years because of cyclical effects, it does not seem realistic to assume that real growth could be as much as 1 percentage point lower than the baseline projections for the next 10 years.

Real Growth

Strong economic growth improves the federal budget's bottom line, and weak economic growth worsens it. The first rule of thumb outlines the budgetary impact

Table C-1.
Effects of Selected Economic Changes on CBO Budget Projections
(By fiscal year, in billions of dollars)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Real Rate of Growth Is 0.1 Percentage Point a Year Lower Beginning in January 1999											
Change in Revenues	-1	-3	-5	-7	-10	-13	-16	-20	-23	-27	-32
Change in Outlays											
Net interest (Debt service)	a	a	a	1	1	2	3	4	5	6	8
Mandatory spending	a	a	a	a	a	a	a	a	a	a	a
Change in Surplus	-1	-3	-5	-8	-11	-15	-19	-23	-28	-34	-40
Inflation Rate Is 1 Percentage Point a Year Higher Beginning in January 1999[b]											
Change in Revenues	10	28	48	70	94	121	151	184	219	259	301
Change in Outlays											
Net interest											
Higher rates	4	13	16	18	18	18	16	14	12	9	6
Debt service	a	a	-1	-2	-4	-6	-9	-12	-17	-22	-29
Discretionary spending	0	0	0	0	6	12	18	25	32	40	48
Mandatory spending	1	8	18	29	42	57	73	90	111	133	159
Total	6	21	33	44	62	80	99	117	138	160	184
Change in Surplus	4	8	15	26	33	41	52	66	81	99	117
Interest Rates Are 1 Percentage Point a Year Higher Beginning in January 1999											
Change in Revenues	0	0	0	0	0	0	0	0	0	0	0
Change in Outlays											
Net interest											
Higher rates	5	13	16	18	18	18	16	14	12	9	6
Debt service	a	1	2	3	4	6	7	8	10	11	12
Mandatory spending	a	1	1	1	1	1	1	1	1	1	1
Total	5	14	19	21	23	24	24	24	23	22	20
Change in Surplus	-5	-14	-19	-21	-23	-24	-24	-24	-23	-22	-20

SOURCE: Congressional Budget Office.

a. Less than $500 million.

b. Assuming that discretionary spending grows with inflation after the statutory caps expire in 2002.

of economic growth that is slightly weaker than that assumed in CBO's baseline.

In CBO's baseline, growth of real GDP averages above 2 percent a year. Subtracting 0.1 percentage point from the rate of real growth, beginning in January 1999, implies slightly slower growth throughout the projection period. Under that slower-growth scenario, GDP lies roughly 1 percent below CBO's baseline assumption by 2009.

That scenario implies lower growth in taxable incomes, leading to revenue losses that mount from $1 billion in 1999 to $32 billion in 2009 (see Table C-1). The loss in revenues in 2009 is roughly 1 percent of baseline revenues, on a par with the loss in GDP. In addition, the government borrows more and incurs greater debt-service costs. In sum, the projected surplus in 2009 would be an estimated $40 billion smaller than in CBO's baseline.

Inflation

Inflation produces effects on federal revenues and outlays that partly offset each other. The second rule of thumb shows the budgetary impact of inflation that is 1 percentage point higher than CBO's baseline assumption. If no other economic variables are affected, higher inflation leads to larger taxable incomes and hence greater revenues. But higher inflation also boosts spending. Nearly all benefit programs would cost more, although with a lag; so would discretionary programs, unless policymakers decided to ignore the steady erosion of real budgetary resources. And interest rates would almost surely rise with inflation, increasing the cost of servicing the government's debt.

In previous years' estimates, higher inflation had relatively little effect on the total budget outcome, as revenues rose nearly in tandem with outlays. In the context of the current budget projections, however, the additional revenue from higher inflation exceeds the extra spending, increasing the projected surplus in 2009 by $117 billion (about 1 percent of GDP). The change in the rule-of-thumb results for inflation stems from several factors underlying the current budget projections: increased taxable incomes, lower interest costs associated with a smaller projected debt, and elimination of the inflation adjustment to the discretionary spending caps in effect through 2002.

An increase of 1 percentage point in inflation boosts revenues by $301 billion by 2009. Inflation's effect on revenues is a little stronger than CBO estimated a year ago because projected taxable income is higher (largely because wages and salaries and corporate profits are expected to represent a larger share of GDP). More important for the effect on the deficit or surplus, the estimated increase in net interest costs is smaller than a year ago because the projected debt has continued to decline.

CBO estimates that an increase of 1 percentage point in the annual rate of inflation would raise outlays by $184 billion in 2009. Spending for entitlement and other mandatory programs accounts for most of that change. Many of those programs have statutory cost-of-living adjustments that automatically boost spending to keep up with inflation, while spending for others grows as a result of increases in prices for the goods and services provided by those programs. Such an increase in inflation would cause spending for entitlements and other mandatory programs to grow by $159 billion in 2009.

For deriving the rule of thumb, CBO assumes that interest rates rise in step with inflation. CBO estimates that higher interest rates from an increase of 1 percentage point in inflation boost projected spending for net interest by $6 billion in 2009. The rise in inflation leads to an increase in revenues that is greater than the increase in outlays. Such additional surpluses lead to a further decline in debt held by the public. As a result, debt-service reductions improve the budget's bottom line by another $29 billion in 2009. In sum, the net effect of inflation on interest costs would increase the surplus in 2009 by $23 billion.

For the years constrained by the caps that the Deficit Control Act places on discretionary appropriations (1999 through 2002), changes in inflation have no effect on projections of discretionary spending. The CBO baseline assumes that once the caps expire, discretionary spending grows with the rate of inflation. As a result, an increase of 1 percentage point in inflation generates extra discretionary spending of $6 billion in 2003 and $48 billion in 2009.

Alternatively, assuming that discretionary spending after 2002 is frozen at the 2002 level regardless of inflation, discretionary spending would not increase under the rule-of-thumb scenario, and the increase in the projected surplus in 2009 would total $175 billion.

Interest Rates

The final rule of thumb illustrates the sensitivity of the budget to interest rates. The Treasury finances the government's large debt at market interest rates. Assuming that interest rates are 1 percentage point higher than in the baseline for all maturities in each year and that all other economic variables are unchanged, interest costs would be almost $5 billion higher in 1999. That initial boost in interest costs is fueled largely by the extra costs of refinancing the government's short-term Treasury bills, which make up about one-fifth of the marketable debt. More than $635 billion worth of Treasury bills are now outstanding, all of them maturing within the next year.

The bulk of the marketable debt, however, consists of medium- and long-term securities, which were issued with initial maturities of two to 10 years. Although the federal government is projected to run surpluses for the next 10 years, the Treasury still must periodically refinance maturing securities. Therefore, higher-than-expected interest rates would cause an increase in interest costs of $18 billion in 2002. Surpluses are expected to continue rising after that point, allowing the further paydown of medium-term securities and causing debt held by the public to decline rapidly. The effect of higher interest rates will diminish during this period because of the reduction in the amount of short- and medium-term securities and because long-term securities are mostly unaffected during a 10-year projection period. By 2009, changes in net interest stemming from higher rates drop to $6 billion. Overall, surpluses would be around $20 billion lower each year if interest rates were 1 percentage point higher than their baseline level.

Appendix D

The Federal Sector of the National Income and Product Accounts

In addition to the usual budget presentation, the economic influence of federal government revenues and spending can be portrayed through the national income and product accounts (NIPAs). The NIPAs provide a picture of government activity in terms of production, distribution, and use of output. That approach recasts the government's transactions into categories that affect gross domestic product, income, and other macroeconomic totals, thereby helping to trace the relationship between the federal sector and other areas of the economy.

Relationship Between the Budget and the NIPAs

A handful of major differences distinguish the NIPA version of federal receipts and expenditures from its budgetary counterpart. One example is the shift of selected dollars from the spending to the receipt side of the budget to reflect intrabudgetary or voluntary payments that the budget records as negative outlays. Such shifts are referred to as *netting and grossing* adjustments and do not affect the deficit or surplus (see Table D-1). The vast majority of netting and grossing adjustments are intrabudgetary receipts for retirement contributions on behalf of federal workers ($73 billion in 1999) and voluntary premiums for Medicare coverage ($22 billion in 1999).

By contrast, other differences between the federal budget and the NIPAs do affect the deficit or surplus. The NIPA totals exclude transactions that involve the transfer of existing assets and liabilities and therefore do not contribute to current income and production. Prominent among such *lending and financial* adjustments are those for deposit insurance outlays, cash flows for direct loans made by the government before credit reform, and sales of government assets. In fiscal years 1999-2009, lending and financial transactions are expected to total between $8 billion and $10 billion a year, except in 2002. In that year, they are expected to contribute $17 billion to the difference between the federal budget deficit and the NIPA deficit, almost $9 billion of which is expected to be receipts from the auctioning of rights to use portions of the electromagnetic spectrum. Other factors driving a wedge between budget and NIPA deficit accounting include *geographic adjustments* (the exclusion of Puerto Rico, the Virgin Islands, and a few other areas from the national economic statistics) and *timing adjustments* (such as correcting for irregular numbers of benefit checks, paychecks, or Medicare payments to health maintenance organizations because of calendar quirks).

Another difference between the NIPA and the unified budget lies in their differing *treatment of investment and capital consumption.* The unified budget reflects all expenditures of the federal government, including investment purchases such as buildings and

Table D-1.
Relationship of the Budget to the Federal Sector of the National Income and Product Accounts (By fiscal year, in billions of dollars)

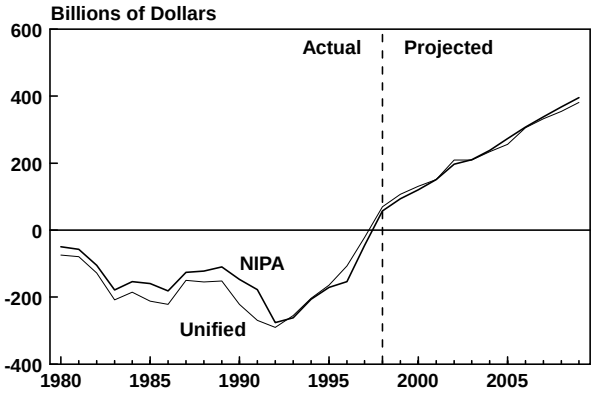
	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Receipts												
Revenue (Budget basis)[a]	1,721	1,815	1,870	1,930	2,015	2,091	2,184	2,288	2,393	2,500	2,611	2,727
Differences												
Netting and grossing												
Government contributions for employee retirement	72	73	76	78	81	83	86	89	92	95	99	102
Medicare premiums	21	22	24	26	29	32	35	39	42	46	50	55
Deposit insurance premiums	b	b	b	b	b	b	b	b	b	b	b	b
Other	1	b	b	b	b	b	-3	-4	-5	-6	-6	-7
Geographic adjustments	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4	-5	-5
Excise timing adjustments	4	-5	0	0	0	0	0	0	0	0	0	0
Universal Service Fund receipts	-3	-4	-5	-7	-12	-12	-13	-13	-13	-13	-13	-13
Other	5	4	b	3	5	4	5	4	4	4	4	4
Total	96	87	90	97	100	104	107	112	117	122	129	136
Receipts (NIPA basis)	1,818	1,902	1,960	2,027	2,115	2,194	2,291	2,400	2,509	2,622	2,740	2,863
Expenditures												
Outlays (Budget basis)[a]	1,651	1,707	1,739	1,779	1,806	1,881	1,951	2,032	2,086	2,166	2,255	2,346
Differences												
Netting and grossing												
Government contributions for employee retirement	72	73	76	78	81	83	86	89	92	95	99	102
Medicare premiums	21	22	24	26	29	32	35	39	42	46	50	55
Deposit insurance premiums	b	b	b	b	b	b	b	b	b	b	b	b
Other	1	b	b	b	b	b	-3	-4	-5	-6	-6	-7
Lending and financial transactions	9	10	10	9	17	8	8	8	8	8	8	8
Defense timing adjustment	-1	1	1	0	0	0	0	0	0	0	0	0
Geographic adjustments	-10	-10	-10	-11	-11	-12	-12	-13	-13	-14	-15	-15
Treatment of investment and capital consumption	10	7	7	7	7	5	4	2	b	-2	-3	-5
Mandatory timing adjustments	0	0	0	-3	3	0	0	-11	6	5	0	0
Universal Service Fund payments	-2	-4	-6	-7	-12	-12	-13	-13	-13	-13	-13	-13
Other	9	b	-2	-2	-2	-2	-3	-3	-3	-3	-3	-3
Total	110	100	100	97	112	103	103	95	115	118	117	121
Expenditures (NIPA basis)	1,761	1,807	1,839	1,877	1,918	1,984	2,054	2,127	2,201	2,285	2,372	2,467
Surplus												
Surplus (Budget basis)[a]	70	107	131	151	209	209	234	256	306	333	355	381
Differences												
Lending and financial transactions	-9	-10	-10	-9	-17	-8	-8	-8	-8	-8	-8	-8
Defense timing adjustment	1	-1	-1	0	0	0	0	0	0	0	0	0
Geographic adjustments	7	7	7	7	8	8	8	9	9	10	10	11
Treatment of investment and capital consumption	-10	-7	-7	-7	-7	-5	-4	-2	b	2	3	5
Excise and mandatory timing adjustments	4	-5	0	3	-3	0	0	11	-6	-5	0	0
Universal Service Fund payments	-1	b	b	0	0	b	0	0	0	0	b	0
Other	-5	3	1	5	7	7	7	7	7	7	7	6
Total	-13	-13	-9	b	-12	1	4	17	2	4	12	14
Surplus (NIPA basis)	57	94	121	151	197	210	238	273	308	338	368	396

SOURCE: Congressional Budget Office.
a. Includes Social Security and the Postal Service.
b. Less than $500 million.

aircraft carriers. The NIPA budget shows the current, or operating, account for the federal government; consequently, it excludes government investment and includes government's consumption of fixed capital (depreciation). (Government investment does not disappear but is classed along with private investment rather than in the government accounts.) That parallels the treatment of investment in and depreciation of private-sector assets in the NIPAs. The Congressional Budget Office (CBO) estimates that capital consumption will be $7 billion greater than new investment in 1999. By 2007, capital consumption is projected to be smaller than investment.

In the early and mid-1980s, the NIPA deficit and the unified budget deficit generally paralleled each other, although the NIPA deficit was several billion dollars lower than the unified budget's (see Figure D-1). During the late 1980s and early 1990s, the difference between the two fluctuated widely because of large swings in lending and financial adjustments. For example, sizable deposit insurance outlays in 1989 through 1991 significantly widened the gap between the NIPA and the unified budget deficits. Since 1992, both deposit insurance spending and the unified deficit as a whole have been plummeting, and the gap between the NIPA and unified measures has narrowed markedly. In fiscal years 1999 through 2002, the NIPA surplus is expected to be slightly less than the unified budget surplus. After 2002, NIPA surpluses consistently outpace the surpluses found in the unified budget.

Figure D-1.
A Comparison of NIPA and Unified Budget Deficits (-) and Surpluses, Fiscal Years 1980-2009



SOURCE: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: NIPA = national income and product accounts.

Sometimes the Bureau of Economic Analysis (BEA) of the Department of Commerce reports actual NIPA expenditures or receipts that are larger or smaller than can be readily explained. The NIPA data for fiscal year 1998, calculated as the sum of quarterly data from October 1997 through September 1998, are an example. Even after the familiar adjustments—chiefly for netting and grossing, geographic adjustments, treatment of investment and depreciation, and lending and financial transactions—are made, NIPA expenditures appear surprisingly high in 1998. That result is evidenced by the $9 billion in other outlay differences—an item that is normally quite small (see Table D-1). That anomaly suggests that BEA may need to revise the 1998 NIPA expenditures. (BEA revised its figure for actual fiscal year 1997 expenditures on a NIPA basis downward by more than $7 billion between December 1997 and July 1998.) CBO's projections assume that this large discrepancy will not persist.

NIPA Receipts and Expenditures

The federal sector of the NIPAs generally classifies receipts according to their source and expenditures according to their purpose and destination (see Table D-2).

The leading source of receipts for the federal government in the 1999-2009 period is taxes and fees paid by individuals. Following that category are contributions (including premiums) for social insurance, such as Social Security, Medicare, unemployment insurance, and federal employees' retirement. The two categories are expected to raise around $886 billion and $708 billion, respectively, in 1999. The remaining categories are accruals of taxes on corporate profits, including the earnings of the Federal Reserve System, and accruals of indirect business taxes (chiefly excise taxes) and nontax accruals (chiefly fees).

Table D-2.
Projections of Baseline Receipts and Expenditures Measured by the National Income and Product Accounts (By fiscal year, in billions of dollars)

	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Receipts												
Personal Tax and Nontax Receipts	839	886	916	943	982	1,015	1,062	1,112	1,166	1,224	1,288	1,355
Corporate Profits Tax Accruals	208	212	202	209	223	235	248	260	273	283	291	298
Indirect Business Tax and Nontax Accruals	95	96	99	102	106	109	111	114	117	120	123	127
Contributions for Social insurance	676	708	742	773	803	835	870	913	953	995	1,037	1,082
Total	1,818	1,902	1,960	2,027	2,115	2,194	2,291	2,400	2,509	2,622	2,740	2,863
Expenditures												
Purchases of Goods and Services												
Defense												
Consumption	246	254	265	269	280	288	296	307	313	318	330	340
Consumption of fixed capital	55	54	53	53	52	52	51	51	50	50	50	50
Nondefense												
Consumption	143	153	163	169	175	181	186	190	195	201	207	213
Consumption of fixed capital	15	15	15	16	16	16	16	17	17	17	17	18
Subtotal	458	475	497	507	523	536	549	565	575	586	605	620
Transfer Payments												
Domestic	798	822	860	900	945	995	1,049	1,107	1,165	1,231	1,300	1,375
Foreign	13	12	12	13	13	14	14	14	14	15	15	15
Subtotal	811	834	873	913	958	1,009	1,062	1,121	1,179	1,246	1,315	1,391
Grants-in-Aid to State and Local Governments	230	243	265	282	298	314	331	349	369	390	414	439
Net Interest	229	217	203	192	180	166	153	137	120	102	83	62
Subsidies Less Current Surplus of Government Enterprises	34	37	32	32	33	36	37	39	41	44	46	49
Required Reductions in Discretionary Spending[a]	n.a.	n.a.	-31	-50	-75	-78	-79	-85	-84	-84	-90	-94
Total	1,761	1,807	1,839	1,877	1,918	1,984	2,054	2,127	2,201	2,285	2,372	2,467
Surplus	57	94	121	151	197	210	238	273	308	338	368	396

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. Unspecified reductions needed to comply with the statutory caps on discretionary spending.

Government expenditures are classified according to their purpose and destination. Defense and nondefense consumption of goods and services are purchases made by the government for immediate use. The largest share of current consumption is compensation of federal employees. Consumption of fixed government capital (depreciation) is the use the government gets from its fixed assets.

Transfer payments are cash payments made directly to people or foreign nations. Grants-in-aid are payments made by the federal government to state or local governments. They are then used by the states or localities for transfers (such as Medicaid), consumption (such as hiring additional police officers), or investment (such as highway construction).

Although both the unified budget and the NIPAs contain a category labeled "net interest," the NIPA figure is smaller. A variety of differences cause the two measures to diverge. The largest is the contrasting treatment of interest received on late payments of personal and business taxes. In the unified budget, both types of payments are counted on the revenue side, as individual income taxes and corporate income taxes, respectively. In the NIPAs, those differences appear as offsets to federal interest payments, thereby lowering net interest payments by $13 billion to $19 billion each year through 2009.

The category labeled "subsidies less current surplus of government enterprises" contains two components, as its name suggests. The first—subsidies—is defined as monetary grants paid by government to businesses, including state and local government enterprises. Subsidies are dominated by housing assistance, which accounts for more than half of 1999 subsidy expenditures.

The second portion of the category is the current surplus of government enterprises. Government enterprises are certain business-type operations of the government—for example, the Postal Service. The operating costs of government enterprises are mostly covered by the sale of goods and services to the public rather than by tax receipts. The difference between sales and current operating expenses is the enterprise's surplus or deficit. *Government enterprises* should not be confused with *government-sponsored enterprises* (GSEs), private entities established and chartered by the federal government to perform specific financial functions, usually under the supervision of a government agency. Examples of GSEs include the Federal National Mortgage Association (Fannie Mae) and the Student Loan Marketing Association (Sallie Mae). As privately owned organizations, GSEs are not included in the budget or in the federal sector of the NIPAs.

The final entry under expenditures labeled "required reductions in discretionary spending" is not a category in the NIPAs. Rather, it is an accounting for policy changes that must be made in the future. The discretionary expenditures included in the NIPA categories reflect 1999 levels of spending, adjusted for inflation each year. The Balanced Budget Act of 1997 imposed statutory limits on total discretionary spending. Holding spending to those limits would require policymakers to reduce discretionary outlays below levels that would keep pace with inflation. The required reductions amount to $31 billion in 2000 and increasing amounts thereafter. Those savings cannot be assigned to a particular NIPA category because policymakers can comply with the discretionary spending caps in any number of ways. However, reductions are most likely to come from defense and nondefense consumption and grants to states and local governments.

Appendix E

Changes in Calculating the Consumer Price Indexes

The Bureau of Labor Statistics (BLS), the agency that compiles the consumer price indexes (CPIs), has recently instituted a number of changes in the way the price indexes are calculated and has announced additional changes for 2002.[1] Although the methods used to construct the CPIs have been modified many times, the changes in the 1995-1999 period are particularly important. The changes made between 1995 and 1998 have lowered the measured increase in inflation by about 0.4 to 0.5 percentage points for 1998 and subsequent years compared with what the former methods would have generated. This year's changes will further reduce the growth of the CPIs by 0.2 to 0.3 percentage points.

The BLS has announced two other changes, although only one of the changes will affect the current CPIs. Starting in 2002, the BLS plans to rebase the official CPIs to new expenditure weights every two years rather than every 10 years. The Congressional Budget Office (CBO) currently assumes that the change will have no effect on the growth of the CPIs. In 2002, the BLS also intends to publish a new price index in addition to the current CPIs. The new index will attempt to more accurately reflect consumers' ability to dampen the adverse effect of price changes by shifting their patterns of consumption.

Changes in 1995 to 1998

The recent modifications in the CPI included general changes that affected virtually all expenditure categories. They also included some specific changes to prices in certain categories, such as housing, prescription drugs, hospital services, and computers.

In January 1995, the BLS corrected an upward bias in the measure of owners' equivalent rent (an estimate of the rent homeowners would pay if they were renting the residences they own) and a downward bias in the measure of rent paid by nonowners, made a better link between prices of generic drugs and prices of corresponding drugs that are no longer under patent, and changed the method of introducing new food items into the sample (in a process called "sample rotation") to eliminate an upward bias.[2] In mid-1996, the BLS extended the new method of sample rotation to all other nonshelter categories of items in the CPIs. Another change, which removed a small upward bias, was made to the way in which new items are brought

1. The Bureau of Labor Statistics publishes two official CPIs: the CPI-U, which is designed to reflect the changes in prices for a basket of goods and services that is representative of the expenditure patterns of all urban households; and the CPI-W, which represents the expenditure patterns for a subset of urban households—those headed by wage earners and clerical workers.

2. Sample rotation is the procedure by which the BLS periodically brings new stores and items into the sample of goods and services selected for price quotes. It is an ongoing process that updates the selection to try to reflect current shopping patterns.

into the sample when the existing item can no longer be priced. In January 1997, the measure of hospital prices was changed to try to better reflect the actual services that are provided and the actual prices of transactions. That change also reduced the measured growth of prices. The BLS estimated that by early 1997, the changes made from 1995 through early 1997 had probably reduced the measured increase in inflation by 0.2 to 0.3 percentage points a year compared with what the former methods would have generated.

The changes introduced in January 1998 further reduced the growth of the CPIs.[3] The BLS began to use new weights for each of the major expenditure categories of the indexes. Shifting to more current weights tends to reduce the growth of the overall price index because current weights usually emphasize items whose prices have been growing less rapidly in recent years. CBO assumes that this change reduced the growth of the CPIs by 0.15 percentage points. The BLS also adopted a new procedure for measuring prices of personal computers and peripheral equipment, a change that CBO estimates has reduced the growth of the CPIs by 0.05 to 0.10 percentage points.

Changes in 1999

The BLS has made six other changes in the CPI methodology that will, on balance, reduce the growth of the CPIs by an additional 0.2 to 0.3 percentage points.

In January, the weighting procedure for compiling many of the subaggregates of price change switched from a simple arithmetic weighting to a geometric weighting. Under certain assumptions about how consumers change their consumption patterns in response to changes in relative prices, geometric weighting provides a more accurate approximation of a cost-of-living index. The BLS estimates that this change will lower the growth of the CPIs by 0.2 percentage points per year. CBO had previously assumed that the reduction would be about 0.14 percentage points per year, but it has now adopted the BLS estimate.

The second change affects sample rotation, an ongoing process that can affect the CPIs every year. In 1999, sample rotation will be changed so that new goods and services, such as high-definition TV or Internet connection, can be incorporated into the CPI more quickly. That change is likely to reduce the growth of the CPIs because the prices of new goods often decline during the first five or 10 years the goods are on the market. Therefore, the earlier the new goods are reflected in the CPIs, the more likely it is that growth will be dampened. Estimating the effect of that change on growth is difficult, however. CBO assumes that the change will reduce growth of the CPIs by less than 0.1 percentage point after the new procedure is fully phased in, a process that will take at least four years.

The four remaining changes instituted this year have a relatively minor effect on the overall growth of the CPIs.[4] In January, the BLS began to use hedonic techniques to measure quality-adjusted price changes for televisions. Hedonic techniques, which estimate implicit prices for each important feature or component of an item, have been used for apparel and computers, and the BLS intends to extend the technique to other items in the future. Because the relative importance of TVs in the CPIs is only about 0.2 percent, the change is unlikely to affect the growth of the overall CPIs significantly.

The BLS has also modified its treatment of mandated changes to goods and services that are instituted solely to meet air pollution standards and that do not provide direct value to consumers. For example, in the past, the BLS deducted from the price of a vehicle the increased cost that stemmed from meeting the requirement to reduce emissions. That procedure essentially assumed that the value to the consumer equaled the change in the cost. As of January 1999, the BLS no longer deducts new pollution abatement costs that do not provide direct value to consumers. The change tends to increase the growth of the CPI compared with previous methods. The BLS estimates that the old procedure reduced overall growth in the consumer price index for all urban consumers (CPI-U) by 0.03 percent per year on average between 1968 and 1997.

3. The major changes for 1998 and1999 are discussed in detail in Bureau of Labor Statistics, *Monthly Labor Review* (December 1996).

4. See Bureau of Labor Statistics, *Consumer Price Index: November 1998* (December 15, 1998), for details about these changes.

However, because such abatement costs are not likely to be large in the near future, CBO has assumed that this change will have no significant effect on CPI growth.

The procedures for calculating the nonowner rent and owners' equivalent rent components of the CPIs were modified again in January 1999. The samples for those components are now based on the 1990 Decennial Census, and the BLS has introduced a new system for estimating owners' equivalent rent that will use the entire rent sample rather than the part that was matched to owner-occupied units. In its current forecast, CBO assumes that this change has no effect on the growth of the overall CPIs.

The final change made in January discontinued the procedure of treating utility refunds from previous consumption as price changes for current consumption. Refunds from previous consumption occur when temporary rate increases are rolled back, energy costs are lower than anticipated, or rates are reevaluated with respect to actual costs. Measures of utility prices under the previous procedure, which credited refunds in the month they were made, did not accurately reflect the current price. The BLS now disregards refunds from previous consumption. CBO assumes that the change will have no significant effect on the growth of the overall CPIs.

Clearly, the combined effect on the CPIs of the BLS's changes between 1995 and 1999 is substantial. Taken together, the changes may be reducing measured inflation on the order of 0.7 percentage points by 2000 compared with what would have occurred if no methodological changes had been made. The changes improve the accuracy of the CPIs, but users should be aware of the changes when they examine the pattern in the growth of the CPIs over the 1995-2000 period.

Changes Announced for 2002

The BLS updates the weights of the 200 major categories of goods and services in the CPIs every 10 years. The weights reflect the spending for each category of expenditure in the base period (currently 1993-1995) as a share of total spending in that period. Starting in 2002, however, the BLS will update the weights of the major categories every two years. In 2002, the weights will be based on the 1999-2000 average pattern of expenditures.

Theoretically, one would expect more frequent reweighting to dampen growth slightly because more frequent updating would tend to give a larger weight to items that have increased less in price in the recent past; that is, consumers would be expected to have shifted their expenditures somewhat toward items that had not experienced rapid price increases. Empirically, however, the BLS has found that if the more frequent reweighting had been used over the past 10 years, the average rate of growth of the CPIs would not have been affected. In the current projection, CBO assumes that the more frequent reweighting planned to start in 2002 has no effect on the growth of the CPIs compared with reweighting every 10 years.

The BLS is also investigating various ways in which it could compile a CPI that would reflect the *continual* responses of consumers to changes in relative prices. That approach differs from more frequent reweighting in that it attempts to match the concurrent changes in consumption patterns that take place in response to changes in relative prices rather than use consumption patterns that are two to four years old. The BLS intends to publish such a price measure by 2002 in addition to the current CPIs. Unlike the current CPIs, however, the new price measure would be subject to revision.

Appendix F

Historical Budget Data

This appendix provides historical data for revenues, outlays, and the deficit or surplus. Estimates of the standardized-employment deficit or surplus and its revenue and outlay components for fiscal years 1956 through 1998 are reported in Tables F-1 through F-3, along with estimates of potential gross domestic product (GDP), actual GDP, and the nonaccelerating inflation rate of unemployment, or NAIRU. The standardized-employment measure and its components are also shown as a percentage of potential GDP.

The change in the standardized-employment deficit or surplus is a commonly used measure of the short-term impact of fiscal policy on total demand. The standardized-employment deficit, which is often called the structural deficit, excludes the effects on revenues and outlays of cyclical fluctuations in output and unemployment. More specifically, standardized-employment revenues are the federal revenues that would be collected if the economy was operating at its potential level of GDP. Those revenues are greater than actual revenues when GDP is below its potential level because the tax bases are then cyclically depressed. Standardized-employment outlays are the federal outlays that would be recorded if the economy was operating at an unemployment rate consistent with stable inflation—the NAIRU, which is also the benchmark used to compute potential GDP. Standardized outlays are less than actual outlays when the rate of unemployment is higher than the NAIRU because transfer payments for unemployment insurance and other programs are then cyclically swollen. Historical estimates for the above-mentioned measures may differ from those reported a year ago because of slight revisions to the estimates of potential GDP.

Budget data consistent with the projections in Chapters 2, 3, and 4 are available for fiscal years 1962 through 1998 and are reported in Tables F-4 through F-13. The data are shown both in nominal dollars and as a percentage of GDP. Data for 1998 come from the Department of the Treasury, *Final Monthly Treasury Statement*, Fiscal Year 1998 (October 1998).

Federal revenues, outlays, deficits or surpluses, and debt held by the public are shown in Tables F-4 and F-5. Revenues, outlays, deficits, and surpluses have both on-budget and off-budget components. Social Security receipts and outlays were placed off-budget by the Balanced Budget and Emergency Deficit Control Act of 1985; the Postal Service was moved off-budget four years later by the Omnibus Budget Reconciliation Act of 1989.

The major sources of federal revenues (including off-budget revenues) are presented in Tables F-6 and F-7. Social insurance taxes and contributions include employer and employee payments for Social Security, Medicare, Railroad Retirement, and unemployment insurance, as well as pension contributions by federal workers. Excise taxes are levied on certain products and services such as gasoline, alcoholic beverages, and air travel. Miscellaneous receipts consist of deposits of earnings by the Federal Reserve System and numerous fees and charges.

Federal outlays (including off-budget outlays) for major spending categories are shown in Tables F-8 and F-9. To compare historical outlays with the projections discussed in Chapters 2 through 4, the historical data have been divided into the same categories of spending as the projections. Spending controlled by the appropriation process is classified as discretionary. Tables F-10 and F-11 divide discretionary spending into its defense, international, and domestic components. Entitlements and other mandatory spending include programs for which spending is governed by laws making those who meet certain requirements eligible to receive payments. Additional detail on entitlement programs is shown in Tables F-12 and F-13. Net interest is identical to the budget function with the same name (function 900). Offsetting receipts include the federal government's contribution toward employee retirement, fees and charges such as Medicare premiums, and receipts from the use of federally controlled land and offshore territory.

Table F-1.
Deficits, Surpluses, Debt, and Related Series, Fiscal Years 1956-1998

	In Billions of Dollars			As a Percentage of GDP			GDP (Billions of dollars)		
	Deficit (-) or Surplus	Standardized-Employment Deficit (-) or Surplus[a]	Debt Held by the Public	Deficit (-) or Surplus	Standardized-Employment Deficit (-) or Surplus[a,b]	Debt Held by the Public	Actual[c]	Potential	NAIRU[d] (Percent)
1956	4	e	222	0.9	f	52.0	427	416	5.4
1957	3	1	219	0.8	0.2	48.7	451	445	5.4
1958	-3	1	226	-0.6	0.2	49.3	459	472	5.4
1959	-13	-10	235	-2.6	-2.1	47.9	490	497	5.4
1960	e	e	237	0.1	0.1	45.6	519	520	5.5
1961	-3	3	238	-0.6	0.5	45.0	530	548	5.5
1962	-7	-5	248	-1.3	-0.8	43.7	568	576	5.5
1963	-5	-3	254	-0.8	-0.5	42.4	599	607	5.5
1964	-6	-7	257	-0.9	-1.0	40.1	641	640	5.6
1965	-1	-5	261	-0.2	-0.8	38.0	687	678	5.6
1966	-4	-15	264	-0.5	-2.1	34.9	756	724	5.7
1967	-9	-20	267	-1.1	-2.6	32.9	810	780	5.8
1968	-25	-36	290	-2.9	-4.3	33.3	870	845	5.8
1969	3	-10	278	0.3	-1.1	29.3	948	919	5.8
1970	-3	-8	283	-0.3	-0.8	28.1	1,010	1,005	5.9
1971	-23	-20	303	-2.1	-1.8	28.1	1,078	1,094	5.9
1972	-23	-22	322	-2.0	-1.9	27.4	1,175	1,183	6.0
1973	-15	-31	341	-1.1	-2.4	26.0	1,310	1,275	6.1
1974	-6	-23	344	-0.4	-1.6	23.9	1,438	1,415	6.2
1975	-53	-37	395	-3.4	-2.3	25.4	1,554	1,613	6.2
1976	-74	-54	477	-4.3	-3.0	27.6	1,732	1,785	6.2
1977	-54	-46	549	-2.7	-2.3	27.9	1,971	1,996	6.2
1978	-59	-64	607	-2.7	-2.9	27.4	2,215	2,209	6.3
1979	-41	-56	640	-1.6	-2.3	25.6	2,497	2,472	6.3
1980	-74	-63	710	-2.7	-2.3	26.1	2,719	2,770	6.2
1981	-79	-65	785	-2.6	-2.1	25.8	3,048	3,117	6.2
1982	-128	-76	920	-4.0	-2.2	28.6	3,214	3,414	6.1
1983	-208	-139	1,132	-6.1	-3.8	33.1	3,423	3,654	6.1
1984	-185	-170	1,300	-4.9	-4.4	34.0	3,819	3,892	6.1
1985	-212	-196	1,500	-5.2	-4.7	36.5	4,109	4,137	6.0
1986	-221	-221	1,737	-5.1	-5.0	39.8	4,368	4,380	6.0
1987	-150	-158	1,889	-3.2	-3.4	41.0	4,609	4,638	6.0
1988	-155	-163	2,051	-3.1	-3.3	41.4	4,957	4,934	5.9
1989	-152	-157	2,190	-2.8	-3.0	40.9	5,356	5,282	5.9
1990	-221	-183	2,411	-3.9	-3.2	42.4	5,683	5,640	5.9
1991	-269	-202	2,688	-4.6	-3.4	45.9	5,862	6,014	5.9
1992	-290	-232	2,999	-4.7	-3.7	48.8	6,149	6,313	5.8
1993	-255	-237	3,247	-3.9	-3.6	50.1	6,478	6,604	5.8
1994	-203	-190	3,432	-3.0	-2.7	50.1	6,849	6,899	5.8
1995	-164	-187	3,603	-2.3	-2.6	50.1	7,194	7,222	5.7
1996	-107	-127	3,733	-1.4	-1.7	49.6	7,533	7,548	5.7
1997	-22	-86	3,771	-0.3	-1.1	47.3	7,972	7,897	5.7
1998	70	-1	3,720	0.8	f	44.3	8,404	8,218	5.6

SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

a. Excludes deposit insurance, receipts from auctions of the electromagnetic spectrum, timing adjustments, and contributions from allied nations for Operation Desert Storm (which were received in 1991 and 1992).
b. The standardized-employment deficit is shown as a percentage of potential GDP.
c. Values for 1956 through 1960 are estimated by CBO.
d. The NAIRU is the nonaccelerating inflation rate of unemployment. It is the benchmark for computing potential GDP.
e. Less than $500 million.
f. Less than 0.05 percent.

Table F-2.
Standardized-Employment Deficit or Surplus and Related Series, Fiscal Years 1956-1998 (In billions of dollars)

	Budget Deficit (-) or Surplus	Cyclical Deficit (-) or Surplus	Other Adjustments[a]	Standardized-Employment Deficit (-) or Surplus	Standardized-Employment Revenues	Standardized-Employment Outlays
1956	4	-4	b	b	71	71
1957	3	-3	b	1	78	77
1958	-3	4	b	1	83	82
1959	-13	2	b	-10	81	91
1960	b	b	b	b	93	92
1961	-3	6	b	3	100	97
1962	-7	3	b	-5	102	106
1963	-5	3	-1	-3	109	112
1964	-6	b	b	-7	112	119
1965	-1	-4	b	-5	114	119
1966	-4	-11	-1	-15	122	137
1967	-9	-11	-1	-20	140	161
1968	-25	-9	-2	-36	146	182
1969	3	-12	-1	-10	178	188
1970	-3	-4	-1	-8	191	199
1971	-23	4	-1	-20	191	211
1972	-23	2	-1	-22	210	232
1973	-15	-11	-5	-31	221	253
1974	-6	-10	-7	-23	256	279
1975	-53	18	-2	-37	293	330
1976	-74	23	-3	-54	313	366
1977	-54	12	-4	-46	363	409
1978	-59	-2	-3	-64	398	462
1979	-41	-9	-6	-56	456	512
1980	-74	16	-4	-63	529	592
1981	-79	25	-11	-65	620	685
1982	-128	61	-8	-76	667	742
1983	-208	79	-10	-139	659	798
1984	-185	25	-9	-170	687	857
1985	-212	12	5	-196	742	938
1986	-221	6	-5	-221	773	993
1987	-150	7	-16	-158	863	1,021
1988	-155	-9	1	-163	904	1,066
1989	-152	-24	20	-157	970	1,127
1990	-221	-15	53	-183	1,018	1,201
1991	-269	47	20	-202	1,094	1,296
1992	-290	63	-5	-232	1,139	1,371
1993	-255	49	-31	-237	1,192	1,429
1994	-203	20	-6	-190	1,276	1,466
1995	-164	4	-27	-187	1,360	1,547
1996	-107	-2	-17	-127	1,452	1,580
1997	-22	-35	-29	-86	1,548	1,634
1998	70	-68	-3	-1	1,649	1,649

SOURCE: Congressional Budget Office.

a. Consists of deposit insurance, receipts from auctions of the electromagnetic spectrum, timing adjustments, and contributions from allied nations for Operation Desert Storm (which were received in 1991 and 1992).
b. Less than $500 million.

Table F-3.
Standardized-Employment Deficit or Surplus and Related Series, Fiscal Years 1956-1998 (As a percentage of potential GDP)

	Budget Deficit (-) or Surplus[a]	Cyclical Deficit (-) or Surplus	Other Adjustments[b]	Standardized-Employment		
				Deficit (-) or Surplus	Revenues	Outlays
1956	0.9	1.0	c	c	17.1	17.2
1957	0.8	-0.6	c	0.2	17.6	17.4
1958	-0.6	0.8	c	0.2	17.6	17.4
1959	-2.6	0.5	c	-2.1	16.3	18.4
1960	0.1	c	c	0.1	17.8	17.8
1961	-0.6	1.1	c	0.5	18.2	17.7
1962	-1.3	0.5	-0.1	-0.8	17.8	18.5
1963	-0.8	0.4	-0.1	-0.5	18.0	18.5
1964	-0.9	c	-0.1	-1.0	17.6	18.6
1965	-0.2	-0.5	-0.1	-0.8	16.9	17.6
1966	-0.5	-1.5	-0.1	-2.1	16.9	19.0
1967	-1.1	-1.4	-0.1	-2.6	18.0	20.6
1968	-2.9	-1.1	-0.2	-4.3	17.3	21.6
1969	0.3	-1.3	-0.1	-1.1	19.4	20.4
1970	-0.3	-0.4	-0.1	-0.8	19.0	19.8
1971	-2.1	0.4	-0.1	-1.8	17.5	19.3
1972	-2.0	0.2	-0.1	-1.9	17.7	19.6
1973	-1.1	-0.9	-0.4	-2.4	17.4	19.8
1974	-0.4	-0.7	-0.5	-1.6	18.1	19.7
1975	-3.4	1.1	-0.1	-2.3	18.2	20.5
1976	-4.3	1.3	-0.2	-3.0	17.5	20.5
1977	-2.7	0.6	-0.2	-2.3	18.2	20.5
1978	-2.7	-0.1	-0.1	-2.9	18.0	20.9
1979	-1.6	-0.4	-0.3	-2.3	18.4	20.7
1980	-2.7	0.6	-0.2	-2.3	19.1	21.4
1981	-2.6	0.8	-0.4	-2.1	19.9	22.0
1982	-4.0	1.8	-0.2	-2.2	19.5	21.7
1983	-6.1	2.2	-0.3	-3.8	18.0	21.8
1984	-4.9	0.6	-0.2	-4.4	17.7	22.0
1985	-5.2	0.3	0.1	-4.7	17.9	22.7
1986	-5.1	0.1	-0.1	-5.0	17.6	22.7
1987	-3.2	0.2	-0.3	-3.4	18.6	22.0
1988	-3.1	-0.2	c	-3.3	18.3	21.6
1989	-2.8	-0.5	0.4	-3.0	18.4	21.3
1990	-3.9	-0.3	0.9	-3.2	18.1	21.3
1991	-4.6	0.8	0.3	-3.4	18.2	21.6
1992	-4.7	1.0	-0.1	-3.7	18.0	21.7
1993	-3.9	0.7	-0.5	-3.6	18.1	21.6
1994	-3.0	0.3	-0.1	-2.7	18.5	21.2
1995	-2.3	0.1	-0.4	-2.6	18.8	21.4
1996	-1.4	c	-0.2	-1.7	19.2	20.9
1997	-0.3	-0.4	-0.4	-1.1	19.6	20.7
1998	0.8	-0.8	c	c	20.1	20.1

SOURCE: Congressional Budget Office.

a. The budget deficit or surplus is shown as a percentage of actual GDP.

b. Consists of deposit insurance, receipts from auctions of the electromagnetic spectrum, timing adjustments, and contributions from allied nations for Operation Desert Storm (which were received in 1991 and 1992).

c. Less than 0.05 percent.

Table F-4.
Revenues, Outlays, Deficits, Surpluses, and Debt Held by the Public, Fiscal Years 1962-1998 (In billions of dollars)

			Deficit (-) or Surplus				Debt
	Revenues	Outlays	On-Budget	Social Security	Postal Service	Total	Held by the Public[a]
1962	99.7	106.8	-5.9	-1.3	b	-7.1	248.0
1963	106.6	111.3	-4.0	-0.8	b	-4.8	254.0
1964	112.6	118.5	-6.5	0.6	b	-5.9	256.8
1965	116.8	118.2	-1.6	0.2	b	-1.4	260.8
1966	130.8	134.5	-3.1	-0.6	b	-3.7	263.7
1967	148.8	157.5	-12.6	4.0	b	-8.6	266.6
1968	153.0	178.1	-27.7	2.6	b	-25.2	289.5
1969	186.9	183.6	-0.5	3.7	b	3.2	278.1
1970	192.8	195.6	-8.7	5.9	b	-2.8	283.2
1971	187.1	210.2	-26.1	3.0	b	-23.0	303.0
1972	207.3	230.7	-26.4	3.0	b	-23.4	322.4
1973	230.8	245.7	-15.4	0.5	b	-14.9	340.9
1974	263.2	269.4	-8.0	1.8	b	-6.1	343.7
1975	279.1	332.3	-55.3	2.0	b	-53.2	394.7
1976	298.1	371.8	-70.5	-3.2	b	-73.7	477.4
1977	355.6	409.2	-49.8	-3.9	b	-53.7	549.1
1978	399.6	458.7	-54.9	-4.3	b	-59.2	607.1
1979	463.3	504.0	-38.7	-2.0	b	-40.7	640.3
1980	517.1	590.9	-72.7	-1.1	b	-73.8	709.8
1981	599.3	678.2	-74.0	-5.0	b	-79.0	785.3
1982	617.8	745.8	-120.1	-7.9	b	-128.0	919.8
1983	600.6	808.4	-208.0	0.2	b	-207.8	1,131.6
1984	666.5	851.9	-185.7	0.3	b	-185.4	1,300.5
1985	734.1	946.4	-221.7	9.4	b	-212.3	1,499.9
1986	769.2	990.5	-238.0	16.7	b	-221.2	1,736.7
1987	854.4	1,004.1	-169.3	19.6	b	-149.8	1,888.7
1988	909.3	1,064.5	-194.0	38.8	b	-155.2	2,050.8
1989	991.2	1,143.7	-205.2	52.4	0.3	-152.5	2,189.9
1990	1,032.0	1,253.2	-277.8	58.2	-1.6	-221.2	2,410.7
1991	1,055.0	1,324.4	-321.6	53.5	-1.3	-269.4	2,688.1
1992	1,091.3	1,381.7	-340.5	50.7	-0.7	-290.4	2,998.8
1993	1,154.4	1,409.4	-300.4	46.8	-1.4	-255.1	3,247.5
1994	1,258.6	1,461.7	-258.8	56.8	-1.1	-203.1	3,432.1
1995	1,351.8	1,515.7	-226.3	60.4	2.0	-163.9	3,603.4
1996	1,453.1	1,560.5	-174.0	66.4	0.2	-107.4	3,733.0
1997	1,579.3	1,601.2	-103.3	81.3	c	-21.9	3,771.1
1998	1,721.4	1,651.4	-29.2	99.0	0.2	70.0	3,720.1

SOURCE: Congressional Budget Office.

a. End of year.

b. In fiscal years 1962 through 1988, the Postal Service was on-budget and included in the on-budget total.

c. Less than $50 million.

Table F-5.
Revenues, Outlays, Deficits, Surpluses, and Debt Held by the Public, Fiscal Years 1962-1998 (As a percentage of GDP)

			Deficit (-) or Surplus				Debt
	Revenues	Outlays	On-Budget	Social Security	Postal Service	Total	Held by the Public[a]
1962	17.6	18.8	-1.0	-0.2	b	-1.3	43.7
1963	17.8	18.6	-0.7	-0.1	b	-0.8	42.4
1964	17.6	18.5	-1.0	0.1	b	-0.9	40.1
1965	17.0	17.2	-0.2	c	b	-0.2	38.0
1966	17.3	17.8	-0.4	-0.1	b	-0.5	34.9
1967	18.4	19.4	-1.6	0.5	b	-1.1	32.9
1968	17.6	20.5	-3.2	0.3	b	-2.9	33.3
1969	19.7	19.4	-0.1	0.4	b	0.3	29.3
1970	19.1	19.4	-0.9	0.6	b	-0.3	28.1
1971	17.4	19.5	-2.4	0.3	b	-2.1	28.1
1972	17.6	19.6	-2.2	0.3	b	-2.0	27.4
1973	17.6	18.8	-1.2	c	b	-1.1	26.0
1974	18.3	18.7	-0.6	0.1	b	-0.4	23.9
1975	18.0	21.4	-3.6	0.1	b	-3.4	25.4
1976	17.2	21.5	-4.1	-0.2	b	-4.3	27.6
1977	18.0	20.8	-2.5	-0.2	b	-2.7	27.8
1978	18.0	20.7	-2.5	-0.2	b	-2.7	27.4
1979	18.6	20.2	-1.6	-0.1	b	-1.6	25.6
1980	19.0	21.7	-2.7	c	b	-2.7	26.1
1981	19.7	22.3	-2.4	-0.2	b	-2.6	25.8
1982	19.2	23.2	-3.7	-0.2	b	-4.0	28.6
1983	17.5	23.6	-6.1	c	b	-6.1	33.1
1984	17.5	22.3	-4.9	c	b	-4.9	34.0
1985	17.9	23.0	-5.4	0.2	b	-5.2	36.5
1986	17.6	22.7	-5.4	0.4	b	-5.1	39.8
1987	18.5	21.8	-3.7	0.4	b	-3.2	41.0
1988	18.3	21.5	-3.9	0.8	b	-3.1	41.4
1989	18.5	21.4	-3.8	1.0	c	-2.8	40.9
1990	18.2	22.1	-4.9	1.0	c	-3.9	42.4
1991	18.0	22.6	-5.5	0.9	c	-4.6	45.9
1992	17.7	22.5	-5.5	0.8	c	-4.7	48.8
1993	17.8	21.8	-4.6	0.7	c	-3.9	50.1
1994	18.4	21.3	-3.8	0.8	c	-3.0	50.1
1995	18.8	21.1	-3.1	0.8	c	-2.3	50.1
1996	19.3	20.7	-2.3	0.9	c	-1.4	49.6
1997	19.8	20.1	-1.3	1.0	c	-0.3	47.3
1998	20.5	19.6	-0.3	1.2	c	0.8	44.3

SOURCE: Congressional Budget Office.

a. End of year.

b. In fiscal years 1962 through 1988, the Postal Service was on-budget and included in the on-budget total.

c. Less than 0.05 percent.

Table F-6.
Revenues by Major Source, Fiscal Years 1962-1998 (In billions of dollars)

	Individual Income Taxes	Corporate Income Taxes	Social Insurance Taxes	Excise Taxes	Estate and Gift Taxes	Customs Duties	Miscel-laneous Receipts	Total Revenues
1962	45.6	20.5	17.0	12.5	2.0	1.1	0.8	99.7
1963	47.6	21.6	19.8	13.2	2.2	1.2	1.0	106.6
1964	48.7	23.5	22.0	13.7	2.4	1.3	1.1	112.6
1965	48.8	25.5	22.2	14.6	2.7	1.4	1.6	116.8
1966	55.4	30.1	25.5	13.1	3.1	1.8	1.9	130.8
1967	61.5	34.0	32.6	13.7	3.0	1.9	2.1	148.8
1968	68.7	28.7	33.9	14.1	3.1	2.0	2.5	153.0
1969	87.2	36.7	39.0	15.2	3.5	2.3	2.9	186.9
1970	90.4	32.8	44.4	15.7	3.6	2.4	3.4	192.8
1971	86.2	26.8	47.3	16.6	3.7	2.6	3.9	187.1
1972	94.7	32.2	52.6	15.5	5.4	3.3	3.6	207.3
1973	103.2	36.2	63.1	16.3	4.9	3.2	3.9	230.8
1974	119.0	38.6	75.1	16.8	5.0	3.3	5.4	263.2
1975	122.4	40.6	84.5	16.6	4.6	3.7	6.7	279.1
1976	131.6	41.4	90.8	17.0	5.2	4.1	8.0	298.1
1977	157.6	54.9	106.5	17.5	7.3	5.2	6.5	355.6
1978	181.0	60.0	121.0	18.4	5.3	6.6	7.4	399.6
1979	217.8	65.7	138.9	18.7	5.4	7.4	9.3	463.3
1980	244.1	64.6	157.8	24.3	6.4	7.2	12.7	517.1
1981	285.9	61.1	182.7	40.8	6.8	8.1	13.8	599.3
1982	297.7	49.2	201.5	36.3	8.0	8.9	16.2	617.8
1983	288.9	37.0	209.0	35.3	6.1	8.7	15.6	600.6
1984	298.4	56.9	239.4	37.4	6.0	11.4	17.1	666.5
1985	334.5	61.3	265.2	36.0	6.4	12.1	18.6	734.1
1986	349.0	63.1	283.9	32.9	7.0	13.3	20.0	769.3
1987	392.6	83.9	303.3	32.5	7.5	15.1	19.5	854.4
1988	401.2	94.5	334.3	35.2	7.6	16.2	20.3	909.3
1989	445.7	103.3	359.4	34.4	8.7	16.3	23.3	991.2
1990	466.9	93.5	380.0	35.3	11.5	16.7	28.0	1,032.0
1991	467.8	98.1	396.0	42.4	11.1	15.9	23.6	1,055.0
1992	476.0	100.3	413.7	45.6	11.1	17.4	27.3	1,091.3
1993	509.7	117.5	428.3	48.1	12.6	18.8	19.5	1,154.4
1994	543.1	140.4	461.5	55.2	15.2	20.1	23.2	1,258.6
1995	590.2	157.0	484.5	57.5	14.8	19.3	28.6	1,351.8
1996	656.4	171.8	509.4	54.0	17.2	18.7	25.5	1,453.1
1997	737.5	182.3	539.4	56.9	19.8	17.9	25.5	1,579.3
1998	828.6	188.7	571.8	57.7	24.1	18.3	32.3	1,721.4

SOURCE: Congressional Budget Office.

Table F-7.
Revenues by Major Source, Fiscal Years 1962-1998 (As a percentage of GDP)

	Individual Income Taxes	Corporate Income Taxes	Social Insurance Taxes	Excise Taxes	Estate and Gift Taxes	Customs Duties	Miscel-laneous Receipts	Total Revenues
1962	8.0	3.6	3.0	2.2	0.4	0.2	0.1	17.6
1963	7.9	3.6	3.3	2.2	0.4	0.2	0.2	17.8
1964	7.6	3.7	3.4	2.1	0.4	0.2	0.2	17.6
1965	7.1	3.7	3.2	2.1	0.4	0.2	0.2	17.0
1966	7.3	4.0	3.4	1.7	0.4	0.2	0.2	17.3
1967	7.6	4.2	4.0	1.7	0.4	0.2	0.3	18.4
1968	7.9	3.3	3.9	1.6	0.4	0.2	0.3	17.6
1969	9.2	3.9	4.1	1.6	0.4	0.2	0.3	19.7
1970	9.0	3.3	4.4	1.6	0.4	0.2	0.3	19.1
1971	8.0	2.5	4.4	1.5	0.3	0.2	0.4	17.4
1972	8.1	2.7	4.5	1.3	0.5	0.3	0.3	17.6
1973	7.9	2.8	4.8	1.2	0.4	0.2	0.3	17.6
1974	8.3	2.7	5.2	1.2	0.4	0.2	0.4	18.3
1975	7.9	2.6	5.4	1.1	0.3	0.2	0.4	18.0
1976	7.6	2.4	5.2	1.0	0.3	0.2	0.5	17.2
1977	8.0	2.8	5.4	0.9	0.4	0.3	0.3	18.0
1978	8.2	2.7	5.5	0.8	0.2	0.3	0.3	18.0
1979	8.7	2.6	5.6	0.8	0.2	0.3	0.4	18.6
1980	9.0	2.4	5.8	0.9	0.2	0.3	0.5	19.0
1981	9.4	2.0	6.0	1.3	0.2	0.3	0.5	19.7
1982	9.3	1.5	6.3	1.1	0.2	0.3	0.5	19.2
1983	8.4	1.1	6.1	1.0	0.2	0.3	0.5	17.5
1984	7.8	1.5	6.3	1.0	0.2	0.3	0.4	17.5
1985	8.1	1.5	6.5	0.9	0.2	0.3	0.5	17.9
1986	8.0	1.4	6.5	0.8	0.2	0.3	0.5	17.6
1987	8.5	1.8	6.6	0.7	0.2	0.3	0.4	18.5
1988	8.1	1.9	6.7	0.7	0.2	0.3	0.4	18.3
1989	8.3	1.9	6.7	0.6	0.2	0.3	0.4	18.5
1990	8.2	1.6	6.7	0.6	0.2	0.3	0.5	18.2
1991	8.0	1.7	6.8	0.7	0.2	0.3	0.4	18.0
1992	7.7	1.6	6.7	0.7	0.2	0.3	0.4	17.7
1993	7.9	1.8	6.6	0.7	0.2	0.3	0.3	17.8
1994	7.9	2.0	6.7	0.8	0.2	0.3	0.3	18.4
1995	8.2	2.2	6.7	0.8	0.2	0.3	0.4	18.8
1996	8.7	2.3	6.8	0.7	0.2	0.2	0.3	19.3
1997	9.3	2.3	6.8	0.7	0.2	0.2	0.3	19.8
1998	9.9	2.2	6.8	0.7	0.3	0.2	0.4	20.5

SOURCE: Congressional Budget Office.

Table F-8.
Outlays for Major Spending Categories, Fiscal Years 1962-1998 (In billions of dollars)

	Discretionary Spending	Entitlements and Other Mandatory Spending	Net Interest	Offsetting Receipts	Total Outlays
1962	72.1	34.7	6.9	-6.8	106.8
1963	75.3	36.2	7.7	-7.9	111.3
1964	79.1	38.9	8.2	-7.7	118.5
1965	77.8	39.7	8.6	-7.9	118.2
1966	90.1	43.4	9.4	-8.4	134.5
1967	106.4	50.9	10.3	-10.2	157.5
1968	117.9	59.7	11.1	-10.6	178.1
1969	117.3	64.7	12.7	-11.0	183.6
1970	120.2	72.6	14.4	-11.5	195.6
1971	122.5	86.9	14.8	-14.1	210.2
1972	128.4	100.9	15.5	-14.1	230.7
1973	130.2	116.1	17.3	-18.0	245.7
1974	138.1	131.0	21.4	-21.2	269.4
1975	157.8	169.6	23.2	-18.3	332.3
1976	175.3	189.4	26.7	-19.6	371.8
1977	196.8	204.0	29.9	-21.5	409.2
1978	218.5	227.7	35.5	-22.8	458.7
1979	239.7	247.3	42.6	-25.6	504.0
1980	276.1	291.5	52.5	-29.2	590.9
1981	307.8	339.6	68.8	-37.9	678.2
1982	325.8	370.9	85.0	-36.0	745.8
1983	353.1	410.7	89.8	-45.3	808.4
1984	379.2	405.8	111.1	-44.2	851.9
1985	415.7	448.4	129.5	-47.1	946.5
1986	438.3	462.0	136.0	-45.9	990.5
1987	444.0	474.4	138.7	-52.9	1,004.1
1988	464.2	505.3	151.8	-56.8	1,064.5
1989	488.6	549.6	169.3	-63.8	1,143.7
1990	500.3	627.3	184.2	-58.7	1,253.2
1991	533.0	702.6	194.5	-105.7	1,324.4
1992	534.0	716.6	199.4	-68.4	1,381.7
1993	540.4	736.8	198.8	-66.6	1,409.4
1994	543.3	784.0	203.0	-68.5	1,461.7
1995	545.1	818.2	232.2	-79.7	1,515.7
1996	533.8	857.5	241.1	-71.9	1,560.5
1997	548.3	896.3	244.0	-87.3	1,601.2
1998	553.6	938.6	243.4	-84.1	1,651.4

SOURCE: Congressional Budget Office.

Table F-9.
Outlays for Major Spending Categories, Fiscal Years 1962-1998 (As a percentage of GDP)

	Discretionary Spending	Entitlements and Other Mandatory Spending	Net Interest	Offsetting Receipts	Total Outlays
1962	12.7	6.1	1.2	-1.2	18.8
1963	12.6	6.0	1.3	-1.3	18.6
1964	12.3	6.1	1.3	-1.2	18.5
1965	11.3	5.8	1.3	-1.1	17.2
1966	11.9	5.7	1.2	-1.1	17.8
1967	13.1	6.3	1.3	-1.3	19.4
1968	13.6	6.9	1.3	-1.2	20.5
1969	12.4	6.8	1.3	-1.2	19.4
1970	11.9	7.2	1.4	-1.1	19.4
1971	11.4	8.1	1.4	-1.3	19.5
1972	10.9	8.6	1.3	-1.2	19.6
1973	9.9	8.9	1.3	-1.4	18.8
1974	9.6	9.1	1.5	-1.5	18.7
1975	10.2	10.9	1.5	-1.2	21.4
1976	10.1	10.9	1.5	-1.1	21.5
1977	10.0	10.4	1.5	-1.1	20.8
1978	9.9	10.3	1.6	-1.0	20.7
1979	9.6	9.9	1.7	-1.0	20.2
1980	10.2	10.7	1.9	-1.1	21.7
1981	10.1	11.1	2.3	-1.2	22.3
1982	10.1	11.5	2.6	-1.1	23.2
1983	10.3	12.0	2.6	-1.3	23.6
1984	9.9	10.6	2.9	-1.2	22.3
1985	10.1	10.9	3.2	-1.1	23.0
1986	10.0	10.6	3.1	-1.1	22.7
1987	9.6	10.3	3.0	-1.1	21.8
1988	9.4	10.2	3.1	-1.1	21.5
1989	9.1	10.3	3.2	-1.2	21.4
1990	8.8	11.0	3.2	-1.0	22.1
1991	9.1	12.0	3.3	-1.8	22.6
1992	8.7	11.7	3.2	-1.1	22.5
1993	8.3	11.4	3.1	-1.0	21.8
1994	7.9	11.4	3.0	-1.0	21.3
1995	7.6	11.4	3.2	-1.1	21.1
1996	7.1	11.4	3.2	-1.0	20.7
1997	6.9	11.2	3.1	-1.1	20.1
1998	6.6	11.2	2.9	-1.0	19.6

SOURCE: Congressional Budget Office.

Table F-10.
Discretionary Outlays, Fiscal Years 1962-1998 (In billions of dollars)

	Defense	International	Domestic	Total
1962	52.6	5.5	14.0	72.1
1963	53.7	5.2	16.3	75.3
1964	55.0	4.6	19.5	79.1
1965	51.0	4.7	22.1	77.8
1966	59.0	5.1	26.1	90.1
1967	72.0	5.3	29.1	106.4
1968	82.2	4.9	30.9	117.9
1969	82.7	4.1	30.5	117.3
1970	81.9	4.0	34.3	120.2
1971	79.0	3.8	39.7	122.5
1972	79.3	4.6	44.5	128.4
1973	77.1	4.8	48.3	130.2
1974	80.7	6.2	51.1	138.1
1975	87.6	8.2	62.0	157.8
1976	89.9	7.5	77.9	175.3
1977	97.5	8.0	91.3	196.8
1978	104.6	8.5	105.3	218.5
1979	116.8	9.1	113.8	239.7
1980	134.6	12.8	128.7	276.1
1981	158.0	13.6	136.1	307.8
1982	185.9	12.9	127.0	325.8
1983	209.9	13.6	129.7	353.1
1984	228.0	16.3	134.9	379.2
1985	253.1	17.4	145.2	415.7
1986	273.8	17.7	146.8	438.3
1987	282.5	15.2	146.2	444.0
1988	290.9	15.7	157.5	464.2
1989	304.0	16.6	167.9	488.6
1990	300.1	19.1	181.1	500.3
1991	319.7	19.7	193.6	533.0
1992	302.6	19.2	212.3	534.0
1993	292.4	21.6	226.4	540.4
1994	282.3	20.8	240.2	543.3
1995	273.6	20.1	251.4	545.1
1996	266.0	18.3	249.5	533.8
1997	271.9	19.8	256.9	548.5
1998	269.6	18.1	265.8	553.6

SOURCE: Congressional Budget Office.

Table F-11.
Discretionary Outlays, Fiscal Years 1962-1998 (As a percentage of GDP)

	Defense	International	Domestic	Total
1962	9.3	1.0	2.5	12.7
1963	9.0	0.9	2.7	12.6
1964	8.6	0.7	3.0	12.3
1965	7.4	0.7	3.2	11.3
1966	7.8	0.7	3.4	11.9
1967	8.9	0.7	3.6	13.1
1968	9.4	0.6	3.6	13.6
1969	8.7	0.4	3.2	12.4
1970	8.1	0.4	3.4	11.9
1971	7.3	0.3	3.7	11.4
1972	6.7	0.4	3.8	10.9
1973	5.9	0.4	3.7	9.9
1974	5.6	0.4	3.6	9.6
1975	5.6	0.5	4.0	10.2
1976	5.2	0.4	4.5	10.1
1977	4.9	0.4	4.6	10.0
1978	4.7	0.4	4.8	9.9
1979	4.7	0.4	4.6	9.6
1980	5.0	0.5	4.7	10.2
1981	5.2	0.4	4.5	10.1
1982	5.8	0.4	4.0	10.1
1983	6.1	0.4	3.8	10.3
1984	6.0	0.4	3.5	9.9
1985	6.2	0.4	3.5	10.1
1986	6.3	0.4	3.4	10.0
1987	6.1	0.3	3.2	9.6
1988	5.9	0.3	3.2	9.4
1989	5.7	0.3	3.1	9.1
1990	5.3	0.3	3.2	8.8
1991	5.5	0.3	3.3	9.1
1992	4.9	0.3	3.5	8.7
1993	4.5	0.3	3.5	8.3
1994	4.1	0.3	3.5	7.9
1995	3.8	0.3	3.5	7.6
1996	3.5	0.2	3.3	7.1
1997	3.4	0.2	3.2	6.9
1998	3.2	0.2	3.2	6.6

SOURCE: Congressional Budget Office.

Table F-12.
Outlays for Entitlements and Other Mandatory Spending, Fiscal Years 1962-1998 (In billions of dollars)

	Means-Tested Programs			Non-Means-Tested Programs								Total Entitlements and Other Mandatory Spending
	Medicaid	Other	Total	Social Security	Medicare	Other Retirement and Disability	Unemployment Compensation	Farm Price Supports	Deposit Insurance	Other	Total	
1962	0.1	4.2	4.3	14.0	0	2.7	3.5	2.4	-0.4	8.2	30.4	34.7
1963	0.2	4.5	4.7	15.5	0	2.9	3.6	3.4	-0.4	6.6	31.5	36.2
1964	0.2	4.8	5.0	16.2	0	3.3	3.4	3.4	-0.4	8.0	33.9	38.9
1965	0.3	4.9	5.2	17.1	0	3.6	2.7	2.8	-0.4	8.7	34.5	39.7
1966	0.8	5.0	5.8	20.3	a	4.1	2.2	1.4	-0.5	10.1	37.6	43.4
1967	1.2	5.0	6.2	21.3	3.2	4.8	2.3	2.0	-0.4	11.6	44.7	50.9
1968	1.8	5.7	7.5	23.3	5.1	5.7	2.2	3.3	-0.5	13.2	52.2	59.7
1969	2.3	6.3	8.6	26.7	6.3	5.2	2.3	4.2	-0.6	11.9	56.1	64.7
1970	2.7	7.4	10.1	29.6	6.8	6.6	3.1	3.8	-0.5	13.0	62.5	72.6
1971	3.4	10.0	13.4	35.1	7.5	8.3	5.8	2.9	-0.4	14.4	73.5	86.9
1972	4.6	11.7	16.3	39.4	8.4	9.6	6.7	4.1	-0.6	17.1	84.6	100.9
1973	4.6	11.4	16.0	48.2	9.0	11.7	4.9	3.6	-0.8	23.5	100.1	116.1
1974	5.8	13.7	19.5	55.0	10.7	13.8	5.6	1.0	-0.6	26.1	111.5	131.0
1975	6.8	18.6	25.4	63.6	14.1	18.3	12.8	0.6	0.5	34.3	144.2	169.6
1976	8.6	21.7	30.3	72.7	16.9	18.9	18.6	1.1	-0.6	31.5	159.1	189.4
1977	9.9	23.4	33.3	83.7	20.8	21.6	14.3	3.8	-2.8	29.3	170.7	204.0
1978	10.7	24.8	35.5	92.4	24.3	23.7	10.8	5.7	-1.0	36.2	192.2	227.7
1979	12.4	26.5	38.9	102.6	28.2	27.9	9.8	3.6	-1.7	38.1	208.4	247.3
1980	14.0	31.9	45.9	117.1	34.0	32.1	16.9	2.8	-0.4	43.2	245.6	291.5
1981	16.8	37.1	53.9	137.9	41.3	37.4	18.3	4.0	-1.4	48.2	285.7	339.6
1982	17.4	37.4	54.8	153.9	49.2	40.7	22.2	11.7	-2.1	40.5	316.1	370.9
1983	19.0	40.3	59.3	168.5	55.5	43.2	29.7	18.9	-1.2	36.8	351.4	410.7
1984	20.1	41.2	61.3	176.1	61.0	44.7	17.0	7.3	-0.8	39.3	344.5	405.8
1985	22.7	43.3	66.0	186.4	69.6	45.5	15.8	17.7	-2.2	49.4	382.4	448.4
1986	25.0	44.9	69.9	196.5	74.2	47.5	16.1	25.8	1.5	30.3	392.1	462.0
1987	27.4	45.5	72.9	205.1	79.9	50.8	15.5	22.4	3.1	24.8	401.5	474.4
1988	30.5	50.0	80.5	216.8	85.7	54.2	13.6	12.2	10.0	32.3	424.8	505.3
1989	34.6	54.2	88.8	230.4	94.3	57.2	13.9	10.6	22.0	32.4	460.8	549.6
1990	41.1	58.8	99.9	246.5	107.4	59.9	17.5	6.5	57.9	31.7	527.4	627.3
1991	52.5	69.7	122.2	266.8	114.2	64.4	25.1	10.1	66.2	33.6	580.4	702.6
1992	67.8	78.7	146.5	285.2	129.4	66.6	36.9	9.3	2.6	40.2	570.1	716.6
1993	75.8	86.5	162.3	302.0	143.1	68.7	35.4	15.6	-28.0	37.7	574.5	736.8
1994	82.0	95.0	177.0	316.9	159.5	72.1	26.4	9.9	-7.6	29.8	607.0	784.0
1995	89.1	101.5	190.6	333.3	177.1	75.2	21.3	5.8	-17.9	32.9	627.6	818.2
1996	92.0	104.2	196.2	347.1	191.3	77.3	22.4	5.0	-8.4	26.6	661.4	857.5
1997	95.6	107.2	202.8	362.3	207.9	80.5	20.6	5.8	-14.4	30.8	693.5	896.3
1998	101.2	107.8	209.0	376.1	211.0	82.9	19.7	8.5	-4.4	35.7	729.6	938.6

SOURCE: Congressional Budget Office.

a. Less than $50 million.

Table F-13.
Outlays for Entitlements and Other Mandatory Spending, Fiscal Years 1962-1998 (As a percentage of GDP)

	Means-Tested Programs			Non-Means-Tested Programs								Total Entitlements and Other Mandatory Spending
	Medicaid	Other	Total	Social Security	Medicare	Other Retirement and Disability	Unemployment Compensation	Farm Price Supports	Deposit Insurance	Other	Total	
1962	a	0.7	0.8	2.5	0	0.5	0.6	0.4	-0.1	1.4	5.4	6.1
1963	a	0.8	0.8	2.6	0	0.5	0.6	0.6	-0.1	1.1	5.3	6.0
1964	a	0.7	0.8	2.5	0	0.5	0.5	0.5	-0.1	1.2	5.3	6.1
1965	a	0.7	0.8	2.5	0	0.5	0.4	0.4	-0.1	1.3	5.0	5.8
1966	0.1	0.7	0.8	2.7	a	0.5	0.3	0.2	-0.1	1.3	5.0	5.7
1967	0.1	0.6	0.8	2.6	0.4	0.6	0.3	0.2	a	1.4	5.5	6.3
1968	0.2	0.7	0.9	2.7	0.6	0.7	0.2	0.4	-0.1	1.5	6.0	6.9
1969	0.2	0.7	0.9	2.8	0.7	0.6	0.2	0.4	-0.1	1.3	5.9	6.8
1970	0.3	0.7	1.0	2.9	0.7	0.7	0.3	0.4	a	1.3	6.2	7.2
1971	0.3	0.9	1.2	3.3	0.7	0.8	0.5	0.3	a	1.3	6.8	8.1
1972	0.4	1.0	1.4	3.3	0.7	0.8	0.6	0.3	-0.1	1.5	7.2	8.6
1973	0.4	0.9	1.2	3.7	0.7	0.9	0.4	0.3	-0.1	1.8	7.6	8.9
1974	0.4	1.0	1.4	3.8	0.7	1.0	0.4	0.1	a	1.8	7.8	9.1
1975	0.4	1.2	1.6	4.1	0.9	1.2	0.8	a	a	2.2	9.3	10.9
1976	0.5	1.3	1.7	4.2	1.0	1.1	1.1	0.1	a	1.8	9.2	10.9
1977	0.5	1.2	1.7	4.2	1.1	1.1	0.7	0.2	-0.1	1.5	8.7	10.4
1978	0.5	1.1	1.6	4.2	1.1	1.1	0.5	0.3	a	1.6	8.7	10.3
1979	0.5	1.1	1.6	4.1	1.1	1.1	0.4	0.1	-0.1	1.5	8.3	9.9
1980	0.5	1.2	1.7	4.3	1.2	1.2	0.6	0.1	a	1.6	9.0	10.7
1981	0.6	1.2	1.8	4.5	1.4	1.2	0.6	0.1	a	1.6	9.4	11.1
1982	0.5	1.2	1.7	4.8	1.5	1.3	0.7	0.4	-0.1	1.3	9.8	11.5
1983	0.6	1.2	1.7	4.9	1.6	1.3	0.9	0.6	a	1.1	10.3	12.0
1984	0.5	1.1	1.6	4.6	1.6	1.2	0.4	0.2	a	1.0	9.0	10.6
1985	0.6	1.1	1.6	4.5	1.7	1.1	0.4	0.4	-0.1	1.2	9.3	10.9
1986	0.6	1.0	1.6	4.5	1.7	1.1	0.4	0.6	a	0.7	9.0	10.6
1987	0.6	1.0	1.6	4.4	1.7	1.1	0.3	0.5	0.1	0.5	8.7	10.3
1988	0.6	1.0	1.6	4.4	1.7	1.1	0.3	0.2	0.2	0.7	8.6	10.2
1989	0.6	1.0	1.7	4.3	1.8	1.1	0.3	0.2	0.4	0.6	8.6	10.3
1990	0.7	1.0	1.8	4.3	1.9	1.1	0.3	0.1	1.0	0.6	9.3	11.0
1991	0.9	1.2	2.1	4.6	1.9	1.1	0.4	0.2	1.1	0.6	9.9	12.0
1992	1.1	1.3	2.4	4.6	2.1	1.1	0.6	0.2	a	0.7	9.3	11.7
1993	1.2	1.3	2.5	4.7	2.2	1.1	0.5	0.2	-0.4	0.6	8.9	11.4
1994	1.2	1.4	2.6	4.6	2.3	1.1	0.4	0.1	-0.1	0.4	8.9	11.4
1995	1.2	1.4	2.6	4.6	2.5	1.0	0.3	0.1	-0.2	0.5	8.7	11.4
1996	1.2	1.4	2.6	4.6	2.5	1.0	0.3	0.1	-0.1	0.4	8.8	11.4
1997	1.2	1.3	2.5	4.5	2.6	1.0	0.3	0.1	-0.2	0.4	8.7	11.2
1998	1.3	1.2	2.5	4.5	2.5	1.0	0.2	0.1	-0.1	0.4	8.7	11.2

SOURCE: Congressional Budget Office.

a. Less than 0.05 percent.

Appendix G

Major Contributors to the Revenue and Spending Projections

The following Congressional Budget Office analysts prepared the revenue and spending projections in this report:

Revenue Projections

Mark Booth	Individual income taxes
Hester Grippando	Customs duties, miscellaneous receipts
Carolyn Lynch	Corporate income taxes, Federal Reserve System earnings
Noah Meyerson	Social insurance taxes
Larry Ozanne	Capital gains realizations
John Sabelhaus	Estate and gift taxes
Sean Schofield	Excise taxes
David Weiner	Individual income taxes

Spending Projections

Defense, International Affairs, and Veterans' Affairs

Shawn Bishop	Veterans' health care, military health care
Kent Christensen	Defense (military construction, base closures)
Jeannette Deshong	Defense (military personnel, NATO expansion, and other international agreements)
Sunita D'Monte	International affairs (conduct of foreign affairs and information exchange activities), veterans' housing
Raymond Hall	Defense (Navy weapons, missile defenses, atomic energy defense)
Charles Riemann	Veterans' compensation and pensions
Dawn Sauter	Intelligence programs, defense acquisition reform, military retirement, veterans' education

JoAnn Vines	Defense (tactical air forces, bombers, Army)
Joseph Whitehill	International affairs (development, security, international financial institutions)

Health

Chuck Betley	Medicare, Federal Employees Health Benefits, Public Health Service
Michael Birnbaum	Medicare Part B, Public Health Service
Julia Christensen	Medicare Part B, Federal Employees Health Benefits, Public Health Service
Jeanne De Sa	Medicaid, State Children's Health Insurance Program
Cynthia Dudzinski	Medicare, Public Health Service
Dorothy Rosenbaum	Medicaid, State Children's Health Insurance Program, tobacco

Human Resources

Valerie Baxter	Food Stamps, child nutrition, child care
Sheila Dacey	Child Support Enforcement, Temporary Assistance for Needy Families, foster care
Deborah Kalcevic	Education
Sean McCluskie	Education, foster care
Josh O'Harra	Pell grants, Pension Benefit Guaranty Corporation, education
Carla Pedone	Housing assistance
Eric Rollins	Federal civilian retirement, Supplemental Security Income
Kathy Ruffing	Social Security
Christi Hawley Sadoti	Unemployment insurance, training programs, aging programs, arts and humanities

Natural and Physical Resources

Coleman Bazelon	Spectrum auction receipts
Gary Brown	Water resources, other natural resources, regional development
Kim Cawley	Energy, pollution control and abatement, Universal Service Fund
Lisa Cash Driskill	Highways
Mark Grabowicz	Justice, Postal Service
Kathleen Gramp	Energy, science and space, spectrum auction receipts
Mark Hadley	Commerce, credit unions, Small Business Administration
Victoria Heid	Conservation and land management, Outer Continental Shelf receipts, air transportation
David Hull	Agriculture
Craig Jagger	Agriculture
James Langley	Agriculture
Mary Maginniss	Deposit insurance, legislative branch
Susanne Mehlman	Justice, Federal Housing Administration and other housing credit
Marjorie Miller	Highways, AMTRAK, mass transit
Deborah Reis	Recreation, water transportation, community development
John Righter	General government, Indian affairs, Federal Emergency Management Agency

Other

Janet Airis	Appropriation bills
Edward Blau	Authorization bills
Jodi Capps	Appropriation bills
Betty Embrey	Appropriation bills
Kenneth Farris	Computer support
Mary Froehlich	Computer support
Vernon Hammett	Computer support
Jeffrey Holland	Net interest on the public debt
Catherine Mallison	Appropriation bills
Taman Morris	Other interest, civilian agency pay
Robert Sempsey	Appropriation bills
Jennifer Winkler	National income and product accounts

Glossary

This glossary defines economic and budgetary terms as they relate to this report and for the general information of our readers. Some entries sacrifice precision for brevity and clarity to the lay reader. Where appropriate, sources of data for economic variables are indicated as follows:

- BEA denotes the Bureau of Economic Analysis in the Department of Commerce;
- BLS denotes the Bureau of Labor Statistics in the Department of Labor;
- CBO denotes the Congressional Budget Office;
- FRB denotes the Federal Reserve Board; and
- NBER denotes the National Bureau of Economic Research.

adjusted gross income (AGI): All income subject to tax under the individual income tax after subtracting "above-the-line" deductions, such as certain contributions for individual retirement accounts and alimony payments. Taxable income is then derived by subtracting personal exemptions and the standard or itemized deductions from AGI.

aggregate demand: Total purchases of a country's output of goods and services by consumers, businesses, government, and foreigners during a given period. (BEA) Compare **domestic demand**.

AGI: See **adjusted gross income**.

appropriation act: A statute or legislation under the jurisdiction of the House and Senate Committees on Appropriations that provides budget authority. Enactment of an appropriation act generally follows adoption of an authorization. Currently, there are 13 regular appropriation acts each year; the Congress may also enact supplemental or continuing appropriations. See **budget authority**.

authorization: A statute or legislation that establishes or continues a federal program or agency. An authorization is normally prerequisite to consideration and enactment of an appropriation act. For some programs, the authorization itself provides the authority to incur obligations and make payments.

Balanced Budget Act of 1997 (Public Law 105-33): This act carried out reconciliation instructions contained in the budget resolution for fiscal years 1998 through 2002. Title X amended the Deficit Control Act by setting discretionary spending caps for each fiscal year through 2002, extending pay-as-you-go procedures for all affected legislation enacted through 2002, and making corresponding extensions in the sequestration procedures. The act created separate discretionary spending caps for defense and nondefense spending through 1999 and a third cap for violent crime reduction spending through fiscal year 2000. In addition, title X amended the Congressional Budget Act of 1974 to make various conforming procedural changes. See **reconciliation, discretionary spending caps**, and **pay-as-you-go**.

Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99-177): Referred to in this report as the Deficit Control Act, the act was originally known as Gramm-Rudman-Hollings. The act set forth specific deficit targets and a sequestration procedure to reduce spending if those targets were exceeded. The act also amended the Congressional Budget Act of 1974 to make significant changes in Congressional budget procedures. The Deficit Control Act has been amended and extended several times—most significantly by the Budget Enforcement Act of 1990 and most recently by the Omnibus Budget Reconciliation Act of 1993 and the Balanced Budget Act of 1997. See **discretionary spending caps** and **pay-as-you-go**.

baseline: A benchmark for measuring the budgetary effects of proposed changes in federal revenues or spending. As specified in section 257 of the Deficit Control Act, the baseline for revenues and direct spending generally assumes that laws now in effect will continue. The baseline projections for discretionary spending reflect the discretionary spending caps set forth in that act for each fiscal year through 2002 and then grow at the rate of inflation thereafter. See **revenues**, **direct spending**, and **discretionary spending**.

basis point: A hundredth of a percentage point. For example, the difference between interest rates of 10.5 percent and 10.0 percent is 50 basis points.

***Blue Chip* consensus forecast:** The average of about 50 economic forecasts surveyed by Capitol Publications, Inc.

budget authority: Legal authority to incur financial obligations that will result in outlays of federal government funds. Budget authority may be provided in an authorization or an appropriation act. Offsetting collections, including offsetting receipts, constitute negative budget authority. See **authorization**, **appropriation act**, and **offsetting receipts**.

Budget Enforcement Act of 1990 (Public Law 101-508): Title XIII of the Omnibus Budget Reconciliation Act of 1990. This act amended the Deficit Control Act to revise and extend the deficit targets through fiscal year 1995, to establish discretionary spending caps and pay-as-you-go procedures through fiscal year 1995, to conform sequestration procedures to the caps and pay-as-you-go, and to establish credit reform. This act also amended the Congressional Budget Act of 1974 to make significant changes in Congressional budget procedures. See **discretionary spending caps**, **pay-as-you-go**, and **credit reform**.

budget function: One of 20 broad categories into which federal spending and credit activities that serve similar objectives are grouped. National needs are grouped into 17 broad budget functions, including national defense, international affairs, energy, agriculture, health, income security, and general government. Three other functions—net interest, allowances, and undistributed offsetting receipts—are included to complete the budget.

budget resolution: A concurrent resolution, adopted by both Houses of Congress, that sets forth a Congressional budget plan for at least five years. The plan consists of spending and revenue targets and is implemented through subsequent legislation, including appropriation acts and changes in laws that affect revenues and direct spending. Such changes may be in response to reconciliation instructions included in the budget resolution. The targets established in the budget resolution are enforced through Congressional procedural mechanisms set out in the Congressional Budget Act of 1974. See **appropriation act**, **direct spending**, and **reconciliation**.

budgetary resources: All sources of budget authority that are subject to sequestration. Budgetary resources include new budget authority, unobligated balances, direct spending authority, and obligation limitations. See **budget authority** and **sequestration**.

business cycle: Fluctuations in overall business activity accompanied by swings in the unemployment rate, interest rates, and profits. Over a business cycle, real activity rises to a peak (its highest level during the cycle), then falls until it reaches its trough (its lowest level following the peak), whereupon it starts to rise again, defining a new cycle. Business cycles are irregular, varying in frequency, magnitude, and duration. (NBER)

capacity utilization rate: The seasonally adjusted output of the nation's factories, mines, and electric and gas utilities expressed as a percentage of their capacity to produce output. The capacity of a facility is the greatest output it can maintain with a normal work pattern. (FRB)

capital: *Physical capital* is the stock of products set aside to support future production and consumption. In the national income and product accounts, private capital consists of business inventories, producers' durable equipment, and residential and nonresidential structures. *Financial capital* is funds raised by governments, individuals, or businesses by incurring liabilities such as bonds, mortgages, or stock certificates. *Human capital* is the education, training, work experience, and other attributes that enhance the ability of the labor force to produce goods and services. *Bank capital* is the sum advanced and put at risk by the owners of a bank; it represents the first "cushion" in the event of loss, thereby decreasing the willingness of the owners to take risks in lending. See **consumption** and **national income and product accounts**.

central bank: A government-established agency responsible for conducting monetary policy and overseeing credit conditions. The Federal Reserve System fulfills those functions in the United States. See **Federal Reserve System** and **monetary policy**.

civilian unemployment rate: Unemployment as a percentage of the civilian labor force—that is, the labor force excluding armed forces personnel. (BLS) See **unemployment**.

compensation: All income due to employees for their work during a given period. In addition to wages, salaries, bonuses, and stock options, compensation includes fringe benefits and the employer’s share of social insurance contributions. (BEA)

consumer confidence: An index of consumers' attitudes and buying plans. One such index is constructed by the University of Michigan Survey Research Center based on surveys of consumers' views of the state of the economy and of their personal finances, both current and prospective.

consumer price index (CPI): The consumer price index, a measure of the change in the cost of living, commonly used as a measure of inflation. There are two official CPIs, the CPI-U and the CPI-W. The *CPI-U* is an index of consumer prices based on the typical market basket of goods and services consumed by all urban consumers during a base period. The *CPI-W* is an index of consumer prices based on the typical market basket of goods and services consumed by urban wage earners and clerical workers during a base period. (BLS)

consumption: Total purchases of goods and services during a given period by households for their own use. (BEA)

CPI: See **consumer price index**.

credit crunch: A sudden reduction in the availability of credit from banks and capital markets at given interest rates on bank loans and other credit instruments. The reduced availability can result from many factors, including an increased perception of risk to lenders, an imposition of credit controls, or a sharp restriction of the money supply.

credit reform: A revised system of budgeting for federal credit activities that focuses on the cost of subsidies conveyed in federal credit assistance. The system was authorized by the Federal Credit Reform Act of 1990, which was part of the Budget Enforcement Act of 1990. See **credit subsidy**.

credit subsidy: The estimated long-term cost to the federal government of a direct loan or a loan guarantee calculated on the basis of net present value, excluding federal administrative costs and any incidental effects on governmental receipts or outlays. For direct loans, the subsidy cost is the net present value of loan disbursements minus repayments of interest and principal, adjusted for estimated defaults, prepayments, fees, penalties, and other recoveries. For loan guarantees, the subsidy cost is the net present value of the estimated payments by the government to cover defaults and delinquencies, interest subsidies, or other payments, offset by any payments to the government, including origination and other fees, penalties, and recoveries. See **present value**.

currency value: See **exchange rate**.

current-account balance: The net revenues that arise from a country's international sales and purchases of goods and services plus net international transfers (public or private gifts or donations) and net factor income (primarily capital income from foreign-located property owned by residents minus capital income from domestic property owned by nonresidents). The current-account balance differs from net exports in that it includes international transfers and net factor income. (BEA) See **net exports**.

current dollar: A measure of spending or revenue in a given year that has not been adjusted for differences in prices between that year and a base year. See **real**.

cyclical deficit: The part of the budget deficit that results from cyclical factors rather than from underlying fiscal policy. The cyclical deficit reflects the fact that when gross domestic product (GDP) falls, revenues automatically fall and outlays automatically rise. By definition, the cyclical deficit is zero when the economy is operating at potential GDP and the unemployment rate equals the nonaccelerating inflation rate of unemployment, or NAIRU. See **deficit**, **fiscal policy**, and **NAIRU**; compare with **standardized-employment deficit**. (CBO)

debt: Total debt issued by the federal government is referred to as *federal debt* or *gross debt*. Federal debt has two components: *debt held by the public* (federal debt held by nonfederal investors, including the Federal Reserve System) and *debt held by government accounts* (federal debt held by federal government trust funds, deposit insurance funds, and other federal accounts). *Debt subject to limit* is federal debt that is subject to a statutory limit on its issuance. The current limit applies to almost all gross debt, except a small portion of the debt issued by the Department of the Treasury and the small amount of debt issued by other federal agencies (primarily the Tennessee Valley Authority and the Postal Service).

debt service: Payment of scheduled interest obligations on outstanding debt.

deficit: The amount by which outlays exceed revenues in a given period, typically a fiscal year. A negative deficit is equivalent to a surplus. See **surplus**.

Deficit Control Act: See **Balanced Budget and Emergency Deficit Control Act of 1985**.

deflator: See **implicit deflator**.

deposit insurance: The guarantee by a federal agency that an individual depositor at a participating depository institution will receive the full amount of the deposit (up to $100,000) if the institution becomes insolvent.

depreciation: Decline in the value of a currency, financial asset, or capital good. When applied to a capital good, depreciation usually refers to loss of value because of obsolescence or wear.

devaluation: The fall in the value of a currency that occurs when the government declares that its domestic currency will buy fewer units of a foreign currency. Such a policy involves government intervention to peg its currency (that is, fix its exchange rate). Many governments peg their domestic currencies to a stable currency, such as the U.S. dollar or the German mark. See **exchange rate** and **depreciation**.

direct spending: Another term for **mandatory spending**. As defined in the Deficit Control Act, as amended, direct spending comprises entitlements, the Food Stamp program, and budget authority provided by laws other than annual appropriation acts. See **entitlement**, **budget authority**, and **appropriation act**; compare with **discretionary spending**.

discount rate: The interest rate the Federal Reserve System charges on a loan that it makes to a bank. Such loans, when allowed, enable a bank to meet its reserve requirements without reducing its loans.

discouraged workers: Jobless people who are available for work but who are not actively seeking it because they think they have poor prospects of finding jobs. Discouraged workers are not counted as part of the labor force or as being unemployed. (BLS) See also **unemployment**.

discretionary spending: Spending for programs whose funding levels are determined and controlled in annual appropriation acts. See **appropriation act**; compare with **direct spending**.

discretionary spending caps: Ceilings imposed in each fiscal year through 2002 on budget authority and outlays for programs whose funding levels are determined and controlled in annual appropriation acts. Established in the Budget Enforcement Act of 1990, the ceilings were further amended in the Balanced Budget Act of 1997 to set separate caps on defense and nondefense spending through fiscal year 1999 and on violent crime reduction spending through 2000. (For a list of discretionary programs, see U.S. House of Representatives, *Balanced Budget Act of 1997*, conference report to accompany H.R. 2015, Report 105-217 (July 30, 1997), p. 1019.) See **discretionary spending** and **sequestration**.

disposable personal income: Income received by individuals, including transfer payments, minus personal taxes and fees paid to government. (BEA)

domestic demand: Total purchases of goods and services, regardless of origin, by U.S. consumers, businesses, and governments during a given period. Domestic demand equals gross domestic product minus net exports. (BEA) See **gross domestic product** and **net exports**; compare **aggregate demand**.

ECI: See **employment cost index**.

economic profits: Profits of corporations, adjusted to remove the distortions in depreciation allowances caused by tax rules and to exclude capital gains on inventories. Economic profits represent a better measure of profits from current production than the book profits reported by corporations. (BEA)

employment cost index (ECI): An index of the cost of an hour of labor—comprising the cost to the employer for wage or salary payments, employee benefits, and contributions for social insurance. The ECI is unaffected by changes in the mix of occupations and of employment by industry. (BLS)

entitlements: Programs that create a legal obligation on the federal government to make payments to any person, business, or unit of government that meets the criteria set in law. The Congress controls those programs by setting eligibility criteria and the benefit or payment rules, not by providing a specific level of funding. Although the level of spending for entitlements is determined by the number of beneficiaries who meet the eligibility criteria, funding may be provided in either the authorization or an appropriation act. The best-known entitlements are the major benefit programs, such as Social Security and Medicare. See **authorization** and **direct spending**.

European Monetary Union (EMU): A currency union consisting of most of the members of the European Union, who in January 1999 aligned their monetary policies under a European Central Bank and adopted a common currency, the euro.

exchange rate: The number of units of a foreign currency that can be bought with one unit of the domestic currency. (FRB)

excise tax: A tax levied on the purchase of a specific type of good or service, such as tobacco products or telephone services.

expansion: A phase of the business cycle that extends from a trough to the next peak. See **business cycle**. (NBER)

federal funds: All funds that compose the federal budget except those classified by law as trust funds. See **trust fund**.

federal funds rate: Overnight interest rate at which financial institutions borrow and lend monetary reserves. A rise in the federal funds rate (compared with other short-term rates) suggests a tightening of monetary policy, whereas a fall suggests an easing. (FRB)

Federal Open Market Committee (FOMC): The group within the Federal Reserve System that determines the direction of monetary policy. The open market desk at the Federal Reserve Bank of New York implements the policy with open market operations—the purchase or sale of government securities—which influence short-term interest rates and the growth of the money supply. The FOMC is composed of 12 members, including the seven members of the Board of Governors of the Federal Reserve System, the president of the Federal Reserve Bank of New York, and a rotating group of four of the other 11 presidents of the regional Federal Reserve Banks. See **Federal Reserve System** and **monetary policy**.

Federal Reserve System: As the central bank of the United States, the Federal Reserve is responsible for conducting the nation's monetary policy and overseeing credit conditions. See **monetary policy**.

financing account: An account established under credit reform to handle the cash transactions of federal direct loans and loan guarantees. Under credit reform, only the subsidy cost of direct loans or loan guarantees appears in the budget. The transactions reflected in the financing accounts are considered a means of financing the deficit and, as such, are extrabudgetary. See **credit subsidy** and **means of financing**.

fiscal policy: The government’s choice of tax and spending programs, which influences the amount and maturity of government debt as well as the level, composition, and distribution of national output and income. An "easy" fiscal policy stimulates the short-term growth of output and income, whereas a "tight" fiscal policy restrains their growth. Movements in the standardized-employment deficit constitute one overall indicator of the tightness or ease of federal fiscal policy; an increase relative to potential gross domestic product suggests fiscal ease, whereas a decrease suggests fiscal restriction. The President and the Congress jointly determine federal fiscal policy. See **standardized-employment deficit**.

fiscal year: A yearly accounting period. The federal government's fiscal year begins October 1 and ends September 30. Fiscal years are designated by the calendar years in which they end—for example, fiscal year 1998 began October 1, 1997, and will end on September 30, 1998.

GDI: See **gross domestic income**.

GDP: See **gross domestic product**.

GDP gap: The difference between potential real GDP and actual real GDP, expressed as a percentage of potential real GDP. See **potential real GDP** and **real**.

GNP: See **gross national product**.

government-sponsored enterprises: Financial institutions established and chartered by the federal government that are privately owned and that facilitate the flow of funds to selected lending markets, such as residential mortgages and agricultural credit. Major examples are the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Banks.

grants: Transfer payments from the federal government to state and local governments or other recipients to help fund projects or activities that do not involve substantial federal participation.

grants-in-aid: Grants from the federal government to state and local governments to help provide for programs of assistance or service to the public.

gross debt: Total debt issued by the federal government. See **debt**.

gross domestic income (GDI): The sum of all income earned in the domestic production of goods and services. (BEA)

gross domestic product (GDP): The total market value of goods and services produced domestically during a given period. The components of GDP are consumption, gross investment, government purchases of goods and services, and net exports. (BEA) See **consumption**, **gross investment**, and **net exports**.

gross investment: A measure of additions to the capital stock that does not subtract depreciation of existing capital.

gross national product (GNP): The total market value of goods and services produced in a given period by labor and capital supplied by residents of a country, regardless of where the labor and capital are located. GNP differs from GDP primarily by including the capital income that residents earn from investments abroad and excluding the capital income that nonresidents earn from domestic investment.

hedge fund: An unregulated private investment pool that holds financial assets. To remain unregulated, hedge funds must limit their membership to small numbers of wealthy individuals and institutions. Institutional members of some hedge funds have included commercial banks. Unlike pension and mutual funds, hedge funds finance some investment from borrowing, a practice that increases the risk of their financial positions. Hedge funds may also follow complex investment strategies, especially by trading in financial derivatives—assets whose value derives from the performance of an index of more elementary assets, such as stocks or bonds of individual companies or organizations.

implicit deflator: A measure of price for the whole economy or for a category of spending given by the ratio of current-dollar spending to real spending. See **real** and **current dollar**. (BEA)

inflation: Growth in a measure of the general price level, usually expressed as an annual rate of change.

infrastructure: Government-owned capital goods that provide services to the public, usually with benefits to the community at large as well as to the direct user. Examples include schools, roads, bridges, dams, harbors, and public buildings.

inventories: Stocks of goods held by businesses either for further processing or for sale. (BEA)

investment: *Physical investment* is the current product set aside during a given period to be used for future production—in other words, an addition to the stock of capital goods. As measured by the national income and product accounts, private domestic investment consists of investment in residential and nonresidential structures, producers' durable equipment, and the change in business inventories. *Financial investment* is the purchase of a financial security. *Investment in human capital* is spending on education, training, health services, and other activities that increase the productivity of the workforce. Investment in human capital is not treated as investment by the national income and product accounts. See **national income and product accounts** and **inventories**.

labor force: The number of people who have jobs or who are available for work and are actively seeking jobs. The *labor force participation rate* is the labor force as a percentage of the noninstitutional population age 16 or older. (BLS)

liquidating account: Any budgetary account established under credit reform to finance direct loan and loan guarantee activities that were obligated or committed before October 1, 1992 (the effective date of credit reform). See **credit reform**.

liquidity: The ease with which an asset can be sold for cash. An asset is highly liquid if it comes in standard units that are traded daily in large amounts by many buyers and sellers. Among the most liquid of assets are U.S. Treasury securities.

long-term interest rate: The interest rate earned by a note or bond that matures in 10 or more years.

mandatory spending: Another term for **direct spending**.

marginal tax rate: The tax rate that applies to an additional dollar of income.

means of financing: Means by which a budget deficit is financed or a surplus is disposed of. Means of financing are not included in the budget totals. The primary means of financing is borrowing from the public. In general, the cumulative amount borrowed from the public (debt held by the public) will increase if there is a deficit and decrease if there is a surplus, although other factors can affect the amount that the government must borrow. Those other factors, known as *other means of financing*, include reductions (or increases) in the government's cash balances, seigniorage, changes in checks outstanding, changes in accrued interest costs included in the budget but not yet paid, and cash flows reflected in credit financing accounts. See **deficit**, **surplus**, and **debt**.

means-tested programs: Programs that provide cash or services to people who meet a test of need based on income and assets. Most means-tested programs are entitlements (such as Medicaid, the Food Stamp program, Supplemental Security Income, family support, and veterans' pensions), but a few (such as subsidized housing and various social services) are funded through discretionary appropriations. See **entitlements** and **discretionary spending**.

monetary policy: The strategy of influencing movements of the money supply and interest rates to affect output and inflation. An "easy" monetary policy suggests faster money growth and initially lower short-term interest rates in an

attempt to increase aggregate demand, but it may lead to a higher rate of inflation. A "tight" monetary policy suggests slower money growth and higher interest rates in the near term in an attempt to reduce inflationary pressure by reducing aggregate demand. The Federal Reserve System conducts monetary policy in the United States. See**money supply** and **aggregate demand**.

money supply: Private assets that can readily be used to make transactions or are easily convertible into assets that can.

NAIRU (nonaccelerating inflation rate of unemployment): The unemployment rate consistent with a constant inflation rate. An unemployment rate higher than the NAIRU indicates downward pressure on inflation, whereas an unemployment rate lower than the NAIRU indicates upward pressure on inflation. Estimates of the NAIRU are based on the historical relationship between inflation and the unemployment rate. CBO's procedures for estimating the NAIRU are described in Appendix B of *The Economic and Budget Outlook: An Update* (August 1994). See **inflation** and **unemployment**.

national income and product accounts (NIPAs): Official U.S. accounts that track the level and composition of GDP and how the costs of production are distributed as income. (BEA)

national saving: Total saving by all sectors of the economy: personal saving, business saving (corporate after-tax profits not paid as dividends), and government saving (the budget surplus or deficit—indicating dissaving—of all government entities). National saving represents all income not consumed, publicly or privately, during a given period. (BEA)

net exports: Exports of goods and services produced in a country minus its imports of goods and services produced elsewhere.

net interest: *In the federal budget*, net interest includes federal interest payments to the public as recorded in budget function 900. Net interest also includes, as an offset, interest income received by the government on loans and cash balances. *In the national income and product accounts* (NIPAs), net interest is the income component of GDP paid as interest—primarily interest that domestic businesses pay minus interest they receive. The NIPAs include government interest payments in personal income, but such payments are not part of GDP. See **national income and product accounts**.

net national saving: National saving minus depreciation of physical capital. See **depreciation** and **capital**.

NIPAs: See **national income and product accounts**.

nominal: A measure based on current-dollar value. For income or spending, the nominal level is measured in current dollars. For an interest rate, the nominal rate on debt selling at par is the current-dollar interest paid in any year as a ratio of the current-dollar value of the debt when it was issued. For debt initially issued or now selling at a discount, the nominal rate includes as a payment the estimated yearly equivalent of the difference between the redemption price and the discounted price. For an exchange rate, the nominal rate is the rate at which one nominal unit of currency trades for another. See **current dollar**; compare with **real**.

off-budget: Spending or revenues excluded from the budget totals by law. The revenues and outlays of the two Social Security trust funds and the transactions of the Postal Service are off-budget and (except for the administrative costs of Social Security, which are discretionary) are not included in the budget resolution or in any calculations necessary under the Deficit Control Act. See **budget resolution** and **Balanced Budget and Emergency Deficit Control Act of 1985**.

offsetting receipts: Funds collected by the federal government that are recorded as negative budget authority and outlays and credited to separate receipt accounts. More than half of offsetting receipts are intragovernmental receipts that reflect agencies' payments to retirement and other funds on behalf of their employees; those receipts simply balance payments elsewhere in the budget. Proprietary receipts are offsetting receipts that come to the federal government from the public, generally as a result of voluntary, business-type transactions. Examples of proprietary receipts are premiums for Supplementary Medical Insurance (Part B of Medicare), receipts from timber and oil leases, and proceeds from the sale of electric power. See **budget authority** and **receipt account**; compare with **revenues**.

Omnibus Budget Reconciliation Act of 1993 (Public Law 103-66): This act carried out the reconciliation instructions contained in the budget resolution for fiscal years 1994 through 1998. Title XIV of the act amended the Deficit Control Act by extending the discretionary spending caps, pay-as-you-go procedures, and sequestration procedures through fiscal year 1998. The act did not extend deficit targets beyond fiscal year 1995. See **reconciliation**, **discretionary spending caps**, and **pay-as-you-go**.

other means of financing: See **means of financing**.

outlays: Expenditures made to fulfill a federal obligation, generally by issuing a check or disbursing cash. Offsetting collections, including offsetting receipts, constitute negative outlays. Outlays may pay for obligations incurred in previous fiscal years or in the current year. Outlays, therefore, flow in part from unexpended balances of prior-year budget authority and in part from budget authority provided for the current year. Unlike outlays for other categories of spending, outlays for interest on the public debt are counted when the interest is earned, not when it is paid. Also, outlays for direct loans and loan guarantees made since fiscal year 1992 reflect the estimated subsidy costs instead of cash transactions.

pay-as-you-go (PAYGO): A procedure that tracks the five-year budgetary effects of all enacted legislation affecting direct spending or receipts and that triggers a sequestration if the legislation would increase the deficit or reduce the surplus in a fiscal year. The procedure was established in the Budget Enforcement Act of 1990 and was extended in the Balanced Budget Act of 1997 for laws enacted through fiscal year 2002. See **direct spending**, **sequestration**, **deficit**, and **surplus**.

peak: See **business cycle**.

personal saving: Saving by households. Personal saving equals disposable personal income minus spending for consumption and interest payments. The *personal saving rate* is personal saving as a percentage of disposable personal income. (BEA) See **disposable personal income**.

potential labor force: The labor force adjusted for movements in the business cycle. See **labor force** and **business cycle**.

potential real GDP: The highest level of real gross domestic product that could persist for a substantial period without raising the rate of inflation. CBO calculates potential real GDP by relating it to the nonaccelerating inflation rate of unemployment, a rate that is consistent with a constant inflation rate. (CBO) See **real** and **NAIRU**.

present value: A single number that expresses a flow of current and future income (or payments) in terms of an equivalent lump sum received (or paid) today. The calculation of present value depends on the rate of interest. For example, given an interest rate of 5 percent, 95 cents today will grow to $1 next year. Hence, the present value of $1 payable a year from today is only 95 cents.

private saving: Saving by households and businesses. Private saving is equal to personal saving plus after-tax corporate profits minus dividends paid. (BEA)

productivity: Average real output per unit of input. *Labor productivity* is average real output per hour of labor. The growth of labor productivity is defined as the growth of real output that is not explained by the growth of labor input alone. *Total factor productivity* is average real output per unit of combined labor and capital inputs. The growth of total factor productivity is defined as the growth of real output that is not explained by the growth of labor and capital. Labor productivity and total factor productivity differ in that increases in capital per worker raise labor productivity but not total factor productivity. (BLS)

program account: Any budgetary account that finances credit subsidies and the costs of administering credit programs. See **credit subsidy**.

real: Adjusted to remove the effects of inflation. *Real output* represents the quantity, rather than the dollar value, of goods and services produced. *Real income* represents the power to purchase real output. *Real data* at the finest level of disaggregation are constructed by dividing the corresponding nominal data, such as spending or wage rates, by a price index. Real aggregates, such as *real GDP*, are constructed by a procedure that allows the real growth of the aggregate to reflect the real growth of its components, appropriately weighted by the importance of the components. A *real interest rate* is a nominal interest rate adjusted for expected inflation; it is often approximated by subtracting an estimate of the expected inflation rate from the nominal interest rate. Compare with **nominal** and **current dollar**.

receipt account: Any account that is established exclusively to record the collection of income, including negative subsidies. In general, receipt accounts that collect money arising from the exercise of the government's sovereign powers are included as revenues, whereas the proceeds of intragovernmental transactions or collections from the public arising from business-type transactions (such as interest income, proceeds from the sale of property or products, or profits from federal credit activities) are included as offsetting receipts—that is, credited as offsets to outlays rather than included in revenues. See **revenues** and **offsetting receipts**.

recession: A phase of the business cycle extending from a peak to the next trough—usually lasting six months to a year—and characterized by widespread declines in output, income, employment, and trade in many sectors of the economy. Real GDP usually falls throughout a recession. (NBER) See **business cycle**.

reconciliation: A special legislative procedure established under the Congressional Budget Act of 1974 by which the Congress changes existing laws that affect revenues or direct spending to conform to the revenue and spending targets established in the budget resolution. The budget resolution may contain *reconciliation instructions*, which direct Congressional committees to make changes in revenue or direct spending programs under their jurisdiction to achieve a specified budgetary result. The legislation to implement the instructions is usually combined into one comprehensive *reconciliation bill*. Reconciliation affects revenues, direct spending, and offsetting receipts, but usually not discretionary spending. See **budget resolution**, **revenues**, **direct spending**, and **discretionary spending**.

recovery: A phase of the business cycle that lasts from a trough until overall economic activity returns to the level it reached at the previous peak. (NBER) See **business cycle**.

revenues: Funds collected from the public arising from the sovereign power of the government. Federal revenues consist of receipts from income taxes (individual and corporate), excise taxes, and estate and gift taxes; social insurance contributions; customs duties; fees and fines; and miscellaneous receipts, such as Federal Reserve earnings, gifts, and contributions. Federal revenues are also known as federal governmental receipts but do not include offsetting receipts, which are recorded as negative budget authority and outlays. Compare with **offsetting receipts**.

risk premium: The additional return that investors require to hold an asset whose perceived return is riskier than that of a hypothetically safe asset. The risk can arise from many sources—such as the possibility of default (in the case of corporate or municipal debt) or the volatility of earnings (in the case of corporate equities).

S corporation: A domestically owned corporation with no more than 75 owners who have all elected to pay taxes under Subchapter S of the Internal Revenue Code. S corporations are treated like partnerships. That is, they are exempt from the corporate income tax, but the owners pay income taxes on all of the firm's income, even if some of the earnings are retained by the firm.

saving rate: See **personal saving**.

seigniorage: The gain to the government from the difference between the face value of minted coins put into circulation and the cost of producing them (including the cost of the metal used in the coins). Seigniorage is considered a means of financing and is not included in the budget totals. See **means of financing**.

sequestration: The cancellation of budgetary resources to enforce the discretionary spending caps and pay-as-you-go procedures established in the Budget Enforcement Act of 1990 and most recently extended by the Balanced Budget Act of 1997. Sequestration is triggered if the Office of Management and Budget determines that enacted discretionary appropriations exceed the discretionary spending caps or that enacted legislation affecting direct spending and receipts increases the deficit or reduces the surplus. Changes in direct spending and receipts that increase the deficit or reduce the surplus would result in reductions in direct spending not otherwise exempted by law. Discretionary spending in excess of the caps would cause the cancellation of budgetary resources within the discretionary spending category. See **discretionary spending caps** and **pay-as-you-go**.

short-term interest rate: The interest rate earned by a debt instrument (such as a Treasury bill) that will mature within one year.

standardized-employment deficit: The level of the federal budget deficit that would occur under current law if the economy operated at potential GDP. The standardized-employment deficit provides a measure of underlying fiscal policy by removing the influence of cyclical factors from the budget deficit. (CBO) Compare with **cyclical deficit**.

structural deficit: Same as **standardized-employment deficit**.

Subchapter S corporation: See **S corporation**.

subsidy cost: See **credit subsidy**.

surplus: The amount by which revenues exceed outlays in a given period, typically a fiscal year. A negative surplus is equivalent to a deficit. See **deficit**.

10-year Treasury note: An interest-bearing note issued by the U.S. Treasury that is to be redeemed in 10 years.

three-month Treasury bill: An interest-bearing security issued by the U.S. Treasury that is to be redeemed in 91 days.

thrift institutions: Savings and loan institutions and mutual savings banks.

total factor productivity: See **productivity**.

transfer payments: Payments in return for which no good or service is currently received, such as welfare or Social Security payments or money sent to relatives abroad. (BEA)

trough: See **business cycle**.

trust fund: A fund, designated as a trust fund by law, that is credited with income from earmarked collections and charged with certain outlays. Collections may come from the public (for example, from taxes or user charges) or from intrabudgetary transfers. The federal government has more than 150 trust funds. The largest and best known finance major benefit programs (including Social Security and Medicare) and infrastructure spending (the Highway and the Airport and Airway Trust Funds). See **federal funds**.

underlying rate of inflation: The rate of inflation of a modified consumer price index for all urban consumers that excludes from the market basket the components most volatile in price: food, energy, and used cars. See **consumer price index**.

unemployment: Joblessness. The measure of unemployment is the number of jobless people who are available for work and are actively seeking jobs. The *unemployment rate* is unemployment as a percentage of the labor force. (BLS) See also **discouraged workers**.

unemployment gap: The difference between the nonaccelerating inflation rate of unemployment (NAIRU) and the unemployment rate. See **NAIRU**.

yield: The average annual rate of return on a security, including interest payments and repayment of principal, if it is held to maturity.

yield curve: The relationship formed by plotting the yields of otherwise comparable fixed-income securities against their terms of maturity. Typically, yields increase as maturities lengthen. The rate of that increase determines the "steepness" or "flatness" of the yield curve. Ordinarily, a steepening (or flattening) of the yield curve is taken to suggest that short-term interest rates are expected to rise (or fall).