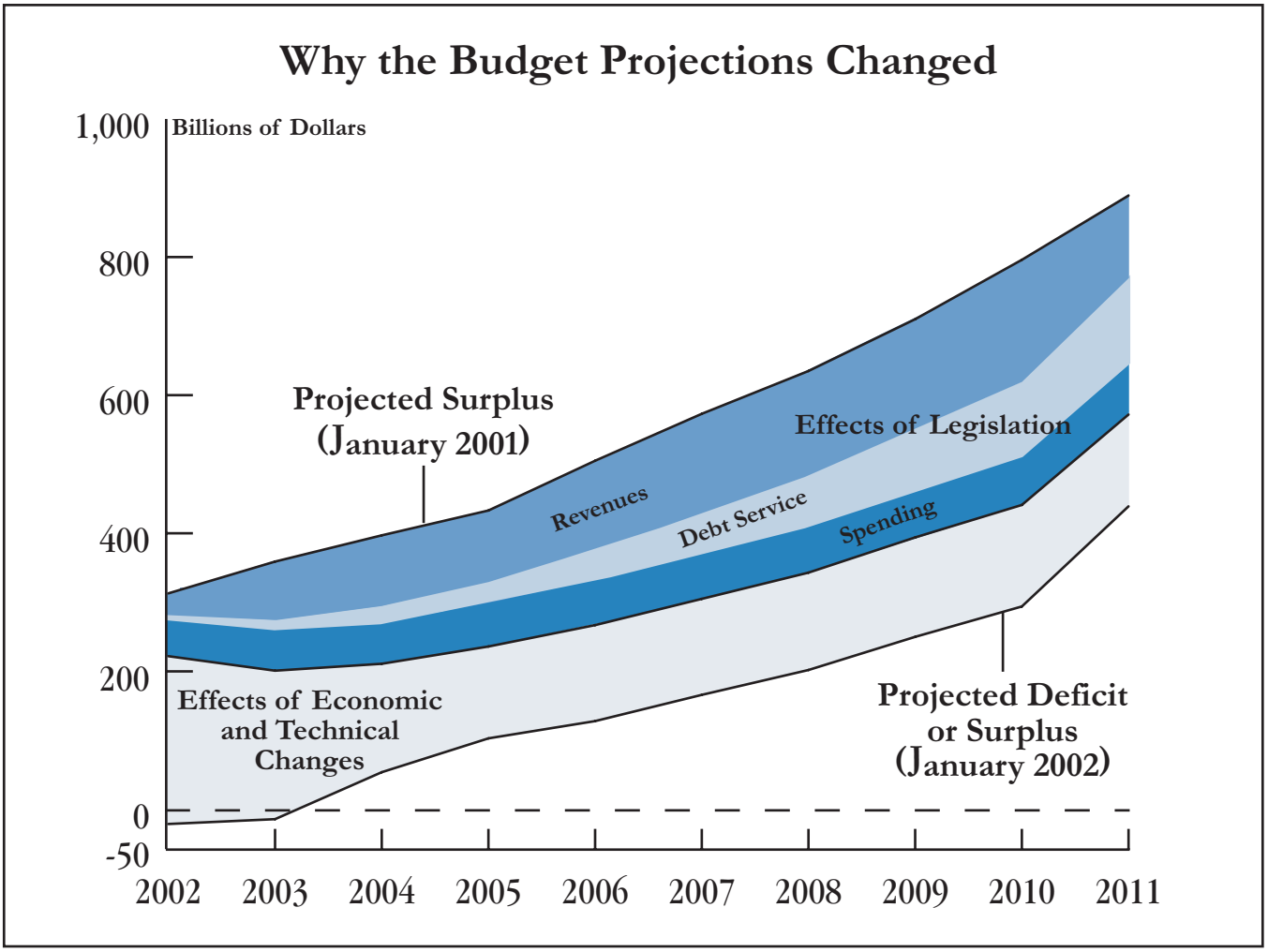
CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

The Budget and Economic Outlook: Fiscal Years 2003-2012



A REPORT TO THE SENATE AND HOUSE COMMITTEES ON THE BUDGET

JANUARY 2002

The Budget and Economic Outlook: Fiscal Years 2003-2012

The Congress of the United States
Congressional Budget Office

NOTES

Unless otherwise indicated, the years referred to in this report are federal fiscal years, which run from October 1 to September 30.

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

Some of the figures in this report indicate periods of recession by using shaded vertical bars. The bars extend from the peak to the trough of each recession. The recession that began in March 2001 is assumed to end in the first quarter of calendar year 2002.

Data for real gross domestic product are based on chained 1996 dollars.

For purposes of comparison, the figure on the cover shows projections for 2002 through 2011 because that was the period covered by CBO's January 2001 baseline. The current projection period extends from 2003 through 2012.

A glossary of budgetary and economic terms used in this report is available on CBO's Web site (www.cbo.gov). Other supplemental material that will appear on the site shortly includes *CBO's Economic Forecasting Record* and *Uncertainties in Projecting Budget Surpluses: A Discussion of Data and Methods*.

Preface

This volume is one of a series of reports on the state of the budget and the economy 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 to the Committees on the Budget periodic reports about fiscal policy and to provide five-year baseline projections of the federal budget. In accordance with CBO's mandate to provide impartial analysis, the report contains no recommendations.

The baseline spending projections were prepared by the staff of CBO's Budget Analysis Division under the supervision of Robert Sunshine, Peter Fontaine, Janet Airis, Thomas Bradley, Kim Cawley, Paul Cullinan, Jeffrey Holland, and Jo Ann Vines. The economic outlook was prepared by John Peterson and Eric Warasta of the Macroeconomic Analysis Division, with assistance from the staff of the division, under the direction of Robert Dennis. The revenue estimates were prepared by the staff of the Tax Analysis Division under the supervision of Thomas Woodward, Mark Booth, and David Weiner, with assistance from the Joint Committee on Taxation.

Jeffrey Holland wrote the summary of the report. Ellen Hays wrote Chapter 1 and Appendix B, with assistance from Mark Booth, Sandy Davis, Adaeze Enekwechi, Kathleen Gramp, and Jina Yoon. Mark Lasky wrote Chapter 2, with assistance from many members of the Macroeconomic Analysis Division. Mark Booth and Thomas Woodward wrote Chapter 3. Barry Blom and Felix LoStracco wrote Chapter 4, with contributions from Paul Cullinan, Jeanne De Sa, Eric Rollins, and Jina Yoon. Robert Dennis wrote Chapter 5, with assistance from many people in the Budget, Tax, and Macroeconomic Analysis Divisions. Ufuk Demiroglu, Frank Russek, and John McMurray carried out the computations for Figure 5-1. Benjamin Page wrote Chapter 6. Matthew Schmit wrote Chapter 7, with help from Jen Bullard Bowman, J. Michael Gilmore, Theresa Gullo, Leo Lex, David Moore, and Jo Ann Vines. Adaeze Enekwechi wrote Appendixes A, C, and F, and Barry Blom wrote Appendix D.

CBO's Panel of Economic Advisers commented on an early version of the economic forecast underlying this report. Members of the panel are Andrew B. Abel, Alan J. Auerbach, Michael J. Boskin, Barry P. Bosworth, Robert Dederick, William C. Dudley, Martin Feldstein, Robert J. Gordon, Robert E. Hall, N. Gregory Mankiw, Allan Meltzer, William Niskanen, William D. Nordhaus, June E. O'Neill, Rudolph G. Penner, James Poterba, Michael Prell, Robert Reischauer, Alice Rivlin, Joel Slemrod, and Martin B. Zimmerman. Sara Johnson of DRI/WEFA, Chris Varvares of Macroeconomic Advisers, and David Wyss of Standard & Poor's participated as guests at the panel's meeting. Although CBO's advisers provided considerable assistance, they are not responsible for the contents of this report.

Christine Bogusz, Leah Mazade, John Skeen, and Christian Spoor edited the volume. Marion Curry, Linda Lewis Harris, Denise Jordan, and Dorothy Kornegay assisted in its production. Kathryn Winstead prepared the report for publication, with assistance from Sharon Corbin-Jallow. Annette Kalicki, with help from Simone Thomas and Martina Wojak-Piotrow, prepared the electronic versions for CBO's Web site. Barry Anderson designed the cover, and Kathryn Winstead produced it.

Dan L. Crippen
Director

January 2002

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Summary

The economic recession and recent laws have combined to sharply reduce the budget surpluses projected a year ago. In January 2001, the Congressional Budget Office (CBO) projected that under the laws and policies then in force, the federal government would run surpluses in fiscal years 2002 through 2011 totaling $5.6 trillion.[1] In CBO's new projections, that cumulative surplus has fallen to $1.6 trillion—a drop of $4 trillion (see Summary Table 1).

About 60 percent of that decline results from legislation—primarily the tax cuts enacted in June and additional discretionary spending—and from its effect on the cost of paying interest on the federal debt. Changes in the economic outlook and various technical revisions since last January account for the other 40 percent of that decline.

For both 2002 and 2003, CBO now projects that, instead of surpluses, the total budget will show small deficits, if current policies remain the same and the economy follows the path that CBO is forecasting. In 2001, by contrast, the federal government ran a surplus of $127 billion (see Summary Table 2).

The deficit projected for this year—$21 billion—represents a change of more than $300 billion from last January's projection. Over 70 percent of that reduction results from the weak economy and related technical factors, which have considerably lowered the revenues expected for this year and next.

For the current 10-year projection period, 2003 through 2012, CBO estimates a total surplus of nearly $2.3 trillion. However, almost half of that total comes from the surpluses projected for 2011 and 2012—the last two years of the projection period and thus the most uncertain. The surpluses for those years also reflect the scheduled expiration in December 2010 of the tax cuts enacted last June.

In CBO's new baseline, the off-budget accounts (which reflect the spending and revenues of Social Security and the Postal Service) run surpluses throughout the projection period. In the on-budget accounts, by contrast, surpluses do not reemerge until 2010.

CBO's baseline projections are intended to serve as a neutral benchmark against which to measure the effects of possible changes in tax and spending policies. They are constructed according to rules set forth in law and long-standing practices and are designed to project federal revenues and spending under the assumption that current laws and policies remain unchanged. Thus, these projections will almost certainly differ from actual budget totals: the economy may not follow the path that CBO projects, and lawmakers are likely to alter the nation's tax and spending policies. Therefore, CBO's baseline should be viewed not as a forecast or prediction of future budgetary outcomes but simply as the agency's best judgment of how the economy and other factors will affect federal revenues and spending under current law.

1. That projection appeared in Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2002-2011* (January 2001).

Summary Table 1.
Changes in CBO's Baseline Projections of the Surplus Since January 2001 (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2006	Total, 2002-2011
Total Surplus as Projected in January 2001	313	359	397	433	505	573	635	710	796	889	2,007	5,610
Changes												
Legislative												
Tax act[a]	-38	-91	-108	-107	-135	-152	-160	-168	-187	-130	-479	-1,275
Discretionary spending	-44	-49	-52	-54	-56	-57	-58	-59	-60	-61	-255	-550
Other	-4	-6	-5	-3	-4	-2	-2	-2	-2	-2	-23	-33
Debt service[b]	-5	-12	-22	-32	-44	-57	-72	-88	-106	-124	-114	-562
Subtotal	-91	-158	-186	-197	-238	-268	-293	-317	-355	-317	-870	-2,420
Economic	-148	-131	-95	-81	-75	-75	-76	-79	-82	-88	-530	-929
Technical[c]	-94	-84	-62	-51	-64	-64	-65	-64	-65	-45	-356	-660
Total Changes	-333	-373	-343	-330	-377	-406	-433	-460	-502	-450	-1,757	-4,008
Total Surplus or Deficit (-) as Projected in January 2002	-21	-14	54	103	128	166	202	250	294	439	250	1,602
Memorandum:												
Changes in the Surplus by Type of Discretionary Spending												
Defense	-33	-29	-29	-29	-29	-29	-30	-30	-31	-32	-149	-301
Nondefense	-11	-20	-23	-25	-26	-28	-28	-29	-29	-30	-106	-249

SOURCE: Congressional Budget Office.

NOTE: For purposes of comparison, this table shows projections for 2002 through 2011 because that was the period covered by CBO's January 2001 baseline. The current projection period extends from 2003 through 2012.

a. The Economic Growth and Tax Relief Reconciliation Act of 2001, which was estimated at the time of enactment to reduce revenues by $1,186 billion and increase outlays by $88 billion between 2002 and 2011.

b. Reflects only the change in debt-service costs that results from legislative actions. Other effects on debt-service costs are included under economic and technical changes.

c. Technical changes are revisions that are not attributable to new legislation or to changes in the components of CBO's economic forecast.

The Budget Outlook

If current policies remain in place, CBO projects, the total budget will be in deficit for the next two years. Those deficits are expected to be small, amounting to only 0.2 percent of the nation's gross domestic product (GDP) in 2002 and 0.1 percent of GDP in 2003 (see Summary Table 2). After that, surpluses are projected to reemerge and gradually increase.

For the five years from 2003 through 2007, CBO projects a cumulative surplus of $437 billion. That figure represents off-budget surpluses totaling more than $1 trillion offset by on-budget deficits that total $617 billion. For the 10-year period through 2012, the total budget surplus under current policies is projected to approach $2.3 trillion. Again, that amount is made up of surpluses in Social Security ($2.5 trillion) offset by a cumulative on-budget deficit ($242 billion). Without the scheduled expiration

Summary Table 2.
The Budget Outlook Under Current Policies (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
On-Budget Surplus or Deficit (-)	-33	-181	-193	-141	-108	-99	-76	-56	-23	4	131	319	-617	-242
Off-Budget Surplus[a]	161	160	178	195	212	227	242	258	274	290	307	322	1,054	2,505
Total Surplus or Deficit (-)	127	-21	-14	54	103	128	166	202	250	294	439	641	437	2,263
Debt Held by the Public (End of year)	3,320	3,380	3,410	3,373	3,288	3,177	3,027	2,840	2,605	2,325	1,900	1,273	n.a.	n.a.
Memorandum:														
Total Surplus or Deficit (-) as a Percentage of GDP	1.3	-0.2	-0.1	0.5	0.8	1.0	1.2	1.4	1.7	1.9	2.7	3.7	0.7	1.6
Debt Held by the Public (End of year) as a Percentage of GDP	32.7	32.8	31.3	29.2	27.0	24.8	22.5	20.0	17.5	14.8	11.5	7.4	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. Off-budget surpluses comprise surpluses in the Social Security trust funds and the net cash flow of the Postal Service.

of last June's tax cuts, the total 10-year budget surplus would fall to $1.6 trillion.

The total surplus is projected to equal 1 percent of GDP by 2006 and grow to 3.7 percent of GDP by 2012. Estimates of large surpluses should be viewed cautiously, however, because future economic developments and estimating inaccuracies could change the outlook substantially. In addition, future legislative actions are almost certain to alter the budgetary picture.

Changes in the Past Year

As an illustration of how quickly the budget outlook can change, CBO's projection of the cumulative surplus for 2002 through 2011 has plunged by $4 trillion in just one year (see Summary Table 1).[2] Some $2.4 trillion of that drop can be attributed to legislative actions. The legislation with the largest effect was the Economic Growth and Tax Relief Reconciliation Act of 2001, enacted in June. That law is estimated to reduce surpluses by nearly $1.3 trillion over 10 years (not including associated debt-service costs).

Additional discretionary spending since last January accounts for another $550 billion reduction in the projected surplus for the 2002-2011 period. That amount stems from both regular and supplemental appropriations. CBO's January 2001 baseline assumed that discretionary budget authority for 2002

2. About 45 percent of that reduction results from changes made since CBO issued its updated *Budget and Economic Outlook* in August 2001. The drop since August totals $1.8 trillion and is attributed, in relatively equal measures, to legislative, economic, and technical changes.

would total $665 billion.[3] The actual amount appropriated for 2002 in the 13 regular appropriation acts totaled $691 billion. In addition, the Congress and the President enacted $20 billion in supplemental budget authority in December as part of their response to the terrorist attacks of September 11—thereby generating a total of $711 billion in budget authority for 2002, $45 billion more than CBO assumed last January.

Under the provisions of the Balanced Budget and Emergency Deficit Control Act of 1985, CBO's baseline assumes that annual appropriations for discretionary programs continue at their current level, increasing only by the rates of inflation projected for each year. As a result of the appropriations enacted for 2002, projections of discretionary spending in the current baseline begin at a level that is $45 billion higher than a year ago.

Furthermore, two supplemental appropriation laws enacted in fiscal year 2001—one for defense personnel and readiness programs and another in immediate response to the attacks of September 11—will generate outlays totaling around $25 billion in 2002 and beyond. However, budget authority from actions in 2001 is not carried forward into the baseline projections for future years because those appropriations occurred before the current year.

Overall, legislated reductions in revenues, additional discretionary spending, and other laws with smaller budgetary effects have reduced projected surpluses—and thereby increased the government's borrowing needs—by $1,858 billion for 2002 through 2011. That increased borrowing is projected to result in an extra $562 billion in net interest costs over the 10-year period.

Changes in the economic outlook since January 2001 account for another $929 billion decline in the 10-year surplus. About three-quarters of that total reflects lower revenue projections, mostly resulting from the substantially weaker economic growth expected in the near term and the slightly lower average growth rates projected for the following several years. Much of the rest of the decline attributable to the economic outlook represents added debt-service costs resulting from the reduction in anticipated revenues.

Technical changes—those not driven by new legislation or by changes in CBO's economic forecast—have reduced the projected 10-year surplus by a total of $660 billion since last January. As with the economic changes, revenues account for over 75 percent of the technical changes, and debt service accounts for much of the rest. The technical changes to revenues stem primarily from revised projections of capital gains realizations and adjustments for lower-than-expected tax collections in recent months.

Homeland Security

Since the attacks of September 11, federal agencies, state and local governments, and the private sector have perceived a heightened threat to the United States and a need to commit more resources to homeland security. On the federal level, legislation following the attacks increased the budget authority provided for such security from $17 billion in 2001 to $22 billion for 2002. What level of resources to commit to homeland security will undoubtedly be a key issue as the Congress and the President make decisions about spending and other policies this year.

The Outlook for Federal Debt

In the January 2001 *Budget and Economic Outlook*, CBO estimated that federal debt held by the public would reach a level in 2006 that would allow the Treasury to retire all of the debt available for redemption. At that time, CBO also projected that the statutory ceiling on all federal debt (which includes debt held by government accounts) would not be reached until 2009. Now, CBO estimates that debt held by the public will not be fully redeemed within the 10-year projection period and that the current debt ceiling will be reached in the next few months. Nevertheless, if the surpluses projected in the current baseline materialize, debt held by the public will fall to about 15 percent of GDP in 2010—its lowest level since 1917.

3. That figure was calculated by assuming that the amount appropriated for the base year of 2001 would grow at specified rates of inflation.

The Economic Outlook

In CBO's view, the most likely path for the economy is a mild recession that may already have reached its nadir. CBO expects the annual growth rate of real (inflation-adjusted) GDP to accelerate from -0.2 percent in 2001 (measured from the fourth quarter of calendar year 2000 to the fourth quarter of 2001) to 2.5 percent in 2002 and to accelerate further to 4.3 percent in 2003 (see Summary Table 3).

Some unusual features of the current recession will cause it to be mild, CBO believes. Chief among those features are the rapidity of policymakers' responses, the moderating behavior of prices, and an early reduction in businesses' inventories. In less than one year, the Federal Reserve has cut the federal funds rate 11 times—from 6.5 percent to 1.75 percent. Also, the tax cuts enacted in June prevented consumption from slowing more than it might have otherwise, and additional federal spending in response to the terrorist attacks will boost GDP in 2002. Lower prices for oil and natural gas and mild price increases for other items are supporting consumption by boosting real disposable income. Furthermore, businesses began to reduce inventories earlier in this recession than they did in past downturns, which may mean that fewer cuts in inventories remain than at this stage of the typical recession.

CBO projects that weak demand in the short run will translate into weak employment, pushing the unemployment rate higher for the next several quarters while restraining inflation. With growth of real GDP near zero early this year, the unemployment rate is expected to increase to 6.1 percent in calendar year 2002 from 4.8 percent last year. The rate of inflation faced by consumers is forecast to fall from 2.9 percent last year to 1.8 percent in 2002. Lower oil prices account for most of the projected decline in inflation, although the recession also plays a role. As oil prices stabilize in CBO's forecast, inflation bounces back to 2.5 percent in 2003.

Looking out through 2012, CBO expects the growth of real GDP to average 3.1 percent during the 2002-2012 period—roughly the same rate that CBO projected last January for the 2002-2011 period. Nonetheless, the level of real GDP is lower each year

Summary Table 3.
CBO's Economic Forecast for 2002 and 2003

	Estimated	Forecast	
	2001	2002	2003
Fourth Quarter to Fourth Quarter (Percentage change)			
Nominal GDP	1.7	4.2	6.5
Real GDP	-0.2	2.5	4.3
Calendar Year Average			
Real GDP (Percentage change)	1.0	0.8	4.1
Consumer Price Index (Percentage change)[a]	2.9	1.8	2.5
Unemployment Rate (Percent)	4.8	6.1	5.9
Three-Month Treasury Bill Rate (Percent)	3.4	2.2	4.5
Ten-Year Treasury Note Rate (Percent)	5.0	5.0	5.5

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

a. The consumer price index for all urban consumers.

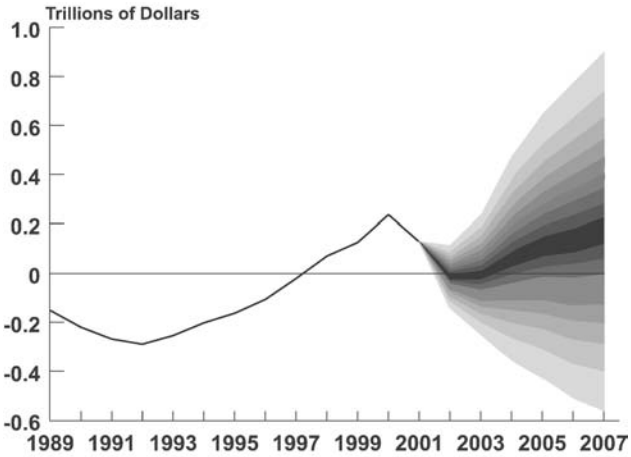
than in last January's projections, primarily because actual GDP ended up much lower in 2001 than CBO had expected a year ago.

Uncertainty of the Projections

CBO's baseline projections represent the midrange of possible outcomes based on past and current trends and the assumption that current policies remain the same. But considerable uncertainty surrounds those projections for two reasons. First, future legislation is likely to alter the paths of federal spending and revenues. CBO does not predict legislation—indeed, any attempt to incorporate future legislative changes would undermine the usefulness of the baseline as a benchmark against which to measure the effects of such changes. Second, 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. As a result, actual budgetary outcomes will almost certainly differ from CBO's baseline projections.

In view of such uncertainty, the outlook for the budget can best be described as a fan of probabilities around the point estimates presented in this report (see Summary Figure 1). Not surprisingly, those probabilities widen as the projection period extends. As the fan chart makes clear, projections that are quite different from the baseline have a significant probability of coming to pass.

Summary Figure 1.
Uncertainty in CBO's Projections of the Total Budget Surplus Under Current Policies



SOURCE: Congressional Budget Office.

NOTES: This figure shows the estimated likelihood of alternative projections of the surplus under current policies. The calculations are based on CBO's past track record. CBO's baseline projections fall in the middle of the darkest area. Under the assumption that policies do not change, the probability is 10 percent that actual surpluses will fall in the darkest area and 90 percent that they will fall within the whole shaded area.

Actual surpluses will of course be affected by legislation enacted during the next 10 years, including decisions about discretionary spending. The effects of future legislation are not included in this figure.

An explanation of how this probability distribution was calculated will appear shortly on CBO's Web site (www.cbo.gov).

The Long-Term Outlook

Despite the sizable surpluses projected for the later years of CBO's 10-year budget outlook, long-term pressures on spending loom just over the horizon. Those pressures result from the aging of the U.S. population (large numbers of baby boomers will start becoming eligible for Social Security retirement benefits in 2008 and for Medicare in 2011), from increased life spans, and from rising costs for federal health care programs. According to midrange estimates, if current policies continue, spending on Social Security, Medicare, and Medicaid combined will nearly double by 2030, to almost 15 percent of GDP.

Taking action sooner rather than later to address long-term budgetary pressures can make a significant difference. In particular, policies that encourage economic growth—such as running budget surpluses to boost national saving and investment, enacting tax and regulatory policies that encourage work and saving, and focusing more government spending on investment rather than on current consumption—can help by increasing the total amount of resources available for all uses.

Chapter One

The Budget Outlook

Over the past year, the outlook for the federal budget has changed substantially. Last January, the Congressional Budget Office (CBO) projected that if the tax and spending policies then in effect remained the same, the government would run surpluses totaling more than $5.6 trillion over the 10-year period from 2002 through 2011. CBO revised those projections in August, reducing the 10-year surplus to $3.4 trillion.[1] Now, CBO projects that the cumulative surplus for 2002 through 2011 under current policies would total $1.6 trillion—a drop of $4 trillion from last January's figure. Approximately 60 percent of that decline ($2.4 trillion) results from laws enacted in the past year. The other 40 percent reflects changes in the outlook for the economy and various technical adjustments to CBO's projections.

The message is much the same over a shorter, five-year horizon. Last January, CBO projected that under current policies, the government would show a surplus in each year and run a cumulative surplus of more than $2.0 trillion during the 2002-2006 period. Revisions to the baseline in August reduced that five-year figure to $1.1 trillion. Now, CBO projects that the total budget would be in deficit in 2002 and 2003 and would show a cumulative surplus of only $250 billion through 2006 under current policies. About half of the drop in that figure since last January ($870 billion) reflects new legislation. Changes in the economic outlook caused another $530 billion of the decline, and technical changes accounted for the remaining $356 billion.

If current tax and spending policies remain in place, the total budget will show a deficit of $21 billion in 2002 and $14 billion in 2003, CBO projects (see Tables 1-1 and 1-2). Total budget surpluses reemerge in 2004 in CBO's baseline and accumulate to almost $2.3 trillion between 2003 and 2012 (the current 10-year projection period). But 80 percent of that cumulative surplus occurs in the last five years of the period, and almost half comes in the final two years—when the projections are, by their nature, the most uncertain. The surpluses projected for fiscal years 2011 and 2012 are particularly large because all of the remaining tax-cut provisions of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) are scheduled to expire in December 2010. That expiration significantly boosts projected revenues.

Unlike total surpluses, on-budget surpluses—which exclude the transactions of Social Security and the Postal Service—do not reappear until 2010 in CBO's new baseline. Although those off-budget accounts are projected to show net surpluses every year through 2012, the rest of the budget is projected to post deficits of $181 billion in 2002, $193 billion in 2003, and declining amounts through 2009. The projected on-budget surplus jumps in 2011 and 2012 after most of the tax-cut provisions expire. If lawmakers extended those tax cuts, the total 10-year surplus would be about one-third less than the $2.3 trillion projected under the assumptions for the baseline (see Box 1-1 on page 4).

As dramatically as the budget outlook has worsened in the past year, it remains relatively bright by historical standards. Before 1998, the government had recorded deficits in 36 of the previous 37 years.

1. The August 2001 revisions appeared in *The Budget and Economic Outlook: An Update*; the $2.2 trillion reduction in the projected 10-year surplus reflected a $1.4 trillion decline in revenues and a $0.8 trillion increase in outlays.

Table 1-1.
The Budget Outlook Under Current Policies (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
On-Budget Surplus or Deficit (-)	-33	-181	-193	-141	-108	-99	-76	-56	-23	4	131	319	-617	-242
Off-Budget Surplus[a]	161	160	178	195	212	227	242	258	274	290	307	322	1,054	2,505
Total Surplus or Deficit (-)	127	-21	-14	54	103	128	166	202	250	294	439	641	437	2,263
Memorandum:														
Social Security Surplus	163	163	179	195	211	227	242	258	274	290	307	322	1,054	2,505
Postal Service Outlays	2	3	1	*	-1	0	0	0	0	0	0	0	*	*
Total Surplus or Deficit (-) as a Percentage of GDP	1.3	-0.2	-0.1	0.5	0.8	1.0	1.2	1.4	1.7	1.9	2.7	3.7	0.7	1.6

SOURCE: Congressional Budget Office.

NOTE: * = between zero and $500 million.

a. Off-budget surpluses comprise surpluses in the Social Security trust funds as well as the net cash flow of the Postal Service.

The total deficits projected for the next two years are as small or smaller as a percentage of the nation's gross domestic product (GDP) than in any of those years (see Figure 1-1 on page 5). More important, public debt continues to decline in CBO's current baseline, albeit more slowly than in last year's projections. Under current policies, federal debt held by the public would equal 25 percent of GDP by 2006 (see Figure 1-2 on page 5). By 2010 (before the expiration of EGTRRA), projected debt would fall to roughly 15 percent of GDP—the lowest level since 1917.

Uncertainty and the Projection Horizon

Budget projections are always subject to considerable uncertainty (see Chapter 5 for more details). However, that uncertainty is particularly great this year as the nation continues to wage war on terrorism and recover from a recession. Actual budget totals will differ from the projections in this report, perhaps substantially. The major reason is that CBO's baseline, by law, must show future spending and revenues under current laws and policies—even though those will almost certainly change. For example, the first session of the 107th Congress left a number of policy issues unresolved, including an economic stimulus package, additional discretionary spending, prescription drug coverage for Medicare beneficiaries, and the extension of agricultural programs. Those policies could significantly affect spending and revenues for years to come.

Another source of uncertainty about the budget outlook is the accuracy of the economic and technical assumptions that underlie CBO's baseline. In recent years, economic growth has surpassed expectations, fueling projections of higher revenues and bigger surpluses. Now, the projections hinge on how rapidly and strongly the economy will rebound from the current recession and whether growth over the next 10 years will match the levels experienced in the late 1990s.

Uncertainty compounds as the projection horizon lengthens. Even small annual differences in the many key factors that influence the budget projections—factors such as inflation, increases in produc-

Table 1-2.
CBO's Baseline Budget Projections

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007[a]	Total, 2003-2012[a]
							In Billions of Dollars							
Revenues														
Individual income taxes	994	947	998	1,059	1,114	1,162	1,228	1,305	1,387	1,477	1,673	1,841	5,562	13,245
Corporate income taxes	151	179	175	199	235	246	260	275	289	303	319	335	1,115	2,635
Social insurance taxes	694	710	748	789	832	869	908	948	994	1,045	1,097	1,151	4,146	9,381
Other	152	146	149	159	161	170	172	179	186	183	188	223	811	1,769
Total	1,991	1,983	2,070	2,206	2,342	2,447	2,568	2,706	2,856	3,008	3,277	3,549	11,633	27,030
On-budget	1,484	1,464	1,525	1,632	1,739	1,816	1,907	2,014	2,130	2,243	2,474	2,706	8,620	20,187
Off-budget	508	518	545	574	602	631	661	693	727	764	803	842	3,014	6,842
Outlays														
Discretionary spending	649	733	764	784	808	824	841	866	888	910	937	953	4,021	8,575
Mandatory spending	1,095	1,188	1,248	1,292	1,362	1,428	1,508	1,602	1,701	1,809	1,933	2,023	6,837	15,904
Offsetting receipts	-87	-88	-101	-113	-119	-115	-122	-129	-136	-143	-152	-160	-570	-1,289
Net interest	206	170	174	188	188	182	175	165	153	138	120	92	908	1,577
Total	1,864	2,003	2,085	2,152	2,238	2,319	2,402	2,504	2,606	2,714	2,838	2,908	11,196	24,767
On-budget	1,517	1,645	1,718	1,774	1,848	1,915	1,983	2,069	2,153	2,240	2,343	2,387	9,237	20,429
Off-budget	347	358	367	379	391	405	419	434	453	474	495	521	1,960	4,337
Surplus or Deficit (-)	127	-21	-14	54	103	128	166	202	250	294	439	641	437	2,263
On-budget	-33	-181	-193	-141	-108	-99	-76	-56	-23	4	131	319	-617	-242
Off-budget	161	160	178	195	212	227	242	258	274	290	307	322	1,054	2,505
Memorandum:														
Gross Domestic Product	10,150	10,315	10,890	11,556	12,168	12,803	13,468	14,166	14,897	15,664	16,469	17,314	60,884	139,394
							As a Percentage of GDP							
Revenues														
Individual income taxes	9.8	9.2	9.2	9.2	9.2	9.1	9.1	9.2	9.3	9.4	10.2	10.6	9.1	9.5
Corporate income taxes	1.5	1.7	1.6	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9
Social insurance taxes	6.8	6.9	6.9	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.7	6.6	6.8	6.7
Other	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.3	1.3	1.3
Total	19.6	19.2	19.0	19.1	19.2	19.1	19.1	19.1	19.2	19.2	19.9	20.5	19.1	19.4
On-budget	14.6	14.2	14.0	14.1	14.3	14.2	14.2	14.2	14.3	14.3	15.0	15.6	14.2	14.5
Off-budget	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Outlays														
Discretionary spending	6.4	7.1	7.0	6.8	6.6	6.4	6.2	6.1	6.0	5.8	5.7	5.5	6.6	6.2
Mandatory spending	10.8	11.5	11.5	11.2	11.2	11.2	11.2	11.3	11.4	11.5	11.7	11.7	11.2	11.4
Offsetting receipts	-0.9	-0.9	-0.9	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Net interest	2.0	1.7	1.6	1.6	1.5	1.4	1.3	1.2	1.0	0.9	0.7	0.5	1.5	1.1
Total	18.4	19.4	19.1	18.6	18.4	18.1	17.8	17.7	17.5	17.3	17.2	16.8	18.4	17.8
On-budget	14.9	16.0	15.8	15.3	15.2	15.0	14.7	14.6	14.5	14.3	14.2	13.8	15.2	14.7
Off-budget	3.4	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.2	3.1
Surplus or Deficit (-)	1.3	-0.2	-0.1	0.5	0.8	1.0	1.2	1.4	1.7	1.9	2.7	3.7	0.7	1.6
On-budget	-0.3	-1.8	-1.8	-1.2	-0.9	-0.8	-0.6	-0.4	-0.2	*	0.8	1.8	-1.0	-0.2
Off-budget	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.7	1.8

SOURCE: Congressional Budget Office.

NOTE: * = between zero and 0.05 percent of GDP.

a. Numbers in the second half of the table are shown as a percentage of total GDP for this period.

Box 1-1.
The Expiration of Revenue Provisions

The scheduled expiration of various tax provisions has a significant impact on the outlook for the budget over the next decade.[1] Three provisions of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) expire by the end of calendar year 2006, and the rest—representing the majority of the law's budgetary cost—expire on December 31, 2010. Many other provisions of the tax code, enacted before EGTRRA, either expired at the end of 2001 or are scheduled to expire in the next 10 years. They include the treatment of nonrefundable credits under the alternative minimum tax (AMT), which ended last year, and the research and experimentation credit, which expires in 2004.

By law, the Congressional Budget Office's (CBO's) budget projections must assume that almost all such provisions expire as planned. (The only exception is expiring excise taxes dedicated to trust funds, which by statute are assumed to be extended.) An alternative measure of the long-term budgetary effects of current tax policy could assume that the expirations do not occur as scheduled but rather that the Congress and the President immediately extend the provisions indefinitely (including those that expired in 2001). Under those assumptions, the Joint Committee on Taxation and CBO estimate, federal revenues would be $735 billion lower during the 2003-2012 period than in CBO's baseline (see the table below). In addition, the government's debt-service costs would increase. As a result, the total surplus for that 10-year period would be about one-third less than the $2.3 trillion projected under baseline assumptions.

More than three-quarters (or about $569 billion) of the revenue loss over 10 years from extending all provisions would result from extending EGTRRA. The majority of that amount would occur in 2011 and 2012 (the years after most of the law's provisions would have expired), but some effects of continuing EGTRRA would appear earlier. Extending the changes to estate and gift taxes could reduce revenues as early as 2003, because if taxpayers knew that the law's repeal of the estate tax would become permanent in 2011, some might postpone taxable gifts that they would otherwise have made during the decade.

The estimates for EGTRRA shown below also assume that the higher exemption levels for the AMT, which expire in 2004, are extended at their 2004 levels. Under that assumption, the exemption level would not rise with inflation, so a growing number of taxpayers would still become subject to the AMT over time—albeit fewer than if the higher exemption levels expire as now scheduled.

1. It can also be expected to affect the economy, but only some of those effects are reflected in the estimated revenue impact of the expiring provisions.

Effects on Revenues of Extending Expiring Tax Provisions (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Provisions in EGTRRA													
Provisions expiring in 2010	n.a.	-1	-1	-2	-2	-3	-3	-3	-4	-127	-229	-9	-374
Provisions expiring before 2010[a]	n.a.	n.a.	n.a.	-4	-13	-19	-24	-28	-31	-35	-39	-36	-194
Subtotal	n.a.	-1	-1	-6	-16	-22	-27	-31	-35	-162	-268	-46	-569
Other Expiring Tax Provisions[b]	-1	-3	-4	-9	-13	-17	-19	-21	-24	-27	-29	-46	-166
Total Effect on Revenues	-1	-4	-6	-15	-29	-38	-46	-52	-59	-189	-297	-92	-735

SOURCES: Congressional Budget Office and Joint Committee on Taxation.

NOTES: These estimates assume that the expiring provisions are extended immediately rather than when they are about to expire. They also assume extension of provisions that expired at the end of 2001. They do not include debt-service effects. In addition, the estimates include interactions between provisions, which are most significant in 2011 and 2012.

EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; n.a. = not applicable.

a. Includes the increased exemption amount for the alternative minimum tax (expires in 2004), the deduction for qualified education expenses (expires in 2005), and the credit for individual retirement accounts and 401(k)-type plans (expires in 2006).

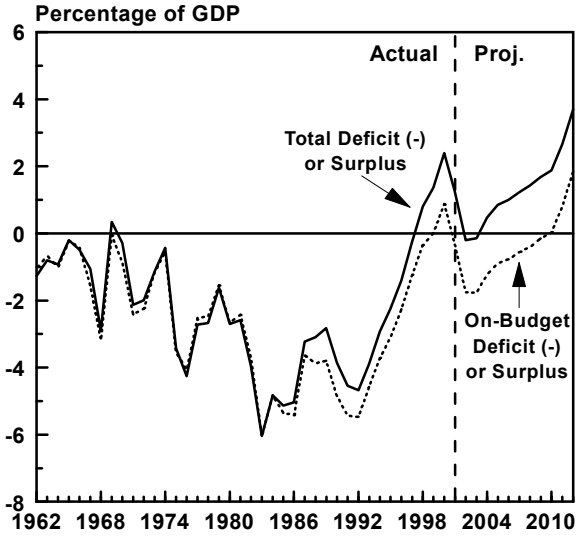
b. Includes numerous provisions, such as the tax credit for research and experimentation. For a complete list, see Table 3-12 in Chapter 3.

tivity, economic growth, the distribution of income, and growth rates for Medicare and Medicaid spending—can add up to substantial differences in the budget outcome 10 years from now. (For details of how changes in several key assumptions would affect the budget outlook, see Appendix A.)

Given such uncertainty, focusing on five-year projections may be more useful than relying on 10-year numbers. In addition, the current 10-year projections are significantly affected by the scheduled expiration, at the end of 2010, of last year's tax cuts. Many of the tables in this report show both five- and 10-year totals (2003-2007 and 2003-2012 for the new baseline; 2002-2006 and 2002-2011 when that baseline is being compared with last year's projections).

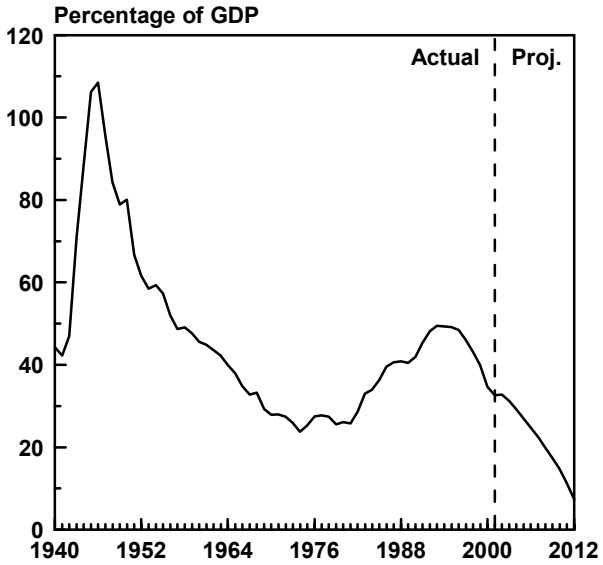
Looking at the longer term remains important, however, as the baby-boom generation approaches retirement age. The recent worsening of the budget outlook—along with its continuing uncertainty—makes the budgetary challenges that loom beyond the 10-year projection period even more difficult. By the end of that period, the baby-boom generation will begin qualifying in large numbers for Social Security and Medicare benefits, putting increased pressure on those programs. By 2030, the number of workers is expected to rise by only about 15 percent while the number of Social Security and Medicare beneficiaries will nearly double. That growth, combined with increases in life expectancy, will boost spending on long-term health care, about half of which is financed by Medicaid and Medicare.[2] Together, demographic changes and growth in medical costs are projected to push total federal spending on Medicare, Medicaid, and Social Security from just under 8 percent of GDP in 2001 to almost 15 percent of GDP in 2030. (For more information about the long-term budget outlook, see Chapter 6.)

Figure 1-1.
Total Deficits and Surpluses as a Share of GDP, 1962-2012



SOURCE: Congressional Budget Office.

Figure 1-2.
Debt Held by the Public as a Share of GDP, 1940-2012



SOURCE: Congressional Budget Office.

The Concept Behind CBO's Baseline

The baseline serves as a neutral benchmark that lawmakers can use to measure the effects of proposed changes in spending and revenue policies. It is constructed according to rules set forth in law, mainly in

2. See Congressional Budget Office, *Projections of Expenditures for Long-Term Care Services for the Elderly* (March 1999), pp. 1, 5-6.

Box 1-2.
A Freeze in Discretionary Spending

The Balanced Budget and Emergency Deficit Control Act of 1985 sets the baseline for discretionary spending as the level appropriated for the current year adjusted for inflation and other specified factors. But some lawmakers view a freeze in discretionary spending at the current year's level as the most logical starting point for considering future appropriations. Indeed, total discretionary outlays remained roughly constant from 1991 through 1996, largely because of the decline in defense spending after the Cold War. Since 1998, however, discretionary spending has grown relatively rapidly, outpacing inflation.

If total discretionary spending were frozen at the level enacted for 2002, the budget would be very close to balance in 2003, and surpluses would grow larger in subsequent years than CBO's baseline projects. In that scenario, the total budget surplus would equal 5.2 percent of gross domestic product (GDP) by 2012 (see the table below). On-budget surpluses—which exclude the balances of the Social Security trust funds and the Postal Service—would equal 3.4 percent of GDP by 2012. At that point, in dollar terms, discretionary spending would be nearly 22 percent below the inflation-adjusted level assumed in the baseline.

The Budget Outlook Assuming That Discretionary Spending Is Frozen at the Level Enacted for 2002 (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
On-Budget Surplus or Deficit (-)	-33	-181	-180	-111	-57	-25	25	74	137	196	360	582	-348	1,000
Off-Budget Surplus	161	160	179	195	212	227	243	259	275	291	309	323	1,055	2,512
Total Surplus or Deficit (-)	127	-21	-1	84	155	202	268	333	411	487	668	905	707	3,512
Memorandum:														
Total Surplus or Deficit (-) as a Percentage of GDP	1.3	-0.2	*	0.7	1.3	1.6	2.0	2.3	2.8	3.1	4.1	5.2	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTE: * = between -0.05 percent and zero; n.a. = not applicable.

the Balanced Budget and Emergency Deficit Control Act of 1985 and the Congressional Budget Act of 1974. Those laws generally instruct CBO (and the Office of Management and Budget) to project federal spending and revenues under current policies.

For revenues and mandatory spending, section 257(b) of the Deficit Control Act requires that the baseline be projected on the assumption that current laws continue without change. In most cases, the laws that govern revenues and mandatory spending are permanent. The baseline projections reflect anticipated changes in the economy, demographics, and other relevant factors that affect the implementation of those laws.[3]

The rules are different for discretionary spending, which is governed by annual appropriation acts. Section 257(c) of the Deficit Control Act states that

3. Section 257(b) of the Deficit Control Act also specifies that expiring spending programs are assumed in the baseline to continue if they have outlays of more than $50 million in the current year and were established on or before the date when the Balanced Budget Act of 1997 was enacted. Programs established after that date are not automatically continued in the baseline. Expiring excise taxes dedicated to a trust fund are extended at current rates. But section 257(b) does not provide for extending other expiring tax provisions, including those that have routinely been extended in the past.

projections of discretionary budget authority after the current year should be adjusted to reflect inflation—using specified indexes—as well as a few other factors (such as the costs of renewing certain expiring housing contracts and of annualizing adjustments to federal pay). Accordingly, CBO's baseline extrapolates discretionary spending from the current level, adjusting for projected rates of inflation and other specified factors over the next 10 years.

This mechanical approach to developing baseline projections can be problematic. For example, all discretionary budget authority appropriated for the current year is inflated and extended through the entire projection period even if it was enacted for an emergency or other one-time event. Thus, CBO's current baseline projects into future years the $20 billion in supplemental budget authority for 2002 that was appropriated in response to the terrorist attacks of September 11.[4] Some people might argue that such an appropriation was intended as one-time spending and should not be extended past 2002. But the Deficit Control Act does not provide for such exceptions. And although that specific emergency appropriation may not be repeated, various types of emergencies that necessitate additional appropriations arise every year. (Chapter 4 presents an alternative path for discretionary spending that does not assume such appropriations in the future.)

CBO traditionally presents at least one other benchmark for discretionary spending. Lawmakers sometimes use a freeze in appropriations—the current year's amounts without adjustment for inflation—to gauge the impact of proposed levels of discretionary spending for the coming fiscal year. The budget outlook under such a freeze is shown in Box 1-2.

CBO's baseline is intended to provide an objective foundation for assessing policy options. It is not intended to be a prediction of future budgetary outcomes. Rather, the projections presented in this report reflect CBO's best judgment about how the economy and other factors will affect federal revenues and spending under existing laws and policies.

Changes in the Baseline Since January 2001

Over the past year, CBO's projection of the cumulative surplus for the 2002-2011 period has fallen by $4 trillion (see Table 1-3). Roughly $2.4 trillion of that decline is attributable to laws passed since last January—primarily the EGTRRA tax cuts of June 2001 and increased discretionary spending. About $930 billion results from changes to CBO's economic forecast, and the remaining $660 billion reflects revisions to the projections that are technical in nature.[5]

Lower projected surpluses result in additional accumulated debt, which in turn requires higher spending for interest on the debt. Those increased debt-service costs, which amount to about $1 trillion through 2011, account for one-fourth of the reduction in the projected 10-year surplus. Last January, CBO estimated that the steady paying down of federal debt held by the public, which began with the onset of surpluses in 1998 and was projected to accelerate through the 2002-2011 period, would enable the Treasury to retire all of the debt available for redemption by 2006.[6] In the current baseline, that paydown has been interrupted—at least temporarily. The small deficits projected for 2002 and 2003 will necessitate additional net government borrowing. Not until 2004 will the emergence of a small surplus allow publicly held debt to begin declining again. As a result, CBO no longer projects that all available

4. The 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States provided $40 billion in budget authority—$20 billion in 2001 and a second $20 billion that could be obligated only when enacted in a later appropriation act. Because the first $20 billion was appropriated before the current fiscal year, that amount is not extended in the new baseline. However, the second $20 billion in emergency appropriations, which was attached to the 2002 defense appropriation act, is part of the current-year total for budget authority and is therefore inflated throughout the 10-year projection period.

5. For a similar analysis of how CBO's baseline has changed since August 2001, see Appendix B.

6. Part of the debt, including some long-term bonds and savings bonds, will remain outstanding regardless of the size of the surplus.

Table 1-3.
Changes in CBO's Baseline Projections of the Surplus Since January 2001 (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2006	Total, 2002-2011
Total Surplus as Projected in January 2001	313	359	397	433	505	573	635	710	796	889	2,007	5,610
Changes to Revenue Projections												
Legislative	-32	-86	-103	-103	-128	-144	-152	-160	-178	-119	-452	-1,205
Economic	-148	-123	-80	-65	-56	-51	-47	-45	-45	-48	-473	-708
Technical	-73	-63	-64	-60	-57	-53	-50	-45	-41	-3	-317	-510
Total Revenue Changes	-253	-273	-247	-228	-242	-248	-249	-250	-264	-170	-1,243	-2,423
Changes to Outlay Projections												
Legislative												
Discretionary												
Defense	33	29	29	29	29	29	30	30	31	32	149	301
Nondefense	11	20	23	25	26	28	28	29	29	30	106	249
Subtotal, discretionary	44	49	52	54	56	57	58	59	60	61	255	550
Mandatory												
EGTRRA child tax credit	6	7	7	7	10	10	9	10	11	12	37	88
Debt service	5	12	22	32	44	57	72	88	106	124	114	562
Other	4	4	3	1	1	1	1	*	*	*	12	14
Subtotal, mandatory	15	22	31	40	54	67	82	98	118	137	163	665
Subtotal, legislative	60	72	83	94	110	124	140	157	177	198	418	1,215
Economic												
Discretionary	2	3	3	3	4	4	5	6	7	7	14	44
Mandatory												
Debt service	3	11	18	23	27	31	35	39	44	48	82	279
Other	-5	-6	-5	-10	-12	-12	-11	-12	-14	-15	-38	-102
Subtotal, mandatory	-2	5	13	13	15	19	24	28	30	33	43	177
Subtotal, economic	*	7	15	16	19	24	29	34	37	40	57	221

(Continued)

debt held by the public will be retired during the projection period.

By convention, CBO attributes changes in its baseline projections to three factors:

- Recently enacted legislation,
- Changes in the outlook for the variables that make up CBO's economic forecast, and
- Changes in anything else that affects the budget—a category labeled technical (see Figure 1-3 on page 10).

That categorization of revisions should be interpreted with caution, however. For example, distinguishing between economic and technical reestimates is imprecise. Changes in some factors that are related to the performance of the economy (such as capital gains realizations) are classified as technical reestimates because they are not driven directly by changes in the components of CBO's economic forecast.

Table 1-3.
Continued

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2006	Total, 2002-2011
Changes to Outlay Projections (Continued)												
Technical												
Discretionary	4	2	*	*	-1	-2	-2	-2	-1	2	6	2
Mandatory												
Debt service	3	7	12	15	18	22	27	31	34	38	55	207
Other	14	12	-15	-24	-10	-9	-11	-10	-9	2	-22	-60
Subtotal, mandatory	17	19	-3	-8	8	13	16	21	25	40	33	148
Subtotal, technical	21	22	-2	-8	7	11	14	19	24	42	39	150
Total Outlay Changes	80	101	96	101	136	159	184	210	239	280	514	1,585
Total Impact on the Surplus	-333	-373	-343	-330	-377	-406	-433	-460	-502	-450	-1,757	-4,008
Total Surplus as Projected in January 2002	-21	-14	54	103	128	166	202	250	294	439	250	1,602
Memorandum:												
Total Legislative Changes	-91	-158	-186	-197	-238	-268	-293	-317	-355	-317	-870	-2,420
Total Economic Changes	-148	-131	-95	-81	-75	-75	-76	-79	-82	-88	-530	-929
Total Technical Changes	-94	-84	-62	-51	-64	-64	-65	-64	-65	-45	-356	-660

SOURCE: Congressional Budget Office.

NOTE: EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; * = between -$500 million and $500 million.

Legislative Changes Since Last January

Altogether, laws passed since January 2001 have cut about $2.4 trillion from the projected surplus for the 2002-2011 period. Half of that amount comes from laws that reduce the amount of revenues that the government is likely to collect, and the other half stems from legislation that increases the amount of outlays for government programs or for paying interest on the government's debt.

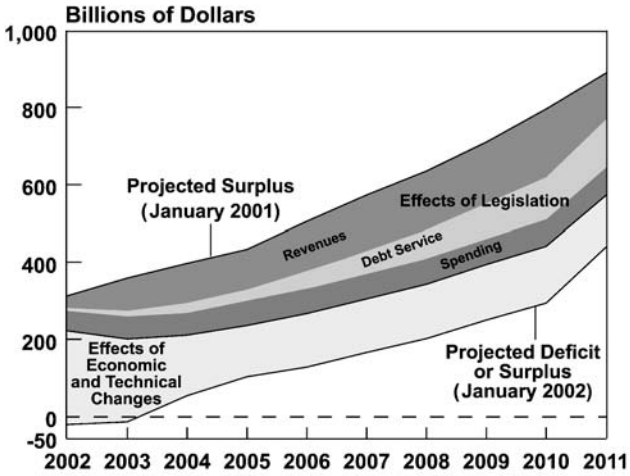
Revenues. In all, some 30 percent of the $4 trillion decline in the 10-year surplus is attributable to EGTRRA, which was enacted in June. CBO and the Joint Committee on Taxation estimated that the law will lower revenues by $1.2 trillion over the 2002-2011 period.[7] Other laws enacted since January have had little effect on revenues.

Outlays. The discretionary budget authority appropriated for 2002 exceeded the amount that CBO had projected a year ago on the basis of 2001 appropriations. That increase results in $550 billion in additional outlays over the 2002-2011 period compared with last January's projections. More than half of the rise in projected outlays, about $300 billion, represents increased defense spending. The rest reflects higher spending for all other discretionary programs.

Legislative changes to mandatory programs in the past year raised projected mandatory outlays (ex-

7. For more information about the budgetary effects of EGTRRA, see Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2001).

Figure 1-3.
Reasons for the Change in CBO's Projections Since January 2001



SOURCE: Congressional Budget Office.

cluding debt-service costs) by $103 billion through 2011. The largest contributor is EGTRRA's expansion of the child tax credit, which is estimated to increase outlays for refundable tax credits by $88 billion during the 2002-2011 period.

By far the biggest increase in mandatory spending, however, comes from higher debt-service costs as a result of laws enacted since January. By convention, CBO attributes increases or decreases in debt-service costs to the type of change (legislative, economic, or technical) that occasioned them. Of the aforementioned $1.0 trillion increase in projected debt-service costs over 10 years, CBO estimates that $562 billion is attributable to the effects of laws enacted in the past year.

Economic Changes Since Last January

Revisions to CBO's economic forecast over the past year have trimmed $929 billion from the total surplus projected for the 2002-2011 period. The recession plays a large role in explaining those revisions, perhaps accounting for as much as half of that 10-year budgetary impact. But other, longer-term changes in the outlook contribute as well. Virtually all of those other economic effects are traceable to a reduction in CBO's projection for investment throughout the 2002-2011 period. The current recession and projected future levels of investment are closely connected: the recession seems to have been precipitated mostly by a period of unsustainable investment in the late 1990s, and the recognition of that overinvestment has led CBO to reduce its estimate of the level of such spending over the next decade. (For details of the economic outlook, see Chapter 2.)

Revenues. Approximately three-quarters of the reduction in the 10-year surplus caused by economic changes represents lower projections for revenues: changes in the economic outlook since last January have lowered projected revenues by about $700 billion over 10 years. In the near term, the recession has slowed the growth of wages and salaries and thus of projected revenues from individual income taxes. The projected growth of investment continues to be slightly lower throughout the 10-year period, further contributing to the decline in receipts from individual income taxes. In addition, corporate profits have declined significantly, reducing projected corporate income tax receipts.

In CBO's outlook, as the economy recovers, tax receipts are anticipated to rise closer to the levels projected last January, although they remain below that level through 2012.

Outlays. As noted earlier, most of the change in projected discretionary spending results from recent increases in enacted appropriations. But changes in CBO's assumptions about two measures of inflation —the GDP deflator and the employment cost index for wages and salaries—over the past year cause an additional small net increase ($44 billion) in projected discretionary spending through 2011.

Projections of mandatory spending are also sensitive to changes in the economic forecast. Although such spending flows from the provisions of permanent laws, the growth of many mandatory programs is keyed to the economy. For example, since last January, lower inflation and wage growth have reduced projected spending for Social Security over the 2002-2011 period by $57 billion and projected spending for Medicare by roughly $33 billion. In addition, lower projections of future interest rates have decreased projected net interest costs during that decade by $53 billion.

Offsetting those declines are much larger changes that raise projected mandatory outlays—and thus reduce surpluses—relative to last January's baseline. The largest change to mandatory spending driven by economic revisions in the past year is the additional $279 billion in debt-service costs necessitated by the $929 billion drop in surpluses. In addition, CBO is forecasting higher unemployment for the next few years because of the weakened economy; that change has increased projected 10-year spending for unemployment compensation by $52 billion in the past year.

Technical Changes Since Last January

Reestimates that cannot be ascribed either to new laws or to changes in CBO's economic assumptions have reduced the projected 10-year surplus by $660 billion in the past year. As with the economic revisions, more than three-quarters of those technical changes involve revenues; the rest mostly reflect the resulting debt-service costs.

Revenues. About $500 billion of the decline in projected revenues since last January results from technical changes that are closely related to the revised economic outlook. Those changes reflect adjustments to the methods and assumptions that determine how much tax revenue any given tax base will generate. For example, the decline in the stock market has reduced projected capital gains realizations and the tax receipts they generate for both the individual and corporate income taxes—reductions that tend to dissipate over time. Slower growth in overall wealth has decreased projections of receipts from estate and gift taxes. In addition, current revenue collections are lower than CBO's economic forecast and revenue-estimating models projected, for reasons not entirely understood.

Outlays. Technical reestimates have had mixed effects on projected spending for both discretionary and mandatory programs since last January. For example, lower projections of Medicare enrollment have reduced expected outlays for that program over the 2002-2011 period by $96 billion. However, the largest change attributed to technical reestimates is the additional debt-service costs resulting from technical revisions—a $207 billion increase over the 2002-2011 period.

The Outlook for Federal Debt

Federal debt consists of two main components: debt held by the public and debt held by government accounts. Debt held by the public—the most meaningful measure of debt in terms of its relationship to the economy—is issued by the federal government to raise cash. Debt held by government accounts is purely an intragovernmental IOU and involves no cash transactions. It is used as an accounting device to track cash flows relating to specific federal programs.

Debt held by the public and debt held by government accounts follow different paths in CBO's baseline. The holdings of government accounts have risen steadily for several decades and are expected to continue doing so. Debt held by the public, in contrast, fluctuates according to changes in the government's borrowing needs. After falling since 1998, publicly held debt is projected to increase in 2002 and 2003 and decline again thereafter (see Table 1-4). If current policies remain the same (and the tax cuts in EGTRRA expire as scheduled), debt will fall to 7.4 percent of GDP by 2012. Even before the expiration of EGTRRA, debt held by the public is projected to decline to 14.8 percent of GDP in 2010.

Debt Held by the Public

When revenues are insufficient to cover spending, the Department of the Treasury raises money by selling securities in the capital markets to investors. Debt held by the public represents the accumulation of those sales. For example, between 1969 and 1997, the Treasury sold debt to finance deficits, and debt held by the public climbed each year, peaking at $3.8 trillion in 1997. That trend reversed in 1998 with the onset of surpluses. By the end of 2001, debt held by the public had dropped by $453 billion, to $3.3 trillion. As a percentage of GDP, publicly held debt

Table 1-4.
CBO's Baseline Projections of Federal Debt (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Debt Held by the Public at the Beginning of the Year	3,410	3,320	3,380	3,410	3,373	3,288	3,177	3,027	2,840	2,605	2,325	1,900
Changes to Debt Held by the Public												
Surplus (-) or deficit	-127	21	14	-54	-103	-128	-166	-202	-250	-294	-439	-641
Other means of financing	37	39	16	16	18	17	16	16	15	15	14	14
Total	-90	60	31	-37	-86	-111	-150	-187	-235	-279	-425	-627
Debt Held by the Public at the End of the Year	3,320	3,380	3,410	3,373	3,288	3,177	3,027	2,840	2,605	2,325	1,900	1,273
Debt Held by Government Accounts												
Social Security	1,170	1,333	1,512	1,707	1,919	2,145	2,387	2,645	2,919	3,209	3,517	3,838
Other government accounts[a]	1,282	1,330	1,411	1,512	1,626	1,746	1,868	1,993	2,120	2,252	2,388	2,533
Total	2,452	2,664	2,923	3,219	3,544	3,891	4,256	4,638	5,039	5,461	5,905	6,372
Gross Federal Debt	5,772	6,043	6,334	6,592	6,832	7,068	7,282	7,478	7,644	7,786	7,805	7,645
Debt Subject to Limit[b]	5,733	6,004	6,299	6,563	6,808	7,044	7,259	7,455	7,622	7,764	7,783	7,624
Memorandum:												
Debt Held by the Public at the End of the Year as a Percentage of GDP	32.7	32.8	31.3	29.2	27.0	24.8	22.5	20.0	17.5	14.8	11.5	7.4

SOURCE: Congressional Budget Office.

a. Mainly the Civil Service Retirement, Military Retirement, Medicare, and Unemployment Insurance Trust Funds.

b. Differs from gross federal debt primarily because it excludes most debt issued by agencies other than the Treasury. The current debt limit is $5,950 billion.

(which had reached 50 percent as recently as 1993) had fallen to less than 33 percent by 2001.

Under current tax and spending policies, CBO's baseline projects that the recent steady decline in debt held by the public will be interrupted briefly as emerging deficits necessitate additional borrowing in 2002 and 2003. Publicly held debt is projected to begin falling again in 2004 under current policies, by amounts roughly equal to the size of future surpluses. It is projected to total less than $1.3 trillion (7.4 percent of GDP) by the end of 2012.

The Composition of Debt Held by the Public. About 85 percent of publicly held debt consists of marketable securities, such as Treasury bills, notes, and bonds and inflation-indexed notes and bonds. The remainder of that debt comprises nonmarketable securities (such as savings bonds and state and local government securities), which are nonnegotiable, nontransferable debt instruments issued to specific investors.

The Treasury sells marketable securities in regularly scheduled auctions, although the size of those auctions varies according to fluctuations in the government's cash flow. For some time, the Treasury has been shifting its borrowing toward shorter-term bills and notes. For example, it recently introduced a four-week bill and eliminated the 30-year bond. As a

result, the Treasury securities sold to the public now range in maturity from one month to 10 years. Those changes may alter the composition of outstanding public debt in the future. However, the trend toward shorter-term securities may be offset to some extent if the Treasury curtails its recent program of buying back bonds before they reach maturity.

Why Changes in Debt Held by the Public Do Not Equal the Size of Surpluses and Deficits. In most years, the amount that the Treasury borrows or redeems approximates the total surplus or deficit. However, a number of factors broadly labeled "other means of financing" also affect the government's need to borrow money from the public. Through the projection period, public debt is expected to increase by more than the amount of deficits—and decrease by less than the amount of surpluses—as other means of financing activities increase the Treasury's borrowing needs.

In most years, the largest component of other means of financing is the capitalization of financing accounts used for federal credit programs. (In 2001, that component accounted for three-fifths of the total for other means of financing.) Direct student loans, rural housing programs, loans by the Small Business Administration, and other credit programs require the government to disburse money in anticipation of repayment at a later date. Those initial outlays are not counted in the budget, which reflects only the estimated subsidy costs of such programs. For the 10 years of CBO's current baseline, the amount of the loans being disbursed is typically larger than the repayments and interest. Thus, the government's annual borrowing needs are $11 billion to $17 billion greater than the annual budget surplus or deficit would indicate.

In 2001, other means of financing led to a net rise in borrowing of $37 billion, about $23 billion more than in 2000. That change largely resulted from higher-than-average increases in a host of financing activities, including premiums paid in the Treasury's bond buyback program, reestimates of subsidies for federal credit programs, payments to the International Monetary Fund, and cash balances held in commercial banks as compensation for financial services. CBO does not expect most of those higher-than-usual increases to recur in future years.

In 2002, other means of financing are projected to boost borrowing by $39 billion, about $20 billion more than in the other years of the projection period. Approximately $16 billion of that increase reflects the initial purchase of private securities by the National Railroad Retirement Investment Trust. (For more information about that new entity, see Box 4-3 in Chapter 4.) The rest of the increase is largely attributable to premiums paid in the bond buyback program, which CBO expects to be scaled back after 2002.

Debt Held by Government Accounts

In addition to the securities it sells to the public, the Treasury has issued about $2.5 trillion in securities to various federal government accounts. All of the major trust funds and many other government funds invest in special, nonmarketable Treasury securities known as the government account series. In practical terms, those securities represent credits to the various government accounts and are redeemed when funds are needed to pay benefits and other expenses. In the meantime, the government both pays and collects interest on that debt.

Debt issued to government accounts is handled within the Treasury and does not flow through the credit markets. Because those transactions and the interest accrued on them are intragovernmental, they have no direct effect on the economy. The largest balances of such debt are in the Social Security trust funds (nearly $1.2 trillion at the end of 2001) and the retirement funds for federal civilian employees ($543 billion). The balance of the Social Security trust funds is projected to rise to $3.8 trillion by 2012 and the balance of all federal trust funds to more than $5.9 trillion (see Table 1-5).

Gross Federal Debt and Debt Subject to Limit

Gross federal debt and its companion measure, debt subject to limit, include debt issued to government accounts as well as debt held by the public. The future path of gross federal debt will be determined by the interaction of those two components. In CBO's

Table 1-5.
CBO's Baseline Projections of Trust Fund Balances at the End of the Year (In billions of dollars)

Trust Funds	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Social Security	1,170	1,333	1,512	1,707	1,919	2,145	2,387	2,645	2,919	3,209	3,517	3,838
Medicare	239	273	307	346	383	425	467	510	551	592	633	677
Military Retirement	157	165	173	181	190	199	209	219	230	242	256	270
Civilian Retirement[a]	543	577	611	646	682	719	756	793	832	871	910	950
Unemployment Insurance	89	74	59	56	64	71	76	78	81	84	88	92
Highway and Airport	38	31	22	14	7	*	-6	-12	-17	-22	-26	-28
Railroad Retirement[b]	27	27	28	29	30	30	31	31	32	32	32	32
Other[c]	74	77	81	84	87	90	93	96	99	102	105	108
Total	2,335	2,558	2,794	3,064	3,362	3,679	4,013	4,362	4,728	5,111	5,514	5,938
Memorandum:												
Railroad Retirement (Non-Treasury holdings)[b]	n.a.	17	17	18	19	19	19	20	20	20	20	20

SOURCE: Congressional Budget Office.

NOTES: * = between zero and $500 million; n.a. = not applicable.

Some government accounts that are not trust funds invest in nonmarketable Treasury securities. Thus, the total trust fund balances shown here differ from the total debt held by government accounts shown in Table 1-4.

a. Includes the Civil Service Retirement, Foreign Service Retirement, and several smaller retirement trust funds.

b. The Railroad Retirement and Survivors' Improvement Act of 2001 established a new entity, the National Railroad Retirement Investment Trust, which will be allowed to invest in non-Treasury securities, such as corporate stocks and bonds. The total balance of the Railroad Retirement trust funds includes both the funds' Treasury and non-Treasury holdings.

c. Primarily trust funds for federal employees' health and life insurance, Superfund, and various veterans' insurance programs.

baseline projections, gross debt increases every year from 2002 to 2012 as the growth of debt held by government accounts outpaces the future redemption of debt held by the public.

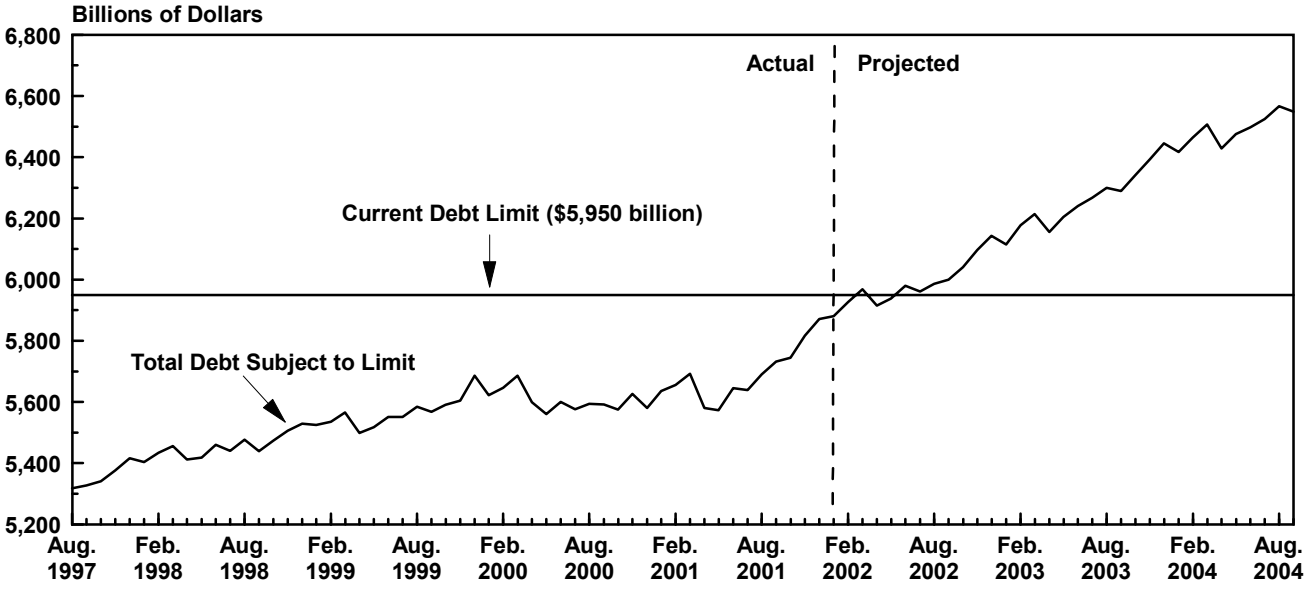
The Treasury's authority to issue debt is restricted by a statutory limit set by the Congress. (The debt subject to limit is nearly identical to gross federal debt, except that it excludes securities issued by agencies other than the Treasury, such as the Tennessee Valley Authority.) The current debt ceiling is $5.95 trillion, enacted in August 1997 (see Figure 1-4). CBO projects that, under current law, debt will exceed that limit sometime this year—possibly as early as March.

Federal Funds and Trust Funds

The budget comprises two groups of funds: trust funds and federal funds. Trust funds are those programs explicitly designated as trust funds in law; federal funds include all other transactions with the public. Over 60 percent of federal spending comes from federal funds.

The federal government has more than 200 trust funds, although fewer than a dozen account for the vast share of trust fund dollars. Among the largest are the two Social Security trust funds (the Old-Age and Survivors Insurance Trust Fund and the Dis-

Figure 1-4.
Debt Subject to Limit Since August 1997



SOURCE: Congressional Budget Office.

ability Insurance Trust Fund) and those dedicated to Civil Service Retirement, Hospital Insurance (Part A of Medicare), 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.

Trust funds do not hold separate cash balances. 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 it would have to otherwise to finance current operations. If the rest of the budget is in balance or in surplus, the Treasury uses the cash from trust fund programs to retire outstanding debt held by the public.

The process is reversed when a trust fund's income falls short of its expenses. In that case, the federal government must raise the necessary cash by boosting taxes, reducing other spending, borrowing more from the public, or (if the total budget is in surplus) retiring less debt.

Including the cash receipts and expenditures of trust funds in the budget totals with other federal programs is necessary to assess the effect of federal activities on the economy and capital markets. CBO, the Office of Management and Budget (OMB), and other fiscal analysts therefore focus on the total surplus or deficit.

Under current policies, the total deficit is projected to be $21 billion in 2002, which can be divided into a federal funds deficit of $243 billion and a trust fund surplus of $222 billion (see Table 1-6). That division is somewhat misleading, however, because trust funds receive much of their income in the form of transfers from federal funds. Such transfers increase the federal funds deficit and augment the trust fund surplus. Those intragovernmental transfers will total $340 billion in 2002. The largest of them involve interest paid to trust funds on their government securities ($152 billion); transfers of federal funds to Medicare for Hospital Insurance, or Part A ($12 billion), and Supplementary Medical Insurance, or Part B ($81 billion); and contributions by government agencies to retirement funds for their current and former employees ($40 billion). Without accounting for

Table 1-6.
CBO's Baseline Projections of Trust Fund Surpluses (In billions of dollars)

Trust Funds	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Social Security	163	163	179	195	211	227	242	258	274	290	307	322
Medicare												
Hospital Insurance (Part A)	29	33	36	38	38	42	41	40	39	38	37	41
Supplementary Medical Insurance (Part B)	-4	1	-1	*	*	*	2	2	2	3	4	4
Subtotal	25	34	35	38	38	42	42	42	42	41	40	45
Military Retirement	7	8	8	8	9	9	10	10	11	12	13	14
Civilian Retirement[a]	31	34	34	35	36	37	37	38	38	39	39	39
Unemployment Insurance	2	-15	-15	-2	8	7	5	3	3	3	4	4
Highway and Mass Transit	-3	-5	-6	-6	-5	-5	-4	-4	-4	-3	-3	-2
Airport and Airways	1	-2	-3	-2	-2	-2	-2	-2	-1	-1	-1	*
Other[b]	-1	4	23	24	25	27	29	31	33	35	38	40
Total Trust Fund Surplus	224	222	254	290	319	341	359	377	396	416	438	461
Federal Funds Surplus or Deficit (-)	-97	-243	-269	-237	-216	-213	-193	-174	-145	-122	1	180
Total Surplus or Deficit (-)	127	-21	-14	54	103	128	166	202	250	294	439	641
Memorandum:												
Net Transfers from Federal Funds to Trust Funds	350	340	357	382	413	441	477	515	555	597	645	688

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

a. Includes the Civil Service Retirement, Foreign Service Retirement, and several smaller retirement trust funds.

b. Primarily trust funds for Railroad Retirement (both Treasury and non-Treasury holdings), federal employees' health and life insurance, Superfund, and various veterans' insurance programs. Beginning in 2003, the category also includes the Department of Defense's Medicare-Eligible Retiree Health Care Fund.

intragovernmental transfers, the trust funds as a whole would run a deficit every year, which would grow from $117 billion in 2002 to $227 billion in 2012.

Because intragovernmental transfers reallocate costs from one part of the budget to another, they do not change the total surplus or the government's borrowing needs. As a result, they have no effect on the economy or on the government's future ability to sustain spending at the levels indicated by current policies.

The Expiration of Budget Enforcement Procedures

The rules that have formed the basic framework for budgetary decisionmaking over the past decade are set to expire on September 30, at the end of this fiscal year. Those budget enforcement procedures comprise annual limits on discretionary appropriations and a pay-as-you-go (PAYGO) requirement for new laws that affect mandatory spending or revenues.

They were established by the Budget Enforcement Act of 1990 (BEA) and later extensions.

Lawmakers are facing the issue of whether, or in what form, to continue that framework at a time when the large projected surpluses of recent years are gone. Although, under current policies, the return of deficits is projected to be short-lived, the current projections raise some of the same issues of budgetary constraint and discipline that led lawmakers to adopt the framework in the first place.

A History of Today's Budget Enforcement Procedures

The BEA built on an existing set of budget enforcement procedures. The Balanced Budget and Emergency Deficit Control Act of 1985 established a schedule of fixed, declining targets for the deficit that began in 1986 and led to a target of zero for 1991. That law also created a procedure—known as sequestration—in which spending for many federal programs would be automatically cut if the deficit for a fiscal year was estimated to exceed its target.

Although deficits shrank somewhat in the late 1980s, they failed to meet the statutory targets—in some years by wide margins. As a result of that failure, the BEA was enacted in the fall of 1990 as part of a plan to reduce deficits by an estimated $500 billion over the 1991-1995 period.[8] That law (which amended the Deficit Control Act) established new procedures for deficit control, including annual caps on the budget authority and outlays in appropriation acts and a PAYGO procedure to prevent new laws dealing with mandatory spending or revenues from increasing the deficit. Both of those controls were to be enforced by sequestration: a breach of the discretionary spending caps would lead to reductions in discretionary programs, and a breach of the PAYGO control would trigger cuts in certain mandatory programs. The BEA retained the Deficit Control Act's concept of deficit targets, but it specified that the targets could be adjusted for revisions in economic and technical estimates.

8. The BEA was enacted as title XIII of the Omnibus Budget Reconciliation Act of 1990.

The BEA's procedures were originally set to expire at the end of fiscal year 1995. But the Congress has periodically extended them, most recently in the Balanced Budget Act of 1997. Currently, the major provisions of the BEA are set to end on September 30, 2002. Those provisions include the discretionary spending limits and related sequestration procedures (set out in section 251 of the Deficit Control Act) and the process for tracking the costs of legislation covered by the PAYGO requirement (under section 252 of the Deficit Control Act).[9]

Evaluating the Budget Enforcement Act

According to its proponents, the BEA helped provide budgetary discipline for most of the 1990s. From 1991 to 1997, total discretionary outlays grew much more slowly than the rate of inflation (principally because of significant cuts in defense spending after the Cold War). During the same period, new mandatory spending and revenue laws covered by the PAYGO requirement were estimated to reduce net deficits.[10] Since enactment of the BEA, only two small sequestrations of discretionary spending have been ordered, both in 1991.

Beginning in 1998, however, the fiscal environment changed. Large and growing surpluses began to emerge that year. In a time of surpluses, the discretionary spending caps and PAYGO requirement

9. Section 252, which sets out the PAYGO procedure, does not expire at the end of 2002. After that time, however, OMB and CBO will no longer be required to track the budgetary effects of new mandatory spending and revenue laws for the purpose of enforcing the PAYGO requirement. That tracking—known as the PAYGO scorecard—generally records the five-year budgetary effects of all laws covered by the PAYGO requirement. The termination of that tracking will effectively shut down the PAYGO system for new laws. However, because section 252 itself does not expire, the possibility of a sequestration of mandatory spending would continue through fiscal year 2006 (the year that section 252 and other remaining provisions of part C of the Deficit Control Act will expire) for PAYGO legislation enacted before the end of fiscal year 2002. Thus, any sequestrations after 2002 would occur solely on the basis of the net costs from legislation enacted before the end of 2002.

10. PAYGO estimates and calculations for that period exclude the budgetary effects of the Omnibus Budget Reconciliation Act of 1993, the Balanced Budget Act of 1997, and the Taxpayer Relief Act of 1997. Those laws, which combined were estimated to reduce deficits, included provisions that prohibited their budgetary effects from being counted on the PAYGO scorecard.

(when enforced) generally bar legislative actions that would diminish projected surpluses.

As surpluses grew to record-setting levels, those procedures (as extended in 1997) were often circumvented. For example, in 1999 and 2000, lawmakers enacted record levels of emergency appropriations—which are effectively exempt from the budget enforcement procedures—and used advance appropriations, obligation delays, timing shifts, and other funding devices to increase discretionary spending well above the caps set in 1997. For 2001 and 2002, lawmakers set new, higher caps to accommodate substantial increases in total discretionary spending.[11] They also eliminated PAYGO balances for those years, removing the need to offset estimated costs of about $11 billion in 2001 and $130 billion in 2002 caused by new mandatory spending and tax laws enacted during the past two years.

Despite recent experience, however, the underlying philosophy of the Budget Enforcement Act—that appropriations should be enacted within enforceable limits and that the estimated costs of new mandatory spending and tax legislation should generally be offset—has proved to be effective in the past. Now, with deficits or small surpluses on the horizon for the next few years, lawmakers may decide that such discipline can again contribute to overall budgetary restraint.

11. The caps for the discretionary category were raised as part of the Congress's final action on regular appropriation acts for 2001 and 2002. The new outlay cap for 2001 was about $60 billion higher than the one for that year set in 1997 (as adjusted). The new outlay cap for 2002 was about $130 billion higher than the comparable 1997 cap (as adjusted).

Chapter Two

The Economic Outlook

The U.S. economy entered a recession in 2001, and most forecasters, including the Congressional Budget Office, believe that it will prove mild in comparison with most past downturns. However, in the aftermath of the events of September 11, new risks to both the nation and the economy have become evident, and policymakers must face the possibility of a significantly different outcome.

CBO's forecast of the U.S. economy's most likely path, which is described in this chapter, anticipates that the recession will be over by the end of the first quarter of 2002 (unless otherwise specified, all years in this chapter are calendar years).[1] CBO estimates that the annual rate of growth of real (inflation-adjusted) gross domestic product will accelerate from -0.2 percent over the four quarters of 2001 to 2.5 percent in 2002 and then quicken further, to 4.3 percent, in 2003 (see Table 2-1). (Chapter 5 explores less likely outcomes, both those that are more optimistic and those that are more pessimistic.)

The recession ended an economic expansion that was unusual in many ways. At 10 years, from March 1991 to March 2001, it was the longest in the nation's history.[2] Midway through the period, the rate of growth of labor productivity sped up significantly, from an annual average of 1.6 percent, between 1991 and 1995, to 2.6 percent, between 1995 and 2000. That acceleration differed from the typical pattern, in which productivity growth slows in the later stages of an expansion. Several factors contributed to that increase in growth, but the most important was a historically high level of business investment, spurred by stunning technological advances in information technology (computers, peripherals, software, and communications equipment) and a surge in stock prices, which reduced the cost of capital. The 10-year expansion was also unusual in that the rapid growth of productive capacity at home, together with excess capacity overseas, kept inflation from picking up as much as it ordinarily does in the later stages of expansions.

Just as the economy's behavior in the 1990s was unusual, the current recession has been out of the ordinary. Expansions typically end after imbalances build up in the economy. Prior to most of the nine recessions that have occurred since World War II, the imbalance—which was reflected in rising rates of inflation—had been a level of overall demand that exceeded overall supply. Monetary tightening in response to the inflation then helped trigger those recessions. At the end of the 1990s, however, the primary imbalance seems to have arisen not from an excess of demand over supply but from overly optimistic expectations of the future profitability of new

1. According to the National Bureau of Economic Research (NBER), a recession is a significant decline in activity spread across the economy, lasting more than a few months, visible in industrial production, employment, real income, and wholesale-retail trade. An economic expansion is the period between the end of one recession and the beginning of the next. Recessions and expansions are both phases of what economists term the business cycle.

2. The previous expansion, lasting from December 1982 to July 1990, was the second-longest peacetime expansion in the nation's history. (The second-longest expansion overall lasted from February 1961 to December 1969.) The NBER maintains the chronology of U.S. business cycles. For the annual record from 1790 to 1855, see Geoffrey H. Moore and Victor Zarnowitz, "Appendix A: The Development and Role of the National Bureau of Economic Research's Business Cycle Chronologies," in Robert J. Gordon, ed., *The American Business Cycle: Continuity and Change* (Chicago: University of Chicago Press for NBER, 1986), p. 746. For the monthly record from the trough in December 1854 to the present, see www.nber.org/cycles.html.

Table 2-1.
CBO's Economic Forecast for 2002 and 2003

	Estimated 2001	Forecast 2002	Forecast 2003
Fourth Quarter to Fourth Quarter (Percentage change)			
Nominal GDP	1.7	4.2	6.5
Real GDP	-0.2	2.5	4.3
GDP Price Index	1.9	1.6	2.1
Consumer Price Index[a]			
Overall	2.2	2.3	2.5
Excluding food and energy	2.7	2.4	2.5
Calendar Year Average			
Real GDP (Percentage change)	1.0	0.8	4.1
Unemployment Rate (Percent)	4.8	6.1	5.9
Three-Month Treasury Bill Rate (Percent)	3.4	2.2	4.5
Ten-Year Treasury Note Rate (Percent)	5.0	5.0	5.5

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

a. The consumer price index for all urban consumers.

investment. Those expectations, which were particularly out of balance for companies that were producing and intensively using information technology, drove both stock prices and levels of business fixed investment (spending on structures, equipment, and software) higher than was merited in retrospect.

As a result, investment plunged beginning late in 2000. A sharp drop in profit margins, probably tied to excess capacity stemming from overoptimism, has worsened that fall. While this recession has been mild so far, the contraction in the share of GDP claimed by corporate profits is expected to be one of the worst since World War II.

Further hurting production is that businesses have reduced their investment in inventory, especially for items that are used to produce new equipment. As the growth of income slowed in response to weaker production and households' equity wealth eroded, the rate of growth of consumption also slackened, but not by as much as did GDP growth. At the same time, the growth of foreign economies began to flag, worsening the downturn in this country by reducing demand for U.S. exports.

The terrorist attacks on September 11 weakened demand still more in an already vulnerable economy. Some industries, such as airlines, hotels, and other travel-related businesses, were directly affected. Consumers lost confidence and cut back their spending on other items as well. "Spreads" (or differences) between the interest rates on corporate and government debt widened noticeably—the financial markets' signal that risk had increased—while stock prices fell; both outcomes raised the cost of funds for business investment. Firms both within and outside the travel sector cut payrolls, and the unemployment rate jumped. Since September, however, many of those effects on the demand side of the economy have been partly or even fully reversed.

Other unusual features of the recession—chiefly the rapidity of policymakers' responses, the moderating behavior of prices, and an early reduction of inventories—support CBO's expectation that the current downturn will not be severe. During 2001, the Federal Reserve cut the federal funds rate (the rate banks charge for overnight loans) 11 times, from 6.5 percent to 1.75 percent. Those cuts probably kept the stock market from sinking further than it did. They also bolstered the housing market and auto sales by putting downward pressure on mortgage interest rates and making it easier for automakers to offer new-car financing of zero percent late last year. On the fiscal side, the tax cuts that became effective in mid-2001 helped prevent consumption from slowing more than it did, and additional federal spending in response to the terrorist attacks will boost GDP in 2002.

Large declines in the prices of oil and natural gas and a lack of pressure on the prices of other items have propped up consumption by boosting real disposable income. Although the price picture indicates some erosion in firms' profit margins, which may be hurting investment, the net impact of the low rate of inflation is probably positive. Also to the good is that businesses began to reduce inventories earlier in this recession than they did in past slowdowns, hurting production last year but setting the stage for stronger production this year. Additional reasons for optimism about the relative moderateness of the recession include the general health of the financial

system and recent monthly indicators of recovery, including a downward trend, between October 2001 and early 2002, in initial claims for unemployment insurance.

The unique character of the recession also bolsters CBO's view that the ensuing recovery will be modest. Since the level of residential construction and purchases of consumer durable goods (such as cars and appliances) have not fallen as much as they have in other recessions, they are not likely to rebound as much when growth returns. Moreover, the lingering presence of significant excess capacity will slow the recovery in business investment. Continued economic weakness overseas means that export growth will also be lower than it was during other recoveries.

CBO forecasts that, in the near term (that is, the next two years), weak growth in GDP, translated into weak growth in employment, will push the unemployment rate higher but also restrain inflation. For 2002, CBO expects the unemployment rate to jump to 6.1 percent, after averaging 4.8 percent in 2001 and just 4.0 percent in 2000 (see Table 2-2 and Figure 2-1). The stronger growth that CBO forecasts for the economy in 2003 trims unemployment to 5.9 percent. And the rate of inflation faced by consumers, as measured by the growth of the consumer price index for urban consumers (CPI-U), falls from 2.9 percent in 2001 to 1.8 percent this year. Lower prices for oil account for most of that forecast decline, although the recession also plays a role. As oil prices stabilize, inflation bounces back to 2.5 percent in 2003.

CBO's and other forecasters' predictions of a mild recession and weak recovery may founder, however, on the uncertainties that accompany the unusual economic patterns of recent years. The possibility of either a stronger recovery or, indeed, a much deeper downturn than CBO forecasts cannot be discounted. Forecasters' lack of experience with this type of recession also means that there are fewer precedents for forecasting the recovery, which increases the uncertainty of their estimates.[3] In addition, other extraordinary events—such as another terrorist attack in the United States or turmoil in the Middle East that causes a severe and sustained rise in oil prices—could deepen or prolong the economy's downturn.

Looking out over the medium term (approximately the next decade), CBO expects the growth of real GDP (production, or output) to average 3.1 percent. That projection for the 2002-2012 period is roughly the same as the projection CBO made in January 2001 for the 2002-2011 period. Nonetheless, the level of real GDP is lower over the 2002-2011 period in CBO's current forecast than in last January's, for two reasons. First, actual GDP fell much farther in 2001 than CBO expected last January. Second, the average rate of growth of potential GDP in the medium term is slightly lower in the current forecast than in last January's because CBO expects productivity to grow somewhat less rapidly than it projected last winter.[4] That lower growth results from less business investment and an altered view of the size of the computer sector: CBO no longer expects that component of the economy, with its high rate of productivity growth, to constitute as large a share of GDP during the next decade as it expected last January that it would.

Recent Economic Developments

The economy had already begun to contract before the events of September 11, a downturn that might even have been deep enough to qualify as a recession without the attacks. A collapse in investment was the single most important source of weakness. Drawdowns in inventories, faltering foreign economies, and increased caution among consumers and investors added to the difficulties. Nonetheless, the slowdown was unusual in that business investment played such an important role. As the economy entered recession during the first half of 2001, growth of GDP

3. For an assessment of CBO's economic forecasts, see *CBO's Economic Forecasting Record*, which will appear shortly on CBO's Web site (www.cbo.gov).

4. Potential GDP is the highest level of real gross domestic product that could persist for a substantial period without raising the rate of inflation. CBO estimates potential GDP using projections of labor; capital; and total factor productivity, which is the average real output per unit of combined labor and capital inputs.

Table 2-2.
CBO's Current and Previous Economic Projections for Calendar Years 2001 Through 2011

	Estimated	Forecast		Projected Annual Average	
	2001	2002	2003	2004-2007	2008-2011
Nominal GDP (Billions of dollars)					
January 2002	10,193	10,422	11,063	13,639[a]	16,676[b]
January 2001	10,446	11,029	11,623	14,100[a]	17,132[b]
Nominal GDP (Percentage change)					
January 2002	3.2	2.2	6.1	5.4	5.2
January 2001	4.7	5.6	5.4	4.9	5.0
Real GDP (Percentage change)					
January 2002	1.0	0.8	4.1	3.3	3.1
January 2001	2.4	3.4	3.3	3.0	3.1
GDP Price Index (Percentage change)					
January 2002	2.2	1.4	2.0	2.0	2.0
January 2001	2.3	2.1	2.0	1.9	1.9
Consumer Price Index[c] (Percentage change)					
January 2002	2.9	1.8	2.5	2.5	2.5
January 2001	2.8	2.8	2.7	2.5	2.5
Unemployment Rate (Percent)					
January 2002	4.8	6.1	5.9	5.2	5.2
January 2001	4.4	4.5	4.5	4.8	5.2
Three-Month Treasury Bill Rate (Percent)					
January 2002	3.4	2.2	4.5	4.9	4.9
January 2001	4.8	4.9	5.0	4.9	4.9
Ten-Year Treasury Note Rate (Percent)					
January 2002	5.0	5.0	5.5	5.8	5.8
January 2001	4.9	5.3	5.5	5.7	5.8
Tax Bases (Percentage of GDP)					
Corporate book profits					
January 2002	6.9	6.1	7.0	7.9	8.1
January 2001	8.9	8.5	8.4	8.1	8.0
Wages and salaries					
January 2002	50.0	50.3	50.1	49.3	48.9
January 2001	48.2	48.2	48.2	48.1	48.0

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

NOTES: CBO's January 2001 projections for GDP and its components were based on data from the national income and product accounts before the accounts were revised in July 2001.

Percentage changes are year over year.

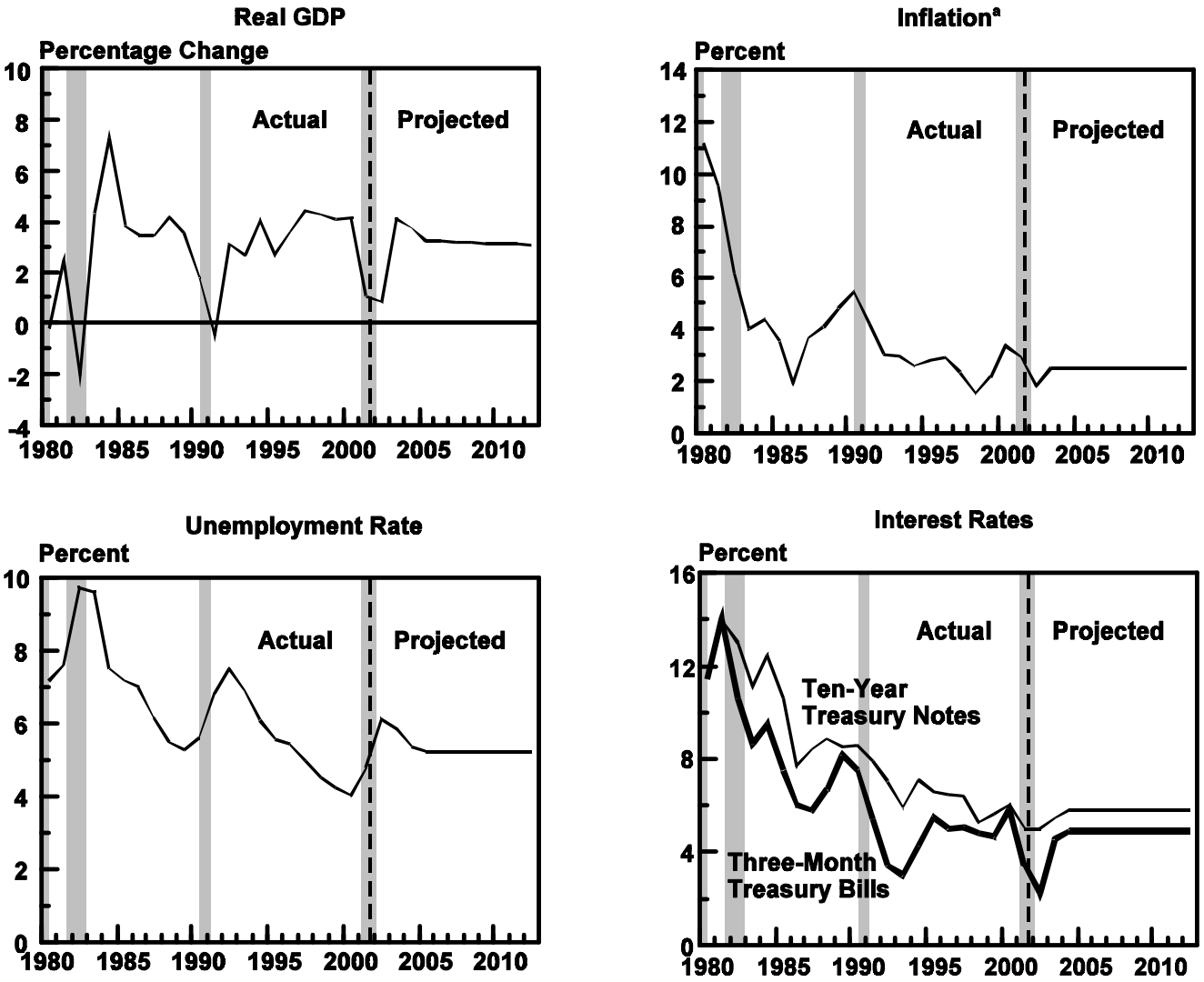
Year-by-year economic projections for calendar and fiscal years 2001 through 2012 appear in Appendix E.

a. Level of GDP in 2007.

b. Level of GDP in 2011.

c. The consumer price index for all urban consumers.

Figure 2-1.
The Economic Forecast and Projections



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

NOTES: All data are annual values; percentage changes are year over year.

The trough of the current recession is assumed to be in the first quarter of 2002.

a. The change in the consumer price index for all urban consumers, applying the current methodology to historical price data (CPI-U-RS).

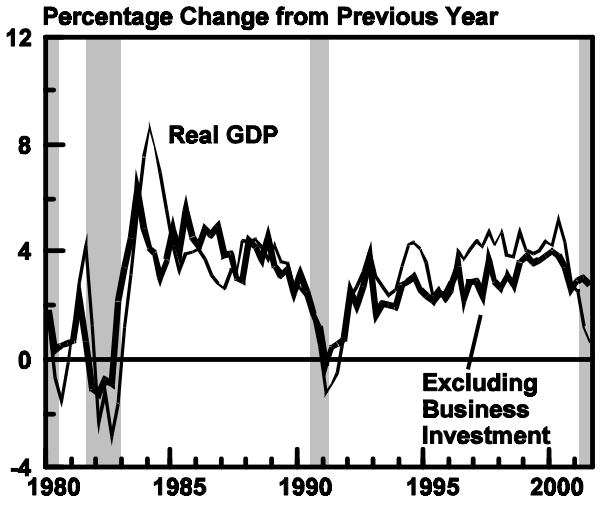
slowed to 0.8 percent from an annual rate of 4.0 percent in the first half of 2000.

The terrorist attacks on September 11 dealt another blow to an already faltering economy. Investors, consumers, and businesses lost confidence. As a result, stock prices fell, consumers bought less, and firms sharply reduced orders for new equipment. Lower demand in turn led businesses to reduce their workforces. Although many of the initial economic effects of the attacks have faded, the economy at the end of 2001 was still weaker than it was before the attacks. How much of that additional weakness stems from the events of September 11 and how much reflects trends already in place before the attacks occurred is difficult to determine.

Business Fixed Investment and Inventories

A dramatic downward shift in the rate of growth of business fixed investment and inventories was the primary cause of the recession. Real nonresidential fixed investment fell by 5.8 percent in the year ending in the third quarter of 2001, after an upward surge of 10.2 percent in the prior four-quarter period. During the first three quarters of 2001, businesses drew down their inventories at an annual rate of $42 billion, after building them at an annual rate of $51 billion in 2000. The downturn in business fixed investment and inventories accounted for 3.7 of the 4.7 percentage points of slowing in the year-over-year growth rate of the economy between the second quarter of 2000 and the third quarter of 2001 (see Figure 2-2).

Figure 2-2.
Growth in Real GDP



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

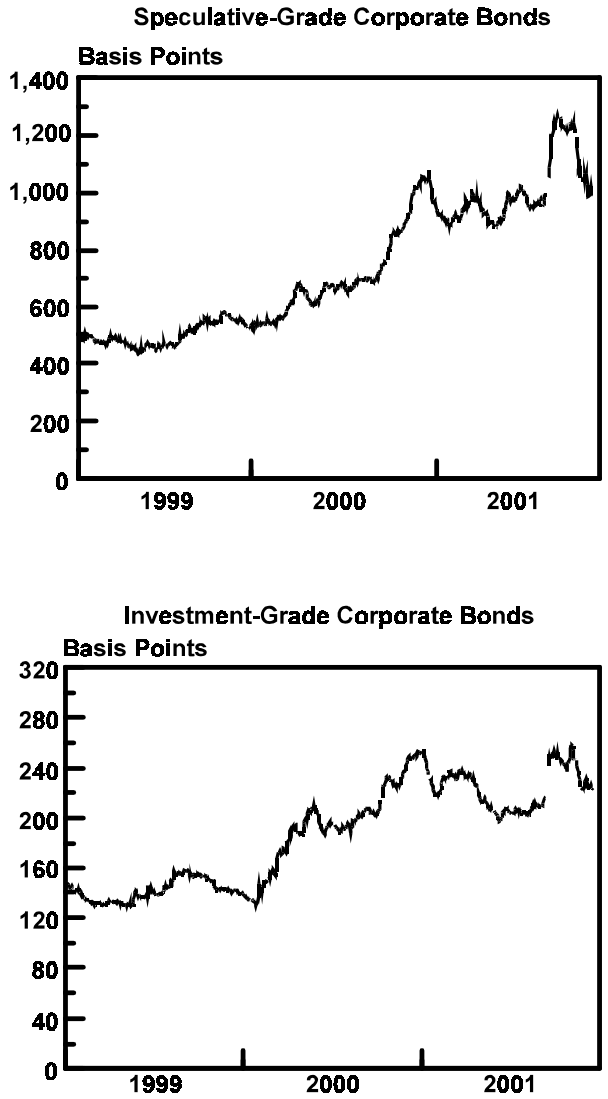
NOTE: Business investment includes business fixed investment (spending on structures, equipment, and software) and the change in business inventories.

Several factors contributed to the decline in investment, but the most influential was probably overinvestment in plant and equipment during the late 1990s and early 2000. Overly optimistic expectations of future growth in demand, which were reflected in inflated stock prices, led businesses to invest in new plant and equipment at levels that appear excessive in hindsight. In addition, many firms in the information technology (IT) sector invested ahead of demand, in an attempt to be first in new Internet and other IT markets. Even though not all such firms were overinvesting, they were all investing at an unsustainable pace. And while overinvestment in information technology appears to have been especially pronounced, there is some evidence of overinvestment in other types of equipment as well.

The decline in investment since early 2000 can be seen as comprising two steps. First, investment has declined from an unsustainably high rate to a more sustainable one. Second, businesses have temporarily reduced investment below that sustainable rate to work off the excess capacity that built up while they were overinvesting. Analysts' estimates of the cumulative level of business overinvestment in information technology alone during the late 1990s and 2000, also known as the IT investment overhang, range from near zero to almost $200 billion—compared with an annual rate of investment in information technology of roughly $350 billion. CBO's implicit assumption about the amount of the overhang is that it falls in the middle of analysts' estimates.

Financial developments since early 2000 exacerbated the drop in firms' investment in plant and equipment. For example, the difference between the interest rates on private and government debt, which private borrowers must pay lenders to compensate for their greater risk of default, grew as the perceived default risk rose. Rates surged on speculative-grade securities (debt carrying some risk of default or nonpayment at maturity), which boosted the cost of capital for firms that rely on such debt. Even for businesses issuing investment-grade debt (which offers a high level of security of repayment at maturity), the spread between the interest rate those firms had to pay and the rate the government paid widened—which meant that the yields on corporate debt fell by less than the yields on Treasury debt (see Figure 2-3). A further development, reported in surveys by the Federal Reserve, was that banks' loan officers tightened lending standards and terms for business customers as a result of the uncertain economic outlook, reducing the availability of bank loans at any given interest rate. Moreover, falling profits last year re-

Figure 2-3.
Interest Rate Spreads



SOURCES: Congressional Budget Office; Standard & Poor's Risk Solutions credit indexes.

NOTES: The spread, which indicates the riskiness of bonds, is measured as the difference between interest rates on speculative-grade and investment-grade corporate bonds and those on Treasury securities of comparable maturity.

A basis point is one-hundredth of a percentage point.

Note that the scales of the vertical axes of the two panels differ.

Breaks in data, most notably those after September 11, 2001, indicate days on which the bond markets were closed.

duced cash flow for many businesses, further limiting their ability to finance new investment.

The attacks on September 11 temporarily worsened those adverse financial conditions and increased uncertainty, which curbed investment still further. Investor confidence plummeted, pushing the Standard & Poor's 500 stock index down by almost 12 percent between September 10 and September 21. (The NASDAQ and Dow Jones industrial indexes fell by even larger percentage amounts.) The spread between yields on corporate securities (both speculative- and investment-grade) and Treasury bonds widened further. In that environment of diminished expectations, orders for nondefense capital goods plunged by 13 percent in September, to their lowest level since August 1995. Although by mid-November the major stock market indexes were back to where they had been before the attack and spreads for corporate bonds had receded nearly to their former levels, orders for nondefense capital goods crept up by just 6 percent in October and 5 percent in November, leaving orders below where they had been in August. Shipments of nondefense capital goods also remained below their August levels in November.

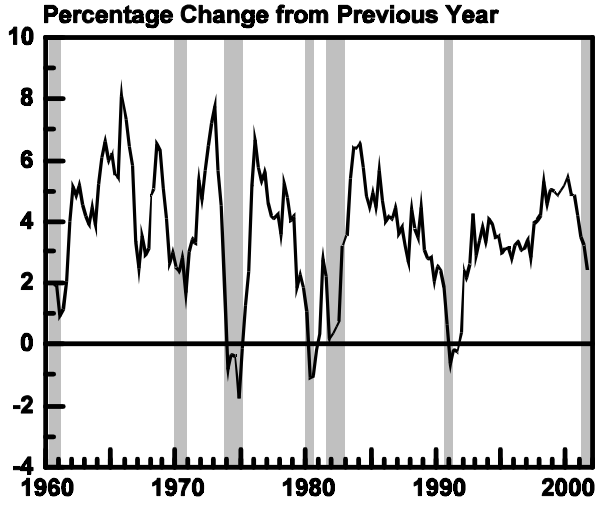
Adverse financial conditions prevailing since September 11 have probably also hurt demand for new nonresidential structures. Vacancy rates for commercial and industrial space have climbed since the end of 2000, as the economy has slowed. Although rising levels of investment in oil-drilling structures, in response to higher oil prices, kept overall construction growing through early 2001, investment in new structures has fallen sharply since then.

The reduction in inventories seen over the past year is primarily a reaction to slower sales, especially of IT equipment. For example, manufacturers of computers and electronic products held only 13 percent of total manufacturing inventories in January 2001, but they accounted for 31 percent of the reduction in those inventories through November 2001. Slowing sales also led wholesalers and retailers to reduce inventories last year. Auto dealers made especially large cuts. In addition, the ratio of inventories to sales rose somewhat in 2000, which produced an inventory overhang at the beginning of 2001 that businesses have since been working off.

Consumer Spending and Residential Investment

The rate of growth of consumption has also slowed since 2000, although the slowdown to date has been much less severe than in most other recessions (see Figure 2-4). Before September 11, real consumer spending was still growing, albeit more slowly than in 2000. From January to August 2001, real consumption rose at an annual rate of 2.7 percent, down from growth of 4.8 percent during 2000 (measured year over year) and 5.0 percent in 1999.

Figure 2-4.
Real Consumer Spending



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

Several factors account for the sagging growth in consumer spending prior to the attacks. In line with the stalling economy, pretax income grew more slowly in 2001 than in 2000. In addition, the rapid rise in equity wealth from higher stock prices, which had helped fuel the growth in consumption in recent years, stopped abruptly in 2000, then swung into reverse. That about-face played a major role in halting the steady decline in the saving rate (which had reflected faster growth in consumption than in income). More recently, tighter standards for consumer lending may also have slowed the growth of consumption slightly.

In fact, if those factors had been the only influences on consumption over the past year, the slowdown would have been more severe than it was. Instead, three other factors helped support consumer spending. First, last summer's tax legislation boosted disposable income, offsetting some of the income lost through lower growth of wages and salaries. Second, rising home prices cushioned the blow to household wealth from lower stock prices. Third, low mortgage rates encouraged many homeowners to refinance their mortgages. Those refinancings have allowed households to consume some of their newfound housing wealth; according to Freddie Mac, a government-sponsored enterprise that provides funding to the home mortgage market, more than half of the homeowners who refinanced during the first three quarters of 2001 took out at least 5 percent of their equity.

For a short time, the terrorist attacks on September 11 sent consumer confidence and consumer outlays reeling. The University of Michigan's index of consumer sentiment fell from 92 in August to just 72 during the second half of September, producing one of the largest monthly declines ever. Consumer confidence, as measured by the Conference Board (a business information group), also dropped. The link between consumption and confidence is not always close, but in this instance, it was: real consumer spending fell by 1.2 percent (monthly rate) during September, the biggest monthly decline in almost 15 years. Travel was especially hard hit, as real spending nosedived for domestic airline travel (down 35 percent), foreign travel (down 28 percent), hotels and motels (down 15 percent), and spectator amusements (down 17 percent). In addition, real outlays for durable goods declined by almost 3 percent, and outlays for clothing and shoes tumbled almost 5 percent.

Since then, consumers have overcome much of the initial shock of the attacks. According to the University of Michigan's index, by the end of October, consumers regained about half of the confidence they had lost during the second half of September, and they regained most of the rest by December. Consumer spending also rebounded, growing by 2.3 percent in October, an upswing that was spearheaded by a sharp rise in sales of light vehicles. (That category includes such vehicles as cars, minivans, and pickup trucks.) Offers of zero-percent financing by automakers pushed sales of such vehicles up by 34 per-

cent in October, to a record annual rate of 21.3 million. Moreover, sales of light vehicles in November and December remained above their levels of a year earlier. Excluding those sales, consumption rose by 0.8 percent in October and 0.2 percent in November, but it remained below August's level. Because automakers made only minor changes in how much they were producing, the sales led mainly to lower inventories rather than to higher GDP growth.

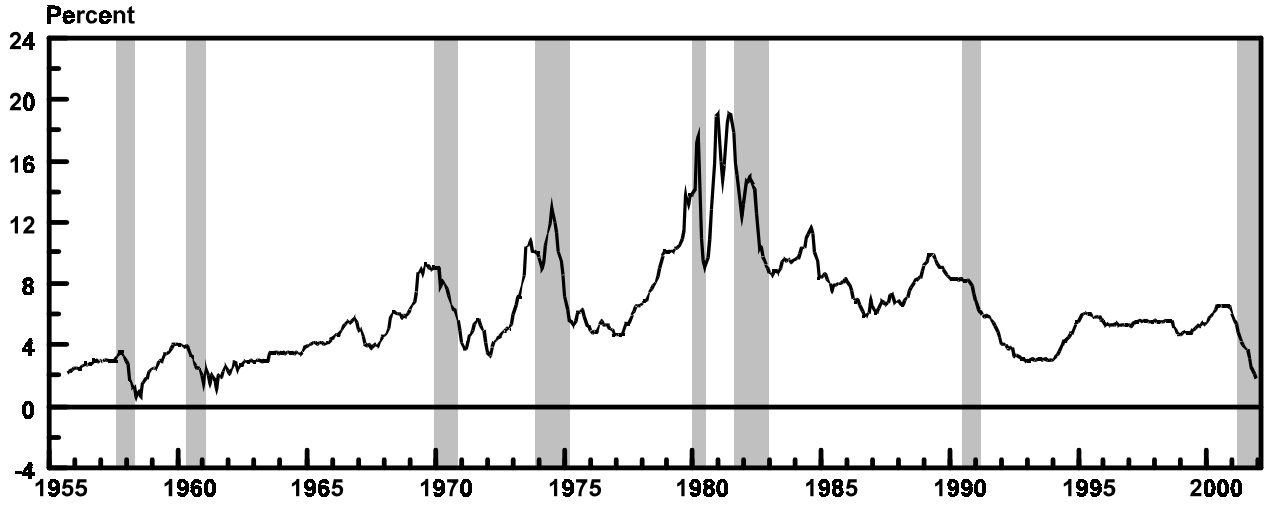
Unlike consumer spending growth, the growth of real residential construction actually accelerated during most of 2001, averaging 5.6 percent annually during the first three quarters of 2001 after a slight decline in 2000. Normally, real residential construction falls during the early stages of a recession, but until a drop in November 2001, it had held up well. At the end of 2001, indicators for the housing market were giving mixed signals. In October, permits for new units fell to their lowest level since 1997, but they jumped back in November to levels similar to those before September 11. If the November jump was due mainly to unseasonably warm weather and not to improving demand for new homes, residential construction is likely to contract in coming months. But barring further major shocks, analysts do not anticipate a collapse.

Monetary Policy

In response to accumulating signs of economic weakness, the Federal Reserve eased monetary policy substantially in 2001, cutting the target for the federal funds rate from 6.5 percent in the first days of January to 1.75 percent in mid-December (see Figure 2-5). It was unusual for the central bank to act preemptively by cutting the rate noticeably even before the official start of the recession. A key factor that made such action easier was the low inflation in the economy—in part the result of excess capacity—as the recession began. Indeed, the same overinvestment that helped cause the downturn may also have helped pave the way for an aggressive response of monetary policy.

However, several factors have muted the ability of those rate cuts to halt the downturn. First, long-term interest rates have fallen over the past 12 months by less than one might expect, given the de-

Figure 2-5.
The Federal Funds Rate



SOURCES: Congressional Budget Office; Federal Reserve Board.

NOTE: The federal funds rate is the rate banks charge for overnight loans.

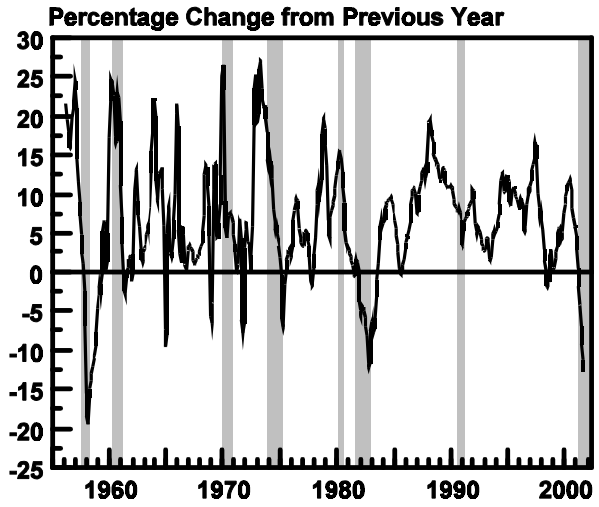
cline in short-term rates; in some cases, they have even risen. Whether they have been sluggish because bondholders expect only a brief recession, because bondholders are demanding a risk premium for inflation (in the form of higher interest rates) as a result of the easier monetary policy, because foreign long-term rates have fallen by only a little, or because the outlook for the federal surplus has deteriorated over the past year is unclear. Second, stock prices fell last year instead of rising, which further neutralized the impact of lower short-term rates on businesses' cost of capital. Third, dimming prospects for foreign economic growth have kept the dollar from falling with the plunge in short-term rates. The dollar's strength has kept U.S. goods from becoming more competitive with foreign goods, which means that another traditional channel by which monetary policy may affect the economy has been blocked. Finally, when excess capacity is unusually large, interest rate cuts may be less effective in boosting investment than they typically are. As a result of all those factors, the Federal Reserve saw the balance of risks at the end of 2001 as still mainly on the side of economic weakness.

International Trade

The trade sector has not played its usual stabilizing role in this recession. The growth of real exports typically holds up during recessions, while weak domestic demand reduces imports, causing a rise in real net exports that partially offsets weakness in other categories of GDP. This time, however, foreign economies withered in tandem with the United States', and real exports fell by 9.0 percent between the third quarters of 2000 and 2001, preventing real net exports from rising (see Figure 2-6). Although the nominal trade deficit narrowed over that period, the improvement stemmed from a stronger dollar and lower oil prices rather than from an increase in real net exports. The synchronous global downturn is another reason that the recovery from the current recession is likely to be relatively weak and the risk of a longer recession cannot be ruled out (see Box 2-1).

The global economy has been buffeted by the recessionary impact of three shocks—the oil price hike of 1999 and early 2000, a sharp pullback in investment since 2000, and the terrorist attacks of September 11—which have pushed the world economy into its weakest state since at least 1982. Countries that depend heavily on foreign direct investment to finance purchases of new plant and equipment have been particularly hard hit by investors' heightened sensitivity to risk after the attacks. (In foreign direct investment, the party investing in a foreign country retains control of the investment.)

Figure 2-6.
Real Exports



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

Economic conditions are worst in Asia and the Americas, but they are also troubling in Europe. Japan's economy, the largest in Asia, is mired in its third recession in a decade and probably its most severe in 20 years. Many other Asian economies, unable to sustain solid growth after the regional crisis in 1997 and 1998, have also entered their worst recession in years. The collapse of the high-tech sector and the sharp slowdown in U.S. demand have been devastating for Asia's export-dependent economies, especially those that are most closely linked to the production of information technology, such as Singapore and Taiwan. In addition, the depreciation of the yen is now making it hard for emerging Asian economies to stage a comeback. In the Americas, Canada's and Mexico's economies have also been buffeted by the global slowdown and the U.S. recession. Argentina's situation is even more dire. After entering its fourth year of recession, Argentina devalued its cur-

Box 2-1.
How the Global Downturn Could Affect Economic Recovery in the United States

Whether the slowdown in the world economy is technically a recession depends on the yardstick one uses, but most analysts agree that the global economy is in its weakest state since at least the 1982 recession. For the first time since 1974, the world's three biggest economies—those of the United States, Japan, and Germany—are contracting simultaneously. In addition, a number of countries (for example, Japan, Hong Kong, Taiwan, China, and Argentina) are in the grip of deflation, or a decline in the general level of prices.

Although weak foreign economies probably helped sustain the U.S. economy's recent expansion—by providing financial capital and a low-cost source of imports—the current global downturn deepened last year's recession in the United States and could even threaten this year's anticipated recovery. Economic growth in the United States can bounce back more quickly and more strongly in an environment of robust economic growth abroad than in an environment of global slowdown. If a U.S. downturn occurs during a foreign boom, U.S. exports will rise and imports will fall, boosting net exports and thus this country's gross domestic product. Net exports stop playing that cushioning role, however, when the world is in a synchronous downturn. In that case, both exports and imports fall, in line with slowing demand in the United States and overseas. That has been true in the current recession, as real (inflation-adjusted) net exports have remained fairly constant, instead of rising as they did in most recessions in the past.

During a global recession, the United States is also more vulnerable to a worldwide financial crisis, which could develop at an alarming speed. U.S. investors hold substantial assets abroad; if many foreign countries began to default on their international debts, investors could incur large losses. Indeed, the risk of systemic financial turmoil that could adversely affect all countries, including the United States, probably increases amid a global downturn. The world—and the United States—are also vulnerable during a global recession to a surge of protectionism that could hinder recovery, such as that seen during the Great Depression.

Although the current worldwide recession has increased the probability of certain adverse outcomes, it has also led to two developments that offer reasons for cautious optimism: the reversal of the global oil price shock and the countercyclical conduct of economic policy in the United States and abroad. The drop in worldwide demand for energy that began at the end of 2000 has more than offset any concerns about shortages in supply. In addition, many foreign countries—for example, Canada, the United Kingdom, Switzerland, Taiwan, and South Korea—have aggressively eased both monetary and fiscal policy. Even the conservative European Central Bank lowered its key interest rate by 150 basis points last year. (A basis point is a hundredth of a percentage point.) Those developments have helped mitigate the severity of the current downturn.

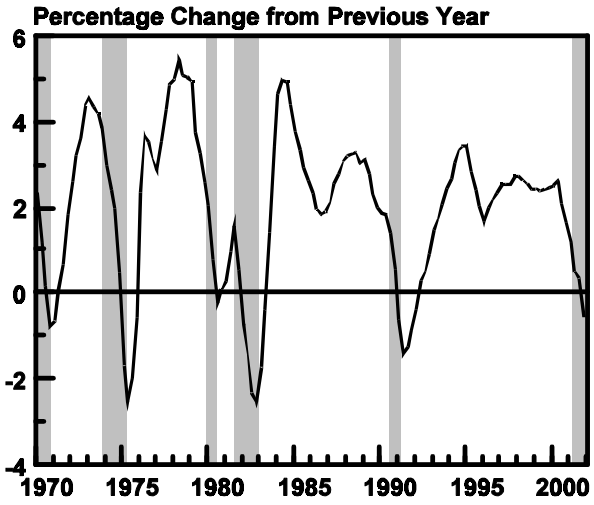
rency and defaulted on its foreign debt at the end of last year. It now faces what could become a wave of bankruptcies. Even Western Europe, which is on a more solid economic footing than other regions are, saw its rate of GDP growth skid from 3.4 percent in 2000 to about 1.5 percent in 2001.

The worldwide plunge in business investment has hit U.S. imports and exports of capital goods especially hard. A drop in imports of nonautomotive capital goods accounted for 74 percent of the decline in real imports during the first three quarters of 2001, even though they constituted only 24 percent of all imports at the end of 2000. Capital goods also made up a disproportionate share of the fall in exports.

Labor Markets

U.S. labor markets have deteriorated markedly over the past year (see Figure 2-7). The unemployment rate had already drifted up to 4.3 percent in March 2001, the final month of the expansion, from a low of 3.9 percent in October 2000. Between March and September 2001, the unemployment rate rose by another 0.7 percentage points, to 5.0 percent. But even that higher rate was low by historical standards. Between March and September, total nonfarm employment fell by 424,000 jobs. The drop in private nonfarm employment alone was nearly twice as large but was partially offset by government hiring. The manufacturing sector accounted for almost all of the de-

Figure 2-7.
Nonfarm Payroll Employment



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

cline in private payrolls, with losses disproportionately high among producers of capital goods.

Lower demand after the terrorist attacks in September led businesses to further reduce their workforces. In October, the first month to fully register conditions in the labor markets after September 11, the unemployment rate jumped to 5.4 percent.[5] The markets continued to deteriorate for the rest of the year, and the unemployment rate climbed to 5.8 percent in December. Nonfarm employment fell by more than 900,000 jobs between September and December. Job losses were spread across many sectors, but travel-related and manufacturing industries suffered disproportionately, as did temporary workers hired through agencies.

Inflation

Consumer price inflation excluding food and energy (which is also known as the core CPI-U) has been remarkably stable for many years, in contrast to the pattern typically seen at the end of economic expansions in the past. The year-to-year growth in the core CPI-U has remained between 2.0 percent and 2.8 percent since 1996. Through the middle of last year, after the slowdown had begun, core CPI-U inflation was only 2.7 percent.

Usually, inflation accelerates late in an expansion, as unemployment falls and the rate of utilization of firms' capacity to produce rises. But the expansion of the late 1990s was unusual in that it was accompanied by a rapid increase in both domestic productive capacity and foreign supply. Growth in total factor productivity (TFP)—the productivity of both labor and capital together—accelerated, and booming investment pushed the capital stock higher. In addition, the percentage of domestic demand met by foreign suppliers increased, and the prices of imports remained low. Annual growth in the overall CPI-U, measured fourth quarter over fourth quarter, slowed to 2.2 percent during 2001 from 3.4 percent during 2000, as energy prices changed course, shifting from a rapid increase to a rapid decline.

CBO's Economic Forecast for 2002 and 2003

CBO forecasts that growth of real GDP will rebound to 2.5 percent in 2002 (measured fourth quarter over fourth quarter) as the economy emerges from recession early in the year and will then accelerate to 4.3 percent in 2003 (see Table 2-1 on page 20). Thus, CBO expects a mild recession and a subdued recovery, by historical standards (see Box 2-2). Inflation is likely to remain moderate: CBO estimates that the CPI-U will climb by 2.3 percent over the four quarters of this year and by 2.5 percent next year. Short-term interest rates in CBO's forecast begin to rise in mid-2002, as economic growth picks up, but they are lower on average in 2002 than in 2001. Those rates then continue to climb in 2003. CBO expects long-term rates to be somewhat higher in 2003 than in 2002.

CBO's current forecast for 2002 and 2003 is much weaker than the forecast it published in January 2001, reflecting both the economy's slide into recession and a reduction of GDP in the national income and product accounts (NIPAs) following last year's

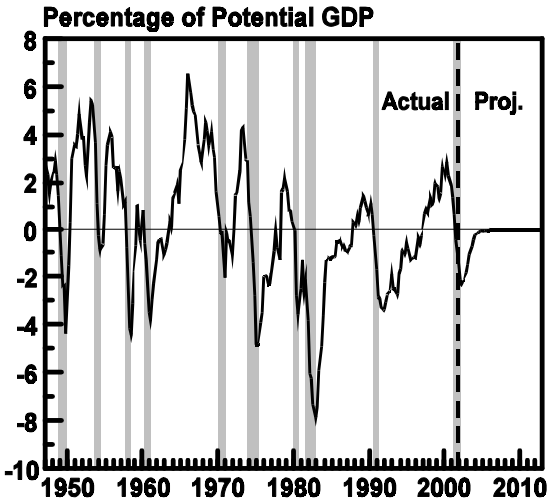
5. The September data do not reflect conditions following the attack because a person who was employed at any time from September 9 to September 15 was considered employed during the month.

Box 2-2.
How Does This Recession Compare with Others?

In the view of the Congressional Budget Office (CBO), the current recession will be mild compared with the nine previous recessions since 1947. In fact, if CBO's forecast comes to pass, the decline in economic activity in this recession and the rise in the unemployment rate will be close to the smallest in the post-World War II period. During the nine previous recessions, gross domestic product (GDP), after adjustment for inflation, dropped from its peak to its trough (or lowest point) by an average of 2.1 percent, but CBO's forecast for the current slowdown indicates a drop of only 0.6 percent. By that measure, only the recession of 1970 was as mild. At the end of the current downturn, CBO expects, the percentage difference between actual GDP and its trend level (known as potential GDP) will be smaller than at the end of most recessions in the past (see the figure).

Similarly, CBO anticipates that the jump in the unemployment rate in this recession will be smaller than that in most past downturns. In CBO's forecast, the unemployment rate rises to a quarterly high of 6.2 percent by the middle of this year, compared with an actual quarterly low of 4.0 percent in late 2000. That increase of 2.2 percentage points is less than the hikes seen in seven of the previous nine recessions. Only in the downturns of 1960 and 1980 did the unemployment rate increase by a smaller amount. CBO also expects that the unemployment rate will peak at a level that is lower than the peak experienced in most recessions in the past.

Potential Output Gap



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

NOTE: The potential output gap is the percentage difference between real GDP and CBO's estimate of potential GDP.

annual revision by the Commerce Department's Bureau of Economic Analysis. (CBO uses data from the NIPAs to prepare its forecast.) For 2002, growth of real GDP in CBO's current outlook is more than 2 percentage points lower, the level of real GDP is almost 5 percent lower, and the unemployment rate averages 1.6 percentage points higher than in its January 2001 forecast (see Table 2-2 on page 22). Although CBO's estimate now of the growth of GDP in 2003 is higher than last January's, its estimate of the level of GDP is lower. The estimate of consumer price inflation in the current forecast is also lower than in last January's, especially for 2002, because of both a drop in energy prices and a weaker economy. The Federal Reserve's rate cuts in 2001 led to estimates of short-term interest rates that are much lower for 2002 and slightly lower for 2003; the forecast for long-term rates is also slightly lower for 2002 but the same for 2003. CBO's current estimate of corporate profits is down sharply from last January's, reflecting an unexpectedly large drop in profits in 2001. CBO's downward revisions of the projected growth of GDP are in line with a consensus of private forecasts (see Table 2-3).

Growth of Real GDP

CBO's short-term forecast for real GDP rests on the assumption that the recession will end by early 2002, with recovery beginning before midyear. During the early part of this year, CBO estimates, business fixed investment and exports will continue to decline, consumption will slow as zero-percent financing for

Table 2-3.
Changes in Forecasters' Estimates for Calendar Year 2002 (In percent)

	Blue Chip Consensus	CBO
Growth of Real GDP[a]		
January 2002	1.0	0.8
January 2001	3.4	3.4
Growth of GDP Price Index[a]		
January 2002	1.6	1.4
January 2001	2.0	2.1
Average Three-Month Treasury Bill Rate		
January 2002	2.1	2.2
January 2001	5.4	4.9

SOURCES: Congressional Budget Office; Aspen Publishers, Inc., *Blue Chip Economic Indicators* (January 10, 2002, and January 10, 2001).

NOTE: The *Blue Chip* consensus is the average of nearly 50 private-sector forecasts.

a. Changes are year over year.

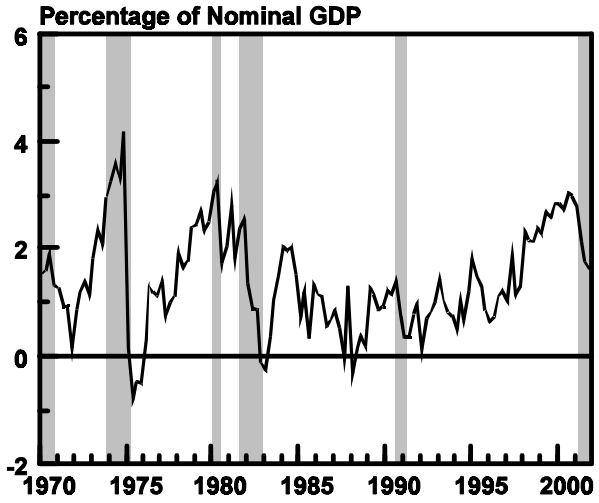
light-vehicle purchases expires, and housing construction will ease slightly. By mid-2002, however, the primary cause of the recession, the downturn in investment, will have finally run its course, and production and income will rise as businesses stop cutting inventories. Increased federal spending will also help put growth back on track. The recovery will gather steam as exports, consumption, and residential construction begin to grow and businesses restock their inventories.

Although CBO's forecast anticipates that consumption and housing will slow in early 2002, both should be growing again by midyear, if not before. Zero-percent financing boosted sales of new light vehicles in the fourth quarter of 2001—but probably at the expense of future sales. Thus, real consumption is likely to fall in the first quarter of 2002. After that, CBO estimates that it will rise along with real income, or even somewhat faster, as greater confidence among consumers adds to spending. Residential construction will follow a similar pattern, CBO forecasts, falling early in 2002 but rebounding with consumers' renewed confidence about the future.

Real business fixed investment will probably continue to decline during early 2002 but then begin to grow moderately again. By the end of 2001, as Figure 2-8 shows, investment had fallen by enough to bring the corporate financing gap down closer to its historical average. (The corporate financing gap is a measure of firms' capital expenditures minus their internal funds, and thus indicates the amount of funding they must raise from outside the corporate sector.) Also by the end of 2001, investment had dropped low enough to eventually draw down the excess capacity built up during the late 1990s. However, given the high levels of excess capacity that many firms still experience, the drawdown is not over, so few prospects exist for rapid growth of investment. Consequently, in terms of investment, this recovery is likely to be one of the weakest of the postwar period, with real business fixed investment projected to remain below its peak (in the fourth quarter of 2000) until late 2003.

The federal budget will add to the growth of GDP in 2002 as a result of legislation passed in response to the terrorist attacks, automatic stabilizers, and the continued effect on consumption of last

Figure 2-8.
The Corporate Financing Gap



SOURCES: Congressional Budget Office; Federal Reserve Board.

NOTE: The corporate financing gap is measured as capital expenditures minus internal funds minus the inventory valuation adjustment for the nonfarm, nonfinancial corporate business sector.

year's tax cuts.[6] CBO expects growth of real federal consumption and gross investment to pick up in 2002 but then to slow somewhat in 2003. Personal tax rates on average will be lower in 2002 than in 2001. However, state and local governments are likely to contribute little help to GDP growth in 2002, because many of them will probably cut back spending in response to paltry increases in revenues.

Firms' investment in inventories will strongly augment GDP growth, whereas international trade will be a net drag, CBO forecasts. During 2001, the reduction in inventories meant that real GDP grew more slowly than did final sales. However, with the very low levels of inventory that firms are now holding, any rebound in sales will trigger a buildup in inventory, causing GDP to grow more rapidly than sales in 2002.

Although real exports are expected to start growing again by mid-2002, CBO forecasts that net exports will hold down real GDP growth in 2002 and 2003. The primary reason is that the economic recoveries of important U.S. customers—for example, the European nations—are likely to lag behind the U.S. recovery. Japan, in particular, will remain in recession in 2002, according to the International Monetary Fund and the Organisation for Economic Co-operation and Development. Thus, imports will rebound faster than will U.S. exports, reducing GDP. In addition, the appreciation of the dollar during 2001 will modestly hurt real net exports by making U.S. products less competitive.

Unemployment

In CBO's forecast, the recession pushes unemployment higher in 2002 than it was in 2001. CBO expects that the unemployment rate will rise to an average of 6.1 percent in 2002, up from 4.8 percent in 2001. As actual GDP begins to grow faster than potential GDP in 2003, the unemployment rate will ease back to 5.9 percent.

6. In general, automatic stabilizers are factors that dampen the impact on GDP of a drop in demand. In the context of fiscal policy, automatic stabilizers are those provisions of tax law and the budget, such as the income-based tax system and unemployment insurance, that partially offset losses in pretax income arising from a drop in demand, thus reducing the consequent fall in consumption.

Inflation

Inflation, as measured by the CPI-U, slows to just 1.8 percent in CBO's forecast for 2002 (down from 2.9 percent in 2001) before rebounding to 2.5 percent for 2003, as energy prices stabilize. Several factors underlie that benign forecast. First, the rate of price increase was already low as the recession began. Second, a weak economy will keep that rate down by both restraining demands for higher wages and limiting businesses' ability to pass on any increase in costs to their customers. Third, falling oil prices will reduce the prices of energy and of goods and services that are produced using energy. CBO expects that oil prices will be lower on average in 2002 than in 2001. In 2003, inflation is likely to pick up, primarily because energy prices will be stable instead of falling.

Interest Rates

CBO forecasts that the Federal Reserve will gradually raise short-term interest rates as the economy recovers to prevent it from overheating and, thus, inflation from rising. Nevertheless, short-term interest rates are likely to remain relatively low over most of the next two years. CBO expects that the rate on three-month Treasury bills will average just 2.2 percent in 2002, roughly 1 percentage point less than in 2001 and much lower than in 2000. As the growth of GDP quickens its pace in 2003, the short-term rate will rebound to 4.5 percent.

Long-term rates typically fluctuate less than short-term rates do, and that is likely to be true again during the forecast period. CBO expects the rate on 10-year Treasury notes to average 5.0 percent in 2002—as it did in 2001. In 2003, CBO forecasts, the rate will rise by 0.5 percentage points, which compares with a rise of 2.3 percentage points in short-term rates.

Comparison of Two-Year Forecasts

Overall, CBO's forecast for 2002 is similar to the *Blue Chip* consensus forecast published in January 2002 (see Table 2-4). (The consensus is an average of roughly 50 private-sector forecasts.) CBO's estimate of GDP growth, relative to that in the *Blue Chip*

Table 2-4.
Comparison of *Blue Chip*'s and CBO's Forecasts for Calendar Years 2002 and 2003

	Estimated	Forecast	
	2001	2002	2003
Nominal GDP (Percentage change)			
Blue Chip high 10		4.0	6.2
Blue Chip consensus	3.3	2.6	5.4
CBO	**3.2**	**2.2**	**6.1**
Blue Chip low 10		1.3	4.3
Real GDP (Percentage change)			
Blue Chip high 10		2.0	4.1
Blue Chip consensus	1.0	1.0	3.4
CBO	**1.0**	**0.8**	**4.1**
Blue Chip low 10		0	2.7
GDP Price Index (Percentage change)			
Blue Chip high 10		2.2	2.4
Blue Chip consensus	2.2	1.6	1.9
CBO	**2.2**	**1.4**	**2.0**
Blue Chip low 10		1.0	1.2
Consumer Price Index[a] (Percentage change)			
Blue Chip high 10		2.4	3.1
Blue Chip consensus	2.9	1.7	2.4
CBO	**2.9**	**1.8**	**2.5**
Blue Chip low 10		1.1	1.8
Unemployment Rate (Percent)			
Blue Chip high 10		6.4	6.2
Blue Chip consensus	4.8	6.1	5.7
CBO	**4.8**	**6.1**	**5.9**
Blue Chip low 10		5.6	5.1
Three-Month Treasury Bill Rate (Percent)			
Blue Chip high 10		2.8	4.3
Blue Chip consensus	3.4	2.1	3.4
CBO	**3.4**	**2.2**	**4.5**
Blue Chip low 10		1.7	2.5
Ten-Year Treasury Note Rate (Percent)			
Blue Chip high 10		5.6	6.1
Blue Chip consensus	4.9	5.1	5.6
CBO	**5.0**	**5.0**	**5.5**
Blue Chip low 10		4.6	5.0

SOURCES: Congressional Budget Office; Aspen Publishers, Inc., *Blue Chip Economic Indicators* (January 10, 2002).

NOTE: The *Blue Chip* high 10 is the average of the 10 highest *Blue Chip* forecasts; the *Blue Chip* consensus is the average of the nearly 50 individual *Blue Chip* forecasts; and the *Blue Chip* low 10 is the average of the 10 lowest *Blue Chip* forecasts.

a. The consumer price index for all urban consumers.

forecast, is somewhat lower for 2002 but higher for 2003. Even so, CBO's forecast of unemployment is identical to that of the consensus for 2002 and 0.2 percentage points higher than the *Blue Chip*'s consensus for 2003. The two forecasts are similar in their estimates of consumer price inflation and long-term interest rates, but CBO expects slightly lower GDP price inflation in 2002 and higher short-term interest rates in 2003.

Why CBO Is Forecasting a Mild Recession

CBO expects that the current recession will be mild, for several reasons. A prominent one is that the Federal Reserve has already eased monetary policy aggressively, and the low inflation that prevailed as the recession began will give the central bank room to do still more without worrying about exacerbating inflation in the near term. Analysts usually expect a lag of six to 18 months between a change in interest rates and its impact on GDP; consequently, some effects of past easing are probably still in the pipeline. Legislation following the attacks, automatic stabilizers, and last year's tax cuts are also likely to aid the recovery. Further bolstering CBO's expectation of a modest downturn is that financial conditions are better now than during, for example, the 1990-1991 recession. In particular, the banking system is stronger than it was then, because financial institutions are better capitalized and have fewer bad loans relative to their assets.

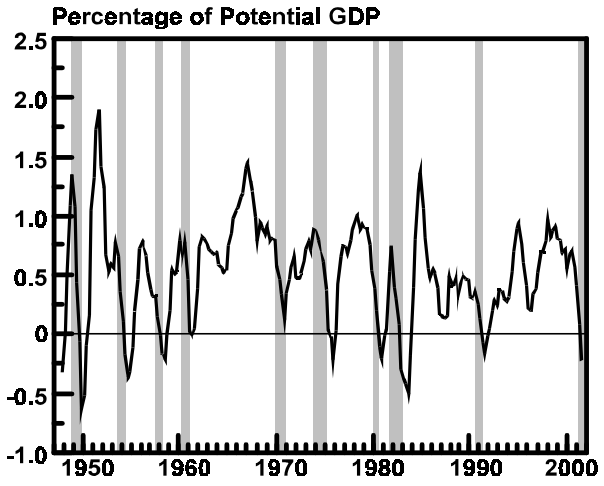
Current moderate rates of consumer price inflation are another cause for optimism. Between May 2001 and December 2001, the price of crude oil fell by almost $10 per barrel, as global demand for oil shrank faster than supply. Natural gas prices also fell during that time. The resulting drop in the cost of household energy boosted consumers' real disposable income, offsetting some of what had been lost with the rise in unemployment. Each decline of $1 in the price of a barrel of oil directly adds nearly $3 billion to the amount consumers have available to spend on other goods and services. In addition, lower oil prices reduce the cost of doing business, allowing further markdowns in consumer prices.

More broadly, price cutting triggered by excess capacity has pushed up real consumer income, preventing a decline in real consumption. Although the lower profit margins that accompany such cuts may hurt investment by businesses, the net effect on GDP of lower prices is probably positive.

Recent data also lend some support to the forecast of a mild recession. Stock prices have rebounded from the lows they reached immediately after the terrorist attacks in September. In addition, consumer confidence has bounced back. Consumption has been growing, even without factoring in the surge in sales of light vehicles. And initial claims for unemployment insurance, while still high, have nevertheless fallen well below the levels seen in the weeks immediately after the attacks. In addition, despite a drop in manufacturing employment in December, average weekly hours worked in the manufacturing sector rose.

As the economy goes forward, the currently low level of inventories means that any recovery should gain momentum fairly quickly. If inventories declined in the final quarter of 2001, as many analysts assume, it would be only the fourth time since World War II that they had been drawn down for four consecutive quarters. After the three previous declines (in 1949, 1953-1954, and 1982-1983), inventory growth was strong (see Figure 2-9). However, stable

Figure 2-9.
Business Inventory Investment

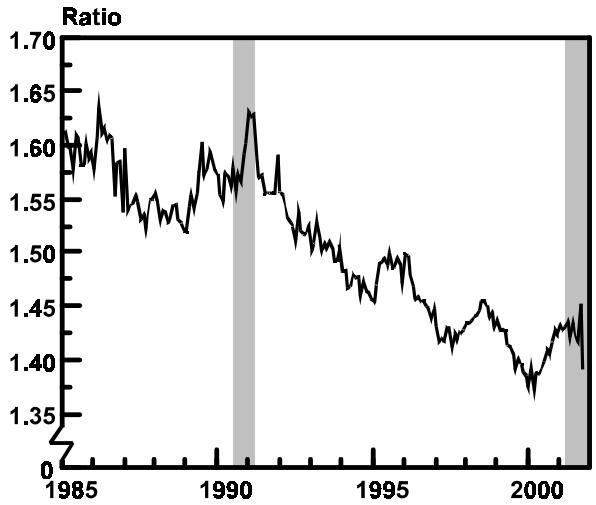


SOURCES: Congressional Budget Office; Department of Commerce, Bureau of Economic Analysis.

NOTE: Data are four-quarter moving averages.

or recovering sales are key to the economy's picking up, since the drop in inventories during the first eight months of 2001 only mirrored the drop in businesses' sales, as reflected in a relatively stable ratio of inventories to sales (see Figure 2-10).

Figure 2-10.
Ratio of Inventories to Sales



SOURCES: Congressional Budget Office; Department of Commerce, Bureau of the Census.

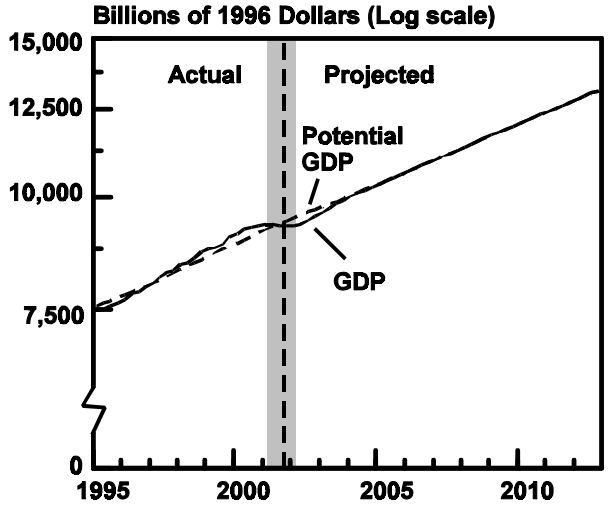
NOTE: Data are for inventories and sales in the manufacturing and trade sectors.

The Outlook Beyond 2003

CBO's economic projections do not explicitly incorporate specific cyclical recessions or booms beyond 2003. Instead, CBO reflects the likelihood that at least one cyclical episode will occur in any 10-year interval by incorporating the average effects of typical business cycles into its projections. The projections for the medium term extend historical trends in such underlying factors as the growth of the labor force, the growth of productivity, the rate of national saving, and the shares of GDP claimed by various categories of income. CBO's projections of real GDP, inflation, real interest rates, and tax revenues depend critically on those underlying trends.

CBO projects that real GDP will grow at an average annual rate of 3.2 percent between 2003 and 2012, which is slightly faster than CBO's estimate of the growth of potential GDP (3.1 percent) over the same span. CBO expects real GDP to grow more quickly than potential output after 2003 because weak growth in 2001 reduced the level of real GDP below its potential, or trend, level and GDP will still be below potential in 2003. Thus, CBO assumes that the economy, in order to catch up, will grow faster than its trend rate during the recovery period (2002 through 2005) and then expand at the level of its trend from 2006 through 2012 (see Figure 2-11). Potential GDP grows more slowly in CBO's current projection than it did in last January's, largely because CBO has revised its outlook for business investment substantially downward from a year ago.

Figure 2-11.
Gross Domestic Product



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

CBO's projections of consumer price inflation and interest rates after 2003 are nearly identical with last January's. However, CBO now expects that the unemployment rate will average 5.2 percent from 2004 through 2007, compared with last January's estimate of 4.8 percent. In both projections, CBO's estimate of the unemployment rate after 2007 is 5.2 percent.

CBO's Projection of Potential Output

CBO now projects that potential output will grow at an average annual rate of 3.1 percent over the 2002-2012 period, which is a reduction of almost 0.3 percentage points from its projection in January 2001 (see Table 2-5). Slower accumulation of capital is the primary reason for that downward revision; growth in the index of capital services ("capital input" in the table) averages 4.2 percent annually during the 2002-2012 period, down from 5.3 percent in last January's projection. That revision by itself crops 0.3 percentage points from CBO's projection of the rate of growth of output and labor productivity in the nonfarm business sector and accounts for most of the change to projected potential growth.

Table 2-5.
Key Assumptions in CBO's Projection of Potential GDP (By calendar year, in percent)

	Average Annual Growth					Overall Average Annual Growth,	Projected Average Annual Growth,
	1951-1973	1974-1981	1982-1990	1991-1995	1996-2001	1951-2001	2002-2012
Overall Economy							
Potential GDP	3.9	3.3	3.0	2.6	3.4	3.4	3.1
Potential Labor Force	1.6	2.5	1.6	1.1	1.2	1.6	1.1
Potential Labor Force Productivity[a]	2.2	0.8	1.4	1.5	2.2	1.8	2.0
Nonfarm Business Sector							
Potential Output	4.0	3.6	3.2	3.0	3.9	3.7	3.4
Potential Hours Worked	1.3	2.2	1.6	1.5	1.5	1.5	1.2
Capital Input	3.7	4.3	3.6	2.5	5.4	3.9	4.2
Potential Total Factor Productivity	2.0	0.8	1.0	1.1	1.3	1.4	1.3
Potential TFP excluding adjustments	2.0	0.7	1.1	1.1	1.1	1.4	1.1
TFP adjustments	0	0	0	0	0.3	0	0.2
Computer quality	0	0	0	0	0.2	0	0.1
Price measurement	0	0	0	0	0.1	0	0.2
Additional spending on security	0	0	0	0	0	0	-0.1
Contributions to Growth of Potential Output (Percentage points)							
Potential hours worked	0.9	1.5	1.1	1.1	1.0	1.1	0.9
Capital input	1.1	1.3	1.1	0.8	1.6	1.2	1.3
Potential TFP	2.0	0.8	1.0	1.1	1.3	1.4	1.3
Total Contributions	4.0	3.6	3.1	2.9	4.0	3.7	3.4
Memorandum:							
Potential Labor Productivity[b]	2.7	1.4	1.6	1.4	2.4	2.1	2.2

SOURCE: Congressional Budget Office.

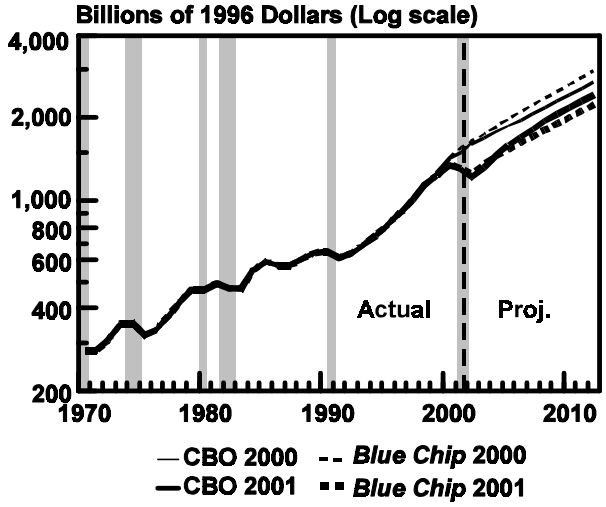
NOTE: CBO assumes that the rate of growth of potential total factor productivity (TFP) changed after the business-cycle peaks of 1973, 1981, and 1990 and again after 1995.

a. The ratio of potential GDP to the potential labor force.

b. Estimated trend in the ratio of output to hours worked in the nonfarm business sector.

CBO's projection of capital accumulation is lower than last January's because CBO, like the *Blue Chip* consensus of private forecasters, has reduced its projection of business fixed investment for the medium term (see Figure 2-12). That revision stems from three considerations. First, the Bureau of Economic Analysis (BEA) sharply lowered its estimates of the level of investment over the 1998-2001 period; the changes were concentrated in the information technology categories of investment, such as computers and software. Second, business investment has been weak during the current recession and is expected to recover slowly. Third, the share of GDP devoted to investment during the late 1990s now appears—in light of the experience of the past year—to have been unsustainable.

Figure 2-12.
CBO's and *Blue Chip*'s Projections of Real Business Fixed Investment



SOURCES: Congressional Budget Office; Aspen Publishers, Inc., *Blue Chip Economic Indicators* (October 10, 2000, and October 10, 2001).

NOTE: The "*Blue Chip* 2000" and "CBO 2000" projections were made late in calendar year 2000; the "*Blue Chip* 2001" and "CBO 2001" projections were made late in calendar year 2001.

CBO projects that potential total factor productivity will grow by 1.3 percent on average during the 2002-2012 period. That rate of growth is roughly 0.2 percentage points slower than the rate CBO projected last January, despite the fact that the historical trend is down only slightly. Two factors explain the difference. First, CBO has incorporated a rough adjustment to account for the effects on long-run growth of additional costs for security following the events of September 11. The adjustment, which trims growth in potential TFP by 0.06 percentage points during the projection period, includes a one-time reduction of 0.3 percentage points for 2002 as well as a cut in the growth rate of 0.03 percentage points for each year of the projection (see Box 2-3).

Second, CBO's current estimate of the contribution to overall TFP growth made by technological advances in the computer manufacturing sector (0.1 percentage points) is smaller than last January's (0.2 percentage points). That change arises not because the outlook for technical innovation in the computer sector has altered but because purchases of computers are now expected to make up a smaller share of overall output than was anticipated last January (a further consequence of the downward revision to business investment).

CBO projects that slower capital accumulation and slower growth of potential TFP will combine to restrain the growth in potential labor productivity. CBO expects an average annual increase of 2.2 percent in that rate during the projection period, or 0.5 percentage points less than its estimate in January 2001.

Partially offsetting the projected downward influence that slower growth of capital and total factor productivity will have on the growth of potential output is a small upward revision to growth in the labor input. CBO's current projection shows potential hours worked in the nonfarm business sector growing by 1.2 percent annually on average during the 2002-2012 period, or about a tenth of a percentage point faster than in last winter's projection. That revision stems partly from the Economic Growth and Tax Relief Reconciliation Act of 2001, whose cuts in marginal tax rates are expected to boost the labor force by 0.3 percent in 2011. In making that calculation, CBO has not attempted to reflect the expiration of those cuts in 2011. Another contributor was CBO's reevaluation (spurred in part by revisions to the historical data following the 2000 census) of the trends underlying both the labor force and hours worked. That reassessment indicated a slightly faster rate of

Box 2-3.
Effects on Productivity Growth of Increasing Spending for Security

The terrorist attacks on September 11 do not have a large impact on the level of productivity or its long-run growth in the Congressional Budget Office's (CBO's) economic projections for the medium term (the next decade). Although those attacks exacted a great human toll, their effect on the nation's ability to produce, even in the short run, was small relative to the economy's immense size. Past experience with natural disasters, such as earthquakes and hurricanes, suggests that the physical destruction caused by the attacks will not generate significant, long-lasting economic effects. (For a discussion of further risks from terrorism, beyond its effects on productivity, see Chapter 5. Chapter 7 discusses the budgetary implications of actions by the federal government to counter terrorism.)

One key difference between a terrorist attack and a natural disaster, however, is that an attack increases the perceived risk of another violent assault. In the medium term, the effects on economic growth of the events of September 11 depend on both how people respond to that risk and whether more terrorist incidents occur. Those effects could operate through several channels, including increased costs for security (for example, in the form of additional security guards, more scanning equipment, and higher defense spending) and escalation in the costs of doing business that goes beyond security considerations (such as delays in shipping, higher costs for insurance, and the need to hold larger inventories). A further possible channel is the psychological impact of the attacks, which could translate into lower business investment or a change in consumer spending. Measures of productivity give a confused account of how spending on security affects well-being. Presumably, such spending enhances well-being, although it is also likely to slow the growth of productivity slightly (see Box 7-1 in Chapter 7).

The effects on productivity noted above can be divided into those that have a one-time impact on its level and those that would be expected to permanently affect its growth. CBO's medium-term projections include rough estimates of the size of those effects. In light of the uncertainties in CBO's analysis, those estimates lean toward the pessimistic end of the range of possible outcomes, implying that the actual effects on productivity could well be smaller.

Effects on Productivity Levels

Effects on productivity are costs, borne by private companies, that CBO assumes would reduce profits and the level of productivity dollar for dollar in 2002 and beyond. They incorporate the cost of additional security guards and of delays in transportation resulting from heightened security. CBO estimates that such costs will total approximately $20 billion in 2002, or roughly 0.3 percent of gross domestic product (GDP, or output) in the nonfarm business sector. Therefore, the adjustment for spending on security reduces CBO's projection of the level of total factor productivity (TFP)—real output per combined unit of capital and labor—for 2002 and later years by about 0.3 percent.

Effects on Growth

CBO expects that over the medium term, firms will divert some business investment toward security equipment (such as alarm systems, facility access systems, surveillance cameras, and protective fences). Accordingly, CBO has reduced its projection of TFP growth by an annual average of about 0.03 percentage points. Capital goods acquired by private businesses for security purposes are considered part of final demand, which means that producing them in place of other goods does not immediately reduce GDP. However, firms buy and use those capital goods to produce a service—security—that is not considered part of final output. Therefore, if national saving does not rise to match the increased overall demand for capital, GDP will be reduced by the value of the goods and services that the security-related capital would have provided if it had been used for production that was counted as part of GDP.[1]

Capital expenditures for security equipment are analogous to businesses' spending on pollution abatement in that they generate an output that is not considered part of GDP. One study estimated that firms' expenditures to abate pollution reduced real growth of GDP by about 0.13 percentage points on average over the 1973-1985 period.[2] Another study, however, found a smaller effect, estimating that spending on pollution abatement reduced the growth of output by 0.07 percentage points on average between 1973 and 1982.[3] During its peak in the mid-1970s, spending on pollution abatement totaled roughly 10 percent of all nonresidential business fixed investment (spending on structures, equipment, and software). How much additional spending firms will allocate to security equipment because of the attacks on September 11 is hard to predict, but it will probably be substantially less than that spent on pollution abatement.

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1. CBO approximates the effect of the diversion of capital on economic growth by adjusting TFP rather than capital services because the TFP adjustment is less burdensome to compute.

2. See Dale Jorgenson and Peter Wilcoxen, "Impact of Environmental Legislation on U.S. Economic Growth, Investment, and Capital Costs," in *U.S. Environmental Policy and Economic Growth: How Do We Fare?* Monograph Series on Tax and Environmental Policies & U.S. Economic Growth (Washington, D.C.: American Council for Capital Formation, March 1992).

3. See Edward Denison, *Trends in American Economic Growth, 1929-1982* (Washington, D.C.: Brookings Institution, 1985), p. 34.

growth for potential hours worked than the rate CBO estimated last January.

Unemployment, Inflation, and Interest Rates

The unemployment rate will decline gradually during the projection period, CBO estimates, falling to a rate of 5.2 percent in 2005 and averaging 5.2 percent thereafter. The decline in the unemployment rate mirrors the behavior of real GDP, which CBO projects will grow more rapidly than potential GDP during the first part of the 2002-2012 period.

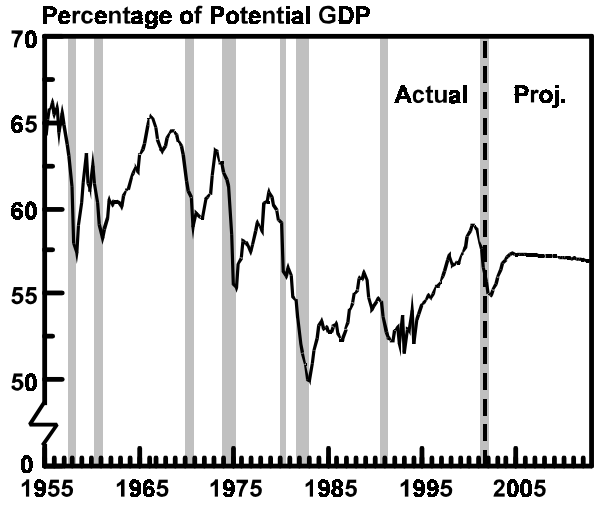
CBO's current projections for inflation as measured by the CPI-U are little altered from last January's, and the average annual rate—2.5 percent—is the same. The GDP price index, CBO estimates, will grow at an average annual rate of 2.0 percent between 2004 and 2012, or about one-tenth of a percentage point faster than CBO expected last winter. CBO assumes that the inflation rate will be determined by monetary policy in the medium term and that the Federal Reserve's policies will maintain the rate of CPI-U inflation near 2.5 percent on average.

CBO projects interest rates by adding the projection for inflation to its estimate of real interest rates. Using the CPI-U as a measure of changes in prices, CBO estimates that the real rate on three-month Treasury bills will average 2.4 percent during the 2004-2012 period and the real rate on 10-year Treasury notes will average 3.3 percent. Combining those rates with the projected estimates of CPI-U inflation implies nominal rates of 4.9 percent for Treasury bills and 5.8 percent for Treasury notes.

Taxable Income

CBO's budget projections are closely connected to its projections of economic activity and national income. However, different categories of national income are taxed at different rates, and some are not taxed at all. Therefore, the distribution of income among its various components is a crucial factor in CBO's economic projections. Wage and salary disbursements and corporate profits are particularly important because they are taxed at the highest effective rates. As a share of potential GDP, those two categories average about 57 percent during the 2004-2012 period, which is roughly equal to their average during the 1996-2000 period (see Figure 2-13). The high level of that share in 2000 reflected the high level of actual GDP relative to potential.

Figure 2-13.
Corporate Profits Plus Wages and Salaries



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

The downward revision since last winter of CBO's projection of the growth of real GDP reduces income and, consequently, tax revenues. However, the projected loss in income and revenues is less than might have been expected on the basis of the downward revision to GDP, for two reasons. First, the revisions to the NIPAs reduced gross domestic income by less than they reduced GDP. For example, BEA revised GDP down by about 0.8 percent for the early part of 2001, but it left national income virtually unchanged.[7]

The other reason that income has been trimmed in CBO's projection by less than the downward revision to GDP stems from a secondary, offsetting effect of BEA's cut in its estimate of business investment

7. Those revisions were reflected in a more negative statistical discrepancy—the difference between estimates of the sum of all expenditures on goods and services and the sum of all income paid to labor and owners of capital.

during the 1998-2001 period and CBO's correspondingly lower projection. Less business investment implies a smaller capital stock and a lower level of depreciation. CBO estimates that depreciation will average 13.7 percent of national income during the 2004-2012 period, down from 15.1 percent in CBO's projection of last winter. Since depreciation is an expense that is deducted from earnings before taxes, a lower path for depreciation raises the share of income subject to taxation.

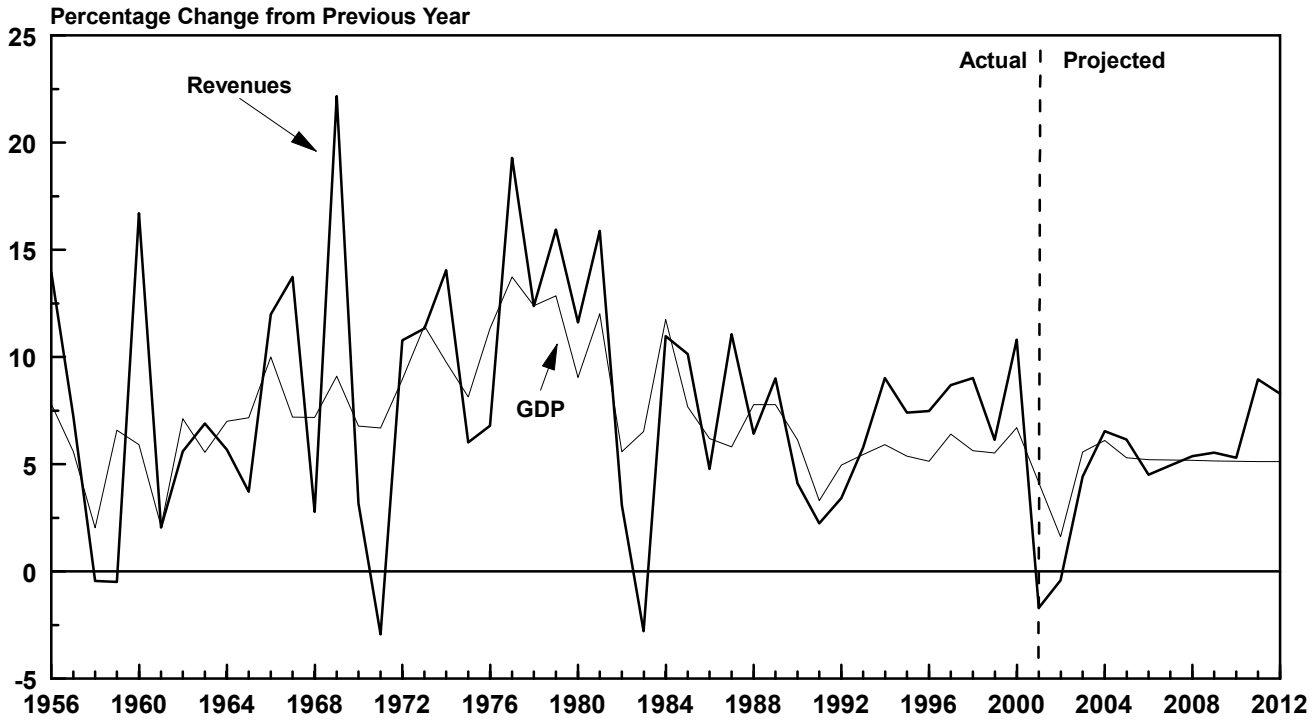
Chapter Three

The Revenue Outlook

The Congressional Budget Office estimates that if current policies remain unchanged, federal revenues will total about $1,980 billion in fiscal year 2002. That level of tax receipts would be close to $10 billion less than total revenues in 2001 and roughly $40 billion less than overall receipts in 2000—and would represent the first time since 1959 that revenues had dropped for two years in a row.

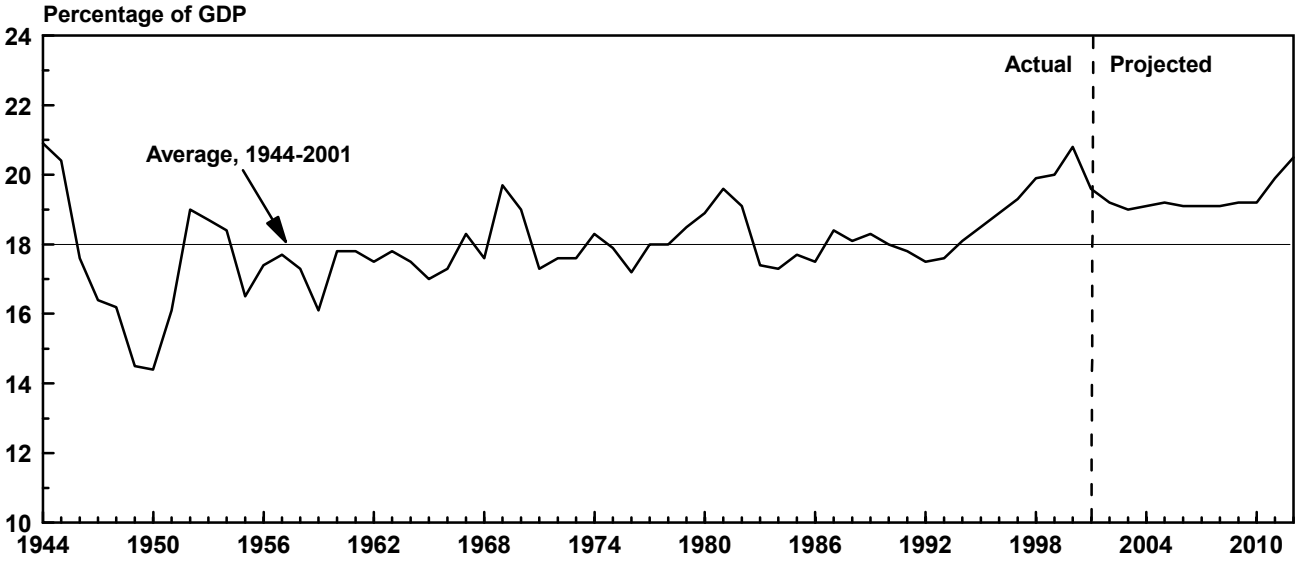
A combination of economic circumstances and tax legislation is expected to cause receipts to grow more slowly than gross domestic product, or output, in 2003; thereafter, revenues grow roughly in tandem with GDP until 2011 (see Figure 3-1). At that point, CBO projects that revenues will increase sharply as a consequence of the expiration of the tax cuts enacted in 2001.

Figure 3-1.
Annual Growth of Federal Revenues and GDP, 1956-2012



SOURCE: Congressional Budget Office.

Figure 3-2.
Total Revenues as a Share of GDP, 1944-2012



SOURCE: Congressional Budget Office.

CBO's current projections contrast sharply with the pattern of receipts from just a few years ago. From 1994 to 2000, revenues rose at an average annual rate of 8.3 percent, a much faster rate of growth than that of GDP. As a result, revenues as a share of output climbed from 18.1 percent in 1994 to 20.8 percent in 2000 (see Figure 3-2). Nonetheless, CBO's projections of revenues relative to GDP for 2002 through 2012 are still well above their average over roughly the past half century.

Changes in CBO's Revenue Projections Since January 2001

In January 2001, CBO projected that revenues would total about $28 trillion over the 2002-2011 period. Its overall projection now, for the same period, is about $2.4 trillion less (see Table 3-1). The altered outlook for revenues is principally responsible for the decline in projected surpluses over the next 10 years. The main factors that led to CBO's new lower estimates of revenues are the tax cuts contained in the Economic Growth and Tax Relief Reconciliation Act of 2001 (Public Law 107-16), which was signed into law last June, and the recession that began in March.

EGTRRA's provisions affect several components of the tax code. The law created a 10 percent marginal income tax bracket and gradually reduces four of the five existing marginal rates.[1] It also expands the child credit, softens the impact of the "marriage penalty" (which causes two married earners to pay more in taxes than they would if they were both single) by adjusting marginal rate brackets and the standard deduction, and provides additional tax incentives to save for retirement and education. In addition, the legislation repeals the current restrictions on itemized deductions and exemptions for higher-income taxpayers. Through 2004, the law provides some relief for taxpayers subject to the alternative minimum tax (AMT). EGTRRA also

1. Calculating a person's tax liability, or tax owed, involves measuring his or her total income, excluding particular kinds of income, to obtain adjusted gross income; subtracting personal and dependent exemptions and various deductions to determine taxable income; applying a set of six statutory marginal tax rates to different ranges of income; and subtracting any applicable credits. In addition, calculations must take account of income ranges over which certain tax provisions phase in or out, granting some or none of various deductions, exemptions, or credits. See Box 3-1 on pages 52 and 53 for more information on rates, tax bases, and tax liability as well as other revenue-related terms.

Table 3-1.
Changes in CBO's Baseline Projections of Revenues Since January 2001 (In billions of dollars)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2011
January 2001 Baseline Revenues	2,135	2,236	2,343	2,453	2,570	2,689	2,816	2,955	3,107	3,271	3,447	27,886
Legislative Changes	-72	-32	-86	-103	-103	-128	-144	-152	-160	-178	-119	-1,205
Economic Changes	*	-148	-123	-80	-65	-56	-51	-47	-45	-45	-48	-708
Technical Changes	*	-73	-63	-64	-60	-57	-53	-50	-45	-41	-3	-510
Subtotal	-72	-221	-186	-144	-125	-113	-104	-97	-90	-86	-51	-1,218
Total Changes	-144	-253	-273	-247	-228	-242	-248	-249	-250	-264	-170	-2,423
January 2002 Baseline Revenues	1,991	1,983	2,070	2,206	2,342	2,447	2,568	2,706	2,856	3,008	3,277	25,464

SOURCE: Congressional Budget Office.

NOTES: Legislative changes are as estimated at the time of enactment.

* = unavailable (CBO did not break out the economic and technical changes for 2001).

phases out the estate tax by 2010. In addition, it permitted businesses to shift payment of their corporate estimated income taxes from the final month of fiscal year 2001 (September) to the first month of fiscal year 2002 (October). All of its provisions still in effect in 2010 expire at the end of that year.

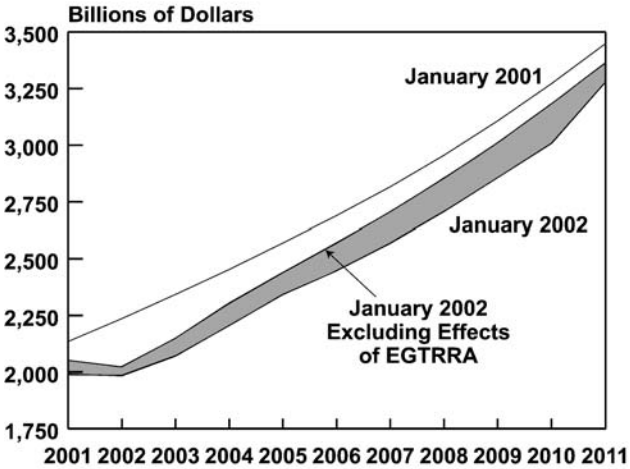
EGTRRA accounts for approximately half of the decrease from last January in the revenues projected for the 2002-2011 period. Most of that reduction—more than $1 trillion of it—is in the category of individual income tax receipts;[2] lower receipts from estate and gift taxes account for over $100 billion of it. Other legislation—principally the Railroad Retirement and Survivors Improvement Act of 2001 (P.L. 107-90), the Investor and Capital Markets Fee Relief Act (P.L. 107-123), and the Victims of Terrorism Tax Relief Act (P.L. 107-134)—accounts for an additional $19 billion of the decrease in projected revenues over the period.[3]

In addition to its impact on the level of overall receipts, EGTRRA also significantly affects the pattern of revenues that CBO projects over the 2002-2012 period (see Figure 3-3 and Table 3-2). First, delaying corporate estimated payments that would normally be due in September 2001 prunes receipts for that fiscal year by about 0.2 percent of GDP and raises receipts for 2002 by the same amount. That shift slightly distorts the apparent contribution of the current recession to the projected drop in corporate income tax revenues. Second, the sequence of reductions in individual income tax rates from 2001 to 2006, which are provided under EGTRRA, offsets increases that would otherwise have occurred in effective individual income tax rates as real (inflation-adjusted) economic growth places more income in the higher tax brackets. Third, the expiration of the law's provisions creates dramatic changes in receipts in the final two years of the projection period. EGTRRA's tax cuts expire at the end of 2010, but the

2. Some of the tax benefits under EGTRRA—about $90 billion over 10 years—are counted as outlays. They consist of child tax credits and earned income tax credits that exceed taxpayers' tax liability and therefore represent payments by the government to individuals.

3. For the purpose of accounting for the changes in CBO's projections, the effects of legislation shown in Table 3-1 are the effects that were estimated at the time of each law's passage. The CBO baselines against which those effects were measured incorporated estimates of economic activity that were higher than those used in the current baseline. Hence, estimates of the loss in revenues from the legislation passed since January 2001 would tend to be smaller if they were calculated now, using the current baseline. The effects of EGTRRA shown in Figure 3-3 and Table 3-2 reflect CBO's current baseline and latest information on the economy; thus, they differ from the effects incorporated in the estimates of Table 3-1.

Figure 3-3.
CBO's Baseline Projections of Total Revenues, 2001-2011



SOURCE: Congressional Budget Office.

NOTE: EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001. The shaded region represents the projected effects of EGTRRA on revenues.

legislation still reduces receipts in 2011 because of both the lag between when tax liability is incurred and when it is paid and the overlap of fiscal and calendar years. By 2012, CBO expects, receipts will be roughly back at the level they would have reached had the legislation not been enacted.

Most of the remaining changes since last January in CBO's projections of revenues are due to an altered picture of economic conditions. The recession slowed the growth of wages and salaries, which constitute the tax base for payroll taxes and make up the biggest part of the individual income tax base. In addition, corporate profits fell steeply, reducing receipts from the corporate income tax. CBO has also slightly lowered its projections of economic growth over the longer term (the later years of the 2002-2012 period). The altered estimates of overall economic activity that CBO is now incorporating in its baseline account for about $700 billion of the projected reduction in revenues.

What CBO terms "technical changes" in its projections (changes that are not driven by new legislation or by modifications to CBO's macroeconomic forecast) also arise largely from economic conditions. The decline in the stock market trimmed capital gains realizations and the receipts they generate in both the individual and corporate income tax categories. CBO's projections also reflect slower growth in overall wealth, which reduces revenues from estate and gift taxes. In addition, total receipts are lower for reasons that are not entirely understood; over the past year, collections have been smaller than those projected by CBO's economic forecasting and revenue-estimating models. Overall, technical changes account for about $500 billion of the reduction that CBO has made in its revenue projections since January 2001.

Much of the decline in projected receipts attributable to the current slowdown in economic growth is likely to be temporary. As the economy recovers, CBO estimates that tax receipts will rise closer to the levels it projected last January. But some of the drop in revenues, relative to those levels, will persist, CBO forecasts, because of slightly slower rates of economic growth over the longer term. In addition, CBO assumes that the portion of the shortfall in current collections not otherwise explained by legislation or economic performance will remain. As a result, CBO's revenue projection for 2011 is still about $50 billion lower (excluding legislative changes) in the current outlook than in last January's.

Revenues by Source

The sources of federal revenues are individual income taxes, corporate income taxes, social insurance taxes, excise taxes, estate and gift taxes, customs duties, and miscellaneous receipts. Individual income taxes produce about half of all revenues and claim roughly 10 percent of GDP (see Table 3-3 and Figure 3-4). Social insurance taxes (mainly Social Security and Medicare Hospital Insurance taxes) are the second largest source of receipts, equaling about a third of total revenues and a little less than 7 percent of GDP. Corporate income taxes contribute about 10 percent of overall revenues and represent approximately 1.5 percent to 2 percent of output. Revenues from the other taxes and duties and miscellaneous receipts, including profits from the Federal Reserve System, make up the balance—and represent about 1.5 percent of GDP.

Table 3-2.
Estimated Effects on Revenues of the Economic Growth and Tax Relief Reconciliation Act of 2001, 2001-2011 (In billions of dollars)

Tax Receipts	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2001-2011
Individual Income	-38	-62	-75	-86	-96	-116	-127	-134	-140	-149	-57	-1,079
Estate and Gift	0	*	-4	-4	-7	-4	-10	-12	-13	-24	-29	-108
Corporate Income[a]	-23	23	0	-7	7	0	0	0	0	0	0	0
Other	0	*	-1	-1	-1	-1	-1	-1	-1	-1	*	-10
Total	-61	-40	-79	-97	-98	-122	-138	-147	-155	-175	-86	-1,197

SOURCE: Congressional Budget Office.

NOTES: EGTRRA's effects on revenues are estimated on the basis of CBO's current economic forecast and estimating assumptions. In contrast, the effects of legislation shown in Table 3-1 (which include those of other laws besides EGTRRA) incorporate estimates of the laws' effects that were produced at the time of enactment and that were based on CBO's economic projections at that time.

EGTRRA's effects on revenues in 2012 are insignificant because the entire law expires at the end of 2010.

Not included here are the law's effects on refundable outlays. At the time of enactment, CBO estimated that such outlays would increase by between $6 billion and $12 billion annually from 2002 through 2011.

* = loss of less than $500 million.

a. These effects derive from changes in due dates for estimated payments.

Rising *individual income tax receipts,* bolstered primarily by increases in capital gains realizations and in the effective tax rate, fueled the rapid growth of total revenues from 1994 to 2000. The higher level of realizations stemmed largely from sharply rising stock prices over that span; increases in the effective tax rate were partly the result of rapidly rising income among higher-income taxpayers, who are taxed at higher marginal rates. Now, both of those effects appear to have leveled out or reversed course. That change, combined with the effects of EGTRRA, contributes to the slower growth of revenues that CBO anticipates for the next few years.

The pattern of individual income tax receipts in CBO's projections incorporates the offsetting effects of several phenomena. Capital gains realizations revert to their historical relationship with GDP, which tends to slow the rise of revenues relative to that of output. In addition, the growth of income of higher-income taxpayers declines to a pace that is consistent with longer-term trends—which also tends to slow the rate of revenue growth relative to the growth of GDP. The higher nominal incomes in CBO's projections tend to raise the average effective tax rate, as more taxpayers become subject to the AMT, and growth in real income subjects more income to higher marginal tax rates (a phenomenon known as "real bracket creep"). Both of those outcomes tend to boost the growth of receipts over the projection period. Finally, the cuts in marginal tax rates scheduled to take effect under EGTRRA tend to reduce income tax receipts relative to GDP.

These offsetting effects, CBO projects, will remain in rough balance through 2010. CBO estimates that at first, they will cause individual income tax receipts to decline slightly relative to GDP, as the effects from capital gains realizations, income growth among high earners, and EGTRRA rate cuts predominate. Then CBO expects individual income tax revenues to rise relative to GDP, as the effects of real bracket creep and the AMT grow stronger. EGTRRA expires as of January 2011, and CBO estimates that at that point, receipts as a share of GDP will begin to climb rapidly.

Table 3-3.
CBO's Baseline Projections of Revenues

Receipts	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007[a]	Total, 2003-2012[a]
							In Billions of Dollars							
Individual Income Tax	994	947	998	1,059	1,114	1,162	1,228	1,305	1,387	1,477	1,673	1,841	5,562	13,245
Corporate Income Tax	151	179	175	199	235	246	260	275	289	303	319	335	1,115	2,635
Social Insurance Tax	694	710	748	789	832	869	908	948	994	1,045	1,097	1,151	4,146	9,381
Excise Tax	66	67	70	72	75	77	79	82	85	87	90	93	373	810
Estate and Gift Tax	28	26	24	25	22	25	22	23	25	16	15	44	119	241
Customs	19	20	21	22	23	24	25	26	26	27	28	29	114	250
Miscellaneous	38	33	34	39	42	44	46	48	50	52	55	57	205	467
Total	1,991	1,983	2,070	2,206	2,342	2,447	2,568	2,706	2,856	3,008	3,277	3,549	11,633	27,030
On-budget	1,484	1,464	1,525	1,632	1,739	1,816	1,907	2,014	2,130	2,243	2,474	2,706	8,620	20,187
Off-budget[b]	508	518	545	574	602	631	661	693	727	764	803	842	3,014	6,842
							As a Percentage of GDP							
Individual Income Tax	9.8	9.2	9.2	9.2	9.2	9.1	9.1	9.2	9.3	9.4	10.2	10.6	9.1	9.5
Corporate Income Tax	1.5	1.7	1.6	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9
Social Insurance Tax	6.8	6.9	6.9	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.7	6.6	6.8	6.7
Excise Tax	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6
Estate and Gift Tax	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2
Customs	0.2	0.2	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total	19.6	19.2	19.0	19.1	19.2	19.1	19.1	19.1	19.2	19.2	19.9	20.5	19.1	19.4
On-budget	14.6	14.2	14.0	14.1	14.3	14.2	14.2	14.2	14.3	14.3	15.0	15.6	14.2	14.5
Off-budget[b]	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9

SOURCE: Congressional Budget Office.

a. Numbers in the second half of the table are shown as a percentage of total GDP for this period.

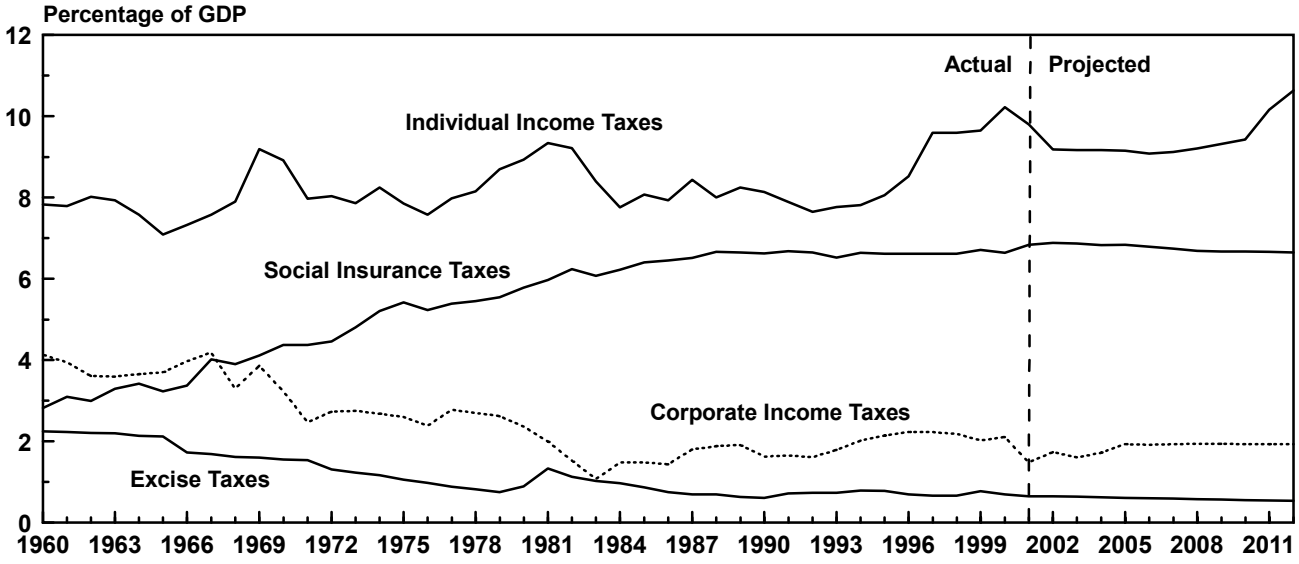
b. Social Security.

The share of output claimed by *social insurance taxes* has changed little over the past decade. From 2002 through 2012, receipts from those taxes are also expected to remain essentially stable, falling only very slightly relative to GDP.

Corporate income taxes contributed some of the increase in revenues in the 1990s as corporate profits surpassed their performance of the 1970s and 1980s. But the current recession has substantially reduced profits—and therefore corporate income tax receipts. Those receipts (which CBO adjusted to take into account the shift in the timing of collections legislated by EGTRRA) fell from 2.1 percent of GDP in 2000 to 1.7 percent in 2001; CBO expects them (again, after adjusting for the timing shift) to fall to 1.5 percent of GDP in 2002. The ratio of receipts to GDP is projected to climb back to 1.9 percent by 2005 and remain near that level through 2012. However, that share of GDP is smaller than the unusually large shares seen just a few years ago.

Excise taxes are a relatively small source of revenues. CBO projects that over the 2001-2012 period, they will decline slightly relative to GDP, dropping from 0.7 percent to 0.5 percent. The excise tax component of receipts is expected to contract relative to GDP because the real value of excise tax receipts tends to fall with inflation. Many such taxes are levied per unit of a good or per transaction rather than as a percentage of value. Excise receipts therefore tend to rise mainly with increases in real, rather than nominal, GDP.

Figure 3-4.
Revenues, by Source, as a Share of GDP, 1960-2012



SOURCE: Congressional Budget Office.

In its current outlook for revenues, CBO expects receipts from *estate and gift taxes* to change in importance over the projection period: their share of GDP is forecast to decline from 0.3 percent to 0.1 percent by 2010 and 2011 before jumping back to 0.3 percent in 2012. That pattern results from phasing out the estate tax under EGTRRA and subsequently reinstating it after the law expires at the end of 2010.

CBO estimates that the share of GDP claimed by all other sources of revenues—customs duties and miscellaneous receipts, including receipts from the Federal Reserve System—will remain steady at just above 0.5 percent throughout the projection period.

Individual Income Taxes

Individual income taxes accounted for most of the expansion of the GDP share of revenues that occurred from the early 1990s to 2000. With the exception of 1998, when individual income tax receipts were reduced by the cuts enacted in the Taxpayer Relief Act of 1997, the rate of growth of those receipts averaged more than 10 percent a year from 1993 to 2000. Their share of GDP reached a historical peak—10.3 percent—in that latter year. The tax cut that became law in June of last year and the recession that began in March halted that trend. Nonetheless, because the tax cuts under EGTRRA expire at the end of 2010, CBO expects individual income tax receipts to rise again, to 10.2 percent of GDP, in 2011 and reach a new historical peak, 10.6 percent, in 2012 (see Table 3-4). Indeed, throughout the entire 2002-2012 period, individual income tax receipts relative to GDP are projected to remain well above their post-World War II average of 8.1 percent. CBO estimates that in every year of the period, they will reach or exceed 9.1 percent, a level that has been surpassed only eight times in the history of the income tax.

CBO's projections of individual income tax receipts over the 2002-2011 period are nearly $1.8 trillion lower than its January 2001 projections for the same span. EGTRRA's tax cuts account for more than $1 trillion of that fall. Approximately $400 billion of the decline is due to the revisions in CBO's macroeconomic forecast, and about $300 billion derives from technical factors closely related to that revised economic outlook. The most influential of those factors were the revisions CBO made in its projections of capital gains realizations and its adjustments for lower-than-expected tax collections since last January. Several minor changes in CBO's projection methods also contributed a small amount to the reduction in the projections.

Table 3-4.
CBO's Baseline Projections of Individual Income Tax Receipts and the Individual Income Tax Base

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Individual Income Tax Receipts														
In billions of dollars	994	947	998	1,059	1,114	1,162	1,228	1,305	1,387	1,477	1,673	1,841	5,562	13,245
As a percentage of GDP	9.8	9.2	9.2	9.2	9.2	9.1	9.1	9.2	9.3	9.4	10.2	10.6	n.a.	n.a.
Annual rate of growth	-1.0	-4.7	5.4	6.1	5.1	4.4	5.7	6.2	6.3	6.5	13.3	10.0	n.a.	n.a.
Taxable Personal Income														
In billions of dollars	7,355	7,501	7,864	8,280	8,651	9,048	9,471	9,917	10,385	10,883	11,402	11,938	43,314	97,840
As a percentage of GDP	72.5	72.7	72.2	71.7	71.1	70.7	70.3	70.0	69.7	69.5	69.2	68.9	n.a.	n.a.
Annual rate of growth	5.9	2.0	4.8	5.3	4.5	4.6	4.7	4.7	4.7	4.8	4.8	4.7	n.a.	n.a.
Individual Receipts as a Percentage of Taxable Personal Income	13.5	12.6	12.7	12.8	12.9	12.8	13.0	13.2	13.4	13.6	14.7	15.4	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTES: The tax base in this table (taxable personal income) reflects income as measured by the national income and product accounts rather than as reported on tax returns. See Box 3-1 for a discussion of tax bases.

n.a. = not applicable.

The Growth of Receipts Until 2000. Historically, revenues from individual income taxes have tended to grow slightly faster than GDP—but a few exceptions to that tendency are notable. In 1969, for example, a surtax caused income tax receipts to grow significantly faster than output; also, before the tax code was indexed for the effects of inflation on tax brackets, price increases pushed the growth of income tax revenues well above that of the economy by effectively decreasing the levels of real income at which higher tax rates applied. From 1994 to 2000, however, individual income tax receipts grew much faster than gross domestic product—and for entirely different reasons.

Understanding the growth of individual income tax receipts over that earlier period helps explain the pattern of receipts projected for the years from 2002 through 2012. CBO examined a sample of detailed tax-return data from tax years 1994 through 1999 (tax years are essentially the same as calendar years) to identify the sources of that growth. (Although detailed data for 2000 are not available, the same forces were probably at work in that year as well.) The surge in individual income tax liabilities as a percentage of GDP can be traced to four sources (see Table 3-5).[4]

The rapid growth of components of GDP that are taxable to individuals was the first significant source of the surge. (For more information on the relationship between tax liability, taxable income, and GDP, see Box 3-1.) Taxable personal income—which is the sum of wages, interest, dividends, proprietors' income, and rental income as measured in the national income and product accounts—grew faster than GDP during most of the 1994-1999 period. The resulting rise in the ratio of taxable personal income to total output boosted the tax base for the individual income tax and accounted for about 16 percent of the growth of tax liabilities in excess of the growth of GDP over that period.

4. CBO calculated the percentage contribution of each of the four sources using the amount of tax liability that would have accrued without the child and education tax credits that became effective in tax year 1998. Excluding those credits allows consistent measurement across all years in the comparison.

Table 3-5.
Sources of Growth of Individual Income Tax Liabilities in Excess of Growth of GDP, Tax Years 1995-1999 (As a percentage of total liabilities)

Source of Growth of Tax Liabilities	1995	1996	1997	1998	1999	Total, 1995-1999[a]
Taxable Personal Income (TPI) Grew Faster than GDP	21	12	14	42	-3	16
Adjusted Gross Income (AGI) Grew Faster than TPI						
Capital gains tax receipts grew faster than TPI	20	52	29	12	36	30
Other AGI grew faster than TPI	15	5	10	-4	22	10
Changes in the Effective Rate on AGI						
Effect of real growth on rate	30	20	34	30	25	28
Remaining growth from changes in effective rate	14	11	13	20	19	16
Total	100	100	100	100	100	100
Memorandum:						
Growth of Individual Income Tax Liabilities in Excess of Growth of GDP (Billions of dollars)	27	39	35	42	57	199

SOURCE: Congressional Budget Office using data from the Internal Revenue Service's *Statistics of Income, 1994-1999.*

NOTE: See Box 3-1 for a discussion of TPI, AGI, and effective rates.

a. The estimates of tax liabilities for 1998 and 1999 do not include the child and education credits enacted in the Taxpayer Relief Act of 1997.

The next two sources of the surge in individual income tax receipts are components of adjusted gross income, or AGI (the actual income base of the individual income tax), that grew more rapidly than taxable personal income over the period. The first component, capital gains realizations (which are not included in either GDP or taxable personal income), accounts for a large part of the growth in AGI. Between 1994 and 1999, realizations of gains nearly quadrupled, with much of that increase occurring before the cut in capital gains tax rates in 1997 (see Table 3-6). Thus, over the period, taxes on gains accounted for roughly 30 percent of the increased growth of individual income tax liabilities relative to the growth of GDP.

The second AGI-related source of the individual income tax surge comprises other components of the AGI measure that are not part of taxable personal income or GDP and that also expanded more rapidly than either of those measures. Among those components, retirement income in the form of distributions from 401(k) plans and individual retirement accounts, and taxable Social Security benefits were especially prominent. The growth of retirement and nonretirement AGI components together accounted for about 10 percent of the increase in liabilities relative to GDP growth from 1994 to 1999.

The fourth and most significant source of income tax liability growth relative to that of GDP was the increase in the effective tax rate on individual income (see Figure 3-5). In tax years 1995 to 1999, increases in the effective rate (on income other than capital gains) accounted for more than 40 percent of the growth of liabilities in excess of the growth of GDP. Increases in real income for taxpayers generally pushed more income into higher tax brackets. That phenomenon alone accounted for more than half of the increase in the ratio of income tax liability to GDP that resulted from the rise in the effective tax rate. Much of the remaining increase in the effective rate appears to result from the concentration of income growth at the top of the income distribution, which led to a greater proportion of income being taxed at the highest rates. Thus, even though no in-

Box 3-1.
Tax Bases and Tax Liability

Tax receipts vary with economic activity, but they do not move in lockstep with gross domestic product (GDP), or output. Although the bases for taxes on individual and corporate income and for social insurance taxes are related to that economic measure, they differ from GDP in a number of important respects, which means that they sometimes grow faster and sometimes slower than output. As a result, the ratio of receipts to GDP may change even if tax laws remain the same.

The Individual Income Tax Base

Taxable personal income is the first approximation of the individual income tax base. It comprises dividends, interest, wages and salaries, rent, and proprietors' income. It does not include depreciation, indirect taxes on businesses (such as excise taxes), fringe benefits, or retained corporate profits.

Despite its name, not all taxable personal income is actually taxed. Some of it accrues to tax-exempt entities such as hospitals, schools, cultural institutions, and foundations; some is earned in a form that is tax-exempt, such as income from state and local bonds; and some is tax-deferred, such as in the case of income from retirement accounts, on which the tax is paid not when the income is earned but when the person retires and begins to draw down the account. Also, personal interest and rental income comprise large components of imputed income—income that is not earned in a cash transaction, including personal earnings within pension funds and life insurance policies and income from owner-occupied housing—that are not taxable. Consequently, a substantial amount of interest, dividend, and rental income is excluded from the taxable base of the income tax.

Taxpayers make further adjustments, both additions and subtractions, to taxable personal income to derive **adjusted gross income**, or AGI. **Capital gains realizations**—the increase in the value of assets between the time they are purchased and sold—are added to taxable personal income. Contributions from income to tax-deductible individual retirement accounts and 401(k) programs are subtracted, but distributions to retirees from those programs are added. Taxpayers also make a variety of other, smaller adjustments.

Exemptions and **deductions** are subtracted from AGI to yield taxable income, to which progressive tax rates—that is, rates that rise as income rises—are applied. (Those rates are known as **statutory marginal tax rates**; the range of taxable income over which a statutory marginal rate applies is known as an **income tax bracket**, of which there are currently six.) The resulting tax may then be subject to further adjustments in the form of **credits**, such as the child tax credit for taxpayers with children under age 17, which reduce the taxpayers' **tax liability** (the amount of taxes they owe). An important factor in calculating individual tax liability is the **alternative minimum tax** (AMT), which requires some taxpayers to calculate their taxes under a more limited set of exemptions, deductions, and credits. Taxpayers then pay the higher of the AMT or the ordinary tax. The ratio of tax liability to AGI is called the **effective tax rate on AGI**.

come group was subjected to higher statutory tax rates, a larger share of income accruing to taxpayers facing the top tax rates raised the effective rate overall.[5]

The Decline of Receipts in 2001. After several years in which actual revenues exceeded CBO's projections, individual income tax receipts in 2001 fell short of the estimates of them that CBO had made in January of that year. CBO projected that individual income tax receipts would total $1,076 billion, but actual receipts in 2001 were about $80 billion less, or $994 billion. About half of that reduction came from the cut in marginal tax rates enacted in EGTRRA; the legislation created a 10 percent tax bracket and "rebated," in 2001, the tax savings that otherwise would have shown up largely in 2002. And as economic growth slowed to a level below that underlying CBO's earlier projections, revenues also ebbed. In addition, at least some of the phenomena responsible for the rise in individual income tax receipts relative to GDP from 1994 to 2000 waned in 2001.

On the basis of figures from the Department of the Treasury, the early rebate under EGTRRA reduced receipts for 2001 by about $35 billion. Other EGTRRA provisions were probably responsible for an additional decline of $3 billion in withholding and other individual income tax receipts. Of the remaining shortfall (compared with what CBO had projected) of $42 billion, about $10 billion resulted from the slowdown in the growth of GDP and in those of

5. See Congressional Budget Office, *Effective Federal Tax Rates, 1979-1997* (October 2001).

Box 3-1.
Continued

The Corporate Income Tax Base

Corporate profits are the tax base of the corporate income tax. But the corporate profits component of GDP differs in several important respects from what is taxed by the corporate income tax.

First, the profits of the Federal Reserve System are counted as corporate profits in measures of GDP, but they are not taxed under the corporate income tax (they are instead remitted to the Treasury as miscellaneous receipts).

Second, measures of GDP calculate corporate income on the basis of **economic depreciation**—the dollar value of productive capital assets that is estimated to have been used up in the production process. For tax purposes, however, corporations calculate **book profits**, which are based on **book**, or **tax, depreciation**. Book depreciation is typically more front-loaded than economic depreciation; that is, the capital is assumed to be used up at a faster rate than the best estimates of how fast it is actually used up, allowing firms to report taxable profits that are smaller than economic profits.

Third, taxable corporate income includes the foreign-source income of U.S. multinational corporations when that income is "repatriated," or returned, to the U.S. parent company. Foreign-source income is not part of measured output.

Several other, smaller differences exist between corporate profits as defined in the GDP measure and corporations' calculation of their **taxable income** for tax purposes. If a corporation's taxable income is negative (that is, if the firm loses money), its loss (within limits) may be carried backward or forward to be netted against previous or future taxable income and thus reduce the firm's taxes in those other years. A statutory tax rate is applied to the corporation's taxable income to determine its tax liability. A number of credits (such as that for taxes imposed by other countries on the foreign-source income included in a firm's taxable profits) may further pare that liability. The ratio of aggregate domestic corporate taxes to aggregate taxable corporate income is the **average tax rate**.

The Social Insurance Tax Base

Social insurance taxes, the other big source of receipts, use payroll as their base. Those taxes largely fund Social Security and Medicare's Hospital Insurance program (Part A of Medicare). Social Security taxes are imposed as a percentage of pay up to a **taxable maximum** that is indexed for the growth of wages in the economy. Medicare's Hospital Insurance taxes are not subject to a taxable maximum.

Despite many adjustments that must be made to calculate the actual tax bases, a ready approximation is the sum of wages and salaries and corporate book profits (see Chapter 2 for a brief discussion). Those items pick up much of the bases of the individual income, corporate income, and social insurance taxes and therefore constitute the bulk of taxed income.

its components that constitute the tax base.[6] The remaining $30 billion of the decline was due to unexpected changes in the amount of revenue that was generated by the level of economic activity in 2001.

Although capital gains realizations constitute a relatively small percentage of overall tax receipts, they played a significant role in the rise of total revenues relative to GDP in the second half of the 1990s (see Table 3-6). And they are probably a significant factor in the recent shortfall of receipts relative to projections. CBO's January 2001 estimate of capital gains realizations in tax year 2000 is an important calculation in its estimate of receipts for fiscal year 2001, because a portion of the tax resulting from the realizations is paid with the subsequent filing of tax returns, in 2001. CBO's estimate last January was $652 billion; that compares with CBO's best estimate to date of actual realizations, which is about $620 billion. Thus, CBO's projection in January 2001 was relatively accurate, and the rise in gains of about 12 percent was faster than that of GDP. Nevertheless, CBO's best estimate of actual realizations in 2000 represents a level that, while strong, was still lower than the level that CBO had projected last year.

CBO now estimates that capital gains realizations in calendar year 2001 fell by nearly 20 percent, to $500 billion. That drop produces a small estimated decline in capital gains receipts for fiscal year 2001.

6. Of that $10 billion, $6 billion appears as an economic revision to CBO's projections between January 2001 and August 2001. CBO's models suggest that $5 billion of the $20 billion shortfall in actual receipts (relative to the August projections) is due to changes in the economy.

Table 3-6.
Actual and Projected Capital Gains (In billions of dollars)

	Realizations		Liabilities		Receipts[a]		Receipts as a Percentage of Total Individual Income Tax Receipts
	Level (CY)	Percentage Change	Level (CY)	Percentage Change	Level (FY)	Percentage Change	
1990	124	-20	28	-21	32	-14	7
1991	112	-10	25	-11	27	-17	6
1992	127	14	29	16	27	1	6
1993	152	20	36	25	32	20	6
1994	153	0	36	0	36	12	7
1995	180	18	44	22	40	10	7
1996	261	45	66	50	54	36	8
1997	365	40	79	19	72	33	10
1998	455	25	89	12	84	16	10
1999	553	21	112	26	99	19	11
2000	620	12	126	13	118	19	12
2001	500	-19	100	-21	115	-3	12
2002	476	-5	95	-5	98	-15	10
2003	476	0	95	-1	95	-3	10
2004	479	1	95	0	95	0	9
2005	483	1	95	1	95	0	9
2006	492	2	97	2	96	1	8
2007	504	2	99	2	98	2	8
2008	520	3	102	3	100	3	8
2009	539	4	106	3	104	3	7
2010	561	4	110	4	108	4	7
2011	581	4	114	4	112	4	7
2012	604	4	118	4	116	4	6

SOURCES: Congressional Budget Office; Department of the Treasury.

NOTES: CY denotes data on a calendar year basis, and FY denotes data on a fiscal year basis. Realizations represent net positive long-term gains.

Data for realizations and liabilities after 1999 and receipts data for all years are projected by CBO.

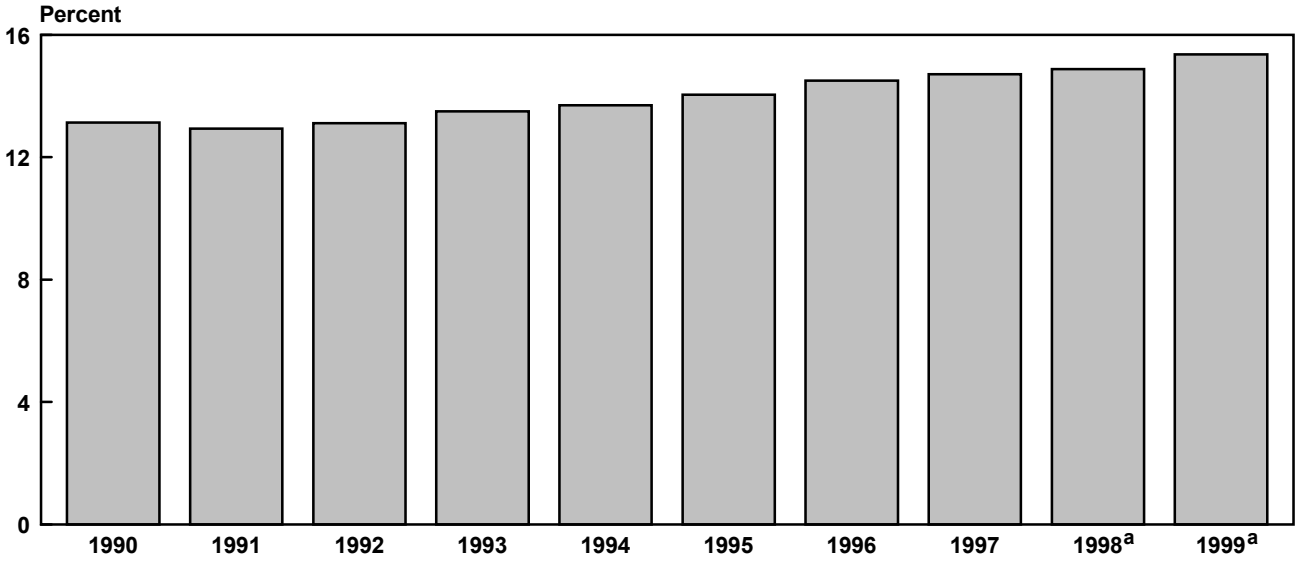
a. The fiscal year receipts measure is CBO's estimate of when liabilities are paid to the Treasury.

A second contributor to the reduction in 2001 in income tax receipts relative to the level of economic activity may have been slower growth in income at the top end of the income distribution. Just as faster-than-average growth of income for very high earners helped fuel the rise in the GDP share of receipts, so slower-than-average growth of that income would accomplish the reverse. Detailed data on taxpayers' incomes are not yet available, but some evidence suggests that income growth at the top end of the income distribution has slowed over the past year.

One source of that growth in the past was income from stock options. Estimates suggest that such income increased to more than $100 billion in 2000, or about 2 percent of wages and salaries. Much of that income presumably accrued to the highest-earning taxpayers and thus was taxed at the highest rates. The weakening of the stock market in 2001 implies that income from stock options declined by perhaps 20 percent to 40 percent from its level in 2000, which means that a larger proportion than before of total wage and salary income was subject to lower marginal tax rates.

Another source of the rapid growth of taxable income among high-earning taxpayers in the late 1990s, CBO believes, was bonuses. Estimates for tax

Figure 3-5.
Effective Tax Rate on Individual Income, Tax Years 1990-1999



SOURCE: Congressional Budget Office.

NOTE: The effective rate is the ratio of tax liability to income. Tax years are essentially the same as calendar years.

a. The estimates of tax liabilities that CBO used to generate the effective rates do not include the child and education credits enacted in the Taxpayer Relief Act of 1997.

year 2001 are not yet available, but anecdotal evidence, as well as preliminary projections from some of the states that closely monitor that source of income, indicates that bonus income in 2001 was lower relative to earlier years.

The Expected Pattern of Future Receipts. CBO estimates that individual income tax receipts will decline in fiscal year 2002. Part of that projected fall results from the tax cuts enacted in the Economic Growth and Tax Relief Reconciliation Act of 2001. Another source is the economy. Although forecasters estimate that it will rebound in the coming months, it will not reach full employment immediately. Thus, the depressed level of economic activity in 2002 is expected to continue to dampen GDP growth and the growth of revenues. In addition, CBO forecasts that indirect effects of that depressed activity on realizations of capital gains and effective tax rates will further reduce receipts from the individual income tax.

From 2003 to 2005, the pattern of revenue growth in CBO's projections is dominated by the nation's recovery from the recession. Over the period, CBO estimates that individual income tax receipts will rise as economic growth picks up. But the path of those receipts over the 10 years from 2003 to 2012 is likely to be influenced by several other factors as well.

First, the provisions of EGTRRA will tend to initially curb and then accelerate the growth of receipts. Under the law, marginal rates drop again in 2004 and 2006. And over the 2006-2010 period, restrictions phase out on itemized deductions and exemptions of high-income taxpayers. Both of those changes will tend to reduce the growth of individual income tax receipts, CBO estimates. But at the end of 2010, all provisions of the law that are still in force expire, and revenues are expected to climb sharply.

Second, on its own, growth in income will tend to increase the relative growth of receipts. Even though the individual income tax is indexed for inflation, the growth of real income will tend to shift a bigger proportion of taxable income into higher tax brackets so that income tax receipts are likely to grow faster than income. Moreover, as income rises, the AMT—which is not indexed for inflation—will affect more taxpayers and more income, providing an additional

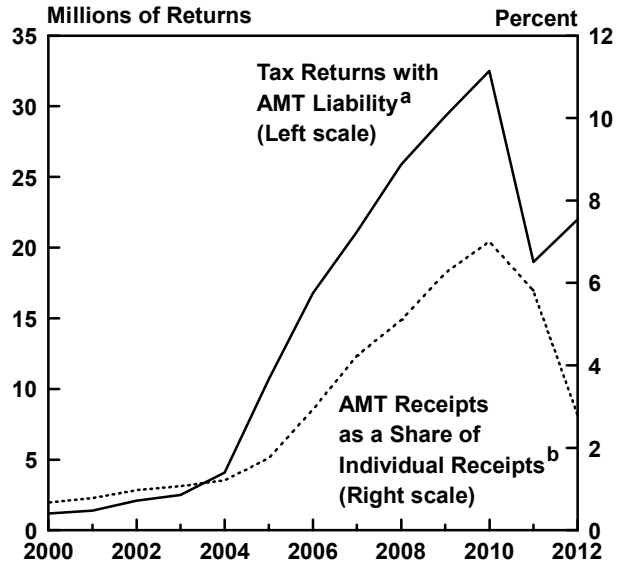
reason that the growth of receipts will tend to outstrip that of income.

Third, the other phenomena that influence the effective tax rate, including capital gains realizations and income growth at the very top of the income distribution, also operate over the 2003-2012 period. On the basis of its estimate of declining capital gains realizations in 2001, CBO expects receipts from gains to fall in 2002. Thereafter, realizations are likely to grow more slowly than overall income as they gradually return to a level consistent with their historical relationship to GDP. That assumed pattern of realizations, CBO estimates, will tend to slow the growth of receipts relative to GDP growth during the period. In addition, CBO assumes that the share of wages going to the highest-earning taxpayers will revert gradually to its longer-term trend, which will tend to reduce receipts relative to GDP during the projection period's first few years.

Until the very end of that period, CBO projects, all of these factors in combination will keep individual income tax receipts roughly constant as a percentage of GDP. The effects of the real growth of income and of the AMT will tend to raise receipts relative to GDP throughout those years. The capital gains effect, in contrast, will tend to lower them, but its impact will be strongest in the period's earlier years. The income distribution effect will also tend to reduce receipts relative to GDP but only in the first few years of the period. Consequently, individual income tax receipts relative to GDP are likely to decline very slightly from 2003 through 2006, but later, after 2006, the effects of the growth of income will begin to dominate and boost receipts relative to GDP. In 2011 and 2012, CBO estimates, the expiration of EGTRRA will swamp all other effects, sharply raising individual income tax receipts as a percentage of GDP.

The effect of the AMT deserves special mention. Provided that tax law does not change, the growth of nominal income will continue to increase both the number of taxpayers and the amount of income subject to the minimum tax. In addition, the marginal rate cuts in EGTRRA will reduce regular tax liability relative to AMT tax liability; that will also tend to increase the contribution that the AMT makes to total revenues. In 2001 through 2004, EGTRRA raises the amount of income that is exempt from the tax, which will temporarily help offset some of the growth in its share of revenues. But the AMT provision in EGTRRA expires at the end of 2004. After that, the number of taxpayers subject to the AMT will rise sharply (see Figure 3-6).

Figure 3-6.
CBO's Projections of the Effects of the Individual Alternative Minimum Tax



SOURCE: Congressional Budget Office.

NOTE: The alternative minimum tax requires some taxpayers to calculate their taxes under a more limited set of exemptions, deductions, and credits than the set applicable under the regular individual income tax.

a. By calendar year.

b. By fiscal year.

Since the remaining provisions of EGTRRA expire at the end of 2010, comparing the number of taxpayers subject to the AMT in 2001 and estimates of the revenues from it with estimates of the same factors in 2012 demonstrates how the AMT's effects increase as a result of the growth of nominal income. CBO estimates that in 2001, 1.4 million tax returns will report AMT liability in the tax year, and receipts from the AMT will total $8 billion in the fiscal year. In 2012, about 22 million returns will have AMT liability, and the tax will add $50 billion to revenues. Thus, over that span, the relative importance of the

AMT as a percentage of total individual income tax receipts more than triples.

The rise and fall of the AMT's projected effects between 2004 and 2011 parallel the phasing in and expiration of the cuts in the tax that are part of EGTRRA. The number of returns that the AMT affects rises from 2.5 million in tax year 2003 to about 32 million in 2010. In fiscal year 2010, the AMT adds more than $100 billion to revenues from the regular tax, or about 7 percent of total individual income tax receipts. The differences between 2010 and 2012 in AMT receipts ($50 billion) and returns affected (10 million) indicate the degree to which the cuts in marginal tax rates under EGTRRA have less than their full effect because of the alternative minimum tax.

Corporate Income Taxes

In recent years, receipts from the corporate income tax and profits both grew more rapidly than the overall economy. From 1994 to 2000, corporate income tax receipts as a percentage of GDP were 2 percent or more, levels not achieved since 1980. That performance was largely driven by very strong corporate profits. In 2001, however, corporate profits and cor-

Table 3-7.
CBO's Baseline Projections of Corporate Income Tax Receipts and Tax Bases

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Corporate Income Tax Receipts														
In billions of dollars	151	179	175	199	235	246	260	275	289	303	319	335	1,115	2,635
As a percentage of GDP	1.5	1.7	1.6	1.7	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	n.a.	n.a.
Annual rate of growth	-27.1	18.5	-2.1	13.6	18.1	4.5	6.0	5.7	5.0	4.9	5.1	5.1	n.a.	n.a.
Corporate Book Profits														
In billions of dollars	748	625	736	873	955	1,025	1,087	1,152	1,213	1,273	1,341	1,407	4,675	11,061
As a percentage of GDP	7.4	6.1	6.8	7.6	7.8	8.0	8.1	8.1	8.1	8.1	8.1	8.1	n.a.	n.a.
Annual rate of growth	-11.8	-16.4	17.7	18.6	9.4	7.3	6.1	6.0	5.3	4.9	5.4	4.9	n.a.	n.a.
Taxable Corporate Profits[a]														
In billions of dollars	610	522	609	712	773	825	872	922	969	1,015	1,069	1,120	3,791	8,885
As a percentage of GDP	6.0	5.1	5.6	6.2	6.4	6.4	6.5	6.5	6.5	6.5	6.5	6.5	n.a.	n.a.
Annual rate of growth	-14.5	-14.3	16.6	16.9	8.5	6.7	5.8	5.7	5.2	4.7	5.3	4.8	n.a.	n.a.
Corporate Receipts as a Percentage of Taxable Profits	24.8	34.3	28.8	27.9	30.4	29.8	29.8	29.8	29.8	29.9	29.8	29.9	n.a.	n.a.
Adjusted Corporate Receipts as a Percentage of Taxable Profits[b]	28.5	29.9	28.8	28.9	29.6	29.8	29.8	29.8	29.8	29.9	29.8	29.9	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTES: The tax bases in this table (corporate book profits and taxable corporate profits) reflect income as measured by the national income and product accounts rather than as reported on tax returns. See Box 3-1 for a discussion of tax bases.

n.a. = not applicable.

a. Taxable corporate profits are defined as book profits minus profits earned by the Federal Reserve System, transnational corporations, and S corporations and minus deductible payments of state and local corporate taxes. They include capital gains realized by corporations.

b. Excludes the shift in corporate receipts from 2001 to 2002 and from 2004 to 2005 enacted in the Economic Growth and Tax Relief Reconciliation Act of 2001.

porate income tax receipts as a percentage of GDP slipped substantially because of the effects of the recession and of EGTRRA.

As noted earlier, EGTRRA delayed corporate estimated payments from September 2001 to October and the new fiscal year, shifting approximately $23 billion in revenues and distorting the pattern of corporate receipts. After adjusting its calculations to account for the shift, CBO estimates that corporate tax revenues fell from $207 billion in 2000 to $174 billion in 2001; it expects them to fall to $156 billion in 2002. That overall projected decline is almost entirely due to the slowing of the economy. Because corporate profits have fallen relative to total output in CBO's projections, corporate tax receipts have followed suit, sliding from 2.1 percent of GDP for 2000 to 1.7 percent (adjusted for the timing shift) for 2001 and 1.5 percent (adjusted) for 2002.

CBO projects that corporate tax receipts will begin to recover in 2003 and that by 2005, the ratio of receipts to GDP will reach 1.9 percent and remain at that level until 2012 (see Table 3-7). Those estimates stem largely from the pattern of profits over time, which is indicated by the measure of the average tax rate (corporate receipts as a percentage of taxable profits). Once the rate is adjusted for the timing shift that affects receipts for 2001 and 2002 and for a second, smaller timing shift between 2004 and 2005, the average tax rate varies within a relatively narrow band of 28.5 percent to 29.9 percent over the rest of the projection period.

The average tax rate includes a cyclical component because profits and losses are treated differently. Firms pay taxes to the government on the profits they earn, but they do not receive payments from it if they lose money (except to the extent that they can carry their losses forward or backward to offset profits in other years). Therefore, when the economy declines and the number of firms losing money increases, corporate tax receipts do not drop by as much as net profits do. That means that the overall effective corporate tax rate (receipts divided by net profits) tends to be higher when economic activity is depressed than when it is not—which explains the rise in the effective corporate tax rate in 2002. The rise in the rate that CBO projects over the longer term (that is, the portion of the rise that is not related to the rate's cyclical component) derives in large part from the expiration of various tax provisions, such as the research and experimentation tax credit, that would otherwise tend to reduce corporate tax liability.

Projections of corporate income tax receipts are always subject to a great deal of uncertainty, although the receipts' relatively small size dampens its effect on projections of total revenues. Much of the uncertainty in corporate tax estimates stems from the fluctuation of corporate profits. Profits are essentially the residual income in an economy—what remains for the owners of firms after all of the other productive inputs (such as labor) have been compensated. As a result, profits tend to vary much more than do other sources of taxable income, and that makes them difficult to project, especially in periods of economic slowdown.

CBO's current projections of corporate income tax receipts for the 2002-2011 period are about $150 billion lower than the amounts it projected last January for the same period. About $60 billion of that reduction flows directly from changes in CBO's economic forecast, and about $120 billion stems from technical changes, some of which derive from reductions in CBO's estimates of corporate capital gains realizations for 2002 through 2011. The technical changes to the projections also reflect lower tax collections in 2001 than would otherwise be expected, given the economic conditions; part of that drop in collections is expected to be permanent. Offsetting some of the reduction in projected corporate tax receipts are the changes CBO made as a result of legislation enacted during the year. Those revisions increase revenues mainly because of the shift of receipts under EGTRRA from 2001 to 2002.

Social Insurance Taxes

In CBO's projections for the 2002-2012 period, revenues from social insurance taxes claim a roughly constant share of wages and salaries (see Table 3-8). By far the largest generators of those receipts are Social Security (Old-Age, Survivors, and Disability Insurance, or OASDI) and Medicare (Hospital Insurance, or HI) taxes (see Table 3-9). A small share of social insurance revenues comes from unemployment insur-

Table 3-8.
CBO's Baseline Projections of Social Insurance Tax Receipts and the Social Insurance Tax Base

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Social Insurance Tax Receipts														
In billions of dollars	694	710	748	789	832	869	908	948	994	1,045	1,097	1,151	4,146	9,381
As a percentage of GDP	6.8	6.9	6.9	6.8	6.8	6.8	6.7	6.7	6.7	6.7	6.7	6.6	n.a.	n.a.
Annual rate of growth	6.3	2.3	5.3	5.5	5.4	4.5	4.4	4.4	4.9	5.1	5.0	4.9	n.a.	n.a.
Wages and Salaries														
In billions of dollars	5,062	5,186	5,461	5,747	6,011	6,301	6,614	6,946	7,296	7,665	8,052	8,460	30,135	68,555
As a percentage of GDP	49.9	50.3	50.2	49.7	49.4	49.2	49.1	49.0	49.0	48.9	48.9	48.9	n.a.	n.a.
Annual rate of growth	6.8	2.5	5.3	5.2	4.6	4.8	5.0	5.0	5.0	5.1	5.1	5.1	n.a.	n.a.
Social Insurance Receipts as a Percentage of Wages and Salaries	13.7	13.7	13.7	13.7	13.8	13.8	13.7	13.6	13.6	13.6	13.6	13.6	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTES: The tax base in this table (wages and salaries) reflects income as measured by the national income and product accounts rather than as reported on tax returns.

n.a. = not applicable.

ance taxes and contributions to Railroad Retirement and other federal retirement programs.

Social Security and Medicare taxes are calculated as a percentage of covered wages; unlike the Medicare HI tax, which applies to all such wages, Social Security taxes apply only up to a taxable maximum that is indexed to the growth of wages over time. Consequently, receipts from OASDI and HI taxes tend to remain a constant proportion of income as long as covered wages are a steady share of GDP and the distribution of income from wages stays relatively stable.

CBO projects that social insurance tax receipts will decrease slightly relative to GDP over the next decade. That decline is partly the result of the unusually high ratio of social insurance receipts to GDP in 2001: the ratio climbed from 6.7 percent in 2000 to 6.8 percent in 2001 and is expected to rise to 6.9 percent in 2002. Those higher levels are largely a consequence of the recession, which tends to increase the share of total income claimed by wages when corporate profits and interest income fall. The ratio is expected to creep downward as the economy and profits recover.

In general, receipts from Social Security and Medicare taxes over the 2002-2012 period will remain a fairly constant proportion of wage and salary income, CBO estimates. And after the economy swings back to full employment, they will tend to maintain a fairly steady share of GDP. From 2002 to 2005, CBO projects, the ratio of total social insurance receipts to wage and salary income will rise, mainly because state unemployment systems will be replenishing their trust funds in the wake of the outflow of unemployment benefits during the recession. The slow decline in social insurance receipts as a fraction of wages that CBO expects will occur after 2005 is driven largely by three factors: states will have completed replenishing their funds; revenues associated with other federal retirement programs will be lower, as the number of workers covered under Railroad Retirement and the old Civil Service Retirement System dwindles; and a slightly larger fraction of total wage and salary income will be above the cap on earnings subject to Social Security taxes.

Compared with last January's projections, CBO's current estimates of social insurance receipts over the 2002-2011 period are lower by about $130

Table 3-9.
CBO's Baseline Projections of Social Insurance Tax Receipts, by Category (In billions of dollars)

Tax Receipts	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Social Security	508	518	545	574	602	631	661	693	727	764	803	842	3,014	6,842
Medicare	150	152	159	168	176	185	194	204	214	225	237	249	882	2,012
Unemployment Insurance	28	31	35	39	45	45	44	43	45	47	49	51	207	444
Railroad Retirement	4	4	4	4	4	4	4	4	4	4	4	5	21	43
Other Retirement	5	4	4	4	4	4	4	4	4	4	4	3	22	40
Total	694	710	748	789	832	869	908	948	994	1,045	1,097	1,151	4,146	9,381

SOURCE: Congressional Budget Office.

billion. The reductions stem from changes in CBO's projections of wages and salaries as a consequence of the slowdown in economic growth. Part of the overall decrease is offset by technical changes that boost receipts. (The changes are based on information that current collections of OASDI and HI taxes are actually higher than revenue-estimating models predicted, given the level of economic activity.) Although that extra revenue is projected to persist, the increase in collections of social insurance receipts does not result in a net increase in projected total revenues—because the increase in social insurance receipts is linked to an offsetting decrease in individual income tax receipts.

Excise Taxes

Receipts from excise taxes are expected to continue their long-term decline as a percentage of GDP, falling from their share of 0.7 percent in 2001 to 0.5 percent by 2012. Most excise taxes—those generating about 80 percent of total excise revenues—are levied per unit of a good or per transaction rather than as a percentage of value. As a result, excise receipts grow with real output, but they generally do not rise with inflation. Therefore, they do not grow as fast as does nominal GDP.

Nearly all excise taxes fall into five major categories: highway, airport, telephone, alcohol, and tobacco. Almost half of all excise tax receipts are earmarked for (allocated by law to) the Highway Trust Fund; they come primarily from taxes on gasoline and diesel fuel (see Table 3-10). Most airport and telephone excise taxes are levied on a percentage basis, so they grow at a faster rate than do the other categories. CBO's projections of tobacco tax receipts incorporate the effects of a small rate hike enacted in 1997 to take effect on January 1, 2002—which raises the level of receipts for this year. However, the projections also reflect the drop in tobacco consumption that is expected from the rise in tobacco prices resulting from the tobacco industry's settlements with the states. The net effect is that CBO's estimates of receipts from tobacco excise taxes are roughly stable for 2003 through 2012.

CBO's current projections of total excise tax receipts are lower than the estimates it produced last January for the same period (2002 through 2011). Lower projections of aviation-related taxes in the wake of the events of September 11 account for some of the drop. And some of it results from as-yet-unexplained reductions, relative to earlier projections, in the receipts collected for other excise taxes in 2001—a pattern that CBO expects will continue through the 2002-2012 period.

Table 3-10.
CBO's Baseline Projections of Excise Tax Receipts, by Category (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Highway	33	33	34	35	37	38	39	40	41	42	44	45	183	395
Airport	9	9	10	10	11	12	12	13	14	15	15	16	55	129
Telephone	6	6	6	7	7	8	8	9	9	10	10	11	36	84
Alcohol	8	8	8	8	9	9	9	9	9	9	9	9	43	88
Tobacco	8	8	9	9	9	9	9	9	9	9	9	9	44	87
All Other	3	3	3	3	3	3	3	3	3	3	3	3	13	27
Total	66	67	70	72	75	77	79	82	85	87	90	93	373	810

SOURCE: Congressional Budget Office.

Estate and Gift Taxes

In the past, revenues from estate and gift taxes have tended to grow more rapidly than income because the unified credit for the estate and gift tax, which effectively exempts some assets from taxation, is not indexed for inflation. Under EGTRRA, however, the estate tax phases out, and the gift tax remains in the code but in a modified form. The amount of an estate that the law effectively exempts from tax is scheduled to rise, in a series of steps, from $1 million in 2002 to $3.5 million in 2009. EGTRRA also reduces the highest estate tax rate, from 50 percent in 2002 to 45 percent by 2007. In 2010, the law calls for the estate tax to be eliminated. But the expiration of EGTRRA's provisions at the end of that year means that the tax will be reinstated in 2011. Because of normal lags in the payment of estate tax liability and the retention of the gift tax in the tax code, receipts from estate and gift taxes do not disappear completely in CBO's projections for the 2002-2012 period but instead reach a trough in 2011 (see Table 3-11). CBO estimates that in 2012 they will return to their 2002 level relative to GDP.

CBO's current projections of estate and gift tax receipts are lower than those from January 2001 by about $180 billion. The source of most of that decline was legislation (specifically, EGTRRA), but technical changes also contributed to it. In particular, the weakening of the stock market led CBO to revise its estimates of the household wealth that would be subject to the estate tax.

Other Sources of Revenue

Customs duties and numerous miscellaneous sources bring in much smaller amounts of revenue than do the major levies (see Table 3-11). CBO projects that customs duties will grow over time in tandem with imports. Over the next few years, however, their growth will be curbed as tariff reductions enacted in 1994 are phased in.

The largest component of miscellaneous receipts is the profits of the Federal Reserve System, which are counted as revenues once they are turned over to the Treasury. Those profits depend on the interest earned on the system's portfolio of securities and on gains and losses from its holdings of foreign currency. In recent months, earnings on securities have declined as the central bank engaged in a countercyclical monetary policy of lowering interest rates to try to stimulate economic growth and counter the economy's downturn. In addition, the recession has shrunk the Federal Reserve's portfolio of assets because of slower growth in the public's holdings of

Table 3-11.
CBO's Baseline Projections of Other Sources of Revenues (In billions of dollars)

Receipts	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Estate and Gift Tax	28	26	24	25	22	25	22	23	25	16	15	44	119	241
Customs	19	20	21	22	23	24	25	26	26	27	28	29	114	250
Miscellaneous														
Federal Reserve	26	24	25	30	32	34	37	39	41	43	45	47	158	373
Universal Service Fund	5	5	5	6	6	6	6	6	6	6	6	7	28	60
Other	6	4	4	4	4	3	4	3	3	3	3	3	18	35
Subtotal	38	33	34	39	42	44	46	48	50	52	55	57	205	467
Total	85	79	79	86	87	93	92	97	102	95	98	130	438	959

SOURCE: Congressional Budget Office.

U.S. currency. Those declines have led CBO to project that receipts from the Federal Reserve System in 2002 and 2003 will be substantially below the amounts previously projected. The central bank's income, and therefore the receipts it remits to the Treasury, are expected to return to their previous trends in 2004 and 2005.

Another small but significant component of miscellaneous receipts is the Universal Service Fund. Collected from the telecommunications industry, money from the fund is intended to finance Internet service for libraries and schools in low-income areas and to subsidize basic telephone service for high-cost areas and low-income households. CBO's current projections of this source of revenues hover close to $5 billion for each year of the 2002-2012 period, although the level of total receipts expected from this source has fallen compared with the level CBO projected last January. CBO has reduced its projections on the basis of new information about the establishment of state universal service funds (the Telecommunications Act of 1996 permitted the states to set up such funds to collect and disburse money). Receipts from the state funds were factored in to earlier projections of miscellaneous receipts, but CBO now considers it unlikely that the funds will be established. (The drop in receipts that CBO's projections now incorporate is offset on the outlay side of the federal budget, so the overall effect on the budget is neutral.)

A further reduction that CBO has incorporated in its current projections applies to the category of "other" miscellaneous receipts. Provisions of the Investor and Capital Markets Fee Relief Act, which was passed in December 2001, lower the fees that CBO expects the Securities and Exchange Commission (SEC) will receive over the period; the law also reclassifies them as offsetting collections—which appear in the budget as negative outlays rather than revenues.

In sum, the changes in the SEC's fees and the revision related to state universal service funds explain most of the $82 billion decline since last January in CBO's projections of other miscellaneous receipts (excluding those from the Federal Reserve System) for the 2002-2011 period.

Expiring Tax Provisions

CBO's projections of revenues rest on the assumption that current tax laws remain unaltered except for scheduled changes and expirations, both of which occur on time. (The sole exception to that approach is the expiration of excise taxes dedicated to trust funds, which under budget rules are included in the revenue projections whether or not they are scheduled to expire.) Yet expiring tax provisions can have

a significant effect on CBO's estimates—even in ordinary circumstances, when they do not include provisions such as the EGTRRA tax cuts, which are due to expire in 2010. Many expiring provisions are extended almost as a matter of course, and most of them reduce receipts; thus, if CBO incorporated the provisions' effects in its projections, those estimates of revenues would be lower than the revenues projected under current law. Because the EGTRRA tax cuts are included as expiring provisions, the size of that category in CBO's current projections is substantially larger than in most past years.

Provisions That Expired in 2001

Twelve tax provisions expired in late 2001, and all of them acted to reduce revenues (see Table 3-12). The House included at least partial extensions of 10 of the provisions in the Economic Security and Worker Assistance Act of 2001, which was passed in December, although the legislation and extensions did not become law. The remaining measures—the Andean Trade Preference Initiative and the Generalized System of Preferences—were considered in separate legislation.

Sometimes in the past, when provisions have recently expired, the Congress has subsequently extended them either prospectively or retroactively. If all of those expired provisions were immediately and permanently extended, they would reduce revenues by a total of $93 billion over the 2003-2012 period. Over the same period, about $51 billion, or more than half of the total cost of extending those expired provisions, would come from the measure that allows taxpayers to claim certain personal credits against the alternative minimum tax. Without the extension of that provision, some taxpayers would be unable to claim the education tax credits that were enacted in the Taxpayer Relief Act of 1997. The provision allowing an exemption from taxable income for certain passive income from financial activities abroad would reduce revenues by an estimated $27 billion over the projection period if it was extended at least through 2012.

Provisions Expiring During the 2002-2012 Period

A number of additional provisions will expire during the period from 2002 through 2012. The most significant of them, from an overall budgetary perspective, were enacted in EGTRRA.[7] Three provisions from that law expire by the end of 2006, and the rest, representing the bulk of the law's budgetary effects, expire on December 31, 2010. If those measures were extended, CBO and the Joint Committee on Taxation (JCT) project that revenues would be reduced by $569 billion through 2012. Most of that reduction, or $430 billion, would be felt at the end of the period, in 2011 and 2012, as a result of extending the tax cuts that expired at the end of 2010. Those reductions include the cuts in marginal tax rates for individuals, increases in the child tax credit, and repeal of the estate tax.

About $140 billion of the loss in revenues from extending the expiring provisions of EGTRRA would occur earlier than in 2011. Extending the changes to estate and gift taxes, which expire at the end of 2010, could reduce revenues as early as 2003, because if taxpayers knew that the law's repeal of the estate tax would become permanent in 2011, some might postpone taxable gifts that they would otherwise have made during the decade. In addition, CBO's and JCT's estimates of the effects of extending EGTRRA's provisions also incorporate the assumption that the higher exemption levels for the AMT, which expire in 2004, are extended at their 2004 levels. Under that assumption, the exemption levels would not rise with inflation, so a growing number of taxpayers would still become subject to the AMT over time—albeit fewer than if the higher exemption levels expired as they are now scheduled to do. Two other provisions of EGTRRA expire before 2010—the deduction for qualified education expenses (in 2005) and the credit for elective deferrals and contributions to individual retirement accounts (in 2006).

7. For a discussion of the likely economic effects of EGTRRA, see Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2001), Box 2-3, pp. 34-35.

Table 3-12.
Effect of Extending Tax Provisions That Will Expire Before 2012 (In billions of dollars)

Tax Provision	Expiration Date	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Provisions That Expired in 2001														
Generalized System of Preferences	09/30/2001	-0.3	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-2.4	-6.0
Andean Trade Preference Initiative	12/04/2001	*	*	*	*	*	*	*	*	*	*	*	-0.1	-0.3
Credit for Electric Vehicles	12/31/2001	*	*	*	*	*	*	*	*	*	*	*	*	-0.1
Credit for Electricity Production from Renewable Sources	12/31/2001	*	*	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.6	-2.0
Deductions for Clean Fuel Vehicles and Refueling Property	12/31/2001	*	*	*	*	*	*	*	*	*	*	*	-0.2	-0.3
Net Income Limitation for Marginal Oil and Gas Wells	12/31/2001	*	*	*	*	*	*	*	-0.1	-0.1	-0.1	-0.1	-0.2	-0.5
Qualified Zone Academy Bonds	12/31/2001	*	*	*	*	*	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.6
Rum Excise Tax Revenue to Puerto Rico and the Virgin Islands	12/31/2001	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.4	-0.7
Subpart F for Active Financing Income	12/31/2001	-0.3	-1.5	-1.7	-1.9	-2.1	-2.4	-2.7	-3.1	-3.5	-4.0	-4.4	-9.6	-27.1
Treatment of Nonrefundable Personal Credits Under the AMT	12/31/2001	-0.1	-0.7	-1.0	-1.7	-3.8	-4.7	-5.4	-6.2	-6.8	-8.3	-12.4	-11.8	-50.9
Welfare-to-Work Credit	12/31/2001	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5	-1.2
Work Opportunity Credit	12/31/2001	-0.1	-0.2	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-1.8	-3.8
Provisions Expiring in 2002 and 2003														
Archer Medical Savings Accounts	12/31/2002	n.a.	*	*	*	*	*	*	*	*	*	*	*	-0.1
Luxury Tax on Passenger Vehicles	12/31/2002	n.a.	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.1	2.3
IRS User Fees	10/01/2003	n.a.	n.a.	**	**	**	**	**	**	**	**	**	0.1	0.3
Tax Return Information for Veterans' Payments	10/01/2003	n.a.	n.a.	**	**	**	**	**	**	**	**	**	0.1	0.2
Brownfields Environmental Remediation	12/31/2003	n.a.	**	-0.1	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-1.0	-2.6
Corporate Contributions of Computers to Schools	12/31/2003	n.a.	n.a.	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.5	-1.3
Depreciation for Business Property on Indian Reservations	12/31/2003	n.a.	**	-0.1	-0.4	-0.6	-0.6	-0.5	-0.4	-0.3	-0.3	-0.3	-1.7	-3.5
Indian Employment Tax Credit	12/31/2003	n.a.	n.a.	*	*	*	*	*	*	*	*	*	-0.1	-0.3
Tax Incentives for Investment in the District of Columbia	12/31/2003	n.a.	n.a.	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.4	-0.4	-1.7

(Continued)

Table 3-12.
(Continued)

Tax Provision	Expiration Date	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Provisions Expiring After 2003 and Before 2012														
Credit for Research and Experimentation	06/30/2004	n.a.	n.a.	-0.6	-3.7	-4.8	-5.8	-6.7	-7.4	-7.9	-8.4	-8.9	-14.9	-54.2
Abandoned-Mine Reclamation Fees	09/30/2004	n.a.	n.a.	n.a.	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.7	2.0
Increased AMT Exemption Amount	12/31/2004	n.a.	n.a.	n.a.	-3.7	-11.2	-15.6	-19.9	-24.0	-26.7	-23.3	-14.9	-30.5	-139.4
Depreciation of Clean-Fuel Automobiles	12/31/2004	n.a.	n.a.	n.a.	*	*	*	*	*	*	*	*	*	-0.1
Authority for Undercover Operations	12/31/2005	n.a.	n.a.	n.a.	n.a.	**	**	**	**	**	**	**	**	**
Deduction for Qualified Education Expenses	12/31/2005	n.a.	n.a.	n.a.	n.a.	-2.2	-3.0	-3.1	-3.2	-3.2	-3.2	-3.3	-5.2	-21.2
Puerto Rico Business Credits	12/31/2005	n.a.	n.a.	n.a.	n.a.	-0.6	-1.5	-1.7	-1.8	-1.9	-2.1	-2.2	-2.1	-11.9
Transfer of Excess Assets in Defined-Benefit Plans	12/31/2005	n.a.	n.a.	n.a.	n.a.	**	**	**	**	**	**	0.1	0.1	0.3
Credit for IRA and 401(k)-Type Plans	12/31/2006	n.a.	n.a.	n.a.	n.a.	n.a.	-0.7	-1.4	-1.2	-1.1	-1.0	-1.0	-0.7	-6.4
FUTA Surtax of 0.2 Percentage Points	12/31/2007	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0	0	0	0	n.a.	0
New Markets Tax Credit	12/31/2007	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.1	-0.3	-0.4	-0.6	-0.8	n.a.	-2.3
Empowerment and Renewal Zones	12/31/2009	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-0.9	-1.7	-1.6	n.a.	-4.2
General Expiration of EGTRRA Provisions	12/31/2010	n.a.	-1.2	-1.5	-1.8	-2.3	-2.5	-2.7	-2.8	-4.0	-126.7	-229.0	-9.2	-374.4
All Expiring Provisions[a]														
Total		-1.0	-4.0	-6.0	-14.6	-29.1	-38.3	-46.0	-52.2	-58.9	-188.5	-297.1	-92.0	-734.7

SOURCES: Joint Committee on Taxation, Congressional Budget Office.

NOTES: AMT = alternative minimum tax; IRS = Internal Revenue Service; IRA = individual retirement account; FUTA = Federal Unemployment Tax Act; EGTRRA = Economic Growth and Tax Relief Reconciliation Act of 2001; n.a. = not applicable.

* = loss of less than $50 million.

** = gain of less than $50 million.

a. The overall totals do not equal the sums of the separate provisions because they include estimated interactions among provisions in 2011 and 2012. Those interactions would occur if all of the provisions were extended together.

Eighteen provisions not related to EGTRRA also expire over the 2002-2012 period, and 11 of them, if extended, would reduce revenues. The one with the greatest effect by far is the research and experimentation tax credit, which was first enacted in 1981. In 1999, the Congress extended that tax benefit through June 2004, the ninth and longest time it has been extended since 1985. Extending the credit from 2005 through 2012 would reduce revenues by about $54 billion. In all, extending those 11 provisions would decrease receipts by $82 billion through 2012.

Six provisions that expire between 2002 and 2005 would raise revenues if they were extended. Extending the provision imposing fees for the reclamation of abandoned mines and the luxury tax on passenger vehicles would each raise between roughly $200 million and $250 million per year; each of the four other provisions would raise revenues by less than $50 million annually. Those other measures include extending user fees charged by the Internal Revenue Service (IRS), allowing employers to transfer excess assets in defined-benefit plans to a special account dedicated to health benefits for retirees, and providing information to the IRS on government benefits received by veterans.

One expiring provision has no effect on revenues. The Federal Unemployment Tax Act surcharge brings in about $2 billion a year; however, the additional revenues from extending the provision would be rebated to the states. CBO expects that the states would use them to lower their unemployment insurance tax rates. Since receipts from the state taxes are counted as federal unemployment tax receipts, extending the surcharge would have no net effect on revenues.

Expiring Provisions That Are Included in the Baseline

In its projections, CBO takes into account excise tax receipts earmarked for trust funds, even if provisions for those taxes are scheduled to expire. The largest of such 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 them at today's rates contributes about $45 billion to CBO's revenue projections in 2012, or about half of total excise tax receipts.

Other expiring trust fund taxes, if extended, would account for smaller amounts in 2012, CBO estimates. Taxes dedicated to the Airport and Airways Trust Fund, which are scheduled to expire at the end of 2007, would contribute about $16 billion to revenues in 2012. Taxes for the Leaking Underground Storage Tank Trust Fund, set to expire on March 31, 2005, would contribute about $250 million. No other expiring tax provisions are automatically extended in CBO's projections.

Total Effect of Expiring Provisions

If all expiring tax provisions were extended together, projections of total revenues would be lower by $4 billion in 2003, with revenue losses growing to $59 billion in 2010 before jumping to $189 billion in 2011 and $297 billion in 2012. Over the 2003-2012 period, revenues would be reduced by $735 billion. That estimate of the effects of jointly extending the expiring provisions includes interactions among the provisions, which reduce revenues by an additional $23 billion in 2011 and 2012.

Chapter Four

The Spending Outlook

Federal spending totaled nearly $1.9 trillion in 2001—a 4.2 percent increase from 2000. In 2002, the Congressional Budget Office projects, spending will grow by 7.5 percent if current policies remain unchanged. Such an increase would be the largest since 1990, when there was a sizable jump in spending because of the savings and loan crisis. Excluding net interest (which has been declining in recent years), spending increased by 5.9 percent between 2000 and 2001 and is expected to climb by 10.6 percent from 2001 to 2002.

Recently enacted legislation, by increasing appropriations for both defense and nondefense activities, contributes to the substantial rise in the rate of growth in spending this year. On the basis of legislation enacted to date, CBO estimates that discretionary budget authority will increase by 7.4 percent from the 2001 level; discretionary outlays will grow by 12.8 percent. Driving that jump in outlays are the rapid increases in budget authority provided over the past couple of years and the spending of the emergency appropriations related to the September 11 attacks. Similarly, the Economic Growth and Tax Relief Reconciliation Act of 2001, which expanded the child tax credit, adds more than $4 billion in outlays in 2002 for the refundable portion of that credit.

Economic weakness will also contribute to higher spending in 2002. The recession and its aftermath are expected to push the unemployment rate to 6.2 percent by mid-2002. As a result, unemployment compensation is anticipated to soar by 67 percent from the level recorded in 2001. As more people become unemployed, participation in other support programs, such as Food Stamps, also increases. (Spending on Food Stamps is projected to rise by 19 percent this year.)

CBO projects that without enactment of further legislation, the rate of growth in spending will moderate to an average of 3.8 percent a year over the next 10 years. Total spending in CBO's baseline rises from $2.0 trillion in 2002 to $2.9 trillion in 2012. (See Tables 4-1 and 4-2.)

Federal spending can be divided into categories based on its treatment in the budget process:

- *Discretionary spending*—which pays for such things as defense, transportation, national parks, and foreign aid—accounts for about one-third of the budget. Discretionary programs are controlled by annual appropriation acts; policymakers decide each year how many dollars to devote to which activities. Certain fees and other charges that are triggered by appropriation action are classified as offsetting collections, which offset discretionary spending. CBO's baseline depicts the path of discretionary spending in accordance with the Balanced Budget and Emergency Deficit Control Act of 1985, which states that current spending (for this report, appropriations provided for fiscal year 2002) should be assumed to grow with inflation in the future.[1]

1. The inflation rates used in CBO's baseline, as specified by the Deficit Control Act, are the employment cost index for wages and salaries (for expenditures related to federal personnel) and the gross domestic product deflator (for other expenditures).

Table 4-1.
CBO's Baseline Projections of Outlays

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
							In Billions of Dollars							
Discretionary Spending	649	733	764	784	808	824	841	866	888	910	937	953	4,021	8,575
Mandatory Spending	1,095	1,188	1,248	1,292	1,362	1,428	1,508	1,602	1,701	1,809	1,933	2,023	6,837	15,904
Offsetting Receipts	-87	-88	-101	-113	-119	-115	-122	-129	-136	-143	-152	-160	-570	-1,289
Net Interest	206	170	174	188	188	182	175	165	153	138	120	92	908	1,577
Total	1,864	2,003	2,085	2,152	2,238	2,319	2,402	2,504	2,606	2,714	2,838	2,908	11,196	24,767
On-budget	1,517	1,645	1,718	1,774	1,848	1,915	1,983	2,069	2,153	2,240	2,343	2,387	9,237	20,429
Off-budget	347	358	367	379	391	405	419	434	453	474	495	521	1,960	4,337
							As a Percentage of GDP							
Discretionary Spending	6.4	7.1	7.0	6.8	6.6	6.4	6.2	6.1	6.0	5.8	5.7	5.5	6.6	6.2
Mandatory Spending	10.8	11.5	11.5	11.2	11.2	11.2	11.2	11.3	11.4	11.5	11.7	11.7	11.2	11.4
Offsetting Receipts	-0.9	-0.9	-0.9	-1.0	-1.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Net Interest	2.0	1.7	1.6	1.6	1.5	1.4	1.3	1.2	1.0	0.9	0.7	0.5	1.5	1.1
Total	18.4	19.4	19.1	18.6	18.4	18.1	17.8	17.7	17.5	17.3	17.2	16.8	18.4	17.8
On-budget	14.9	16.0	15.8	15.3	15.2	15.0	14.7	14.6	14.5	14.3	14.2	13.8	15.2	14.7
Off-budget	3.4	3.5	3.4	3.3	3.2	3.2	3.1	3.1	3.0	3.0	3.0	3.0	3.2	3.1
Memorandum:														
Gross Domestic Product (Billions of dollars)	10,150	10,315	10,890	11,556	12,168	12,803	13,468	14,166	14,897	15,664	16,469	17,314	60,884	139,394

SOURCE: Congressional Budget Office.

- *Entitlements and other mandatory spending*—which constitute more than half of the federal budget—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 other parameters rather than by appropriating specific dollar amounts each year. CBO's baseline projections of mandatory spending assume that existing laws and policies remain unchanged and that most expiring programs will be extended.

- *Offsetting receipts*—fees and other charges that are recorded as negative budget authority and outlays—are collected without annual appropriation action. Offsetting receipts differ from revenues in that revenues are collected as an exercise of the government's sovereign powers, whereas offsetting receipts are generally collected from other government accounts or paid by the public for businesslike transactions (such as rents and royalties from leases for oil and gas drilling on the Outer Continental Shelf).

- *Net interest*—which includes interest paid on Treasury securities and other interest that the government pays (for example, on late refunds issued by the Internal Revenue Service) minus interest that the government collects from various sources (such as from commercial banks for deposits in tax and loan accounts)—is driven by the size of the government's debt, annual budget surpluses or deficits, and market interest rates.

The mix of federal spending has changed significantly over time. Today, the government spends less—as a proportion of GDP—on discretionary activities and more on entitlement programs than it did in the past. Discretionary spending fell from 12.7 percent of GDP in 1962 to 6.4 percent in 2001 (see Figure 4-1). Over that period, spending on entitlements

Table 4-2.
Average Annual Rate of Growth in Outlays (In percent)

	1991-1996	1996-2001	2000-2001	Estimated 2001-2002	Projected[a] 2002-2012
Discretionary	*	4.0	5.6	12.8	2.7
Defense	-3.6	2.8	3.8	14.8	2.3
Nondefense	4.5	5.2	7.3	11.0	3.0
Mandatory	5.7	5.1	6.1	9.1	5.4
Social Security	5.4	4.3	5.7	5.0	5.5
Medicare	10.9	4.5	10.1	4.9	7.2
Medicaid	11.9	7.2	11.1	9.5	8.5
Other[b]	-0.8	6.1	-0.2	22.1[c]	0.5
Net Interest	4.4	-3.1	-7.6	-17.4	-5.9
Total Outlays	3.3	3.6	4.2	7.5	3.8
Total Outlays Excluding Net Interest	3.2	4.7	5.9	10.6	4.4
Memorandum:					
Consumer Price Index	2.8	2.5	3.3	1.8	2.5
Nominal GDP	5.4	5.7	4.1	1.6	5.3
Discretionary Budget Authority	1.7	5.7	13.2	7.4	2.6
Defense	-4.4	4.5	10.0	5.1	2.6
Nondefense	2.0	7.0	16.7	9.7	2.6

SOURCE: Congressional Budget Office.

NOTE: * = between -0.05 percent and zero.

a. As specified by the Deficit Control Act, CBO's baseline incorporates as inflation rates the employment cost index for wages and salaries (for expenditures related to federal personnel) and the GDP deflator (for other expenditures).

b. Includes offsetting receipts.

c. Contributing to the increase from 2001 to 2002 is an estimated jump of 67 percent in unemployment compensation, an increase of 19 percent for Food Stamps, and a $4 billion increase for the child tax credit.

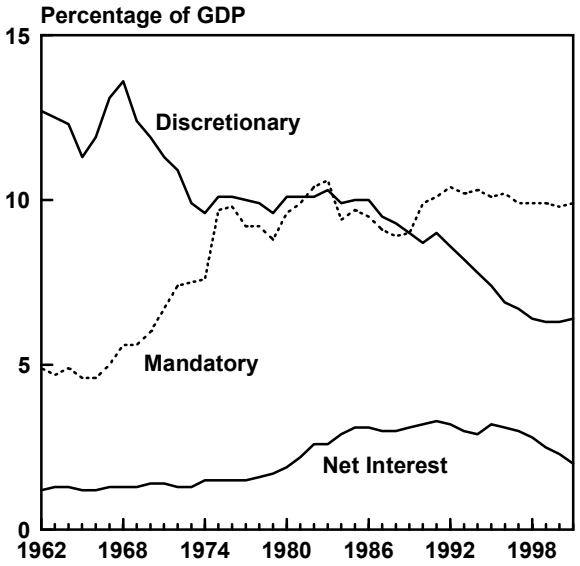
and other mandatory programs (net of offsetting receipts) increased from 4.9 percent to 9.9 percent of GDP. (For detailed annual data on spending since 1962, see Appendix F.)

According to CBO's baseline, discretionary outlays will grow about half as fast as the economy, at an average annual rate of 2.7 percent, from 2002 to 2012. Led by the two major health care programs, Medicare and Medicaid, mandatory spending (net of offsetting receipts) will grow slightly faster than the economy—at a rate of 5.4 percent—if current policies remain unchanged. At that rate, mandatory spending (net of offsetting receipts) will climb to 10.8 percent of GDP by 2012. Although interest payments currently consume a sizable portion of the federal budget, CBO projects that, with a shrinking amount of debt held by the public, such spending will decline from 2.0 percent of GDP in 2001 to 0.5 percent of GDP in 2012.

Discretionary Spending

Each year, the Congress starts the appropriation process anew. The annual appropriation acts that it

Figure 4-1.
Major Components of Spending, 1962-2001



SOURCE: Congressional Budget Office based on data from the Office of Management and Budget.

passes provide new budget authority (the authority to enter into financial obligations) for discretionary programs and activities. That authority translates into outlays when the money is actually spent. Although some funds are spent quickly, others are disbursed over several years. In any given year, discretionary outlays include spending from both new budget authority and from amounts appropriated previously.

Recent Trends in Discretionary Spending

As a share of GDP, discretionary spending has dropped from 9.0 percent in 1991 to 6.4 percent in 2001 (see Table 4-3). The figures for total discretionary spending, however, mask large programmatic shifts that occurred between 1991 and 1996—defense spending declined from $320 billion to $266 billion, while nondefense spending increased from $214 billion to $267 billion. Between 1996 and 2001, defense outlays grew at an average rate of 2.8 percent a year, compared with a 5.2 percent rate for nondefense spending. In 2001, defense and nondefense outlays were $306 billion and $343 billion, respectively. Although spending for nondefense programs has outstripped that for defense, growth in the economy has been greater still. As a result, at the end of 2001, nondefense spending was below its 1991 level as a percentage of GDP. (For additional information on the growth in nondefense outlays, see Box 4-1.)

For 2002, CBO estimates that defense spending will rise to $351 billion and nondefense outlays will reach $381 billion. Total discretionary outlays, CBO expects, will increase by $84 billion (12.8 percent) from their level in 2001—a much faster rise than experienced in the 1990s. Emergency appropriations related to the September 11 attacks will generate about one-quarter of that growth. (For additional information on those appropriations, see Box 4-2.) Increased budget authority provided for 2002 and spending in the pipeline from appropriations before 2002 will account for the remainder.

Discretionary Spending for 2003 to 2012

CBO's projections should be viewed not as a prediction of future outcomes but rather as a reference point for assessing policy changes, in part because, as specified in the Deficit Control Act, CBO inflates discretionary budget authority from the level appropriated in the current year (in this case, 2002). In CBO's baseline, discretionary outlays reach $953 billion in 2012. The economy, however, is projected to continue growing faster than the baseline for such spending; as a result, discretionary outlays decline as a percentage of GDP from 7.1 percent in 2002 to 5.5 percent in 2012.

Because the size of projected deficits and surpluses is sensitive to assumptions about discretionary spending, CBO has prepared four alternative scenarios for such spending during the 2003-2012 period. One scenario assumes that budget authority grows at the same rate as nominal GDP after 2002 (5.3 percent a year, on average, compared with the 2.6 percent rate of growth assumed in the baseline). That assumption would cause discretionary outlays to be $1.2 trillion higher than the baseline figures over the 10-year period (see Table 4-4 on page 74). If budget authority increased even more rapidly—at the average annual rate of growth recorded between 1998 and

Table 4-3.
Defense and Nondefense Discretionary Outlays, 1991-2002

	Defense Outlays		Nondefense Outlays		Total Discretionary Outlays	
	In Billions of Dollars	As a Percentage of GDP	In Billions of Dollars	As a Percentage of GDP	In Billions of Dollars	As a Percentage of GDP
1991	320	5.4	214	3.6	533	9.0
1992	303	4.9	231	3.7	534	8.6
1993	292	4.5	247	3.8	539	8.2
1994	282	4.1	259	3.7	541	7.8
1995	274	3.7	271	3.7	545	7.4
1996	266	3.5	267	3.5	533	6.9
1997	272	3.3	276	3.4	547	6.7
1998	270	3.1	282	3.2	552	6.4
1999	275	3.0	297	3.2	572	6.3
2000	295	3.0	320	3.3	615	6.3
2001	306	3.0	343	3.4	649	6.4
2002[a]	351	3.4	381	3.7	733	7.1

SOURCES: Office of Management and Budget for 1991 through 2001 and Congressional Budget Office for 2002.

a. Estimated.

2002 (7.6 percent)—discretionary outlays would exceed the baseline figures by a cumulative $2.3 trillion. A third scenario does not inflate the $20 billion of emergency appropriations provided in Public Law 107-117 for 2002, but it assumes that all other budget authority grows at the baseline rates from 2003 to 2012.[2] Under that assumption, discretionary outlays over the 10-year period would be $0.2 trillion lower than the baseline figures. A fourth scenario assumes that budget authority is essentially frozen at the dollar level enacted for 2002. Under that assumption, discretionary outlays over the 2003-2012 period would total $1.0 trillion less than those in the baseline.

2. In September 2001, the 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States (P.L. 107-38) provided $40 billion of budget authority—$20 billion in 2001 and a second $20 billion that could be obligated only though subsequent legislation. In December 2001, enactment of the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (P.L. 107-117), made the second $20 billion available; as part of current-year appropriations, that amount is extended throughout the 10-year baseline period.

Entitlements and Other Mandatory Spending

Currently, more than half of the $2 trillion that the federal government spends each year supports entitlement programs and other types of mandatory spending (not including net interest). Most 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 generally are not constrained by annual appropriation acts.

As a share of total outlays, mandatory spending steadily increased from 32 percent in 1962 to 59 percent in 2001. If current policies remain unchanged, mandatory spending will continue to grow faster than other spending, reaching 70 percent of total outlays in 2012, CBO estimates. Among the largest mandatory programs are Social Security, Medicare, and Medicaid, which together accounted for over 72 percent of mandatory spending in 2001 and are projected

Box 4-1.
The Growth in Nondefense Discretionary Outlays

To focus on the increases in nondefense discretionary outlays since the emergence of a surplus in 1998, the Congressional Budget Office (CBO) examined such spending for the four-year periods before and after that year—for 1994 through 1998 and for 1998 through 2002 (which encompasses one year of CBO's estimates). Over the first period, nondefense discretionary outlays grew at an average annual rate of about 2 percent; for the second period, CBO estimates a growth rate of approximately 8 percent. All budget functions except one show increases in outlays over the second period. In 2002, the following four categories will account for about half of nondefense discretionary outlays (up from 45 percent in 1998).

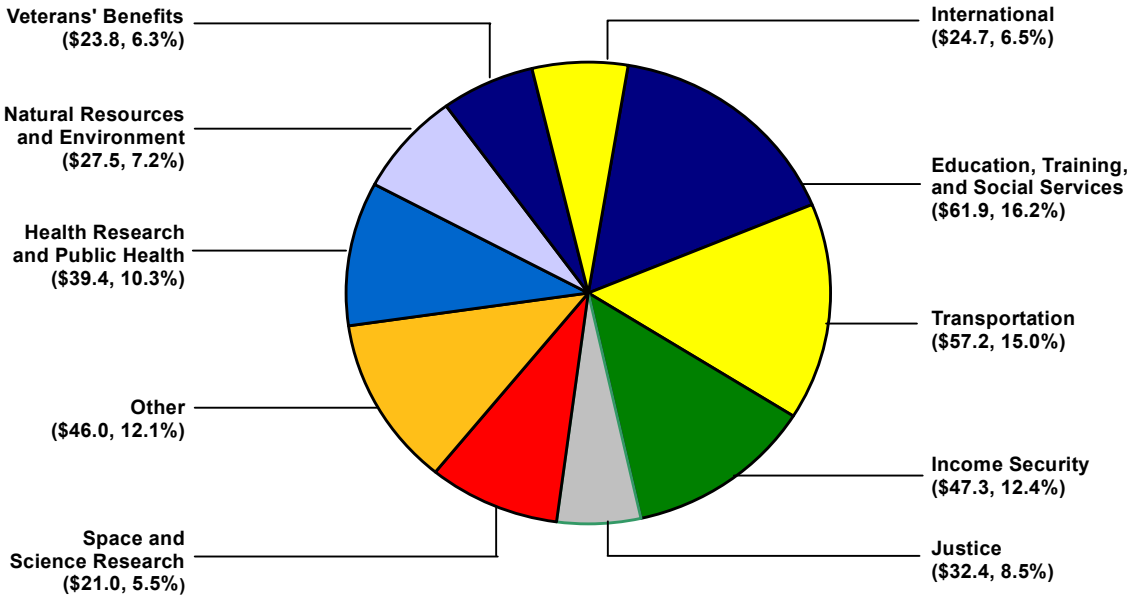
The education, training, and social services category will claim 16 percent of nondefense discretionary outlays in 2002, CBO expects (see the figure below). That budget function includes all federal programs related to education and employment as well as social services for children, families, the elderly, and disabled people. From 1994 through 1998, spending for the category grew at an average annual rate of about 3 percent. For the second period, CBO estimates that rate to be nearly 10 percent; much of that growth results from increased spending for education.

Transportation (ground, air, and water) will account for 15 percent of nondefense discretionary outlays in 2002, CBO estimates. For 1994 through 1998, transportation spending grew slowly, at an average annual rate of less than 2 percent; but for 1998 through 2002, CBO estimates a growth rate of almost 11 percent. Outlays for ground transportation have been the largest contributor to that growth, spurred by the Transportation Equity Act for the 21st Century (Public Law 105-178).

According to CBO's projections, health research and public health expenditures will make up more than 10 percent of nondefense discretionary outlays in 2002. For 1998 through 2002, CBO estimates an average annual rate of growth in spending for the category that is more than double the rate for the previous period. Fueling such growth are additional grants and contracts to research diseases and promote disease-prevention programs awarded by the Health Resources and Services Administration and the National Institutes of Health.

Since the mid-1990s, the federal government has stepped up its funding for the administration of justice at an average annual rate of more than 10 percent. Most of the increases have been devoted to correctional activities and law enforcement agencies, such as the Federal Bureau of Investigation, the Immigration and Naturalization Service, and the Customs Service. For 2002, CBO projects that the category will account for almost 9 percent of nondefense discretionary outlays.

Nondefense Discretionary Spending, by Budget Function, 2002
(In billions of dollars and percent)



Box 4-2.
$40 Billion of Emergency Discretionary Appropriations for 2001 and 2002

Responding to the events of September 11, the 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States (P.L. 107-38) provided $40 billion for disaster recovery and homeland security. That law stipulated, however, that half of the funds could not be obligated until subsequent legislation was enacted; the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (P.L. 107-117), made the second $20 billion available.

From the first $20 billion, the Department of Defense (DoD) obtained more than any other agency, about $14 billion of budget authority; the Federal Emergency Management Agency's (FEMA's) disaster relief program received the next largest amount, $2 billion. Because P.L. 107-38 was enacted near the end of fiscal year 2001, CBO estimates that only $131 million of outlays from it occurred in 2001. The majority of the outlays will be recorded in 2002 (see the table below).

Of the second $20 billion, less than $4 billion was alloted to DoD; the remaining $16 billion was for combating terrorism, improving homeland security, providing aid, and promoting recovery. CBO estimates that the second $20 billion will result in outlays of $8 billion in 2002, about $5 billion in 2003, and the remainder in subsequent years.

Altogether, a little more than half of the $40 billion was provided to nondefense agencies. The largest amounts went to FEMA ($6.6 billion), the Department of Health and Human Services ($2.9 billion), the Department of Housing and Urban Development ($2.7 billion), and the Department of Justice ($2.2 billion).

In accordance with the Deficit Control Act, CBO's baseline projects budget authority by inflating the level appropriated for 2002. Because the first $20 billion was provided for 2001, its budget authority is not inflated, but the resulting outlays are included in the baseline. However, because the second $20 billion was provided for 2002, its budget authority is inflated through 2012 in the baseline.

Table 4-4 shows an alternative path of spending that excludes the second $20 billion from total discretionary budget authority from 2003 through 2012. Chapter 7 describes how much is being spent for homeland security, including a detailed breakout of the $40 billion of emergency appropriations (see Table 7-4 on page 117).

$40 Billion of Emergency Discretionary Appropriations, by Type of Spending (In billions of dollars)

	2001	2002	2003	2004 and Beyond	Total, 2001-2012
Defense					
Budget authority	14	4	0	0	18
Outlays	*	13	3	1	18
Nondefense					
Budget authority	6	16	0	0	22
Outlays	*	9	6	8	22
Total					
Budget authority	20	20	0	0	40
Outlays	*	21	9	9	40

SOURCE: Congressional Budget Office.

NOTE: * = less than $500 million.

Table 4-4.
CBO's Projections of Discretionary Spending Under Alternative Paths (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Baseline (Discretionary Spending Grows at the Rate of Inflation After 2002)[a]														
Budget Authority														
Defense	331	348	357	367	376	386	396	406	417	428	439	451	1,881	4,022
Nondefense	331	363	376	385	394	404	414	425	436	447	459	470	1,973	4,211
Total	662	711	733	751	770	790	810	831	853	875	898	921	3,854	8,233
Outlays														
Defense[b]	306	351	356	363	375	381	387	401	411	422	437	441	1,862	3,974
Nondefense	343	381	408	421	433	443	454	465	476	488	500	512	2,159	4,600
Total	649	733	764	784	808	824	841	866	888	910	937	953	4,021	8,575
Discretionary Spending Grows at the Rate of Nominal Gross Domestic Product After 2002														
Budget Authority														
Defense	331	348	367	389	410	431	454	477	502	528	555	584	2,050	4,697
Nondefense	331	363	385	408	429	451	474	498	524	551	579	609	2,146	4,907
Total	662	711	752	796	838	882	928	976	1,027	1,079	1,134	1,192	4,195	9,604
Outlays														
Defense[b]	306	351	362	380	403	421	439	465	490	515	545	565	2,005	4,586
Nondefense	343	381	413	436	458	481	504	528	553	580	607	636	2,292	5,196
Total	649	733	775	816	861	901	943	993	1,043	1,095	1,153	1,201	4,297	9,782
Discretionary Spending Increases at the Average Annual Rate of Growth from 1998 through 2002 (7.6 percent)														
Budget Authority														
Defense	331	348	374	403	433	466	502	540	581	626	673	725	2,178	5,323
Nondefense	331	363	392	420	452	485	522	561	604	649	698	751	2,271	5,535
Total	662	711	766	823	885	952	1,024	1,101	1,185	1,275	1,372	1,476	4,449	10,858
Outlays														
Defense[b]	306	351	367	391	423	451	481	521	561	604	654	695	2,113	5,147
Nondefense	343	381	416	445	475	507	542	580	620	664	711	761	2,385	5,721
Total	649	733	783	836	897	958	1,023	1,101	1,181	1,268	1,364	1,456	4,498	10,868
Discretionary Spending Excluding the Extension of Supplemental Appropriations for 2002 Grows at the Rate of Inflation After 2002[a,c]														
Budget Authority														
Defense	331	348	353	362	372	381	391	402	413	423	434	446	1,860	3,978
Nondefense	331	363	359	368	377	386	396	406	417	428	439	450	1,886	4,026
Total	662	711	712	730	749	768	788	808	829	851	873	896	3,747	8,004
Outlays														
Defense[b]	306	351	353	359	371	377	383	396	407	418	432	436	1,843	3,932
Nondefense	343	381	402	411	419	427	437	447	458	469	481	492	2,096	4,442
Total	649	733	755	770	790	804	820	843	865	887	913	928	3,939	8,374

(Continued)

Table 4-4.
Continued

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Discretionary Spending Is Frozen at the Level Enacted for 2002														
Budget Authority														
Defense	331	348	348	348	348	348	348	348	348	348	348	348	1,738	3,476
Nondefense	331	363	364	363	363	363	363	363	363	363	363	363	1,817	3,632
Total	662	711	712	711	711	711	711	711	711	711	711	711	3,555	7,108
Outlays														
Defense[b]	306	351	349	348	350	347	344	347	347	347	350	344	1,738	3,471
Nondefense	343	381	402	408	409	410	408	406	406	406	405	404	2,037	4,063
Total	649	733	751	755	760	757	751	753	753	752	754	748	3,774	7,534
Memorandum:														
Debt Service on Differences from Baseline														
Growth at rate of nominal GDP	0	0	*	1	4	8	13	20	29	40	53	68	26	235
Growth at annual average from 1998 through 2002	0	0	*	2	6	13	22	35	51	72	97	128	44	426
Growth excluding $20 billion	0	0	*	-1	-2	-3	-4	-6	-7	-9	-11	-13	-10	-55
Frozen at the 2002 level	0	0	*	-1	-4	-7	-12	-18	-26	-35	-46	-59	-24	-208

SOURCE: Congressional Budget Office.

NOTES * = between -$500 million and $500 million.

In CBO's projections, discretionary outlays are always higher than budget authority because of spending from the Highway Trust Fund and the Airport and Airways Trust Fund, which is subject to obligation limitations in appropriation acts. The budget authority for such programs is provided in authorizing legislation and is not considered discretionary. Another reason why outlays exceed budget authority is that they include spending from appropriations provided in previous years.

a. Using the inflators specified in the Deficit Control Act (the GDP deflator and the employment cost index for wages and salaries).

b. When October 1 falls on a weekend, certain federal payments due on that date are shifted into September; consequently, military personnel will be paid 13 times in 2005 and 2011 and 11 times in 2007 and 2012.

c. The Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (P.L. 107-117), provided $20 billion of supplemental budget authority for 2002. This scenario does not inflate that emergency appropriation from 2003 through 2012 but includes the outlays resulting from it.

to reach almost 79 percent of mandatory spending in 2012.

Less than one-fourth of entitlements and mandatory spending, or about one-seventh of all federal spending, is means-tested—that is, paid to individuals who must document their need on the basis of income or assets that are below specified thresholds. In some cases, other criteria, such as family status, are also used. The remainder of mandatory spending has no such restrictions and is labeled non-means-tested.

Means-Tested Programs

Since the 1960s, spending on means-tested benefits has more than tripled as a share of the economy—from 0.8 percent of GDP in 1962 to a high of 2.6 percent in 1995. Between 1995 and 2000, means-tested outlays declined slightly as a share of GDP, measuring 2.4 percent in 2000. They increased to 2.5 percent in 2001, and CBO projects such outlays to climb to 2.7 percent in 2002. Changes in spending for means-tested programs are driven by several factors, including inflation, rising health care costs, fluctuating unemployment, growth of the eligible populations, and new legislation. CBO projects that spending for means-tested programs will grow more rapidly than the economy over the next 10 years—largely because of Medicaid's growth—climbing to 2.8 percent of GDP in 2012.

Medicaid. Outlays for Medicaid, the joint federal/state program that pays for the medical care of many of the nation's poor people, made up over half of all spending for means-tested entitlements in 2001 (see Table 4-5). Spending grew by 11.1 percent, marking the fifth consecutive year that spending growth in the program accelerated. The spending increase in 2001 resulted from a combination of higher prices and rising enrollment and utilization. Most notably, spending on outpatient prescription drugs jumped by 19 percent (after rising by 18 percent in 1999 and 22 percent in 2000). State and federal actions in recent years to expand eligibility and benefits, increase payment rates to providers, and conduct outreach have increased both enrollment and costs. States also expanded their use of financing mechanisms related to Medicare's upper payment limit (UPL) that generate additional federal payments.[3]

In 2002, spending for Medicaid will increase by 9.5 percent, CBO estimates—reflecting higher costs for prescription drugs, additional enrollment of children and adults resulting from rising unemployment, and states' continuing use of their UPL financing mechanisms. For 2003, CBO projects, spending growth will dip to 6.5 percent because a provision allowing "transitional eligibility" expires[4] and because restrictions that take effect will limit both UPL spending and payments to hospitals that serve a large number of Medicaid beneficiaries or other low-income people.

Over the next decade, Medicaid spending is projected to grow more rapidly than spending for other means-tested programs. Higher prices, greater consumption of services, and, to a lesser extent, higher enrollment will continue putting upward pressure on Medicaid costs—pushing outlays from $143 billion in 2002 to $323 billion in 2012—an average annual increase of 8.5 percent (see Figure 4-2). Spending for acute care services, which includes payments to managed care plans and payments for prescription drugs, accounts for more than half of all Medicaid outlays and is the most rapidly growing component of the program. Acute care spending is anticipated to grow from $76 billion in 2002 to $188 billion in 2012. Spending for long-term care, which accounts for about one-third of all Medicaid spending, is also expected to grow rapidly, climbing from $42 billion in 2002 to $98 billion in 2012, as states expand eligibility for home- and community-based services in response to legal challenges under the Americans with Disabilities Act.

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3. The UPL is a regulatory ceiling in Medicaid's payment policy that prohibits states from paying certain groups of facilities more than they would under Medicare's rules. However, many states use particular financing mechanisms to pay certain public facilities at rates far above Medicaid's normal rates, but below Medicare's upper payment limit, and then receive federal matching funds for those payments. Those public facilities return the excess to the states, and the states then retain the additional funds from the federal match.

4. Medicaid allows enrollees who have returned to work and would otherwise be ineligible because they now have higher incomes to remain eligible for the program temporarily for the transitional period. Under current law, the provision is set to expire at the end of 2002.

Table 4-5.
CBO's Baseline Projections of Mandatory Spending (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Means-Tested Programs														
Medicaid	130	143	152	164	179	194	211	230	250	272	296	323	900	2,271
State Children's Health Insurance	3	4	4	5	5	5	5	5	5	5	5	5	23	50
Food Stamps	19	23	24	24	24	25	26	27	27	28	29	30	124	265
Supplemental Security Income	27	31	32	34	38	37	35	40	42	43	49	43	176	393
Family Support[a]	25	25	26	26	25	25	25	25	25	25	26	26	127	253
Veterans' Pensions	3	3	3	3	4	3	3	3	3	3	4	4	16	34
Child Nutrition	10	10	11	11	11	12	12	13	13	14	14	15	57	126
Earned Income and Child Tax Credits	27	33	34	34	34	37	38	38	39	40	43	31	176	367
Student Loans	-1	3	4	4	4	4	4	4	5	4	4	4	20	42
Foster Care	6	6	7	7	7	8	8	8	9	9	9	10	36	81
Total	249	281	297	311	331	349	367	393	417	445	480	491	1,656	3,883
Non-Means-Tested Programs														
Social Security	429	451	470	493	518	545	574	606	642	682	724	771	2,600	6,026
Medicare	238	249	263	279	302	318	346	374	404	435	471	498	1,508	3,690
Subtotal	667	700	733	771	820	863	920	980	1,046	1,117	1,195	1,269	4,108	9,716
Other Retirement and Disability														
Federal civilian[b]	53	56	59	62	65	68	71	75	78	82	86	90	325	737
Military	34	35	36	37	38	39	40	41	42	43	44	45	191	406
Other	5	5	5	5	5	6	6	6	6	6	7	7	27	58
Subtotal	93	97	100	104	108	113	117	122	126	132	137	142	543	1,201
Unemployment Compensation	28	47	50	41	37	38	39	41	43	44	46	48	205	427
Other Programs														
Veterans' benefits[c]	20	25	27	28	31	30	29	32	33	33	37	33	145	312
Department of Defense health care	0	0	6	7	7	8	8	9	10	10	11	12	36	88
Commodity Credit Corporation Fund	22	14	12	10	8	7	7	6	5	5	5	5	44	72
Social services	4	5	5	5	5	5	5	5	5	5	5	5	24	49
Universal Service Fund	5	5	5	5	5	5	6	6	6	6	6	6	27	56
Other	7	16	14	10	8	9	9	9	10	10	10	11	49	100
Subtotal	59	64	68	65	65	64	63	66	68	70	75	73	325	677
Total	847	907	951	981	1,030	1,078	1,140	1,209	1,283	1,364	1,453	1,531	5,181	12,022
Total														
All Mandatory Spending	1,095	1,188	1,248	1,292	1,362	1,428	1,508	1,602	1,701	1,809	1,933	2,023	6,837	15,904

SOURCE: Congressional Budget Office.

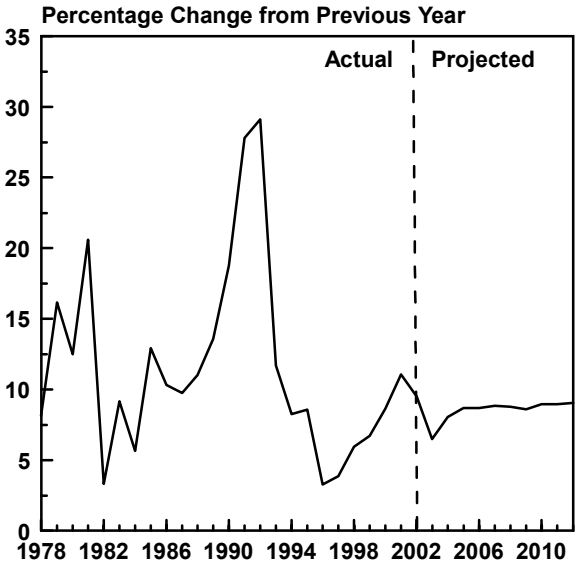
NOTE: The spending for the benefit programs shown above generally excludes administrative costs, which are discretionary. Spending for Medicare also excludes premiums paid by participants, which are considered offsetting receipts.

a. Includes Temporary Assistance for Needy Families and various programs that involve payments to states for child support enforcement and family support, child care entitlements, and research to benefit children.

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

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

Figure 4-2.
Annual Growth of Federal Medicaid Outlays, 1978-2012



SOURCE: Congressional Budget Office.

Other Means-Tested Programs. Outlays for other means-tested programs are projected to grow at an average annual rate of 2.0 percent from 2002 through 2012, although two programs will experience significant growth this year. Because of current economic weakness, spending for the Food Stamp program is projected to jump 19 percent in 2002; however, growth will slow thereafter, yielding an average annual rate of 1.7 percent over the next decade. Outlays for refundable tax credits—the earned income tax credit and the refundable portion of the child tax credit—are projected to increase by 21 percent in 2002. Almost all of that jump results from the expansion of the child tax credit contained in the Economic Growth and Tax Relief Reconciliation Act of 2001. Beyond 2002, outlays for refundable tax credits are expected to rise to $43 billion in 2011 before falling to $31 billion in 2012, the first full year after the expanded child tax credit is scheduled to expire.

Although the student loan program is difficult to classify as either means-tested or non-means-tested, CBO includes that program in the former category because historically the majority of loans have had interest subsidies and have been limited to students from families with relatively low income and financial assets. However, in recent years, the fastest-growing category of loans involves no means-testing. For 2002, CBO estimates that about $37 billion in student loans will be guaranteed or provided directly by the federal government. Over the 2002-2012 period, total loan disbursements will top $475 billion. Of that total, the share of loans that are not means-tested will increase from 52 percent in 2002 to 57 percent in 2012.

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 for interest subsidies, default costs, and other expected costs over the life of the loans. CBO estimates that the subsidy and administrative costs of the student loan program will range from $3 billion to $5 billion a year from 2002 through 2012.

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 $451 billion in 2002. It pays benefits to 46 million people—a number that is projected to increase to about 54 million by 2012. Most Social Security beneficiaries also participate in Medicare, which is expected to cost $249 billion in 2002. 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). CBO projects that the two programs combined will grow by more than $569 billion from 2002 to 2012 as the leading edge of the baby-boom generation reaches the age of eligibility. In total, Social Security and Medicare account for more than half of the projected increase in federal outlays over that period

Social Security. During the past decade, Social Security outlays grew by an average of about 4.9 percent a year. For the next 10 years, that figure will average about 5.5 percent a year, CBO projects. By 2012, spending for Social Security will total $771 billion. The share of the economy devoted to it will remain fairly constant at about 4.4 percent of GDP through 2012.

Social Security's Old-Age and Survivors Insurance (OASI) program pays benefits to retired workers, their eligible spouses and children, and to some survivors (chiefly young children and aged widows) of deceased workers. It will pay about $384 billion in benefits in 2002. Most beneficiaries are elderly, and most elderly people collect Social Security: three-fifths of people between the ages of 62 and 64 and more than 90 percent of people 65 and older collect Social Security. Consequently, CBO bases its estimates of the number of beneficiaries and of OASI outlays primarily on the size of the elderly population.

CBO projects that OASI benefits will cost $636 billion in 2012, an increase of 66 percent over the amount in 2002, reflecting an average growth rate of 5.2 percent a year. In contrast, benefits grew by 56 percent in the past decade, at an average rate of 4.5 percent a year. Overall, of that 4.5 percent average annual growth in OASI benefits during the past decade, roughly 2.7 percent can be assigned to cost-of-living adjustments (COLAs), 0.9 percent to increasing enrollment, and 0.9 percent to growth in the average real benefit (in excess of COLAs). For the next decade, CBO expects that the growth in COLAs will slow to 2.4 percent a year, enrollment will grow by 1.4 percent a year, and the average real benefit will increase by 1.2 percent a year.

The smaller Disability Insurance (DI) program pays benefits to insured workers who have suffered a serious medical impairment before they reach retirement age and to their eligible spouses and children. According to CBO's projections, DI benefits will grow even faster than OASI benefits, from $63 billion in 2002 to $130 billion in 2012, at an average rate of 7.6 percent a year. CBO ascribes 3.9 percent of that growth to increasing caseloads; 2.4 percent to COLAs; and 1.1 percent to other factors, chiefly the effect of wage growth on benefits. In the past decade, the average growth rate for the DI program was similar, measuring 8 percent. However, the source of that growth was somewhat different: CBO attributes roughly 5.3 percent to caseloads, 2.7 percent to COLAs, and barely anything to other factors.

Social Security outlays include about $4 billion in mandatory spending other than OASI and DI benefits. Almost all of that reflects an annual transfer to the Railroad Retirement program.

Medicare. Currently, Medicare spending is about 55 percent as large as Social Security spending, but it is expected to grow faster than Social Security spending over the next decade. By 2012, CBO projects, spending for the Medicare program will total more than $498 billion, and Medicare's share of the economy will have risen by about one-half of a percentage point, from 2.4 percent of GDP in 2002 to 2.9 percent.

Partly because of the effects of the Balanced Budget Act of 1997 on payment rates and a strong effort by the federal government to ensure compliance with the program's payment rules, the annual change in Medicare spending fell from almost a 9 percent increase in 1997 to a 1 percent decline in 1999. By the next year, the bulk of the savings had been realized, so in 2000 and 2001 Medicare spending grew by 3 percent and 10 percent, respectively. The acceleration in 2001 reflects large increases in payment rates for many categories of services. In addition, there was a shift into September 2001 of the October payments to Medicare+Choice plans. Without that payment shift, spending in 2001 would have increased by 8.6 percent. CBO projects that Medicare spending will grow by 4.9 percent in 2002—a figure that would have been 7.7 percent without the payment shift. Through 2012, Medicare spending will increase by an average of 7.2 percent per year, CBO estimates.

The projected growth in Medicare spending over the next decade stems from various factors. First, payment rates for most services in the fee-for-service sector (including hospital care and services furnished by physicians, home health agencies, and skilled nursing facilities) are subject to automatic updates based on changes in input prices and other economic factors, including changes in GDP and productivity. CBO estimates that automatic updates to payment rates will average 3.1 percent per year (although updates for specific services will vary considerably) and will account for roughly 45 percent of the increase in Medicare spending from 2002 through 2012.

Second, increases in caseloads make up an additional 23 percent of the anticipated rise in Medicare spending over the 10-year period. CBO projects that the number of enrollees in Medicare's Hospital Insurance (Part A) program will expand by 17 percent, from 40 million to 47 million, between 2002 and 2012. The increases in spending associated with new enrollees will be greater in the second half of the decade than in the first half, as baby boomers begin to qualify for Medicare coverage. Growth in enrollment will accelerate from 1 percent in 2002 to 2.6 percent in 2012, CBO estimates.

The remainder of the increase results from other changes in covered benefits; from payment rates required by the Balanced Budget Act of 1997, the Balanced Budget Refinement Act, and the Benefits Improvement and Protection Act of 2000; and from such factors as changes in medical technology, billing behavior, and the age distribution of enrollees.

Other Non-Means-Tested Programs. Other federal retirement and disability programs, with outlays totaling $97 billion in 2002, 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 average 3.9 percent annual growth from 2002 through 2012.

The slowdown in economic growth has raised spending significantly for unemployment compensation, as the number of people who have lost jobs has swelled recently. The unemployment rate picked up rapidly at the end of fiscal year 2001, reaching 4.8 percent—almost a percentage point above its level of a year before. By the end of fiscal year 2002, that rate is projected to reach 6.2 percent. The change in 2001 caused outlays for unemployment benefits to grow by 35 percent, from $21 billion the year before to $28 billion. The jump in 2002 will cause spending for unemployment compensation to leap 67 percent, to $47 billion, CBO projects. Even with renewed economic growth later in this fiscal year, the unemployment rate is likely to remain high for some time. CBO therefore projects that spending for unemployment benefits will peak at $50 billion in 2003 before declining in subsequent years.

The balance of spending for non-means-tested programs funds a diverse set of activities—mainly veterans' benefits, health care benefits for military retirees, farm price and income supports, certain social service grants to the states, and the Universal Service Fund.[5] CBO projects that spending for other non-means-tested programs will total $64 billion in 2002 (up from $59 billion last year) and it will fluctuate between $63 billion and $75 billion each year over the next 10 years. By CBO's estimates, the introduction of additional health care benefits (medical coverage and prescription drug coverage) in 2003 for military retirees age 65 and over will increase mandatory spending by $6 billion in its first year, a figure that rises to $12 billion in 2012.

Spending for farm price and income supports was $22 billion in 2001, down from $30 billion in 2000. CBO projects that downward trend to continue as outlays fall to $14 billion in 2002 and to $5 billion in 2012. In recent years, the Congress has provided additional money—$14 billion in 2000 and $10 billion in 2001—through emergency or other one-time funding. The drop in mandatory agricultural spending over the 10-year period occurs in part because such funding is not part of the ongoing mandatory program and therefore is not projected in future years. In addition, with improved economic conditions and stronger demand for exports, CBO expects prices for major supported crops such as corn, cotton, and wheat to increase slowly throughout the decade.

What Explains the Projected Rate of Increase in Mandatory Spending?

As a whole, spending for entitlements and other mandatory programs has more than doubled since 1988—rising faster than both nominal growth in the economy and the rates of inflation. CBO's baseline projections show that trend continuing.

Why is mandatory spending projected to grow so much? One way to analyze that growth is to break it down by its major causes. Such a breakdown

5. That fund receives payments from all providers of telecommunications service and disburses them to those providers that serve high-cost areas, low-income households, libraries, and schools, as well as to rural health care providers.

Table 4-6.
Sources of Growth in Mandatory Spending (In billions of dollars)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Estimated Spending for Base Year 2002	1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188
Sources of Growth										
Increases in participants	11	14	25	39	55	73	93	115	138	166
Automatic increases in benefits										
Cost-of-living adjustments	9	24	39	55	71	87	104	121	139	156
Other[a]	10	20	31	44	58	74	90	106	124	142
Increases in Medicare and Medicaid[b]	9	26	46	69	92	118	146	178	209	243
Growth in Social Security[c]	8	14	22	30	41	53	67	83	101	122
Irregular number of benefit payments[d]	3	3	12	*	-2	3	3	3	14	-7
Other sources of growth	9	3	-2	2	4	5	9	14	20	12
Total	60	104	173	239	319	413	512	620	744	834
Projected Spending	1,248	1,292	1,362	1,428	1,508	1,602	1,701	1,809	1,933	2,023

SOURCE: Congressional Budget Office.

NOTE: * = between zero and $500 million.

a. Automatic increases in Food Stamps and child nutrition benefits, certain Medicare reimbursement rates, the earned income tax credit, and health care benefits for military retirees, as well as statutory increases for veterans' education.

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

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

d. Represents differences attributable to the number of benefit checks that will be issued in a fiscal year. Normally, benefit payments are made once a month. However, Medicare will make 13 payments to Medicare+Choice plans in 2005 and 2011 and 11 in 2002, 2006, and 2012. Supplemental Security Income and veterans' benefits will be paid 13 times in 2005 and 2011 and 11 times in 2007 and 2012.

shows that 85 percent of the growth in entitlements and other mandatory programs between 2002 and 2012 results from more participants; automatic increases in benefits; and greater use of, and increasing prices for, medical services.

Rising numbers of participants produce about one-fifth of the total growth. Additional beneficiaries increase spending by $11 billion in 2003 and $166 billion in 2012 relative to outlays in 2002 (see Table 4-6). The majority of that spending is concentrated in Social Security and Medicare and can be traced to a growing number of elderly and disabled people; most of the rest is in Medicaid. CBO estimates that the growth in the number of participants alone will boost outlays for each of those three programs by between 10 percent and 25 percent during the 2003-2012 period.

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 to their beneficiaries. The adjustment for 2002 is 2.6 percent, and CBO estimates that those adjustments, which are pegged to the consumer price index, will be 1.9 percent in 2003 and 2.5 percent thereafter. In 2002, outlays for programs with COLAs total almost $597 billion. COLAs are projected to add $9 billion to that amount in 2003 and $156 billion in 2012.

Several other programs—chiefly the earned income tax credit, the Food Stamp program, and Medicare—are also automatically indexed to changes in prices and other economic factors. The income thresholds above which the earned income tax credit begins to be phased out and the maximum amount of the tax credit are both automatically adjusted for in-

Table 4-7.
Costs for Programs That CBO's Baseline Assumes Will Continue Beyond Their Current Expiration Dates (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Commodity Credit Corporation Fund[a]													
Budget authority	n.a.	11.8	9.7	8.3	7.4	6.9	5.9	5.4	5.4	5.4	5.3	44.1	71.5
Outlays	n.a.	11.8	9.7	8.3	7.4	6.9	5.9	5.4	5.4	5.4	5.3	44.1	71.5
Ground Transportation Programs Controlled by Annual Obligation Limitations[b]													
Budget authority	n.a.	n.a.	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	148.3	333.7
Outlays	n.a.	n.a.	0	0	0	0	0	0	0	0	0	0	0
Ground Transportation Programs Not Subject to Annual Obligation Limitations													
Budget authority	n.a.	n.a.	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	2.6	5.8
Outlays	n.a.	n.a.	0.1	0.3	0.5	0.6	0.6	0.6	0.6	0.6	0.6	1.5	4.7
Air Transportation Programs Controlled by Annual Obligation Limitations[b]													
Budget authority	n.a.	n.a.	3.4.	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	13.6	30.6
Outlays	n.a.	n.a.	0	0	0	0	0	0	0	0	0	0	0
Family Preservation and Support													
Budget authority	n.a.	n.a.	n.a.	n.a.	n.a.	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.8
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	0.1	0.2	0.3	0.3	0.3	0.3	0.1	1.5
Rehabilitation Services and Disability Research													
Budget authority	n.a.	n.a.	n.a.	n.a.	n.a.	2.8	2.9	3.0	3.0	3.1	3.2	2.8	18.0
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	2.0	2.8	2.9	3.0	3.1	3.2	2.0	17.0
State Children's Health Insurance Program													
Budget Authority	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	5.0	5.0	5.0	5.0	5.0	0	25.2
Outlays	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.1	4.0	5.0	5.2	5.3	0	21.6
Federal Unemployment Benefits and Allowances													
Budget authority	n.a.	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.1	4.6
Outlays	n.a.	0.2	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.0	4.5

(Continued)

flation using the consumer price index.[6] The Food Stamp program makes annual adjustments to its benefit payments according to changes in the cost of the Department of Agriculture's Thrifty Food Plan. Medicare's payments to providers are based in part on special price indexes for the medical sector and other economic factors, including changes in GDP and productivity. The combined effect of indexing for all of those programs is an extra $10 billion in outlays in 2003 and $142 billion in 2012.

The remaining boost in entitlement spending comes from increases that cannot be attributed to rising enrollment or automatic adjustments to benefits. Two of those sources of growth are expected to become even more important over time. First, CBO anticipates that prices for Medicaid will grow with inflation even though the program is not formally indexed at the federal level. Medicaid payments to providers are determined by the states, and the federal government matches those payments, according to a formula set by law. If states increase their benefits in response to increased prices, federal payments will rise correspondingly. Second, the health programs have faced steadily escalating costs per partici-

6. Credits are administered through the individual income tax, but credits in excess of tax liabilities are recorded as outlays in the budget.

Table 4-7.
Continued

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2003	Total, 2003-2012
Food Stamps													
Budget authority	n.a.	24.5	24.3	24.5	25.1	25.8	26.6	27.3	28.1	29.0	29.8	124.2	265.1
Outlays	n.a.	23.5	24.3	24.5	25.0	25.8	26.5	27.3	28.1	29.0	29.8	123.1	263.8
Child Nutrition[c]													
Budget authority	n.a.	n.a.	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.9	4.7
Outlays	n.a.	n.a.	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.8	4.6
Child Care Entitlement to States													
Budget authority	n.a.	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	13.6	27.2
Outlays	n.a.	2.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	12.9	26.5
Temporary Assistance for Needy Families													
Budget authority	n.a.	16.7	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	84.2	168.6
Outlays	n.a.	16.3	16.6	16.9	17.1	17.3	17.1	16.9	16.9	16.9	16.9	84.0	168.6
Veterans' Compensation COLAs													
Budget authority	0	0.3	0.9	1.5	2.1	2.5	3.2	3.9	4.5	5.6	5.4	7.2	29.8
Outlays	0	0.3	0.8	1.5	2.0	2.4	3.2	3.8	4.4	5.5	5.3	7.0	29.3
Total													
Budget authority	n.a.	56.3	96.5	95.9	96.2	100.0	105.6	106.7	108.2	110.2	110.9	444.9	986.5
Outlays	n.a.	54.1	54.9	55.0	55.6	58.6	62.1	65.1	67.6	69.8	70.6	278.4	613.5

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 says that the baseline must assume that the FAIR provisions continue.

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. Includes the Summer Food Service program and state administrative expenses.

pant 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. CBO estimates that the growth in Medicare and Medicaid from both of those sources will be $9 billion in 2003 and $243 billion in 2012.

In most federal retirement programs, the average benefit grows faster than the COLA alone. Social Security is a prime example. Because awards to new retirees are buoyed by recent growth in wages, 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 smaller benefits based on their status as a spouse of a retiree. In Social Security alone, CBO estimates, the resulting increase in benefits will add $8 billion to outlays in 2003 and $122 billion in 2012.

Mandatory spending will increase or decrease in a given fiscal year depending on whether the first day of the year, October 1, falls on a weekend. If it does,

some benefit payments are made at the end of September, which increases spending in the year just ended and decreases spending in the new year. Thus, the Supplemental Security Income program, 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 (see Table 4-6). Irregular numbers of benefit payments will affect mandatory spending in 2002, 2005 through 2007, 2011, and 2012.

Most of the remaining growth in spending for benefit programs derives from rising benefits for new retirees in the Civil Service and Military Retirement programs (fundamentally the same phenomenon as in Social Security); the new program to provide medical insurance for Department of Defense retirees, which will begin in 2003; and larger average benefits for unemployment compensation (a program that lacks an explicit COLA but pays amounts that are generally linked to the recent earnings of its beneficiaries) and some education programs for veterans. Those factors together contribute just $12 billion of the total $834 billion increase in mandatory spending in 2012.

Legislation Assumed in the Baseline

The general baseline concept for mandatory spending is to project budget authority and outlays in accordance with current law. However, in the case of certain programs with outlays of more than $50 million in the current year, the Deficit Control Act directs CBO to assume that the programs will be extended when their authorization expires.[7] The bulk of projected spending associated with such programs occurs after 2002 (see Table 4-7 on page 82). The Food Stamp, Temporary Assistance for Needy Families, and State Children's Health Insurance programs are examples of programs whose current authorizations expire but that in the baseline are assumed to continue. The Deficit Control Act also directs CBO to assume that cost-of-living adjustments for veterans' compensation are granted each year. In total, assuming that expiring programs are continued accounts for about $55 billion in outlays each year from 2003 to 2006 and larger amounts in subsequent years.

7. Section 257 of the Deficit Control Act stipulates that programs with current-year outlays of $50 million or more that were established prior to enactment of the Balanced Budget Act of 1997 should be assumed in the baseline to continue, but programs established after the 1997 law could be assumed in the baseline to expire. That decision is based on estimates by the Office of Management and Budget and CBO, in consultation with the House and Senate Budget Committees. For example, the authorization for the Initiative for Future Agriculture and Food Systems program, which was established in 1998 and for which outlays of $72 million are projected in 2002, is assumed to expire after 2003.

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).

Collection of more (or less) money in the form of offsetting receipts generally requires a change in the laws that generate such collections. Thus, offsetting receipts are treated as offsets to mandatory spending. Fees and other charges that are triggered by appropriation action are classified as offsetting collections. In those cases, the collections offset discretionary spending.

Intragovernmental transfers representing the contributions that federal agencies make to their employees' retirement plans account for roughly 45 percent of offsetting receipts—a share that is expected to range from 39 percent to 47 percent through 2012 (see Table 4-8). Agencies' contributions go primarily to the trust funds for Social Security, military retirement, and civil service retirement. Some contribution rates are set by statute; others are determined on an actuarial basis. Those contributions are charged against the agencies' budgets in the same way as other elements of their employee compensation are. The budget treats them as outlays of the employing agency and records the deposits into retirement funds as offsetting receipts. The transfers thus wash out in the budget totals, leaving only the fund's disbursements—for retirement benefits and administrative costs—reflected in total outlays.

The program providing health care benefits for military retirees will work in the same way. The payment made by the Department of Defense will be off-

Table 4-8.
CBO's Baseline Projections of Offsetting Receipts (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Employer's Share of Employee Retirement														
Social Security	-8	-9	-10	-10	-11	-12	-12	-13	-14	-15	-16	-17	-55	-131
Military Retirement	-11	-12	-12	-12	-13	-13	-13	-14	-14	-15	-15	-15	-63	-136
Civil Service Retirement and other	-20	-20	-21	-22	-23	-24	-25	-26	-27	-28	-30	-30	-116	-258
Subtotal	-39	-42	-42	-45	-47	-49	-51	-53	-56	-58	-61	-63	-234	-525
Department of Defense Health Care	0	0	-8	-9	-9	-10	-10	-11	-12	-12	-13	-14	-46	-108
Medicare Premiums	-24	-26	-28	-31	-34	-37	-41	-45	-49	-53	-57	-62	-170	-435
Energy-Related Receipts[a]	-8	-5	-4	-4	-5	-5	-5	-6	-5	-5	-5	-5	-24	-51
Natural Resource-Related Receipts[b]	-4	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-4	-15	-32
Electromagnetic Spectrum Auctions	-1	-1	-3	-11	-11	-1	-1	*	*	*	*	*	-27	-27
Other[c]	-11	-12	-12	-10	-10	-10	-11	-11	-11	-11	-12	-12	-54	-110
Total	-87	-88	-101	-113	-119	-115	-122	-129	-136	-143	-152	-160	-570	-1,289

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and zero.

a. Includes proceeds from the sale of power, various fees, and royalties on mineral production and oil and gas production from the Outer Continental Shelf.

b. Includes timber and mineral receipts and various fees.

c. Includes asset sales.

set by the receipt of that payment into the fund. The transfer will wash out, leaving only the fund's disbursements reflected as outlays. CBO projects that the program will collect $8 billion in receipts from the Department of Defense in 2003, an amount that increases to $14 billion in 2012.

The largest proprietary receipt that the government collects comprises premiums from the 38 million people enrolled in Supplementary Medical Insurance (Part B of Medicare), which primarily covers physicians' and outpatient hospital services. Premiums in the program are set to cover one-quarter of its costs. The monthly charge for beneficiaries is $54 in 2002; it is projected to climb to $114 in 2012.

Almost all enrollees in Part B of Medicare pay the monthly premium. In the case of Part A, the Hospital Insurance program, most beneficiaries are considered to be entitled to those benefits and are not charged a premium. However, Medicare collects Part A premiums for about 400,000 enrollees who were not employed in jobs covered by Medicare payroll taxes long enough to qualify for free enrollment. CBO estimates that collections of premiums for both parts of Medicare will increase from $26 billion in 2002 to $62 billion in 2012; more than 95 percent of the increase in those collections is associated with enrollees' payments of the regular monthly Supplementary Medical Insurance premium. The federal government, however, also pays a substantial share of those premiums because Medicaid pays the Part B premium (and, if necessary, the Part A premium) for Medicare enrollees who are eligible for Medicaid. CBO projects that collections of premiums from nonfederal sources will increase from $22 billion in 2002 to $53 billion in 2012.

Other proprietary receipts come mostly from royalties and charges for oil and natural gas, electricity, minerals, and timber and from various fees levied on users of government property and services. Auctions by the Federal Communications Commission of rights to use parts of the electromagnetic spectrum are expected to continue through 2007, when the authority to conduct the auctions expires. CBO estimates that those auctions will bring in $500 million in 2002, $3 billion in 2003, $11 billion in both 2004 and 2005, and smaller amounts in subsequent years (for more details, see Box B-1 in Appendix B).

Net Interest

Interest costs are still a sizable portion of the federal budget, even though they have been shrinking in the past few years. (Net interest outlays peaked at $244 billion in 1997.) In 2001, such costs totaled $206 billion—more than 11 percent of government outlays. Although debt held by the public is projected to increase in 2002 to finance the deficit, net interest payments are anticipated to decline to $170 billion (see Table 4-9). That drop is mainly attributable to the recent decline in interest rates—particularly short-term rates—as well as a shift toward issuing securities with shorter maturity periods.

As interest rates rise in CBO's economic forecast, net interest also rises, growing to $188 billion in 2004 and remaining at that level in 2005. After 2005, as the decline in debt held by the public begins to gain speed, net interest begins to gradually fall. According to CBO's estimates, net interest as a share of total spending drops from 8 percent in 2002 to about 3 percent in 2012.

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 affect the former through leg-

Table 4-9.
CBO's Baseline Projections of Federal Interest Outlays (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Interest on Public Debt (Gross interest)[a]	360	332	338	368	385	398	410	420	430	437	443	441	1,899	4,070
Interest Received by Trust Funds														
Social Security	-69	-77	-84	-93	-104	-117	-130	-144	-159	-175	-192	-210	-528	-1,409
Other trust funds[b]	-75	-74	-71	-76	-81	-86	-92	-97	-103	-109	-115	-122	-406	-953
Subtotal	-144	-152	-155	-169	-185	-203	-221	-241	-262	-284	-307	-332	-934	-2,361
Other Interest[c]	-9	-9	-8	-10	-11	-12	-12	-13	-14	-14	-15	-16	-53	-125
Other Investment Income[d]	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-8
Total (Net Interest)	206	170	174	188	188	182	175	165	153	138	120	92	908	1,577

SOURCE: Congressional Budget Office.

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

b. Mainly the Civil Service Retirement, Military Retirement, Medicare, and Unemployment Insurance Trust Funds.

c. Primarily interest on loans to the public.

d. Earnings on private investments by the National Railroad Retirement Investment Trust.

islation on taxes and spending and, thus, government borrowing. Interest rates are determined by market forces and the Federal Reserve's policies.

Net or Gross?

Net interest is the most economically relevant measure of the government's costs to service its debt. However, some budget watchers stress gross interest (and its counterpart, gross federal debt) rather than 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 now receives.

Currently, about $3.3 trillion in federal securities sold to the public to finance previous deficits is outstanding. The federal government also has issued about $2.5 trillion in securities to its own accounts (mainly Social Security and other retirement trust funds). Those securities represent the past surpluses of government accounts, and their total amount grows approximately in step with the projected trust fund surpluses (see Chapter 1). The funds redeem the securities as needed to pay benefits or finance programs; in the meantime, the government both pays and collects interest on those securities. It also receives interest income from loans and short-term 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 entities outside the federal government.

In 2001, net interest was about two-thirds as large as gross interest. CBO estimates that the government will pay $332 billion in gross interest costs in 2002. Of that amount, however, $152 billion will be credited to trust funds and not paid out by the government. CBO also projects that the government will collect about $10 billion in other interest and investment income this year. Therefore, net interest costs will total $170 billion.

Other Interest

The $9 billion in other interest that CBO expects the government to receive in 2002 is the net of payments and collections. On balance, however, the government takes in more such interest than it pays out. Among the expenditures are Treasury payments for interest on tax refunds that are delayed for more than 45 days after the filing date. Among the collections is the interest received from the financing accounts of credit programs (such as direct student loans).

Other Investment Income

Beginning in 2002, a new category in the budget function for net interest will represent the earnings on the private holdings of the newly created National Railroad Retirement Investment Trust (see Box 4-3). As part of the Railroad Retirement and Survivors' Improvement Act of 2001, that trust is now allowed to invest the balances of the Railroad Retirement Trust Funds in non-Treasury securities, such as stocks and corporate bonds; previously, all balances could be invested only in nonmarketable Treasury securities. CBO makes no assumption about the gains or losses that the fund might incur when investing in riskier securities; its projections assume that such investments will earn a risk-adjusted rate of return equal to the average interest rate projected for Treasury bills and notes. Such earnings total less than $1 billion each year through 2012.

Box 4-3.
Budgetary Treatment of the National Railroad Retirement Investment Trust

When the President signed the Railroad Retirement and Survivors' Improvement Act of 2001 (Public Law 107-90) on December 21, 2001, the federal government received permission to acquire corporate stocks, bonds, and other assets to provide resources for an entitlement program (Railroad Retirement). Such action has no clear precedent and raises questions about how the federal government might behave as an investor in private enterprises. Proponents of the policy hope that the investments will produce higher returns than the program's traditional portfolio of government bonds. Opponents express concern that the government is taking on unnecessary risk and potentially involving itself in corporate governance or selective investing.

The law requires that the Secretary of the Treasury transfer any money in the Railroad Retirement Trust Funds that is not necessary to meet the funds' immediate cash needs to the newly established National Railroad Retirement Investment Trust, which would manage and invest that money. The trust is not an agency or instrumentality of the federal government; however, the Congressional Budget Office (CBO) and the Office of Management and Budget agree that it should be included in the federal budget because it will be acting as an agent of the federal government in managing the finances of a federal program.

P.L. 107-90 specifies that "[f]or all purposes of the Congressional Budget Act of 1974, the Balanced Budget and Emergency Deficit Control Act of 1985, and chapter 11 of title 31, United States Code, and notwithstanding section 20 of the Office of Management and Budget Circular No. A-11, the purchase or sale of non-Federal assets (other than gains and losses from such transactions) by the National Railroad Retirement Investment Trust shall be treated as a means of financing." That language suggests a budgetary treatment similar to the one for purchases and sales of private debt under the Credit Reform Act of 1990. Transactions of principal would be treated neither as outlays when securities were bought nor as offsetting receipts when they were sold. Income and losses on the trust's investments, including interest, dividends, and changes in asset values, would be recorded as they accrued. Thus, the acquisition or sale of assets by the trust would not be recorded as budgetary transactions, but its gains or losses would be reflected as decreases or increases in federal spending and thereby would affect the surplus or deficit.

How should returns on those investments be estimated for the purpose of baseline projections over a 10-year period? One method is to project returns on the basis of historical averages. Because the trust is expected to invest in private equities, and history indicates that stocks have outperformed government bonds over most historical periods, that approach would probably show the trust earning more by investing in private securities than by investing in government bonds. That so-called arbitrage profit would make it appear as if the government would come out ahead by borrowing money at the government interest rate and investing it in private markets. The more it borrowed, the more it would gain.

Such a presentation, however, would miss an important aspect of the investments in private securities. Private stocks and bonds carry greater risk than government bonds. Investors are willing to take on the additional risk of such investments only because the average return is higher than that from government bonds. An investor choosing between a risky stock portfolio and low-risk bonds would almost certainly choose the bonds if the expected return were the same on both. Thus, in the market, the price of bonds would be bid up relative to the price of stocks, until investors had no preference between bonds and stocks at their new prices—that is, until the additional expected yield on stocks exactly offset the costs of the investors' additional risk. Therefore, on a risk-adjusted basis, securities in private markets carry the same returns as government securities.

Such reasoning suggests that budget projections of the returns on the trust's investments should be calculated using the low-risk rate of return, the government's borrowing rate. CBO has projected earnings from the trust's investments on that basis, and as a result, the baseline projections of the surplus or deficit are unaffected by the fact that the government will issue more debt in order to invest Railroad Retirement funds in private securities.

Chapter Five

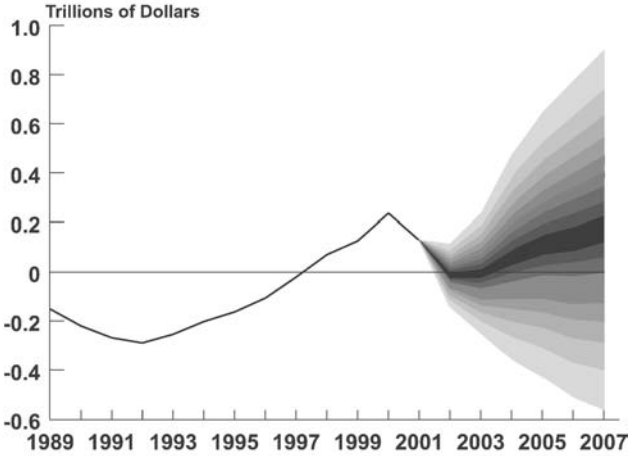
The Uncertainty of Budget Projections

The baseline projections in Chapters 1 and 2 represent the most likely of the possible outcomes for the budget and the economy, based on current trends and the assumption that policies now in place do not change. But considerable uncertainty surrounds those projections for two reasons. First, future legislation is likely to alter the paths of federal revenues and spending. The Congressional Budget Office does not predict future legislation—indeed, any attempt to incorporate future legislative changes into its baseline would undermine the usefulness of those numbers as a base against which to measure the effects of legislative action. Second, the U.S. economy and the federal budget are highly complex and are affected by many economic and other changes that are difficult to predict. As a result, actual budgetary outcomes will almost certainly differ from CBO's baseline projections, even after adjusting for new legislation.

This chapter explores how the accuracy of the economic and technical assumptions that CBO incorporates into its baseline can affect the accuracy of its budget projections. Looking back, the chapter describes CBO's record of projections and shows how reliable CBO's current and future projections might be if they are as accurate as those of the past. Looking forward, it uses several scenarios to describe how the budget might differ from CBO's baseline projections.

The outlook for the budget (given current legislation) can best be described not as the single row of numbers presented in CBO tables but as a fan of possible outcomes around those numbers, which widens as the projection extends (see Figure 5-1). The fan in

Figure 5-1.
Uncertainty in CBO's Projections of the Total Budget Surplus Under Current Policies



SOURCE: Congressional Budget Office.

NOTES: This figure shows the estimated likelihood of alternative projections of the surplus under current policies. The calculations are based on CBO's past track record. The CBO projections described in Chapter 1 fall in the middle of the darkest area. Under the assumption that policies do not change, the probability is 10 percent that actual surpluses will fall in the darkest area and 90 percent that they will fall within the whole shaded area.

Actual surpluses will of course be affected by legislation enacted during the next 10 years, including decisions about discretionary spending. The effects of future legislation are not included in this figure.

An explanation of how this probability distribution was calculated will appear shortly on CBO's Web site (www.cbo.gov).

the figure is based on CBO's record of accuracy in its budget projections. The baseline budget projections presented in Chapter 1 fall in the middle of the highest probabilities—shown in the darkest part of the figure. But nearby projections—other paths in the darkest part of the figure—have nearly the same probability of occurring as do the baseline projections. Moreover, projections that are quite different from the baseline also have a significant probability of coming to pass. Based on the historical record, the budget surplus or deficit is likely to fall within the fan around CBO's projections about 90 percent of the time, in the absence of new legislation.

Figure 5-1 is intentionally fuzzy because the uncertainties are themselves estimates; as such, they may misstate the true uncertainty of current forecasts. The record on which the fan chart is based is short, and it may not be representative of future uncertainties. Historically, CBO's forecasts have been least accurate around cyclical turning points (times when the economy moves from expansion to recession, or vice versa), which economists are generally unable to predict reliably. However, from 1981 (the earliest year for which complete data are available that are suitable for this analysis) until 2001, the economy experienced just two recessions and two long expansions. The first recession (that of 1981-1982) occurred at the start of the period, so the record includes only one short-term forecast from before the recession and no longer-term forecasts that refer to that recessionary period. Thus, CBO has very little information on the accuracy of its forecasts around recessions.

In addition to uncertainty about cyclical turning points, the economic and budget trends that underlie the 10-year outlook are unusually hard to discern at present. Many commentators, including CBO, believe that major structural changes have created a "new economy" centered on information technology. But CBO's projections, like those of other forecasters, are based on very limited information about increased growth of productivity and strong investment in information technology over just a few years, from the mid-1990s through 2000. Moreover, in the past year, many companies central to the new economy have suffered setbacks, reflected in the prices of their stocks, and it has become clear that the investment boom included some investments that proved unprofitable. So even though CBO's 10-year projections continue to assume that the gains in the trend rate of productivity growth seen in the late 1990s (adjusted for the effects of the business cycle) were real and will persist—though temporarily obscured by the current recession—that projection has become more uncertain.

Another way to show the uncertainty of projections is to calculate the effects of specific sets of alternative assumptions on the economic and budget outlook. To illustrate the possible implications of alternative cyclical and trend assumptions, CBO has chosen four scenarios. The two cyclical scenarios explore the possibilities of a substantially faster recovery from or a deepening of the current recession than the baseline projections assume. The two trend scenarios concentrate on differing assumptions about the trends that might be experienced over a 10-year period. One of those scenarios assumes that the favorable economic trends seen from 1996 through 2000 will continue for the next decade, once the nation emerges from recession; the other assumes that the underlying trends the economy will follow after the recession is over will be less favorable, like those of 1974 through 1995. The projections that result from those four scenarios suggest a very wide range of possible outcomes for the budget.

Policymakers will have to decide what that degree of uncertainty means for a budget process that currently relies on 10-year projections. Looking forward five or 10 years allows the Congress to consider the longer-term budgetary implications of specific policy changes. But it also increases the likelihood that budgetary decisions will be made on the basis of projections that later turn out to have been far wrong.

The Accuracy of CBO's Past Budget Projections

Because baseline budget projections are destined to deviate from actual outcomes, assessing their historical accuracy is not a simple matter. Baseline projections are meant to serve as a neutral reference point for evaluating policy changes, so they make no assumptions about future legislation that might alter

Box 5-1.
Innovations in This Analysis

The Congressional Budget Office (CBO) introduced the fan chart presentation of the uncertainty of projections in its January 2001 report. This report takes that presentation a step farther, distinguishing inaccuracies that are correlated with the business cycle from inaccuracies in the assessment of trends that are unrelated to the business cycle. That is a useful distinction, because inaccuracies in the assessment of trends are likely to grow indefinitely as the projection horizon extends, but inaccuracies correlated with the business cycle would not be expected to grow forever. According to CBO's estimates, in fact, cyclical inaccuracies are small in the first two years of a projection—that is, the current year and the budget year—when CBO attempts to reflect its view of the business cycle in its forecast. They plateau at a constant level for the last three years of the projection, when CBO does not attempt to forecast the business cycle. The remaining inaccuracies grow almost linearly with the forecast horizon. According to that decomposition, discrepancies between CBO's budget projections five years out and budgetary outcomes have consisted in roughly equal parts of discrepancies due to business cycles (which CBO does not attempt to project so far in advance) and inaccuracies in assessing the economic and other trends that underlie the budget.

That new analysis has widened the five-year fan of uncertainty in budget projections, compared with the one CBO published in January 2001. It is described in detail in a document that will be available shortly on CBO's Web site (www.cbo.gov).

For the purpose of this chapter, discretionary spending is handled somewhat differently than in CBO's usual analyses of revisions to budget projections (but in the same way as last year's chapter). In the analysis of revisions, CBO allocates part of any discrepancies between the assumptions for discretionary spending in the baseline and the amounts finally enacted and spent to the category of economic or technical differences. (For more details about those categories, see Chapter 1.) But discretionary spending, which is appropriated annually, is not controlled by the kind of permanent laws and automatic rules that determine entitlement spending and taxes (in the absence of new legislation). Indeed, when the Congress sets discretionary spending, it does so through new legislation. As a result, legislation accounts for the lion's share of the differences between baseline projections and actual outlays for such programs. Because attributing all discrepancies in discretionary spending to legislation permits the use of a larger historical record in this analysis, CBO has excluded the small variations for other reasons from the uncertainties discussed in this chapter.

This analysis (like last year's) also omits any distinction between economic and technical differences. That distinction can be arbitrary and subject to change as the underlying economic data are revised. In any case, the distinction is unnecessary for this analysis.

current budget policies. Of course, new legislation is likely to affect spending and revenues, but the purpose of baseline estimates is not to forecast legislation. Consequently, this chapter concentrates on inaccuracies in forecasting that stem from economic and technical factors, not from the effects of new legislation.

To assess the accuracy of its past annual projections, CBO compared those projections with actual budgetary outcomes and attempted to determine the sources of any differences (after adjusting for the estimated effects of policy changes). (See Box 5-1.) The comparisons included 20 sets of projections for the ongoing fiscal year (the one in which the projections were made), 19 sets for the following fiscal year (referred to as the budget year), and 15 sets of projections that extend five years into the future.[1] (CBO has also examined in greater detail its record of economic forecasts. See Congressional Budget Office,

1. The projections are those made in July 1981 and CBO's winter projections (usually published in January) from 1983 through 2001. Insufficient data were available to use either projections made before 1981 or the projection made in early 1982. For projections made before 1996, a full five years of projections could be used. For projections made since that date, progressively shorter projection spans could be used because the most recent actual data against which they could be compared for accuracy is for fiscal year 2001. To calculate the role of policy changes, CBO used estimates of the budgetary effects of legislative changes that were made close to the time the legislation was enacted.

CBO's Economic Forecasting Record, available at www.cbo.gov.)

On average, the absolute difference (without regard to whether the difference was positive or negative) between CBO's estimate of the federal deficit or surplus and the actual result was 0.5 percent of gross domestic product for the ongoing fiscal year, 1.1 percent for the budget year, and 3.2 percent for the fourth year beyond the budget year, adjusted for the effects of subsequent legislation (see Table 5-1). If those averages were applied to CBO's current baseline, the actual surplus or deficit could be expected to differ in one direction or the other from CBO's projections by about $50 billion in 2002, $130 billion in 2003, and over $350 billion in 2007.

Misestimates of revenues have generally been larger than misestimates of outlays, reflecting the greater sensitivity of revenues to economic develop-

Table 5-1.
Average Difference Between CBO's Budget Projections and Actual Outcomes Since 1981, Adjusted for Subsequent Legislation (In percent)

	Year for Which the Projection Was Made					
	Current Year	Budget Year	Budget Year + 1	Budget Year + 2	Budget Year + 3	Budget Year + 4
Difference as a Percentage of GDP						
Surplus or Deficit						
Average difference[a]	0.3	0.3	0.1	0	-0.3	-0.7
Average absolute difference	0.5	1.1	1.6	2.1	2.7	3.2
Revenues						
Average difference	0.1	0.1	-0.1	-0.2	-0.3	-0.6
Average absolute difference	0.3	0.7	1.2	1.6	1.9	2.2
Outlays						
Average difference	-0.2	-0.2	-0.2	-0.1	0	0
Average absolute difference	0.3	0.5	0.7	0.8	1.0	1.2
Difference as a Percentage of Actual Outcome						
Revenues						
Average difference	0.3	0.3	-0.8	-1.4	-2.3	-4.1
Average absolute difference	1.8	3.9	6.6	8.6	10.2	11.9
Outlays						
Average difference	-0.9	-0.9	-1.0	-0.9	-0.4	-0.3
Average absolute difference	1.5	2.2	3.2	3.9	5.0	5.9

SOURCE: Congressional Budget Office.

NOTES: This comparison covers the baseline budget projections that CBO published in July 1981 in *Baseline Budget Projections: Fiscal Years 1982-1986* and the ones it published each winter between 1983 and 1999 in *The Economic and Budget Outlook*.

The current year is the fiscal year in which the projections are made; the budget year is the following fiscal year.

Differences are actual values minus projected values. Unlike the average difference, the average absolute difference ignores arithmetic signs and thus indicates the average distance between actual and projected values without regard to whether individual projections are overestimates or underestimates.

a. A positive average difference for the surplus or deficit means that, on average, CBO underestimated the surplus or overestimated the deficit.

ments. In absolute terms, revenue projections have differed from actual outcomes by an average of about 1.8 percent of revenues for the current year, 3.9 percent for the budget year, and 11.9 percent for the fourth year beyond the budget year. Inaccuracies in outlay projections were similar to those in revenue projections for the current year but only half as large as revenue inaccuracies for the budget year and subsequent years.

The misestimates of the budget's bottom line went in both directions: sometimes the projections were too high and at other times too low. On average, CBO's forecast of the deficit or surplus has tended to be slightly pessimistic—that is, CBO overestimated deficits—for the current year and the budget year, and slightly optimistic for the fourth and fifth years of the projection. (That pattern may reflect the fact that deficit projections made before 1991 were optimistic and those made in more recent years were pessimistic; data on the later years are incomplete for projections made after 1996.) However, the average underestimates and overestimates of the budget balance at different horizons were not statistically significant and thus were not incorporated into Figure 5-1.

Sources of Past Inaccuracies in Projecting Revenues

Misestimates of revenues can rarely be traced to a single cause, but a few major factors can be identified. Both recessions and rapid expansions can be a problem for revenue projections—as noted earlier, predicting turning points in the business cycle is one of the most difficult challenges facing economic forecasters. Thus, revenues tend to be overestimated in forecasts done just before recessions and underestimated in forecasts made before rapid expansions. Until the current recession, the major source of inaccuracies in revenue projections made during the economic expansion of 1995 through 2000 was the failure to predict both the apparent acceleration in the trend growth of the economy and the economic changes associated with it, especially the boom in the stock market and the increasing concentration of income growth among taxpayers in the highest tax brackets. The stock market boom led to huge capital gains on paper, which boosted tax revenues as investors began to realize those gains. It also raised the income of households in higher tax brackets through stock options (which when exercised count as ordinary income and not capital gains).

The causes of the projected shortfall in revenues in 2001 (after adjusting for legislation) will not be known until data from tax returns are tabulated over the next couple of years. It is likely, however, that some combination of the factors that pushed receipts above expectations in the prior half-decade contributed to the recent shortfall as well.

Sources of Past Inaccuracies in Projecting Nondiscretionary Outlays

Economic performance affects federal spending, both directly and indirectly. CBO often overestimated inflation in the forecasts it made in the early 1980s, and more recently it anticipated an upturn in inflation during the late 1990s that did not occur. Estimates of inflation that are too high result in overestimates of cost-of-living adjustments for beneficiaries of many cash benefit programs and overestimates of reimbursements for health care providers. CBO also overestimated unemployment rates in the 1990s, which meant a corresponding overstatement of caseloads for means-tested benefit programs (such as Food Stamps and Medicaid) and of the number of applicants for unemployment and disability benefits.

Misestimates of those broad economic trends, however, account for only part of the inaccuracies in past projections of nondiscretionary outlays. The remainder come from inaccurate assumptions about such factors as what proportion of eligible individuals and families will participate in benefit programs, how sound financial institutions will be, and how health care providers will behave. Those factors can be extremely difficult to predict. For example, the deposit insurance crisis of the 1980s came as a surprise, and the year-by-year costs for its cleanup were highly variable and hard to estimate. CBO also did not anticipate the states' expanded use of creative financing mechanisms to obtain federal Medicaid funds, which occurred in the late 1980s and early 1990s, or the temporary slowing of the growth of Medicare costs in the late 1990s.

Alternative Economic and Budget Scenarios

The differences between CBO's past projections and actual budgetary outcomes could suggest how accurate future projections will be—if future inaccuracies mirror those of the past. But whether that will happen is an open question. Another way of looking at the uncertainty of projections is to consider how different assumptions could affect the projections. Such alternative scenarios give a qualitative understanding of how projections might miss the mark, though it is generally not possible to assess the probability of such alternatives.

CBO's past performance probably should not be used to gauge how accurate short-term budget projections will be in periods around recessions. Only two recessions have occurred since CBO started to make five-year projections, so the record is simply inadequate for extrapolation. Even a larger record might be misleading because recessions do not tend to follow a closely similar script—each one is different.

Box 5-2.
Risks from Terrorism

The terrorist attacks on the United States on September 11 have brought many changes, but at least up to now there is little evidence of any large and persistent effect on the economy. (Actions that the federal government might take to counter terrorism could have budget implications of their own. Those are discussed in Chapter 7.) Shocking as the losses of life and property were, they did not have much impact on the nation's $10 trillion economy. The new awareness of vulnerability to attacks could, in principle, change the economy in a number of ways: by diverting both public and private resources to security and away from more conventionally productive uses; by discouraging commitment to large and risky investments; or by leading people to save more in order to insure against hard times in the future. Possible future actions by the United States could also have economic impacts: for example, a widening of the war against terrorism could have serious, though probably temporary, effects on oil markets. The economic projections in Chapter 2 reflect an estimate of the possible diversion of resources to security spending, which will tend to increase business costs and thus reduce productivity. However, although those estimates are necessarily highly uncertain, they suggest that the overall economic impact is likely to be small.

The impact of terrorism risks on spending by businesses for new buildings and equipment is even harder to quantify and may be negligible. For that reason, the economic projections in Chapter 2 do not attempt to estimate that impact. However, it remains a risk to the forecast because insurance against losses from terrorism may be very expensive or even unavailable. The possibility of future terrorist attacks poses a difficult problem for the insurance industry, because those risks are impossible to quantify and thus to price correctly. If insurance companies and their reinsurers were to decide that they did not wish to take up some proportion of those risks, owners of existing businesses would probably self-insure to a large extent rather than go out of business. As a consequence, some companies' bond ratings could drop and stock prices could fall, reflecting the increased risk that stockholders would assume. For new investment, businesses would have to take into account the increased risk from terrorism in deciding whether to spend. Certain projects, particularly large, iconic buildings that might be attractive targets for terrorism, might not be built. In addition, some businesses require insurance either as part of the terms of loan agreements (mortgages) or because of regulations. If insurance became unavailable, those agreements and regulations would have to be changed to avoid business interruptions.

The impact on investment is likely to be somewhat smaller if insurance for terrorism risks remains available but its cost rises. Self-insuring is likely, in many cases, to be more costly than purchasing insurance because the insurance market pools risk more widely than self-insurers can. Moreover, the insurance market allows risk to be borne by those who can most easily bear it. There is a distinct advantage to keeping the insurance market for terrorism risks operating, which is why many governments have responded to those risks with devices—such as government-sponsored insurance pools and limited

In addition, making longer-term projections for the period after the current recession is over requires assessing trends in the economy that can be very difficult to determine. Will the performance of the next 10 years be like the extraordinary expansion of the late 1990s, or will it revert to the relatively lackluster performance of the 1974-1995 period? Might the attacks of September 11, and the increased awareness of terrorist threats that has followed them, weaken the economy? (For more on that question, see Box 5-2.) The accuracy of assumptions about those factors—together with assumptions about how revenues relate to gross domestic product and how much social spending (especially on medical programs) will grow—will determine the accuracy of the 10-year budget projections.

To examine the implications of those questions, CBO has constructed additional scenarios that make alternative economic and budgetary assumptions—two that describe a faster recovery from the current recession or a deepening of the recession, and two that describe alternative views about the longer-term trends that could affect the budget. The cyclical and trend scenarios could in principle be combined. For example, a deeper recession could be combined with

Box 5-2.
Continued

government reinsurance—that maintain a large role for the private insurance market.[1] As of January 2002, there is no evidence that withdrawal of coverage for terrorism risks is having a major effect on economic activity.

The fear of future terrorist attacks and business disruptions could also affect private consumption. Many economists thought that the September 11 attacks would sharply diminish consumer confidence and thus spending on consumption. In fact, spending has held up surprisingly well since the attacks (see Chapter 2).

If the war against terrorism was to widen, its effects could include a rise in the price of oil. So far, the oil market has been affected much more by the weakness of the world economy than by war risks, and the price for the West Texas Intermediate contract (a standard price for oil) has fallen from about $28 per barrel in December 2000 to roughly $20 per barrel at the end of December 2001. The Congressional Budget Office's (CBO's) projections assume that the current price weakness will be temporary and that the price of a barrel of oil will return to around $25 as the world economy improves. However, violence in the Persian Gulf region could disrupt the flow of oil enough to create a temporary price spike, such as occurred in 1990, when the price of oil rose briefly to $40 a barrel. Such a price spike would have only a small, temporary effect on the U.S. economy. More persistent price increases could occur if there were increased violence and unrest in the Gulf region that affected oil production.

A persistent increase in the price of oil from $25 to, say, $35 per barrel would raise costs to U.S. consumers and businesses and would in some ways act as a tax. Initially, the most significant effects on the U.S. economy would result from the diversion of consumers' expenditures toward energy purchases and away from other things, and from a short-run increase in inflation. Assuming that the Federal Reserve allowed interest rates to rise to head off any permanent increase in inflation, growth of gross domestic product might be lowered by 1 percentage point in the first year. In subsequent years, if oil prices continued at the higher level, on average, businesses would probably alter their investment plans, retiring some equipment and purchasing new, more energy-efficient equipment. Both the higher depreciation and the increased importance of energy efficiency, rather than overall productivity, in business decisions about investment might slow the growth of the economy—indeed, some analysts attribute a significant part of the slowdown in productivity growth after 1974 to the oil price increases of 1974 and 1980. According to CBO's simulations, such an increase in oil prices could worsen the budget outlook by upward of $40 billion per year for a few years as long as discretionary spending followed the ordinary rules of budget projections. In addition, higher oil prices would raise the cost of energy purchases by the federal government and could put upward pressure on discretionary spending.

1. See Congressional Budget Office, *Federal Reinsurance for Terrorism Risks* (October 2001).

a less optimistic trend for the economy, in which case the budget would worsen by about as much as the sum of the effects in each of the scenarios. Whereas the fan chart describes how unexpected events in the past have affected the accuracy of CBO's budget projections, the scenarios suggest how specific future events could affect budgetary outcomes.

How likely is it that the actual 10-year outcomes for the budget will lie between the optimistic and pessimistic scenarios or that the budget in the next year will be within the bounds of the faster-recovery and deeper-recession scenarios? No exact probability calculation is possible, because those scenarios are meant to illustrate the possibilities of events that might not be fully captured by the statistical analysis presented at the beginning of the chapter. The first five years of all of the scenarios lie within the bounds of the fan chart based on CBO's historical record.

Recovery from Recession

The current recession differs in important respects from previous recessions (as Chapter 2 discusses), and those differences make forecasting how the recovery will develop particularly difficult. Real possibilities exist of either a quicker recovery than CBO currently envisages or a more prolonged recession. Economic news coming in during the first weeks of 2002 seemed to point to a more rapid rebound, particularly in consumption, than CBO's baseline projections assume, but that could easily be reversed if consumers decide to cut back on their consumption to pay off debts or because they are unsure of their employment prospects. Three large sources of uncertainty are investment, the weakness of the world economy, and the inventory cycle. In addition, larger or smaller realizations of capital gains, which are hard to predict but probably have a cyclical component, could also affect budgetary outcomes.

CBO's baseline projections assume that the investment overhang described in Chapter 2 is being worked off and that investment will begin to pick up in the second half of 2002 as the economy recovers. That assumption could be wrong, however; there is no independent way to verify either the size of the overinvestment or the degree to which investment must fall to bring business equipment in line with needs. In CBO's forecast, investment begins to grow by the end of 2002 at about the pace of the late 1990s. That pickup could be earlier or later, and the growth rate could be either more sluggish (if businesses' confidence about future demand and profits remains poor) or faster (if the need to build inventories boosts demand and profits more quickly than anticipated).

Developments in other countries play an important role in the outlook for the United States, and the current outlook for the rest of the world is more likely to be weaker than stronger relative to what CBO's projections assume. As of early January 2002, forecasts for growth in Europe were being lowered, the outlook for Japan was becoming even bleaker, tensions between India and Pakistan were on the rise, and Argentina's currency crisis had brought down the government (and several successors). So far, there is little evidence that Argentina's problems are spilling over to other countries (as did currency problems in a few Asian countries in 1998). But the world economy is clearly no stronger than CBO's forecast assumes. In fact, it may be weakening further, which could reduce demand for U.S. goods and services and prolong the recession.

A few forecasters worry that if the recession deepened, the usual tools of monetary policy might reach their limit because interest rates are already very low, so policy cannot push them down much farther (see Box 5-3). That possibility seems remote; there is still room to lower rates by 1.75 percentage points, and if the recession worsened dramatically enough to require such a drop in interest rates, the Congress would also have the option to add fiscal stimulus. More fundamentally, the U.S. financial system is sound, and it is resistant to the difficulties that cramped the effectiveness of U.S. monetary policy in the 1930s and that of Japan today.

In contrast, some forecasters see the possibility of a substantially sharper recovery because inventories were run down much more rapidly than expected in 2001, setting the stage for a possible inventory rebuilding in 2002. Production could ratchet up more than the CBO forecast assumes if firms try to rebuild inventories aggressively. In this recession, as in past ones, the swing in production is likely to exceed the swing in final sales considerably. However, econo-

mists have had little success in predicting firms' inventory decisions, and a much more rapid rebuilding of inventory cannot be ruled out.

Although those factors cannot be quantified precisely, CBO has calculated illustrative budgetary impacts of a faster recovery or a continued and deeper recession (see Table 5-2). Those scenarios are chosen to reflect, on the optimistic side, a rapid bounce back from recession such as occurred on two previous occasions and, on the pessimistic side, a continued recession that becomes as large as the average postwar recession (that is, considerably deeper than the mild one in CBO's baseline forecast) before re-

Box 5-3.
Could Monetary Policy Lose Its Clout?

The economy remains weak even though the Federal Reserve has pushed the short-term interest rate on federal funds down to 1.75 percent and the real short-term rate on Treasury bills to 0.1 percent. The recession has been accompanied by a yearlong deflation in commodity prices and weak prices for goods in general, although the deflation has not spread to the larger service sector of the economy. Despite general weakness, long-term interest rates have not followed short-term rates down. In those circumstances, some commentators are concerned that monetary policy might not be able to do much more to stimulate the economy. A few analysts go farther and point to the Great Depression of the 1930s, when short-term rates were even closer to zero but failed to help the economy recover. They also point to current conditions in Japan, where the interest rates that the government uses to set monetary policy are virtually zero, deflation has prevailed since 1999, and the economy remains mired in a long and painful recession.

For monetary policy to stimulate economic activity, the channels through which it affects demand must be operating. The most important channels operate through banks and other financial intermediaries. Typically, the Federal Reserve purchases short-term securities from banks and other dealers, lowering short-term rates and increasing the funds that intermediaries can lend. If banks and other intermediaries are healthy (as is not the case in Japan), they will compete to make loans, causing longer-term rates to decline and encouraging businesses and households to borrow to finance spending. The decline in interest rates may also stimulate the stock and real estate markets, providing additional monetary-policy channels, either as corporations issue more stock or bonds to finance their investments in plant and equipment or as households increase spending in response to their capital gains. Declines in interest rates might also cause the dollar to depreciate, stimulating exports and shifting some import spending toward domestic alternatives.

Although the monetary-policy channels are generally working as usual in this economic downturn, analysts have observed a few worrisome weak spots. Banks have continued to lend in modestly growing amounts for real estate and consumer loans, but increased loan defaults have caused lending terms and conditions to tighten, and loans to businesses have declined. Businesses with good credit ratings have been able to borrow in growing amounts in the corporate bond market, though at long-term rates that are relatively high compared with short-term rates. Moreover, companies with poor credit ratings face an extremely scarce supply of credit at high rates, reflecting the perceived probability of default. The exchange-rate channel also has been blocked by slowdowns abroad and strong foreign preferences for U.S. investments that have caused the dollar's value to appreciate and held back U.S. exports.

At some point, further economic deterioration could clog the monetary-policy channels, although that eventuality does not seem likely. Should more companies lose money, cut payrolls, or slip into insolvency, lenders would be faced with further losses on loans to businesses and households. Losses from loan defaults and stock market declines that went beyond what banks and other intermediaries can absorb could choke off lending, as happened to banks in 1991 and 1992 and slowed the economy's recovery from recession. If deflation sets in as a result of a greater collapse in overall demand, firms may be reluctant to borrow, even at interest rates that are close to zero, if they see no prospect for profitable investments. Similarly, households may defer plans to purchase homes and durable goods. However, such monetary difficulties would not be likely to occur unless the recession became a great deal more severe than is now anticipated.

Table 5-2.
Key Economic Variables and Budget Consequences Under Alternative Cyclical Scenarios (By calendar year, in percent)

	2002	2003	2004	2005	2006
Growth of Real GDP					
Faster Recovery	2.7	4.4	2.8	2.5	2.8
CBO Baseline	0.8	4.1	3.7	3.2	3.2
Deeper Recession	-1.4	2.9	4.8	4.2	3.8
Growth of Wages Plus Profits					
Faster Recovery	5.1	7.7	5.0	4.7	4.7
CBO Baseline	1.2	7.4	6.4	5.1	5.2
Deeper Recession	-2.3	5.1	8.2	6.3	5.8
Short-Term Interest Rates					
Faster Recovery	2.5	5.0	5.2	4.9	4.9
CBO Baseline	2.2	4.5	4.9	4.9	4.9
Deeper Recession	0.9	2.0	4.0	4.9	4.9
Budget Surplus or Deficit (-) (By fiscal year, in billions of dollars)					
Faster Recovery	50	99	146	176	193
CBO Baseline	-21	-14	54	103	128
Deeper Recession	-89	-143	-64	10	50

SOURCE: Congressional Budget Office.

NOTE: See the text for a description of the faster-recovery and deeper-recession scenarios.

covery begins in 2003. Those scenarios define a range that is much wider than the range in January 2002 between the 10 most optimistic of the *Blue Chip* forecasters and the 10 most pessimistic of those forecasters.[2] However, the amounts by which those scenarios differ from the baseline forecast are similar to the revision that has occurred since January 2001 in CBO's forecast for 2002.

In the faster-recovery scenario, both GDP and the most important components of taxable income start to grow rapidly from the beginning of 2002, and they continue to grow at a high rate in 2003. Recoveries have occurred that quickly on two occasions: in 1968, following the slowdown of 1967 (which did not even qualify as an official recession), and in 1972, from the recession of 1970. By 2004, the growth rates slip below those of the baseline, because these scenarios reflect only alternative outlooks for the business cycle and do not envisage permanently higher or lower growth. (The possibility of different persistent trends in the economy is discussed in the next section.) With such a strong recovery, interest rates would be likely to rise quickly to their long-term level. The total budget surplus would return rapidly under that scenario, reaching nearly $100 billion in fiscal year 2003 and $200 billion in fiscal year 2006.

The deeper-recession scenario assumes that the current recession does not end in the first quarter of 2002 (as the baseline assumes) but rather develops into a recession of average duration and depth based on recessions from 1949 through 1990. Following the deeper recession is a more rapid recovery; as in the previous scenario, this one does not envisage that the deeper downturn implies a slower trend rate of growth. With a weaker economy, interest rates are lower, but not dramatically so; this scenario assumes that the Federal Reserve, as well as Congressional forecasters, are surprised by the extent of the recession and cannot fully counteract it. Under this scenario, the budget would deteriorate rapidly, subtracting about $130 billion from the budget balance in fiscal year 2003. The budget would remain in deficit for an additional year but would return to surplus in fiscal year 2005.

In addition to different economics, these scenarios assume that a faster recovery or a deeper recession would most likely mean a weaker or stronger stock market. For that and other reasons, taxpayers might alter their decisions about realizing capital gains. CBO does not forecast stock prices, but it does project capital gains realizations (see Table 3-6 in Chapter 3). About $10 billion of the better budgetary outcome under a stronger recovery and of the weaker budgetary outcome under a slower recovery is assumed to result from changes in capital gains receipts.

2. See Aspen Publishers, Inc., *Blue Chip Economic Indicators* (January 10, 2002).

Longer-Term Economic and Budget Trends

CBO has also constructed two alternative scenarios about future longer-term trends. They are intended to reflect assumptions that—although systematically different from the ones underlying the baseline projections—still seem reasonable to CBO analysts. They alter not only economic assumptions but also some assumptions that are usually labeled technical, such as assumptions about the level of capital gains realizations and the growth of spending for the major federal health care programs. (The scenarios illustrate possible alternative paths and are not intended to be symmetrical.)

The two trend scenarios illustrate a wide range of possible outcomes for the budget. Over the 11 years from 2002 through 2012, the optimistic trend scenario implies $3.7 trillion more in total surpluses than CBO's baseline projections do. The pessimistic trend scenario implies cumulative deficits that increase the government debt held by the public by more than $4 trillion by 2012 compared with CBO's baseline projections.

The Optimistic Trend Scenario. In this scenario, the favorable trends for the budget that existed between 1996 and 2000 continue more or less unabated after the economy recovers from recession. The average growth of labor productivity from 2001 to 2012 is 2.6 percent, matching its growth from 1996 to 2000, rather than the 2.1 percent growth assumed in the baseline. As a result, real GDP grows at a rate 0.3 percentage points higher than in the baseline (see Table 5-3). In addition, the scenario assumes that the recent dip in the effective tax rate is temporary: individual income tax liabilities as a share of taxable personal income rise rapidly over the next five years, to where they would have been had their growth in the late 1990s continued. Those tax liabilities therefore reach 17.5 percent of taxable personal income by 2012—2 percentage points higher than in the baseline—with a small amount of that increase resulting from the higher real growth and productivity assumed in this scenario. On the outlay side of the budget, the

Table 5-3.
Key Economic and Budget Assumptions in Alternative Trend Scenarios (In percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Growth of Real GDP											
Optimistic Scenario	0.3	4.0	4.3	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4
CBO Baseline	0.2	3.6	4.0	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0
Pessimistic Scenario	-0.1	3.1	3.4	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.5
Individual Income Taxes as a Share of NIPA Taxable Personal Income											
Optimistic Scenario	12.9	13.3	13.7	14.2	14.6	14.8	15.0	15.3	15.5	16.7	17.5
CBO Baseline	12.6	12.7	12.8	12.9	12.8	13.0	13.2	13.4	13.6	14.7	15.4
Pessimistic Scenario	12.3	12.0	11.8	11.5	11.1	11.1	11.2	11.4	11.5	12.5	13.2
Growth of Medicare and Medicaid Spending											
Optimistic Scenario	4.5	3.8	4.6	6.6	4.5	6.8	6.3	6.2	6.4	6.6	5.0
CBO Baseline	6.4	5.7	6.5	8.5	6.4	8.7	8.2	8.2	8.3	8.5	6.9
Pessimistic Scenario	8.2	7.6	8.4	10.4	8.3	10.6	10.2	10.1	10.2	10.4	8.9

SOURCE: Congressional Budget Office.

NOTES: See the text for a description of the scenarios.

NIPA = national income and product accounts.

Table 5-4.
Budget Surpluses Under Alternative Trend Scenarios (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2002-2007	Total, 2002-2012
Total Budget Surplus or Deficit (-)													
Optimistic Scenario	7	61	183	301	403	492	585	698	815	1,043	1,337	1,448	5,926
CBO Baseline	-21	-14	54	103	128	166	202	250	294	439	641	416	2,243
Pessimistic Scenario	-58	-101	-95	-115	-170	-194	-227	-259	-308	-268	-184	-732	-1,979
Debt Held by the Public (End of year)													
Optimistic Scenario[a]	3,353	3,307	3,140	2,857	2,471	1,995	1,426	743	-58	-1,087	-2,410	n.a.	n.a.
CBO Baseline	3,380	3,410	3,373	3,288	3,177	3,027	2,840	2,605	2,325	1,900	1,273	n.a.	n.a.
Pessimistic Scenario	3,417	3,534	3,646	3,779	3,966	4,176	4,418	4,693	5,015	5,297	5,495	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTES: See the text for a description of the scenarios. Unlike budget tables in other chapters, cumulative totals are for six and 11 years because these scenarios envision changes in 2002.

n.a. = not applicable.

a. In this scenario, the projected level of debt held by the public falls below CBO's estimate of debt available for redemption in 2009. Beyond that point, the federal government would accumulate "uncommitted funds"—CBO's term for the surplus that remains each year after paying down all publicly held debt available for redemption.

optimistic scenario assumes that spending for Medicare and Medicaid will grow at an annual rate that is nearly 2 percentage points lower than the rate in the baseline.

The budget outlook would improve dramatically under the assumptions of the optimistic trend scenario (see Table 5-4). By 2012, if there was no other action to cut taxes or increase spending, the annual surplus would exceed $1.3 trillion (more than twice the surplus projected under the baseline assumptions). With surpluses of that magnitude, the government's holdings of assets (uncommitted funds) would exceed federal debt held by the public to the tune of $2.4 trillion in 2012.[3]

The Pessimistic Trend Scenario. This scenario reverses most of the assumptions of the optimistic scenario and assumes that the economy reverts in many respects to its situation before 1996. In this scenario, trends in the economy are generally unfavorable to the budget. The pessimistic trend scenario assumes that the recent burst of productivity will prove temporary, so future productivity growth averages the 1.4 percent rate seen from 1974 through 1995 (cyclically adjusted), implying correspondingly lower GDP growth. In addition, the scenario assumes that individual income tax liabilities decline relative to taxable personal income to levels recorded before the increases that occurred in the second half of the 1990s (except that real bracket creep—inflation-adjusted growth in income that pushes people into higher tax brackets—is assumed to continue). Medicare and Medicaid spending is assumed to grow nearly 2 percentage points faster each year than in the baseline.

Under that scenario, the budget would remain in overall deficit for each of the 10 years of the projection period. Debt held by the public would rise to almost $5.5 trillion in 2012, compared with less than $1.3 trillion under baseline assumptions.

3. "Uncommitted funds" is CBO's term for the surplus that remains each year after paying down all publicly held debt available for redemption.

Chapter Six

The Long-Term Budget Outlook

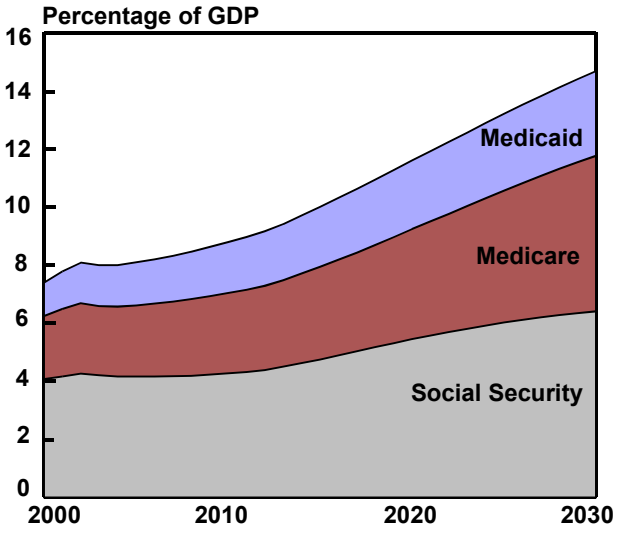
In October 2000, the Congressional Budget Office wrote about the long-term challenges to the budget and the economy posed by the aging of the baby-boom generation, increasing life spans, and rising costs in federal health programs.[1] At that time, the near-term budgetary outlook seemed very bright —CBO projected that surpluses over the coming decade would enable the government to eliminate its net indebtedness within that time span. Even in that highly optimistic environment, however, CBO projected that pressures on spending would eventually bring about a return of budget deficits and rising government debt.

Now, 15 months later, although debt held by the public is still projected to fall over the next 10 years, the near-term budgetary situation is less favorable. Furthermore, the onset of pressure for increased health and retirement spending has only drawn nearer as the baby-boom generation has moved one year closer to the time at which large numbers of them will qualify for Social Security and Medicare benefits.

This chapter describes the likely magnitude of pressures on spending over the next 30 years and the possible budgetary and economic consequences. It emphasizes measures such as total health and retirement spending and economic output, rather than the status of the Social Security and Medicare trust funds. Trust fund measures, although useful for some purposes, can be misleading. They can be changed by accounting transactions that appear to improve solvency but do not alter the government's underlying obligations or resources to pay those obligations. Moreover, they only partially reflect trends in the overall economy that are paramount in determining the government's ability to pay benefits over the longer term.

The long-term path of the federal budget will ultimately depend on the health of the economy and

Figure 6-1.
Spending for Social Security, Medicare, and Medicaid Under CBO's Midrange Assumptions



SOURCE: Congressional Budget Office.

NOTE: Spending is based on measures from the national income and product accounts. See Box 6-1 for details of CBO's midrange and other assumptions.

1. See Congressional Budget Office, *The Long-Term Budget Outlook* (October 2000).

Box 6-1.
How CBO Makes Its Long-Term Projections

The Congressional Budget Office's (CBO's) long-term projections are based on a model of the economy, the Social Security programs, and the budget.[1] The projections are not predictions of what CBO thinks is likely to happen; fiscal policies, for example, will probably change as pressure for spending on health and retirement programs increases.

Through 2010, the long-term projections flow from CBO's current 10-year baseline projections of the budget and the economy. In most of the projections, the first eight years exactly match the baseline projections. (In some of the projections, however, the use of optimistic or pessimistic population or productivity assumptions causes them to differ from the baseline over that period.) The long-term projections follow only the first eight years of the 10-year baseline projections because of the uncertainty surrounding the scheduled expiration of the tax-cut provisions in the Economic Growth and Tax Relief Reconciliation Act of 2001.

1. CBO's Long-Term Actuarial Model (LTAM) is a macroeconomic growth model with a detailed Social Security sector. That sector has been constructed to mimic the results and sensitivities of the projections of the Social Security Administration's Office of the Chief Actuary. See Congressional Budget Office, *An Economic Model for Long-Run Budget Simulations*, CBO Memorandum (July 1997), for a detailed description of the model on which the macroeconomic component of LTAM is based, and *Uncertainty in Social Security's Long-Term Finances: A Stochastic Analysis* (December 2001), Chapter One, for a description of the Social Security sector of the LTAM.

Budgetary Assumptions

In CBO's long-term projections, most categories of spending and revenues other than health and retirement programs are extended after 2010 using simple rules rather than current law. Revenues and discretionary spending are adjusted in 2011 to produce a surplus in the total budget (including the Social Security trust funds) of 2 percent of gross domestic product (GDP). From 2011 on, revenues other than payroll taxes are assumed to remain fixed as a share of the tax base. CBO does not incorporate the impact of real bracket creep—inflation-adjusted growth in income that subjects more income to higher tax rates—in its projection of revenues. Similarly, discretionary spending remains a fixed share of GDP after 2011. CBO's projections assume that spending on government transfer programs other than Social Security, Medicare, and Medicaid grows with the size and age mix of the population and with GDP per capita.

CBO projects spending and revenues for Social Security and Medicare under current law after 2010. The long-term projections of outlays for Social Security are based on forecasts by the trustees of the Social Security trust funds, adjusted for CBO's economic assumptions; projections of Medicare and Medicaid outlays are based on projected health care costs per enrollee and the number and ages of enrollees.[2]

2. The long-term projections also follow those of the Social Security trustees in assuming that Social Security benefits will continue to be paid even after the trust fund is exhausted.

on future policy decisions, which are impossible to predict. It is fairly certain, however, that health and retirement spending under current law will increase substantially over the coming decades. If current policies continued, spending on Social Security, Medicare, and Medicaid under CBO's midrange estimate would rise to 14.7 percent of gross domestic product by 2030, almost twice its current share of 7.8 percent (see Figure 6-1 on the previous page). The health programs would account for about two-thirds of that increase. Projected spending on those three programs would be substantial under a variety of alternative assumptions—for variables such as the rate of growth of productivity, the cost of health care, and the age composition and size of the population—ranging from about 13 percent to 17 percent of GDP in 2030. (See Box 6-1 for a discussion of CBO's midrange and other assumptions.)

The pressure to boost spending on health and retirement programs will present the nation with difficult choices. Some combination of reduced spending on other priorities, increased revenues, and diminished outlays for health and retirement programs (below levels projected under current law) will probably be needed to balance the government's finances.

Box 6-1.
Continued

The projections' midrange assumption is that cost growth per enrollee in Medicare in excess of real wage growth and inflation will slow from 1.7 percent to 1 percent between 2012 and 2027 and remain at that level thereafter. That assumption is similar to the intermediate assumption made by the trustees of the Medicare trust funds. In some alternative projections, CBO assumes that excess cost growth gradually climbs to 2 percent per year or falls to zero by 2027. However, the future path of health costs is extremely uncertain, and outcomes outside the range that CBO examined are plausible. All of CBO's projections assume that between 2012 and 2027, cost growth per enrollee in Medicaid gradually shifts from the rate in CBO's 10-year baseline to the long-run growth rate assumed for Medicare.

Economic Assumptions

CBO's projections assume that economic growth depends on total hours worked, the size of the capital stock, and total factor productivity (TFP). Hours of work in turn depend on the size of the population and its age mix. CBO's midrange assumption for population matches the Social Security trustees' intermediate assumption; other projections use the trustees' low-cost (optimistic) or high-cost (pessimistic) assumptions. (Mortality, immigration, and birth rates are higher under the low-cost assumption and lower under the high-cost assumption.) Budget surpluses bolster national saving, raising investment, which boosts the private capital stock. The midrange assumption is for TFP to grow at the rate assumed in CBO's baseline until 2012, after which the rate of growth will gradually rise to 1.6 percent (its average over the postwar period plus 0.2 percentage points to adjust for changes in the way prices are measured). Alternative optimistic and pessimistic assumptions raise and lower TFP growth by half a percentage point, respectively. In this analysis, the rate of productivity growth is treated as an exogenous, or independent, variable because the determinants of that growth rate are not yet well understood by economists.

CBO's projections assume that interest rates move in tandem with the return on capital (that is, the return earned on productive capital, such as plant and equipment, after corporate taxes).

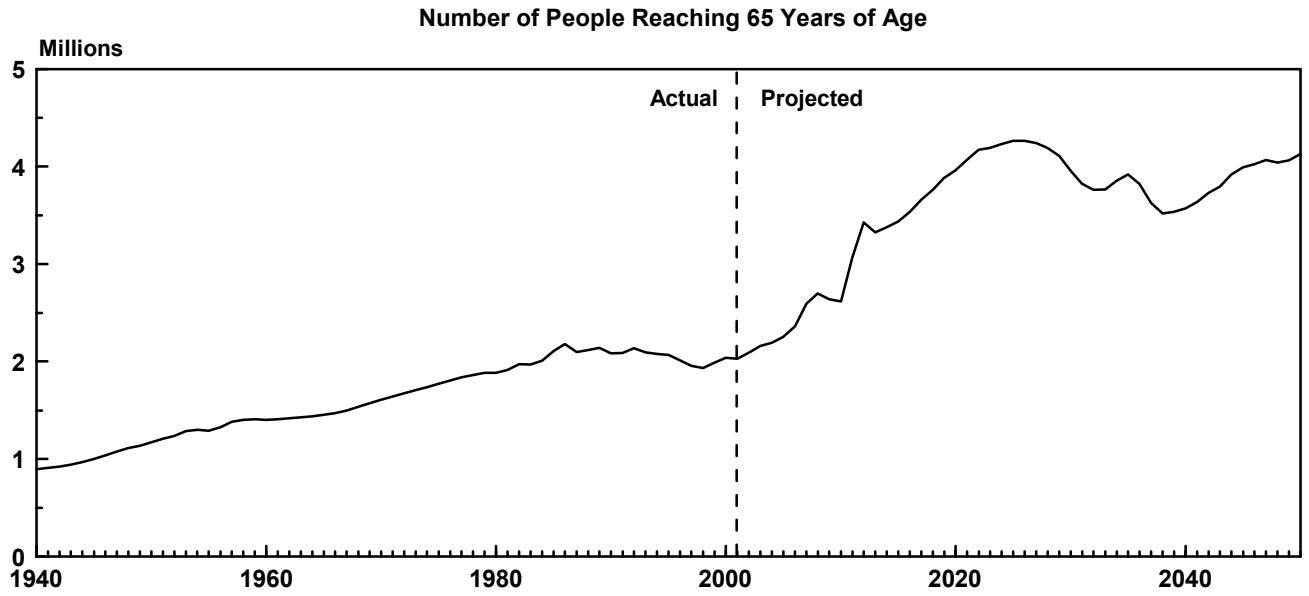
To be consistent with the economic variables in CBO's baseline, the long-term projections use the budget categories of the national income and product accounts (NIPAs). NIPA measures of spending and revenues differ from those in the budget because of differences in accounting methods and the timing of some spending.[3]

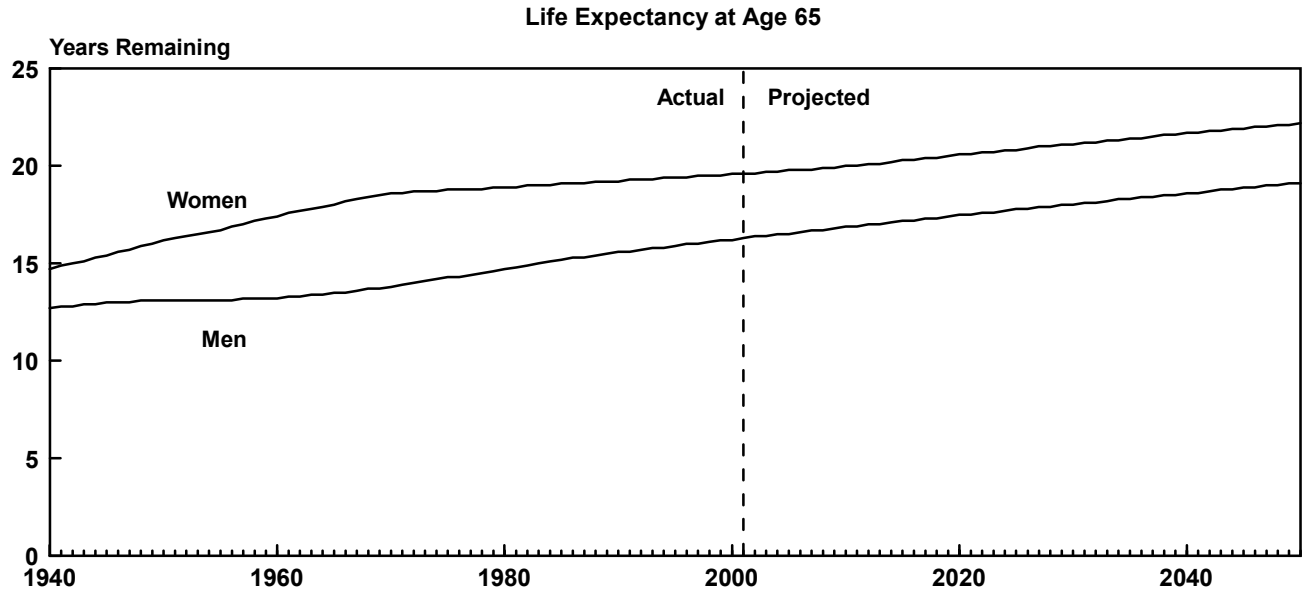
3. For a detailed description of the differences between NIPA and total budget accounting, see Appendix D, *The Federal Sector of the National Income and Product Accounts*.

Policies that encourage economic growth also could help ease the burden of rising health and retirement spending. If none of those actions is taken, rising budget deficits could ultimately harm the economy.

Taking action sooner rather than later to alleviate future budgetary pressures has several advantages. Policies that encourage economic growth may have a greater impact on future output and budgets the sooner they are implemented, simply because they can affect the economy over a longer period of time. Such policies could include running budget surpluses to bolster national saving and investment, implementing tax and regulatory policies that encourage work and saving, and orienting government spending more toward investment than toward current consumption. In addition, acting sooner would better enable lawmakers to enact policy changes that do not take effect for many years. That would give people more time to adjust their lifetime work and savings plans in response to any changes in expected benefits and taxes in programs such as Social Security, Medicare, and Medicaid. Finally, policy changes that drive down spending or push up revenues early on enable the government, because of reduced interest costs, to finance more programmatic

Figure 6-2.
Factors Affecting Long-Term Pressure on Spending for Social Security, Medicare, and Medicaid





SOURCES: Congressional Budget Office based on data from the Social Security Administration (intermediate assumptions) and from Social Security Administration, *The 2001 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (March 19, 2001), Table V.A4 (intermediate assumptions).

spending with a given level of taxes. Higher surpluses or smaller deficits today result in lower levels of debt and smaller interest payments in the future. Therefore, noninterest spending can be financed with a lower level of taxes, which can have a beneficial effect on the economy.

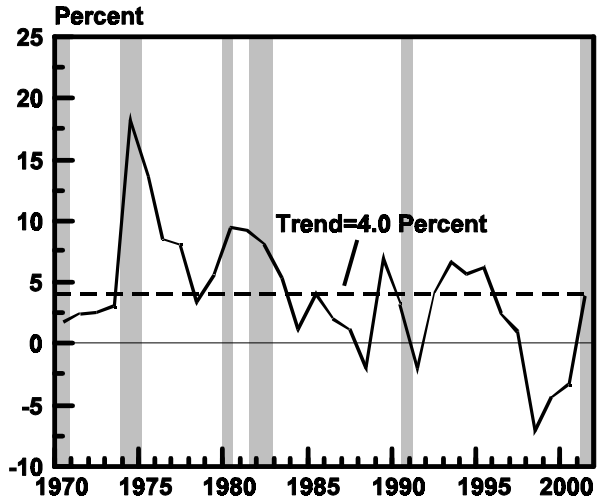
Pressures on Spending for Health and Retirement Programs

Under current law, spending on Medicare, Medicaid, and Social Security will rise significantly over the next three decades. That expected surge in spending stems from three fundamental factors. First, the large baby-boom generation will begin to reach retirement age and become eligible to receive benefits from Social Security and Medicare (see Figure 6-2). Second, people are likely to live longer than they did in the past and therefore receive health and retirement benefits over a longer time frame. Third, history suggests that advances in medical technology and increased use of medical services will probably keep pushing up the cost of providing health care (see Figure 6-3). If policymakers adopted proposals to increase Social Security, Medicare, or Medicaid benefits, spending would grow even more rapidly.

The size of projected increases in health and retirement spending is sensitive to the economic and demographic assumptions used to generate those projections. To illustrate some of those sensitivities, CBO has varied within plausible ranges the assumptions about three important but uncertain variables: cost per enrollee in federal health programs, the demographics of the U.S. population, and productivity growth (see Table 6-1).

Growth in cost per enrollee is the most difficult aspect of health care spending to project, and it is also a variable that has a powerful effect on spending as a share of GDP. Even though the wages of health care workers are an important element of the costs of federal health programs, cost per enrollee of a given age has typically grown faster than the average wage has grown (see Figure 6-3). In all of CBO's long-term projections, cost per enrollee is assumed to match the levels in CBO's 10-year baseline through 2012. Under CBO's midrange assumption, cost growth per enrollee in Medicare will gradually slow from a rate that is 1.7 percent faster than wage growth (the rate projected for 2012 in the 10-year baseline) to a rate that is 1 percent faster than wage growth between 2012 and 2027; growth will remain at that rate thereafter. Cost growth per enrollee in Medicaid is assumed to slow to the same long-run rate as in Medicare between 2012 and 2027, although it starts at a higher rate.

Figure 6-3.
Estimated Cost Growth in Excess of Wage Growth per Enrollee in Medicare (Adjusted for age mix of beneficiaries)



SOURCE: Congressional Budget Office.

Both public and private medical expenditures have tended to grow faster than the economy over the past few decades. That situation cannot continue indefinitely, however, or health spending will eventually crowd out other consumption. At some point, pressure from consumers and employers for lower health insurance premiums and less expensive medical care will probably rein in the growth of costs in the private sector—indeed, cost growth slowed substantially over the past decade. CBO's midrange assumption reflects some further slowing, but the likelihood, timing, and extent of that slowdown are extremely uncertain.

Table 6-1.
Alternative Assumptions About Health Costs, Population, and Productivity in Calendar Year 2030 (In percent)

	Assumptions		
	Optimistic	Midrange	Pessimistic
Annual Excess Growth in Health Costs per Enrollee[a]	0	1.0	2.0
Old-Age Ratio[b]	32.9	35.2	38.1
Annual Growth in Total Factor Productivity[c]	2.1	1.6	1.1

SOURCE: Congressional Budget Office.

a. Annual growth in costs per enrollee in Medicare and Medicaid in excess of real growth in wages and inflation, adjusted for the age mix of enrollees. For each alternative assumption, growth in health expenditures follows CBO's 10-year baseline projections from 2002 to 2012 and then moves to the long-run rate shown above over the next 15 years.

b. The ratio of people age 65 and over to those ages 18 to 64. The assumptions about population under CBO's optimistic, midrange, and pessimistic alternatives match the low-cost, intermediate, and high-cost population assumptions of the Social Security trustees.

c. For the midrange assumption, annual growth follows CBO's 10-year baseline projections from 2002 to 2012 and then moves to the long-run rate shown above over the next 15 years. Annual growth under the optimistic assumption is 0.5 percentage points higher, and under the pessimistic alternative 0.5 percentage points lower, than the midrange assumption in each year.

In the projections CBO made before October 2000, it assumed that cost per enrollee slowed to the level of wage growth, rather than to the current midrange assumption of 1 percent faster than wage growth, by the 25th year of the projection period.[2] Under that earlier, more optimistic assumption, spending on Social Security, Medicare, and Medicaid would rise to 14.1 percent of GDP by 2030 (see Table 6-2). In contrast, under the more pessimistic assumption that Medicare and Medicaid's cost per enrollee grows 2 percent per year faster than wages in the long run, spending on the three programs would rise to 15.4 percent of GDP by 2030. Under each of the three assumptions about cost growth, the increase in costs as a percentage of GDP is substantial.

The number of people of different ages within the population also influences the degree to which spending will rise. The Social Security trustees use three different assumptions about population in their 75-year projections: an intermediate assumption; a "high cost" assumption, which projects more elderly and fewer working-age people; and a "low cost" assumption, which projects fewer elderly and more working-age people.[3] Using the high-cost, or pessimistic, assumption, CBO projects that spending for Social Security, Medicare, and Medicaid will rise to 15.6 percent of GDP by 2030 (see Table 6-2). Even under the more optimistic low-cost assumption, CBO projects that spending will rise to 13.8 percent of GDP.

A further influence on projected spending as a share of GDP is the rate of productivity growth. Total factor productivity (TFP) is the productivity measure that CBO uses as an input in its long-term projections. Growth in TFP is the portion of economic growth that cannot be accounted for by growth in capital or labor—it is commonly thought of as a measure of technical progress. Under CBO's midrange assumption, the growth rate of TFP inches up from 1.3 percent per year in 2012 to 1.6 percent per year in 2022 and beyond (1.6 percent comprises TFP's average annual growth rate over the postwar period plus 0.2 percentage points to adjust for changes in the way prices are measured). If TFP grew by half a percentage point more in each year of the projection period—the optimistic assumption—spending on Social Security, Medicare, and Medicaid would be 14.2 percent of GDP by 2030 (see Table 6-2). If TFP grew by half a percentage point less—the pessimistic assumption—spending would rise to 15.2 percent of GDP by 2030.

Higher productivity growth means that both GDP and Social Security spending will climb, but at

2. Medicare's trustees also used a similar assumption until this year; they now use an assumption comparable to CBO's current midrange assumption.

3. The trustees' population assumptions used in CBO's projections do not incorporate information from the 2000 census, which tallied a larger current population than the trustees had assumed. Incorporating that data will probably change the trustees' population projections.

Table 6-2.
Spending for Social Security, Medicare, and Medicaid in Calendar Year 2030 Under Alternative Assumptions About Health Costs, Population, and Productivity

	Spending in 2030 (Percentage of GDP)[a]
Health Costs	
Optimistic Assumption	14.1
Pessimistic Assumption	15.4
Population	
Optimistic Assumption	13.8
Pessimistic Assumption	15.6
Productivity	
Optimistic Assumption	14.2
Pessimistic Assumption	15.2
Health Costs, Population, and Productivity Combined	
Optimistic Assumption	12.8
Pessimistic Assumption	16.9
Memorandum:	
Midrange Assumptions	14.7

SOURCE: Congressional Budget Office.

NOTE: For comparison, spending in 2001 amounted to 7.8 percent of GDP.

a. Each alternative is based on assumptions about health costs, population, and productivity (among others). In generating the first six alternatives, CBO varied only one assumption, as indicated, and held the other two at their midrange levels (see Box 6-1 for details). In the remaining two alternatives, all three assumptions are optimistic or pessimistic simultaneously.

different rates. Spending for Social Security rises when productivity increases because the program's initial benefits are based on an enrollee's history of earnings as well as average wage growth in the economy, both of which respond to changes in productivity growth. Social Security spending rises more slowly than GDP does, however, because new beneficiaries with histories of higher earnings (and therefore higher benefits) enter the system slowly, over time.

Under the assumption that health costs, population, and productivity growth combined were more favorable or less favorable than they were under CBO's midrange assumptions, the variation in projected spending would be greater. For instance, if all three variables followed their optimistic assumptions, spending for Social Security, Medicare, and Medicaid would reach 12.8 percent of GDP in 2030, still well above the current level. Pessimistic assumptions for all three variables imply that health and retirement spending would total 16.9 percent of GDP in 2030.

Those calculations offer some perspective on the likely increase in outlays over the next 30 years for Social Security, Medicare, and Medicaid under current law. Although CBO used a particular set of assumptions to generate its projections, the results would be similar under most reasonable assumptions. The bottom line is that if policies do not change, federal spending on health and retirement programs for the elderly will rise significantly as a share of the U.S. economy and the federal budget over the next 30 years.

Conclusion

The aging of the large baby-boom generation and growth in the cost of health care will dramatically increase spending for federal health and retirement programs under current law. The pressure to increase spending will present policymakers with difficult choices if they are to maintain the government's fiscal balance. Policymakers could directly reduce the rate of growth of spending for Social Security, Medicare, and Medicaid by changing those programs in ways that would reduce benefits relative to current law or provide health care more efficiently.[4] If those programs are not changed, the nation will face the prospect of steep tax increases, big cuts in other government spending, or large budget deficits.

4. For a general discussion of possible changes to Social Security, see Congressional Budget Office, *Social Security: A Primer* (September 2001). For additional examples of possible changes to both Social Security and Medicare, see Congressional Budget Office, *Long-Term Budgetary Pressures and Policy Options* (May 1998) and *Budget Options* (February 2001).

Chapter Seven

Homeland Security

Most of the activities that make up homeland security were being undertaken before September 11, 2001, but the attacks of that date changed the nation's perception of the risks that it faces and of its preparedness to deal with the consequences of such attacks on the homeland. Federal agencies, state and local governments, private businesses, and individuals perceive a heightened threat to security and a need to commit additional resources to lower the risk of future attacks or to minimize the ensuing harm. Those commitments have affected both the budget and the economy in fiscal year 2002 and will undoubtedly be a focus of additional spending and policy decisions that the Congress will make this year.

The federal government has accounted for a large part of the increase in the resources committed to homeland security following the attacks, most notably as a part of the 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States (Public Law 107-38). States and localities also have devoted more resources to homeland security, for example, in response to a series of alerts issued by the federal government since the September attacks. Likewise, the private sector has increased spending on physical security, particularly to protect facilities with the potential to be turned into weapons of mass destruction.

As the Congress faces a heightened awareness of the risks of terrorism and the pressure that homeland security is likely to place on federal spending and priorities in the near future, some fundamental questions emerge. First, what is homeland security, and what set of activities does it embrace? Second, what is currently being spent on homeland security and by whom? Although some of the estimates presented in this chapter are preliminary, they highlight the fact that homeland security is an evolving concept that cuts across traditional budget categories and jurisdictional boundaries. That wide scope makes the task of evaluating different priorities and approaches particularly challenging and suggests the value of assessing trade-offs using a broad framework.

What Is Homeland Security?

Before September 11, homeland security was a phrase that was little known to the public and discussed, for the most part, by a small group of analysts in the defense and law enforcement communities. Since the attacks, "homeland security" appears frequently in the media, has acquired an elevated standing within the Executive Office of the President, and has been offered as the reason to undertake a wide array of spending and policy initiatives. A core set of activities are widely recognized as part of homeland security (for example, emergency preparedness and the protection of government facilities), although the inclusion of others (for example, policies intended to increase the domestic supply of energy) is a matter of disagreement.

The definition of homeland security has implications for both the measurement of and the control over resources. A narrow view of the mission and activities that constitute homeland security may imply that one actor—a specific federal agency, for example—should be responsible. A broader definition may suggest not only additional agencies but also a

different structure to control the associated resources; for instance, instead of being directly responsible for the security of some function or activity, the federal government could mandate particular security systems that the private sector would then control. Moreover, a broader view would imply a broader set of trade-offs that should be considered in setting priorities and allocating resources.

Within the defense community, a research institute defines homeland security as, "the prevention, deterrence, and preemption of, and defense against, aggression targeted at U.S. territory, sovereignty, population, and infrastructure, as well as the management of the consequences of such aggression and other domestic emergencies."[1] That definition is implicitly broad in its geographic scope and may encompass major new national investments, most prominently in missile defense. By contrast, the mission statement of the recently created Office of Homeland Security implies a narrower definition of homeland security as comprising the federal government's efforts, in coordination with state and local governments and the private sector, to develop, coordinate, fund, and implement the programs and policies necessary to detect, prepare for, prevent, protect against, respond to, and recover from terrorist attacks within the United States.[2] Although clearly limited to the domestic arena, that definition explicitly grants a role both to state and local governments and to private institutions in providing homeland security.

For the presentation of federal spending that follows, the Congressional Budget Office adopts a definition of homeland security that is based on the Office of Management and Budget's most recent *Annual Report to Congress on Combating Terrorism*.[3] That definition encompasses the activities that OMB has classified as devoted to combating terrorism and protecting critical infrastructure.

As described in OMB's report, those classifications are as follows:

- *Physical Security of Government,* which consists of activities to protect federally owned, leased, or occupied facilities and federal employees, including high-ranking officials, from terrorist acts. It also includes activities to protect foreign embassies, dignitaries, and other persons as authorized by federal law or executive order.

- *Law Enforcement and Investigative,* which captures activities to reduce the ability of groups or individuals to commit terrorist acts and the investigation and prosecution of terrorist acts when they occur. This category includes intelligence collection activities and programs to detect and prevent the introduction of weapons of mass destruction into the United States. It includes both antiterrorism investigations to identify threats and vulnerabilities and activities to apprehend and prosecute terrorists.

- *Preparing for and Responding to Terrorist Acts,* which includes the planning, training, equipment, and personnel directed at responding once terrorist acts have occurred.

- *Research and Development* captures activities to develop technologies to deter, prevent, or mitigate terrorist acts.

- *Physical Security of the National Populace,* which includes activities to protect the national infrastructure, including air traffic, railroad, highway, maritime, and electronic distribution systems; the production, distribution, and storage of electricity, natural gas, and petroleum; vital services such as banking and finance, water, and emergency services; and telecommunications systems.

- *Critical Infrastructure Protection* (CIP) is similar to *Physical Security of the National Populace* in that it also includes the protection of civilian infrastructure and services, but the

1. Anser Analytic Services, Institute for Homeland Security (www.homelandsecurity.org).

2. President George W. Bush, "Establishing the Office of Homeland Security and the Homeland Security Council," Executive Order no. 13228, *Federal Register*, vol. 66 (October 10, 2001), pp. 51812 -51817, available at www.nara.gov/fedreg/eo2001b.html.

3. Office of Management and Budget, *Annual Report to Congress on Combating Terrorism* (July 2001). Some analysts define homeland security as a subset of combating terrorism, with the former excluding the physical security functions that the Departments of Defense and State conduct overseas. OMB's report and CBO's analysis include those functions.

scope is slightly broader than defending against terrorist acts. Besides terrorism, CIP also addresses threats to the national infrastructure from equipment failures, natural disasters, and domestic crimes. CBO has chosen to include this category in its accounting of spending for homeland defense because many efforts to protect critical infrastructure will probably be undertaken to address terrorist threats, including those against large economic and communications structures, such as nuclear power plants, bridges, dams, and computer networks.[4]

The definition adopted by CBO offers the advantage of having an associated set of measures of the resources devoted to combating terrorism and protecting critical infrastructure since 1998.[5] In fact, OMB's report is the sole compendium of data on federal funds for combating terrorism and protecting infrastructure. However, the definition is relatively narrow in scope and thus will probably be unable to accommodate the full array of trade-offs that will likely present themselves in this year's spending and policy debates. Moreover, any definition offered now will likely evolve to encompass more activities than were included in last year's report on combating terrorism and protecting critical infrastructure.

4. In its tally for the CIP category, OMB focuses especially on costs for protecting the nation's computer networks against cyberattacks. OMB's current *Annual Report to Congress on Combating Terrorism* does not account for activities to protect key physical infrastructure such as nuclear plants, dams, and bridges, although the CIP category as defined encompasses such activities. In the aftermath of the recent attacks, protecting key elements of the nation's physical infrastructure will probably assume a higher priority.

   For purposes of this analysis, efforts to overcome any potential threats that could directly result in a large number of civilian casualties, such as attacks on transportation services, contamination of drinking water, and disruption or contamination of the mail service, are classified under Physical Security of the National Populace. Efforts dealing with threats to large economic and communications structures, such as nuclear power plants, bridges, dams, and computer networks, are classified under Critical Infrastructure Protection.

5. OMB has been collecting data from federal agencies, departments, and bureaus since 1998 in response to direction in the Fiscal Year 1998 National Defense Authorization Act (P.L. 105-85). Specifically, the Congress directed the President to report on federal spending for counterterrorism, including funding to combat weapons of mass destruction.

How Much Is Being Spent on Homeland Security?

The federal government, state and local governments, and the private sector all spent money on security before the attacks of September 11 and have all increased their spending since then. The federal increase has been the most visible. Data about the spending by other levels of government and the private sector are less available. (Box 7-1 discusses the effects that spending for security has on the economy.)

A complication evident in all that follows is identifying the portion of spending that incrementally contributes to homeland security. Many of the activities associated with homeland security also serve other purposes. For example, spending on emergency preparedness improves response to natural disasters and industrial accidents, as well as to terrorist attacks. Thus, it may be impossible in many cases to clearly separate the homeland security component for expenditures that deliver benefits in more than one area.

Federal Spending

Under the definition adopted by CBO, federal spending (expressed in terms of budget authority) for homeland security was $17.2 billion in 2001 and will be about $22.2 billion in 2002. Those totals include funds provided in the 13 enacted appropriation laws for fiscal years 2001 and 2002 and portions of the $40 billion provided in the 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States (P.L. 107-38) and the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (P.L. 107-117). The immediate budgetary effect of the September 11 attacks is in part captured by the roughly $8.7 billion that the Congress provided afterward, over and above the $13.6 billion requested by the Administration for combating terrorism and protecting critical infrastructure in its original budgetary proposal for 2002.

Box 7-1.
Homeland Security Spending and the Economy

Terrorism reduces the well-being of U.S. citizens directly, and given the increased threat, some increase in spending on security is necessary. Certainly, security spending is valuable, but it uses up resources that could otherwise be used to produce something else.

Conventional measures of economic performance do not account for how security spending affects well-being. The most commonly used aggregate measures, gross domestic product (GDP) and labor productivity, do not gauge well-being but account for only the value of goods and services sold and the cost of providing government services. By those measures, additional spending for homeland security is likely to slow real economic growth by 0.1 percent per year during the next decade, in large part because security spending will result in slightly higher prices, with nominal GDP not significantly changed (see Table 2-5 and Box 2-3 in Chapter 2).

For example, private businesses such as airlines will be able to sell more and charge higher prices if their improved security systems can convince customers that they will be safe. But the national income and product accounts (NIPAs) would not measure such increased security spending as an increase in output: any costs of security spending passed on to consumers would increase prices. Thus, spending on security by private businesses (whether mandated or not) will tend to reduce measured real output per worker (productivity) and increase inflation. The story is different if the increased spending is done by governments (for, say, airport security). The NIPAs cannot directly measure the output of government workers because it is not sold in the market. Therefore, government workers (in this case, the security checkpoint workers at airports) are presumed to produce services in line with their wages. The result is that government spending on security does not reduce measured real GDP, although in the long run, private spending does.

Leaving aside the quirks of measurement, does increased security spending have any macroeconomic consequences that will reflect back on the budget? In nominal terms, total income in the economy would be roughly unchanged if customers were willing to pay as much for the increased security as it cost private businesses. Thus, the total tax base would be roughly unchanged.

In the short run, the effects of spending on homeland security may be positive because the recession has idled some workers who can be employed in security without drawing resources from other activities. Employing those workers will provide a temporary boost to incomes and consumption spending that will help speed the recovery from recession. That benefit will dissipate, however, as the economy recovers and the diversion of workers to security begins to affect other production.

According to Administration reports produced before September 11, annual federal spending to combat terrorism and protect critical infrastructure grew from $7.2 billion in 1998 to $12 billion in 2001, an increase of 67 percent over four years. The President's budget for fiscal year 2002 included $13.6 billion for those efforts, a further increase of $1.6 billion above the 2001 level. Thus, since 1998 the increase in federal spending for those efforts has been steady (see Table 7-1). More specifically, homeland security funding for the Department of Defense (DoD) and intelligence agencies grew by almost 50 percent over the 1998-2001 period, and additional growth was planned for 2002. Such funding for the Department of State increased dramatically in 1999 to improve physical security after the August 1998 attacks on U.S. embassies in Africa. The Department of Health and Human Services (HHS) received the largest relative increase in appropriations, which climbed from $53 million in 1998 to a request of $446 million for 2002 for its disaster response activities, such as the stockpiling of vaccines and research and development related to bioterrorism.

The almost 90 percent increase between the 1998 level and the President's budget request for 2002 may be overstated, however, because the annual accounting of funding is complicated by programs' changing content. Although OMB attempts to normalize the data each year, agencies are always redefining programs that they consider to be combating terrorism and protecting infrastructure. So, any cost

Table 7-1.
Appropriations for Combating Terrorism and Protecting Critical Infrastructure Since 1998 and the Funding Requested for 2002 Before September 11, 2001 (In millions of dollars)

Department or Agency	1998	1999	2000	Original Funding for 2001	President's Request for 2002
DoD and Intelligence Agencies	4,919	5,485	6,757	7,267	8,252[a]
State	202	1,654	792	1,311	1,549
Justice	630	716	765	939	1,038
Energy	505	619	724	754	834
Treasury	401	423	406	475	474
Health and Human Services	53	218	325	387	446
Transportation	192	296	313	366	401
All Others	295	385	372	537	573
Total Budget Authority	7,197	9,794	10,454	12,036	13,566

SOURCE: Congressional Budget Office based on Office of Management and Budget, *Annual Report to Congress on Combating Terrorism* (July 2001).

NOTE: The totals shown here are larger than those presented by the Congressional Research Service and other organizations because CBO has included funds for protecting critical infrastructure.

a. This figure for the Department of Defense (DoD) and intelligence agencies is different from the one in the Office of Management and Budget's report because CBO has included an adjustment made in the President's fiscal year 2002 amended budget request.

accounting is somewhat subjective and prone to shifting interpretation because reported levels of spending for those efforts in any given year may not be precisely comparable to the levels shown for any other year.

Following the terrorist attacks of September 11, the Congress provided $40 billion in additional funding for 2001 and 2002 conveyed in Public Laws 107-38 and 107-117. It also increased funding beyond the amounts originally requested by the President for combating terrorism and protecting infrastructure for 2002 in the annual appropriation acts. Congressional action can be summarized as follows.

The Congress provided an additional $5.1 billion above the original funding of $12 billion for 2001 for combating terrorism and protecting infrastructure. Then, for 2002 it added $8.7 billion to the President's original request of $13.6 billion—yielding $22.2 billion for this year.[6] In all, the Congress increased funding for those efforts by almost 45 percent above the original level for 2001 and then by about 65 percent above the level requested for 2002 (see Table 7-2). Six agencies—DoD (along with the intelligence agencies), HHS, the Department of Justice, the Department of State, the Department of Transportation, and the Department of Energy—received 87 percent of the total appropriations for homeland security in 2001 and 2002, and almost 79 percent of the total increase above the original level for 2001 and the requested level for 2002.

Among the various purposes of spending for combating terrorism and protecting infrastructure (according to OMB's classifications), efforts related to the physical security of government received 33 percent of the funding appropriated for 2002. The Department of State, DoD and the intelligence agencies, and the Department of Energy got the largest shares of the $7.3 billion allotted to this category (see Table 7-3). According to information gleaned from Administration documents, the Departments of Defense and State expect to spend their shares on equipment to detect intrusions at, respectively, bases in the continental United States and bases and embas-

6. The effective 2002 level is about $27 billion because the $5.1 billion was provided at the end of 2001.

Table 7-2.
Comparison of Funding for Combating Terrorism and Protecting Critical Infrastructure Before and After September 11, 2001 (In millions of dollars)

	2001			2002		
Department or Agency	Original Funding	Funding with Supplemental	Change	President's Request	Estimated Funding[a]	Change
DoD and Intelligence Agencies	7,267	10,833	3,566	8,252[b]	9,314	1,062
Health and Human Services	387	405	18	446	3,067	2,621
Justice	939	1,020	81	1,038	2,633	1,595
State	1,311	1,467	156	1,549	1,549	0
Transportation	366	916	550	401	1,360	959
Energy	754	759	5	834	1,065	231
Treasury	475	554	79	474	711	237
Agriculture	60	60	0	50	341	291
FEMA	35	35	0	36	281	245
Postal Service	0	175	175	0	250	250
Legislative Branch	0	376	376	0	232	232
NASA	117	117	0	117	226	109
General Services Administration	114	123	9	117	210	94
District of Columbia	0	6	6	0	200	200
Interior	10	13	3	10	128	118
Judiciary	10	31	21	10	105	95
Social Security Administration	71	71	0	101	105	4
Environmental Protection Agency	5	5	0	5	93	88
Commerce	47	47	0	55	71	16
Executive Office of the President	0	82	82	2	50	48
Veterans Affairs	22	22	0	22	24	2
Labor	15	15	0	23	23	0
International Assistance	13	18	5	12	12	0
Education	12	12	0	9	9	0
Office of Personnel Management	1	1	0	0	0	0
Other Independent Agencies	5	5	0	5	185	180
Total Budget Authority	12,036	17,166	5,130	13,566	22,242	8,676

SOURCE: Congressional Budget Office based on Office of Management and Budget, *Annual Report to Congress on Combating Terrorism* (July 2001).

NOTES: DoD = Department of Defense; FEMA = Federal Emergency Management Agency; NASA = National Aeronautics and Space Administration.

These figures include funds associated with combating terrorism and protecting critical infrastructure according to the Office of Management and Budget's (OMB's) classifications in its July 2001 report. They exclude an estimated $1.25 billion authorized by Public Law 107-71 for aviation security, which is to be offset by fees. Of the roughly $8.7 billion in added funds for 2002, about $8 billion was from emergency supplemental legislation (P.L. 107-117), and about $700 million was added in the 13 regular appropriation acts, according to CBO's estimates.

a. Figures in this column reflect CBO's estimate of homeland security funding for each agency. Actual spending will not be known until agencies make their budget allocations and report to OMB.

b. This figure for DoD and intelligence agencies is different from the one in OMB's report because CBO has included an adjustment made in the President's fiscal year 2002 amended budget request.

Table 7-3.
Estimated 2002 Funding for Combating Terrorism and Protecting Critical Infrastructure, by OMB's Classification of Purpose (In millions of dollars)

Department or Agency	Law Enforcement and Investigative	Research and Development	Preparing for and Responding to Terrorist Acts	Physical Security of National Populace	Physical Security of Government	Critical Infrastructure Protection	Total
DoD and Intelligence Agencies	2,888	303	735	41	3,498	1,850	9,314
Health and Human Services	97	294	2,485	0	94	98	3,067
Justice	1,330	24	987	0	227	66	2,633
State	77	6	7	0	1,427	32	1,549
Transportation	7	101	22	804	13	412	1,360
Energy	1	134	45	1	834	50	1,065
Treasury	292	1	35	65	234	84	711
Agriculture	12	102	51	0	174	2	341
FEMA	0	0	277	0	2	2	281
Postal Service	0	0	0	250	0	0	250
Legislative Branch	0	0	0	0	232	0	232
NASA	0	0	0	0	89	137	226
General Services Administration	14	0	2	0	185	10	210
District of Columbia	0	0	135	39	26	0	200
Interior	5	0	1	2	89	32	128
Judiciary	0	0	0	0	105	0	105
Social Security Administration	0	0	0	0	4	101	105
Environmental Protection Agency	0	8	8	39	36	2	93
Commerce	12	4	0	0	13	42	71
Executive Office of the President	0	0	17	0	8	25	50
Veterans Affairs	0	0	0	0	2	22	24
Labor	0	0	0	0	0	23	23
International Assistance	0	0	1	0	11	0	12
Education	0	0	0	0	0	9	9
Other Independent Agencies	2	0	0	4	3	175	185
Total Budget Authority	4,737	977	4,807	1,245	7,305	3,172	22,242
Percentage of Total Budget Authority	21	4	22	6	33	14	100
Memorandum:							
President's Request for 2002	3,694	511	864	283	5,726	2,488	13,566
Amounts Added After September 11	1,043	466	3,943	962	1,578	684	8,676[a]

SOURCE: Congressional Budget Office based on Office of Management and Budget, *Annual Report to Congress on Combating Terrorism* (July 2001).

NOTES: DoD = Department of Defense; FEMA = Federal Emergency Management Agency; NASA = National Aeronautics and Space Administration.

These figures include funds associated with combating terrorism and protecting critical infrastructure according to the Office of Management and Budget's (OMB's) classifications in its July 2001 report. They exclude an estimated $1.25 billion authorized by Public Law 107-71 for aviation security, which is to be offset by fees.

These figures reflect CBO's estimates of homeland security funding for each agency. Actual spending will not be known until agencies make their budget allocations and report to OMB.

a. Of the roughly $8.7 billion in added funds for 2002, about $8 billion was from emergency supplemental legislation (P.L. 107-117), and about $700 million was added in the 13 regular appropriation acts, according to CBO's estimates.

sies abroad. The Department of Energy expects to use its share of the funding to protect its facilities and safeguard nuclear weapons materials.

Twenty-two percent, or $4.8 billion, of the $22.2 billion will be used to prepare for and respond to terrorist acts. HHS and the Department of Justice received the majority of those funds. HHS received about $2.5 billion to purchase pharmaceuticals and vaccines, provide grants to state and local health departments, and conduct other related activities. The Department of Justice received almost $1 billion for activities such as grants and training for local law enforcement.

Another 21 percent, or $4.7 billion, of the 2002 appropriations for homeland security will be used for law enforcement and investigative activities. DoD and the intelligence agencies and the Department of Justice received almost 90 percent of the money allotted to this category.

Of the $40 billion appropriated as emergency supplemental funds, CBO has classified $13.1 billion as devoted to combating terrorism and protecting critical infrastructure. The remaining $26.9 billion ($14.9 billion in 2001 and $12 billion in 2002) was appropriated for items such as disaster relief for New York City and the Pentagon, foreign humanitarian assistance, and military operations in Afghanistan, which, while directly related to the September 11 terrorist attacks, fall outside of the adopted definition of homeland security (see Table 7-4). Some or all of those activities could be included if the Congress or the Administration chose a broader definition of homeland security. (See Box 7-2 for more information on federal funding going to New York City.)

Almost $24 billion of the $26.9 billion is for two activities—disaster relief and military operations in Afghanistan. Of that $24 billion, $11.9 billion is for disaster relief, which includes recovery of the disaster sites, economic aid to affected businesses, and medical and financial relief for victims of the September 11 attacks. The Federal Emergency Management Agency (FEMA) received $6.4 billion of the money for disaster relief, the bulk of which will go to New York City. An additional $2.7 billion was appropriated to the Department of Housing and Urban Development, much of which was for block grants to affected New York City businesses. DoD received about $1 billion to rebuild the Pentagon, including relocating damaged offices.

Another $11.9 billion has been allocated for direct and indirect military operations for the war in Afghanistan as well as an increase in global intelligence activities related to the war on terrorism. (That figure is CBO's rough estimate because related activities—such as domestic combat air patrols and the activation of reserves by DoD, which CBO classifies under Physical Security of the National Populace, one of the purposes that OMB cites for combating terrorism—are difficult to break out in the Administration's pertinent documents.)

About $840 million of the roughly $1.7 billion classified in Table 7-4 as "other" spending is associated with border enforcement activities of the Immigration and Naturalization Service, the Customs Service, and the Animal and Plant Health Inspection Service. Another $150 million is for the Department of Energy's nonproliferation activities in the former Soviet Union. Like items mentioned above, these activities could easily be considered as combating terrorism under a broader definition.

The issue of whether to consider border enforcement activities as combating terrorism highlights the problem of determining where to draw the line in examining the total costs for combating terrorism as well as the difficulty and subjectivity of an accounting of homeland security funding. Expanding the scope of the definition to include border enforcement activities would add more than $13 billion each year that is not now captured within the adopted definition. About $10 billion of that $13 billion consists of appropriations made to agencies such as the Animal and Plant Health Inspection Service, the Immigration and Naturalization Service, the Customs Service, the Coast Guard, and the Federal Aviation Administration. The remaining $3 billion comes from fees collected by the Customs Service and the new Transportation Security Administration.

In addition to the 13 appropriation acts and the emergency supplemental package, the Congress provided security and disaster relief funding for 2002 in four other acts (see Table 7-5). The Air Transporta-

Table 7-4.
Emergency Supplemental Appropriations Conveyed in Public Laws 107-38 and 107-117, by Activity (In millions of dollars)

Department or Agency	Combating Terrorism	Aviation and Airport Economic Assistance	Disaster Relief	Foreign Humanitarian and Economic Assistance	Direct and Indirect Military Operations	Other	Total
DoD and Intelligence Agencies	4,053	0	1,078	125	11,890	402	17,547
FEMA	245	0	6,357	0	0	0	6,602
Health and Human Services	2,684	0	260	0	0	0	2,944
Housing and Urban Development	0	0	2,701	0	0	0	2,701
Justice	1,617	0	88	0	0	494	2,199
Transportation	1,509	140	287	0	0	0	1,935
International Assistance	5	0	0	952	0	5	962
Treasury	292	9	134	0	0	265	701
Postal Service	425	0	250	0	0	0	675
Legislative Branch	605	0	24	0	0	4	633
Agriculture	248	0	0	95	0	119	462
State	156	0	0	128	0	144	428
Energy	226	0	0	0	0	148	374
Labor	0	0	250	0	0	0	250
District of Columbia	206	0	2	0	0	0	208
Environmental Protection Agency	88	0	88	0	0	0	176
Executive Office of the President[a]	130	0	0	0	0	36	166
General Services Administration	103	0	32	0	0	0	135
Interior	122	0	0	0	0	0	122
Judiciary	116	0	0	0	0	0	116
NASA	109	0	0	0	0	0	109
Commerce	16	0	8	0	0	5	29
Education	0	0	10	0	0	0	10
Social Security Administration	4	0	4	0	0	0	8
Veterans Affairs	2	0	0	0	0	0	2
Other Independent Agencies	178	0	289	0	0	48	516
Total Budget Authority	13,137	149	11,862	1,300	11,890	1,669	40,000

SOURCE: Congressional Budget Office.

NOTES: DoD = Department of Defense; FEMA = Federal Emergency Management Agency; NASA = National Aeronautics and Space Administration.

For several agencies, the amounts for various activities represent CBO's best estimates. For instance, activities such as combat air patrols and the activation of reserves by DoD are difficult to break out in the Administration's pertinent documents. Some agencies —for example, the Postal Service—must submit a plan before funds are released.

a. The figures for the Executive Office of the President include $27 million in funds that are unreleased pursuant to Public Law 107-38.

tion Safety and System Stabilization Act (P.L 107-42) provided $7.6 billion for loan guarantees, insurance, and other financial assistance for the airline industry, as well as $5.4 billion for financial assistance to victims of the terrorist attacks in New York; Washington, D.C.; and Pennsylvania (categorized as disaster relief in Table 7-5). Of that $5.4 billion, about $750 million will be paid out in 2002, CBO estimates.

The USA PATRIOT Act (P.L. 107-56) will increase federal payments to families of public safety officers killed in the line of duty. CBO estimates that in 2002 the act will increase outlays by about $104

Box 7-2.
Federal Spending to Aid New York City After the September 11 Attacks

According to the Congressional Budget Office's (CBO's) estimates, of the $40 billion of emergency supplemental appropriations provided by the 2001 Emergency Supplemental Appropriations Act for Recovery from and Response to Terrorist Attacks on the United States (Public Law 107-38) and the Department of Defense and Emergency Supplemental Appropriations for Recovery from and Response to Terrorist Attacks on the United States Act, 2002 (P.L. 107-117), about $10.2 billion is for assistance to New York City, providing both support to businesses and individuals and support to state and local governments. Disaster relief accounts for the largest portion of the spending, followed by economic assistance, which is mostly loans and assistance to businesses affected by the attacks. Other aid includes improvements and repairs to infrastructure, such as roads and mass transit; unemployment assistance to displaced workers; and health assistance and monitoring.

Additional funds from the $40 billion will also benefit New York City. For instance, about $100 million will be spent to relocate and reconstitute federal offices destroyed in the attacks. Also, New York City is likely to receive some portion of about $1 billion appropriated in the form of grants and other assistance to state and local law enforcement and other emergency personnel.

Other laws provide compensation for victims—some of which will go to the families who lost relatives in the attacks in Pennsylvania and at the Pentagon but the majority of which will go to families who lost relatives in the World Trade Center attacks. According to CBO's estimates, the Air Transportation Safety and System Stabilization Act (P.L. 107-42), the USA PATRIOT Act (P.L. 107-56), and the Victims of Terrorism Tax Relief Act (P.L. 107-134) provide for about $5.8 billion in such compensation over the 2002-2011 period.

In accordance with the Deficit Control Act, CBO's baseline inflates budget authority from the level appropriated in 2002. Thus, the $7.2 billion appropriated in 2002 for disaster relief for New York City is inflated through 2012 in the baseline. (See Box 4-1 in Chapter 4 for a more thorough discussion of the treatment of the discretionary emergency appropriations for 2001 and 2002 within the baseline.)

Emergency Supplemental Appropriations for New York City, Conveyed in Public Laws 107-38 and 107-117 (In millions of dollars)

	Fiscal Year 2001 (P.L. 107-38)	Fiscal Year 2002 (P.L. 107-117)	Total Federal Assistance to New York City
Disaster Relief	2,000	4,357	6,357
Economic Assistance	800	2,150	2,950
Other	145	709	854
Total	2,945	7,215	10,161

SOURCE: Congressional Budget Office.

NOTE: These figures do not include spending to relocate, reconstitute, or assist federal offices destroyed in the September 11 attacks or approximately $5.8 billion ($1 billion provided in 2002) conveyed by other laws to compensate victims over the 2002-2011 period (see Table 7-5).

Table 7-5.
Additional Resources for Homeland Security Provided in Other Legislation for 2001 and 2002
(In millions of dollars)

	Physical Security of National Populace	Aviation and Airport Economic Assistance	Disaster Relief[a]	Total
Air Transportation Safety and System Stabilization Act (P.L. 107-42)[b]	0	7,600	750[b]	8,350
USA PATRIOT Act (P.L. 107-56)	0	0	70[c]	70
Aviation and Transportation Security Act (P.L. 107-71)	1,250[d]	0	0	1,250
Victims of Terrorism Tax Relief Act (P.L. 107-134)	0	0	190[e]	190
Total	1,250	7,600	1,010	9,860

SOURCE: Congressional Budget Office.

NOTE: These figures do not include outlays beyond 2002.

a. All figures for disaster relief are for compensating victims.

b. Only the estimated payments for 2002 are shown. The law's total cost for compensating victims will be about $5.4 billion over the 2002-2006 period, CBO estimates.

c. The law has other purposes, which CBO estimates will cost an additional $34 million in 2002.

d. This amount provided for airline security will be offset by fees.

e. This figure represents a combination of lower tax revenues ($188 million) and increased outlays ($2 million); only the estimated payments for 2002 are shown. The law's total 10-year cost for compensating victims will be about $360 million, CBO estimates.

million, $70 million of which is expected to go to families of officers killed on September 11.

The Aviation and Transportation Security Act (P.L. 107-71) was enacted to improve transportation security through the establishment of the Transportation Security Administration, which will coordinate all domestic aviation security. So far for fiscal year 2002, $1.25 billion has been appropriated for that function, and CBO estimates that the full amount will be offset by fees paid by passengers and air carriers.

Finally, the Victims of Terrorism Tax Relief Act (P.L. 107-134), cleared by the Congress on December 20, 2001, provides specialized income tax treatment for individuals who died as a result of the recent terrorist attacks. CBO estimates that implementing this law will cost about $190 million in 2002 (both in terms of lost revenues and outlays) and about $360 million over the 2002-2011 period.

The amounts for aviation and airport economic assistance conveyed in the emergency supplemental appropriations and in the aviation legislation (that is, the amounts shown in both Tables 7-4 and 7-5) sum to about $7.7 billion in authorizations and appropriations for the activity in 2001 and 2002. Summing the amounts for disaster relief yields a figure of $12.9 billion for 2001 and 2002.

State and Local Spending

Although data for spending by state and local governments are not yet available, in supplemental appropriations the federal government has provided signifi-

cant assistance to those governments for homeland security. That assistance is included in totals for federal spending on homeland security discussed earlier in this chapter, but CBO notes it separately here in order to highlight functions that various levels of government support through their spending. That said, state and local governments continue to provide and fund services related to homeland security in their traditional areas of responsibility: law enforcement, fire safety and control, emergency response, and public health.

Supplemental appropriations for 2002 provided a significant source of federal funding for state and local governments. CBO has identified over $7 billion in such assistance. It takes the form of either grants to state and local governments or increased funding for federal programs that directly support ongoing state and local activities, such as specialized training for emergency response workers. Well over half of the $7 billion can be attributed to public assistance awards through the Federal Emergency Management Agency. Initial estimates by CBO indicate that at least $4.3 billion in assistance will be provided to the City of New York or the Metropolitan Transit Authority to reclaim the World Trade Center site and to rebuild transit systems and government buildings. The supplemental appropriations provided another $1 billion to the Department of Health and Human Services for grants to state and local governments to increase their ability to effectively respond to biological and chemical threats. Other items in the supplemental funds include grants for law enforcement training and preparedness, increased port security, and reimbursement for losses resulting from airport closures. Such activities are ones that CBO could easily identify in the budget and appropriation acts as clear examples of federal support available to state and local governments for homeland security.

In identifying the subset of federal spending targeted either for grants to state and local governments or for the direct support of those governments' activities, CBO did not include several programs that may provide some residual, yet significant, benefit to those governments. For example, CBO did not include funding for federal emergency response teams that may augment state and local activities. Similarly, CBO did not include funding for federal data collection and information systems that track and report disease outbreaks or for additional deployments by the Federal Bureau of Investigation for the Winter Olympics in Salt Lake City. However, all of those items, as well as the $7 billion in assistance that CBO identifies as directly benefiting state and local governments, are included in the federal totals discussed earlier.

Private Spending

Although the bulk of spending for security is done by the government, the private sector contributes a significant portion as well. One academic study estimates that private businesses spent roughly $40 billion on security in 2001, or about 10 percent of all crime-induced spending in the economy.[7] Nearly half of the total spending for security by the private sector is composed of a single category, security guards and other protective service employees. The rest of the spending falls into such categories as alarm systems, computer security, locks and safes, surveillance cameras, safety lighting, and guard dogs. Although most of that spending is undertaken to prevent crime rather than terrorist threats, it should reduce the risk of all types of attacks.

Businesses and consumers have incurred and will continue to incur other costs, as markets adjust to the perception of a riskier world and participants take steps to reduce their risks. Air travelers face higher costs as federal taxes associated with flying have increased. Those consumers and many producers who rely on shipments that cross U.S. land borders or enter U.S. ports also are burdened with costly longer waiting times in transit to allow for security checks. And as discussed in Chapter 5, businesses seeking insurance against the consequences of future terrorist attacks will pay higher premiums or pay the less visible cost of accepting more risks.

7. David Anderson, "The Aggregate Burden of Crime," *Journal of Law & Economics*, vol. 42 (October 1999). The values were adjusted from 1997 dollars to 2001 dollars using the GDP price index.

Conclusion

Each year, the Congress is confronted with the task of choosing and supporting national priorities. In the aftermath of the September 11 attacks, funding homeland security initiatives has become a top priority. But budgetary resources are limited, and the benefits of increased funding for homeland security must be weighed against other budgetary choices. As illustrated by the spending that is already taking place, the scope over which priorities might be redefined is exceptionally wide, encompassing many agencies of the federal government, state and local governments, and the private sector. The task of coordinating, financing, planning, and putting integrated programs into place is correspondingly great. Because the political and economic systems in the United States are decentralized, the country has few opportunities beyond the federal budget process—and the budget resolution in particular—to plan major changes in priorities and put in place the programs necessary to carry them out.

The recent debate on airline security illustrates the difficult issues that the Congress will face in crafting and funding policies intended to increase homeland security. One key element of that debate was whether to make airport security a federal responsibility or to leave it in the hands of the airlines. The Aviation and Transportation Security Act resolved this issue by shifting primary responsibility to the federal government. It also authorized the assessment of fees on passengers and airlines to help pay for the federal workforce and equipment necessary to screen passengers and their baggage.

The issues that arose during the debate about aviation security will return, and new ones will come up as the Congress considers additional homeland security proposals. A recurring issue is who should pay for increased government spending on homeland security. Should the costs be spread broadly over society or focused on the recipients of the government benefits? A second issue is which federal agencies should do what—for example, should the role of the military be expanded if its skills and equipment could be used effectively in activities currently undertaken by civilian or nonfederal entities? A third issue is whether the proposal in question only enhances homeland security or whether it has additional benefits. Some measures to address terrorism—for instance, most proposed improvements in the public health system or better training for emergency personnel—have additional benefits. A fourth issue is whether improvements in homeland security should be administered by the federal government, state and local governments, or the private sector—choices that elicit different views about the appropriate roles of different levels of government and the private sector. Thus, the policy and spending decisions that the Congress faces present a special challenge because of their complexity and the difficult trade-offs they involve.

Appendixes

Appendix A

How Changes in Assumptions Can Affect Budget Projections

The federal budget is highly sensitive to economic conditions. Revenues depend on taxable income—including wages and salaries, interest and other nonwage income, and corporate profits—which generally moves in step with overall economic activity. The benefits of many entitlement programs are pegged to inflation either directly (as with Social Security) or indirectly (as with Medicaid). In addition, the Treasury regularly refinances portions of the government's debt at market interest rates, so the level of federal spending for interest on that debt is directly tied to such market rates.

To illustrate how assumptions about key economic factors can affect federal budget projections, the Congressional Budget Office (CBO) uses what it terms rules of thumb. Those rules are rough orders of magnitude for gauging how changes in individual economic variables, taken in isolation, will affect the budget's totals.

The variables that figure in those rules of thumb are real (inflation-adjusted) growth, interest rates, and inflation. For real growth, CBO's rule shows the effects of a rate that is 0.1 percentage point lower each year, beginning in January 2002, than the assumed rate of growth underlying CBO's baseline projections (that rate and other economic assumptions are outlined in Chapter 2). The rules for interest rates and inflation assume an increase of 1 percentage point over the rates in the baseline, also starting in January 2002.

Each rule is roughly symmetrical. Thus, the effects of higher growth, lower interest rates, or lower inflation would have about the same magnitude as the effects shown in this appendix, but with the opposite sign.

The calculations that appear in this appendix are merely illustrative of the impact that changes in assumptions can have. CBO uses variations of 0.1 percentage point or 1 percentage point for the sake of simplicity; they should not be viewed as typical forecasting inaccuracies. (For details about the accuracy of CBO's past budget projections, see Chapter 5.) Furthermore, readers should be careful about extrapolating from small, incremental rule-of-thumb calculations to much larger changes, because the magnitude of the effect of a larger change is not necessarily a multiple of a smaller change. Moreover, budget projections are subject to other kinds of inaccuracies that are not directly related to economic forecasting.

In addition to the rules of thumb related to economic projections, CBO presents two rules that deal with the levels of projected surpluses. The first illustrates the impact on projections of discretionary spending of adding $10 billion to CBO's estimate of budget authority for 2002. The second shows the effect on net interest payments of borrowing $10 billion less than anticipated.

Lower Real Growth

Strong economic growth improves the federal budget's bottom line, and weak economic growth wors-

ens it. The first economic rule of thumb outlines the budgetary impact of economic growth that is slightly weaker than CBO's baseline assumes. Specifically, the rule illustrates the effects of growth rates for real gross domestic product (GDP) that are lower by 0.1 percentage point every year from January 2002 through 2012.

Those effects differ from the effects of a cyclical change, such as a recession, which are much shorter-term in nature. (For scenarios involving cyclical economic changes, see Chapter 5.) Moreover, CBO's rule for GDP uses 0.1 percentage point—rather than the full percentage point used in the interest rate and inflation rules—because projected real growth is unlikely to differ from actual growth by such a large amount over the next 10 years. A difference as large as 1 percentage point might occur for a few years, however, as a result of a cyclical change.

The baseline projects that real GDP will grow by an average of about 3.1 percent a year. Subtracting 0.1 percentage point from that rate each year means that the level of GDP would lie roughly 1 percent below CBO's baseline assumption by 2012.

A lower rate of growth for GDP would have a number of budgetary implications. For example, it would suggest slower growth of taxable income, leading to shortfalls in revenues that would mount from $1 billion in 2002 to $42 billion in 2012 (see Table A-1). Cumulatively, revenues would be $196 billion lower over the 2003-2012 period than CBO now projects. Lower growth of GDP would also mean that the government borrowed more and incurred greater interest costs on its debt. Those debt-service costs would be minimally affected during the first few years of the projection period, but in later years, those costs would gradually rise, by as much as $11 billion in 2012. Altogether, those changes (along with small effects on the earned income tax credit and Medicare) would reduce the projected surplus for 2012 by $53 billion. In sum, if growth of real GDP was 0.1 percentage point a year lower than the rate assumed in CBO's baseline, surpluses would be a total of $51 billion smaller over the 2003-2007 period and $234 billion smaller over the 2003-2012 period.

Higher Interest Rates

CBO's second rule of thumb illustrates the sensitivity of the budget to changes in interest rates, which affect the flow of interest to and from the federal government. When the budget is in surplus, the Treasury uses some of its income to reduce debt held by the public, but it also refinances some debt at market interest rates. When the budget is in deficit, the Treasury must borrow additional funds from the public to cover any shortfall.

If interest rates were 1 percentage point higher than in the baseline for all maturities of debt each year and all other economic variables were unchanged, interest costs would be approximately $6 billion higher in 2002 (see Table A-1). That initial boost in interest costs would be fueled largely by the extra costs of refinancing the government's short-term Treasury bills (those with maturities of one year or less), which make up about 25 percent of the marketable debt. More than $730 billion of Treasury bills are currently outstanding, all of which mature within the next year.

The bulk of marketable debt, however, consists of medium-term notes and long-term bonds, which were issued with maturities of two to 30 years. As those longer-term securities mature, they will be replaced with new issues (the Treasury has stopped issuing 30-year bonds, but it continues to issue two-, five-, and 10-year notes). Thus, the budgetary effects of a change in interest rates would mount; the effect of interest rates that were 1 percentage point higher each year than in the baseline would peak at $22 billion in 2006 and 2007.

After 2007, however, the effect of higher interest rates would diminish. As projected baseline surpluses continued to rise, the stock of debt held by the public would be reduced, so fewer securities would be expected to roll over each year. By 2012, the effect of higher interest rates would drop to $11 billion, but the effect of increased debt over the 10-year period would add another $16 billion to interest costs in that year. In sum, the interest rate rule of thumb would cause the cumulative surplus to decline by $117 billion from 2003 through 2007 and by $267 billion from 2003 through 2012.

Table A-1.
Estimated Effects of Selected Economic Changes on CBO's Budget Projections (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Growth Rate of Real GDP Is 0.1 Percentage Point Lower per Year													
Change in Revenues	-1	-3	-6	-9	-12	-16	-20	-24	-29	-35	-42	-46	-196
Change in Outlays													
Net interest (Debt service)	*	*	*	1	1	2	3	5	6	9	11	5	39
Mandatory spending	*	*	*	*	*	*	*	*	*	*	*	*	-1
Total	*	*	*	1	1	2	3	5	6	8	11	5	38
Change in Surplus	-1	-3	-6	-10	-13	-18	-23	-29	-35	-43	-53	-51	-234
Interest Rates Are 1 Percentage Point Higher per Year													
Change in Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0
Change in Outlays													
Higher rates	6	15	19	21	22	22	21	20	18	16	11	99	185
Debt service	*	1	2	3	5	7	9	11	13	15	16	18	81
Total	6	16	21	24	27	29	30	31	31	30	27	117	267
Change in Surplus	-6	-16	-21	-24	-27	-29	-30	-31	-31	-30	-27	-117	-267
Inflation Is 1 Percentage Point Higher per Year													
Change in Revenues	12	35	59	86	114	147	185	229	281	339	405	441	1,880
Change in Outlays													
Higher rates	7	17	21	22	23	24	23	22	20	17	12	107	200
Debt service	*	*	*	-1	-2	-4	-6	-9	-14	-20	-30	-8	-87
Discretionary spending	0	4	10	18	25	34	43	52	63	73	84	91	407
Mandatory spending	*	10	22	36	50	66	84	103	124	148	171	183	814
Total	7	31	52	74	97	120	144	168	193	218	238	373	1,334
Change in Surplus	5	4	7	12	17	27	41	61	88	121	167	68	546

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

Higher Inflation

The third rule of thumb shows the budgetary impact of inflation that is 1 percentage point higher each year than the baseline projects. The effects of inflation on federal revenues and outlays partly offset each other. On the one hand, higher inflation and its assumed effects on wages and other income lead to greater revenues. On the other hand, higher inflation increases spending for many benefit programs (although with a lag), as well as baseline projections of discretionary spending. In deriving this rule of thumb, CBO also assumes that nominal interest rates rise in step with inflation, thus increasing the cost of financing the government's debt.

An increase of 1 percentage point per year in projected inflation from 2002 through 2012 would boost revenues by $405 billion and outlays by $238 billion in 2012 (see Table A-1). The combined effect of those changes would be to increase the surplus in 2012 by $167 billion. Over the 2003-2007 period, the projected surplus would grow by $68 billion; over the 2003-2012 period, it would increase by $546 billion.

Higher Discretionary Budget Authority

Discretionary spending is not directly related to economic conditions but rather to the level of appropriations provided by the Congress and the rate at which such appropriations are spent. CBO's baseline projections assume that appropriations for the current year—in this case, 2002—grow at the specified rates of inflation in the years to follow (as specified by the Balanced Budget and Emergency Deficit Control Act of 1985). Nevertheless, it may be useful to estimate the sensitivity of discretionary outlays (and thus the surplus or deficit) to changes in discretionary budget authority that are unrelated to changes in economic assumptions.

Budget authority is the legal authority to incur financial obligations that will result in immediate or future outlays of federal government funds. The Congress appropriates such budget authority for discretionary programs annually in appropriation acts; outlays from that authority may occur in the year that the authority is granted or in subsequent years. Fast-spending activities (such as meeting payrolls or directly providing services) generally expend most of their budget authority in the year that it is granted; slow-spending activities (such as procuring weapons or building roads and other infrastructure) spend their authority over a longer period of time.

As a result, changes in budget authority for different activities do not immediately translate into equal changes in outlays. CBO estimates that, on average, approximately 60 percent of budget authority for discretionary spending is spent in the year that it is granted. Therefore, an additional $10 billion in budget authority in 2002 would lead to $6 billion more in outlays that year. The remaining $4 billion would be spent over the next few years.

Under the rules that govern CBO's baseline, providing $10 billion more in budget authority in 2002 would lead to an increase of $13 billion in projected budget authority in 2012 (see Table A-2). Spending that additional budget authority would lead to $51 billion more in outlays between 2003 and 2007 and $111 billion more over the 2003-2012 period.

Table A-2.
Estimated Effects on CBO's Baseline of Increasing Discretionary Budget Authority by $10 Billion in 2002
(In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Budget Authority	10	10	11	11	11	11	12	12	12	13	13	54	116
Outlays	6	9	10	10	11	11	11	12	12	12	13	51	111

SOURCE: Congressional Budget Office.

NOTE: CBO assumes that budget authority grows at the rates of inflation specified in the Balanced Budget and Emergency Deficit Control Act of 1985 (the GDP deflator and employment cost index for wages and salaries).

Increase in the Surplus or Decrease in the Deficit

CBO's projections of net interest costs are consistent with its projections of future interest rates and debt held by the public. Changes from year to year in debt held by the public depend mostly on the size of the surplus or deficit. If surpluses or deficits differed from those projected in the baseline—for whatever reason—interest costs would also change.

A one-time decrease of $10 billion in the deficit in 2002 would enable the Treasury to redeem an additional $10 billion in debt that year, compared with the assumption in CBO's baseline. Removing that debt from the outstanding stock would save $0.1 billion in net interest in 2002 and nearly $1 billion a year by 2012 (see Table A-3). (Savings in later years would stem from the compounding effect of debt reduction in 2002.)

Interest savings would be even greater if the $10 billion decrease in borrowing was sustained in every year through 2012. In that case, savings from additional debt reduction and the compounding effect of such savings would increase the projected surplus in 2012 by $7.4 billion.

Table A-3.
Estimated Savings in Net Interest from Borrowing $10 Billion Less (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total, 2003-2007	Total, 2003-2012
Savings from Borrowing $10 Billion Less in 2002 Only	-0.1	-0.4	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-2.7	-6.6
Savings from Borrowing $10 Billion Less Each Year	-0.1	-0.7	-1.3	-2.0	-2.6	-3.3	-4.1	-4.8	-5.6	-6.5	-7.4	-9.9	-38.3

SOURCE: Congressional Budget Office.

Appendix B

Changes in CBO's Baseline Since August 2001

Since January 2001, the cumulative budget surplus that the Congressional Budget Office (CBO) is projecting for the 2002-2011 period, under current policies, has dropped by $4 trillion. Nearly $1.8 trillion of that decline stems from changes made to CBO's baseline projections since the previous baseline was published in August 2001 (see Table B-1).[1] In the current baseline, the surpluses projected last summer have diminished or, for some years, disappeared. The reasons for those reductions are fairly evenly divided among legislative, economic, and technical factors.

Budget Totals in 2001

In August, CBO estimated that the surplus for fiscal year 2001 would total $153 billion; the actual surplus turned out to be $26 billion less. About two-thirds of that difference stemmed from lower-than-expected revenues, primarily in the category of individual income tax receipts.[2]

On the outlay side, two events produced notable differences from the August baseline. First, in September, the Treasury recorded outlays of $12 billion to reverse most of the downward credit reestimate it had recorded in July for loans made by the Federal Communications Commission (FCC) related to the auction of spectrum licenses. That reversal reflected a change in the Administration's assessment of the likely outcome of litigation involving borrowers that had filed for bankruptcy. Second, enactment of the Air Transportation Safety and System Stabilization Act in September increased outlays in 2001. That law provided $5 billion in grants to U.S. airlines in the aftermath of the September 11 terrorist attacks. About $2.3 billion of the grants were disbursed before the end of the fiscal year.

Changes in Projections for the 2002-2011 Period

CBO's baseline projections are intended to be a neutral benchmark against which policymakers can measure the effects of possible changes in tax and spending policies. Thus, rather than predicting future budgetary outcomes, the baseline projects what federal revenues and spending would look like over five or 10 years if current policies remained the same.

At least twice each year, CBO updates its baseline to reflect new legislation (which alters the definition of current policies), changes in the outlook for

1. Those projections appeared in Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2001).

2. Actual revenues in 2001 fell short of CBO's published estimate by more than $20 billion. However, CBO recorded $3.6 billion in advance refunds (included as part of last June's tax-cut law) as outlays in its baseline because those refunds were projected to exceed taxpayers' 2001 tax liabilities. The Treasury, by contrast, recorded all advance refunds as reductions in revenues, although that action was not consistent with normal budgetary practices; had CBO done the same, the revenue difference would have been $17 billion rather than $20 billion.

Table B-1.
Changes in CBO's Baseline Projections of the Surplus Since August 2001 (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2006	Total, 2002-2011
Total Surplus as Projected in August 2001	176	172	201	244	289	340	389	450	507	628	1,082	3,397
Changes to Revenue Projections												
Legislative	*	-2	-2	-3	-3	-2	-2	-2	-2	-2	-11	-19
Economic	-105	-80	-48	-44	-45	-48	-52	-58	-61	-67	-322	-609
Technical	-46	-43	-51	-50	-49	-45	-41	-36	-32	4	-238	-388
Total Revenue Changes	-151	-125	-101	-97	-96	-95	-95	-96	-95	-64	-571	-1,016
Changes to Outlay Projections												
Legislative												
Discretionary	34	42	44	46	48	49	50	50	51	52	214	467
Mandatory												
Debt service	1	3	6	9	12	16	20	23	28	32	30	149
Other	4	4	3	1	1	1	1	*	*	*	12	14
Subtotal, mandatory	5	7	9	10	13	17	20	24	28	32	42	163
Subtotal, legislative	39	48	53	56	61	66	70	74	79	85	257	630
Economic												
Discretionary	1	1	*	1	1	2	2	3	4	4	3	19
Mandatory												
Unemployment insurance	9	10	3	1	*	*	*	*	*	*	24	23
Medicare	-1	-2	-4	-5	-5	-4	-4	-4	-4	-4	-17	-36
Social Security	-2	-5	-6	-6	-7	-7	-7	-8	-10	-11	-25	-69
Net interest (Rate effects)	-15	-13	-5	-3	-2	-2	-1	-1	-1	-1	-38	-43
Debt service	1	6	10	12	15	17	20	24	28	32	44	165
Other	1	*	-2	-3	-3	-3	-3	-3	-3	-4	-7	-22
Subtotal, mandatory	-6	-5	-4	-3	-2	1	5	8	10	12	-19	18
Subtotal, economic	-5	-4	-3	-3	-1	3	7	12	14	16	-15	37

(Continued)

the economy, and various technical factors. The rest of this appendix outlines the revisions that CBO has made to the baseline since last August, when its previous projections were published.

Legislative Changes Since August

Laws enacted in the past six months are projected to reduce the cumulative surplus over the 2002-2011 period by $649 billion. Most of that change stems from higher discretionary spending and the costs of servicing the larger federal debt that will result from that spending.

Revenues. Legislation enacted since August is expected to decrease revenues only modestly over the next 10 years—by a total of about $19 billion (see Table B-2). The largest decline comes from the Investor and Capital Markets Fee Relief Act, which lowers fees charged by the Securities and Exchange Commission.

Discretionary Spending. In its August baseline, CBO extrapolated discretionary budget authority from the appropriations enacted for 2001 and calculated the outlays that would flow from such budget authority. In that baseline, budget authority for 2002 totaled $670 billion. However, the appropriation acts

Table B-1.
Continued

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2006	Total, 2002-2011
Changes to Outlay Projections (Continued)												
Technical												
Discretionary	8	4	2	2	2	1	2	2	2	2	18	27
Mandatory												
Medicare	-2	-3	-4	-5	-8	-10	-11	-13	-15	-25	-21	-96
Medicaid	-1	*	1	2	2	4	4	5	6	7	3	30
Social Security	-1	*	*	*	1	2	4	6	11	16	-1	38
Unemployment insurance	3	3	1	1	2	2	2	2	3	3	9	21
Universal Service Fund	-1	-1	-7	-8	-7	-7	-7	-7	-7	-7	-23	-60
Spectrum auctions	-5	5	-3	-10	*	0	0	0	0	0	-13	-13
Net interest	3	3	3	6	8	8	7	8	8	9	23	64
Debt service	1	3	7	9	12	15	19	22	25	27	32	139
Other	5	2	-2	-6	-6	-5	-6	-6	-7	-7	-7	-38
Subtotal, mandatory	3	11	-6	-11	4	9	12	17	23	22	2	86
Subtotal, technical	12	16	-3	-9	5	11	14	19	25	24	20	113
Total Outlay Changes	45	60	46	44	65	79	91	104	118	126	262	779
Total Impact on the Surplus	-197	-186	-148	-141	-161	-174	-186	-200	-213	-190	-832	-1,795
Total Surplus as Projected in January 2002	-21	-14	54	103	128	166	202	250	294	439	250	1,602
Memorandum:												
Total Legislative Changes	-39	-50	-55	-59	-64	-67	-72	-76	-81	-87	-267	-649
Total Economic Changes	-100	-77	-45	-42	-44	-51	-59	-70	-75	-83	-307	-645
Total Technical Changes	-58	-59	-47	-41	-54	-56	-55	-55	-57	-20	-258	-501

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

for 2002 actually provided a total of $711 billion in budget authority (including $20 billion in emergency supplemental spending in response to the September 11 attacks). That additional $41 billion in budget authority for 2002 is extrapolated throughout the projection period in CBO's new baseline.

An earlier $20 billion in emergency supplemental funding, provided in September, also contributes to the increase in projected discretionary outlays for the next few years. That budget authority was enacted in fiscal year 2001, so it was not carried forward into the baseline projections for future years. But because it was provided so late in the fiscal year, most of the outlays from that budget authority will occur in 2002 and beyond—an estimated $14 billion in 2002, $4 billion in 2003, and $1 billion in both 2004 and 2005.

Overall, projected outlays for discretionary programs during the 2002-2011 period are $467 billion higher than they were in the August baseline because of new legislation. Defense spending accounts for $229 billion of that increase and nondefense programs for the other $238 billion.

Mandatory Spending. Legislative changes to projected mandatory spending since August (excluding

Table B-2.
Changes in CBO's Baseline Projections of Revenues Since August 2001 (In billions of dollars)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total, 2002-2006	Total 2002-2011
Revenues as Projected in August 2001	2,134	2,196	2,307	2,438	2,543	2,663	2,801	2,952	3,103	3,341	11,619	26,479
Legislative Changes												
Miscellaneous Fees	-1	-2	-2	-2	-2	-1	-1	-1	-1	-1	-10	-15
All Other Revenue Sources	1	*	*	*	*	*	*	-1	-1	-1	-1	-3
Total	*	-2	-2	-3	-3	-2	-2	-2	-2	-2	-11	-19
Economic Changes												
Individual Income Taxes	-46	-40	-29	-32	-35	-38	-41	-45	-47	-53	-183	-408
Corporate Income Taxes	-32	-18	-6	*	7	11	14	14	15	16	-48	22
Social Insurance Taxes	-21	-16	-9	-10	-15	-19	-22	-24	-26	-27	-72	-190
All Other Revenue Sources	-5	-6	-4	-3	-2	-2	-2	-3	-3	-3	-20	-33
Total	-105	-80	-48	-44	-45	-48	-52	-58	-61	-67	-322	-609
Technical Changes												
Individual Income Taxes	-45	-40	-35	-29	-26	-20	-14	-8	-3	10	-175	-211
Corporate Income Taxes	1	-3	-10	-13	-15	-16	-17	-18	-18	-19	-39	-127
Social Insurance Taxes	4	3	4	4	4	4	3	3	6	6	20	42
Estate and Gift Taxes	-5	*	-2	-4	-4	-5	-6	-6	-9	15	-14	-24
All Other Revenue Sources	-2	-3	-8	-8	-8	-8	-8	-8	-8	-7	-29	-68
Total	-46	-43	-51	-50	-49	-45	-41	-36	-32	4	-238	-388
Total Changes												
All Revenue Sources	-151	-125	-101	-97	-96	-95	-95	-96	-95	-64	-571	-1,016
Revenues as Projected in January 2002	1,983	2,070	2,206	2,342	2,447	2,568	2,706	2,856	3,008	3,277	11,048	25,464

SOURCE: Congressional Budget Office.

NOTE: * = between -$500 million and $500 million.

debt-service costs) stem primarily from the Air Transportation Safety and System Stabilization Act of 2001. That law aids U.S. passenger and cargo airlines through a combination of grants, federal credit assistance, and reimbursements for some increases in their insurance premiums. It also establishes compensation for families of the victims of the September 11 plane crashes and limits the liability of the air carriers involved in those crashes to the amount of insurance they had for such events. In addition, the law allows air carriers to buy insurance coverage from the federal government and, for a limited time, relieves them of liability for further terrorist acts. CBO estimates that the law will add about $10 billion to outlays over the 2002-2011 period.

Enactment of the Railroad Retirement and Survivors' Improvement Act has increased projected mandatory outlays by about $4 billion over 10 years. Moreover, that law—for the first time—allows some of the holdings of federal trust funds (the Railroad Retirement trust funds) to be invested in corporate stocks and bonds. (For details of how those investments would be treated in the federal budget, see Box 4-3 in Chapter 4.)

The additional $467 billion in discretionary outlays and $14 billion in mandatory outlays over 10 years that are caused by laws enacted since August decrease projected surpluses—and thus increase the amount of federal debt that will remain outstanding. As a result, those changes (plus the relatively small adjustments to revenues) are projected to raise the cost of servicing the debt by $149 billion between 2002 and 2011. All told, enacted laws increased mandatory spending by $163 billion relative to the August baseline.

Economic Changes Since August

CBO recently revised its economic outlook to reflect both the current recession and slightly smaller average rates of growth projected through 2012. Compared with its August forecast, CBO now expects the growth of gross domestic product (GDP) to drop more sharply this year and then rebound in 2003 and 2004. CBO is also projecting lower interest rates and significantly higher unemployment for the next two years than it did last summer.

Those changes in the economic forecast reduce the cumulative surplus projected for the 2002-2011 period by $645 billion. The bulk of that decline, $609 billion, comes from lower projections of revenues. The other $37 billion reflects higher projections of outlays (the net result of increases and decreases in those projections).

Revenues. CBO now estimates that nominal GDP will grow by only 1.6 percent in fiscal year 2002 before rebounding to 5.6 percent in 2003 and 6.1 percent in 2004. Slower growth of GDP (combined with a smaller share of GDP generated by corporate profits) leads to lower revenues. The short-term effects of the economic recession are reflected in drops in revenue projections since August—declines of $105 billion for 2002 and $80 billion for 2003. The anticipated recovery from recession translates into smaller projected revenue losses for 2004 and 2005. After that, however, the fact that CBO now expects real (inflation-adjusted) growth to be 0.1 percent slower per year, on average, than it did last August means that annual revenue projections continue to be $45 billion to $67 billion lower through 2011 than they were in August.

In all, revenue projections for the 2002-2011 period have dropped by roughly $610 billion because of changes in the economic outlook. More than $400 billion of that total is attributable to lower projections of individual income tax receipts. Nearly $200 billion reflects reduced projections of revenues from social insurance (payroll) taxes. Those reductions are both directly related to CBO's lower projections for wages and salaries, on which those taxes are imposed. Relatively small changes in other sources of revenue because of economic revisions roughly offset each other.

Outlays. Recent changes to CBO's economic outlook have a much smaller impact on projected outlays—a net increase of $37 billion over 10 years—than on revenues. But the result is the same: the changes reduce projected surpluses. Over the 2002-2011 period, the increased costs of debt service attributable to economic changes since August outstrip the short-term savings from lower inflation and interest rates.

CBO now expects the unemployment rate in 2002 and 2003 to be higher than it forecast in August (6.0 percent in both years, compared with the 5.1 percent and 5.2 percent forecast last summer). As a result, CBO has increased its projections of unemployment insurance payments—by $9 billion for 2002, $10 billion for 2003, and smaller amounts for 2004 and 2005—and made smaller adjustments to projected spending for other programs, such as Food Stamps and Medicaid.

Most of the other effects of the economic changes (excluding the increase in debt-service costs) reduce projected spending. Projections of Medicare outlays are lower by $4 billion to $5 billion a year beginning in 2004 because of lower expected infla-

tion and real (inflation-adjusted) GDP in the next few years. (Medicare's payment rates for most services are automatically adjusted each year to reflect movement in the prices of inputs; payment rates for services paid under the physician fee schedule are also adjusted to reflect changes in real GDP.)

Ten-year projections of Social Security spending are also lower that they were in August, by a total of $69 billion. Because inflation was lower than expected in 2001, the cost-of-living adjustment effective in January 2002 turned out to be lower than CBO had anticipated. As a result, the base for benefits throughout the projection period has been reduced. (The projected January 2003 cost-of-living adjustment is significantly smaller as well.) In addition, since Social Security benefits are calculated from wages, CBO's projection of lower real wage growth means smaller initial benefits for new beneficiaries in the future.

The government's net interest costs are principally determined by two factors: the stock of outstanding debt and prevailing interest rates. CBO's forecast for interest rates has fallen since August, reducing the projected cost of issuing new debt. Net interest savings from that change are expected to be $15 billion in 2002, $13 billion in 2003, and smaller amounts thereafter, totaling $43 billion over the 2002-2011 period.

Because the recent economic revisions reduce projected surpluses (mainly because of the substantial drop in revenues described above), the stock of federal debt held by the public will no longer decline as quickly as CBO estimated in August. That slowdown adds an estimated $165 billion to debt-service costs through 2011, with most of the expense coming in the later years of that period.

Technical Changes Since August

Technical revisions are defined as any reestimates that are not ascribed to new legislation or to changes in the components of CBO's economic forecast. Overall, technical changes reduce the projected surplus for the 2002-2011 period by $501 billion.

Revenues. Since August, CBO has decreased its revenue projections for the 2002-2011 period by $388 billion because of various technical adjustments to the method for calculating how much revenue the projected level of economic activity will generate. More than $200 billion of that decrease reflects lower projections of individual income tax receipts. The technical factors involved are closely related to the revised economic outlook—most important, revisions to projections of capital gains realizations and adjustments for unexplained shortfalls in tax collections since July, as well as some minor changes to CBO's estimating methods.

Another $127 billion of the technical change affects projections of corporate income taxes. Again, that drop results from lower estimates of corporate capital gains realizations and from tax collections in 2001 that were smaller than CBO would have expected given the economic conditions.

By contrast, technical changes increased the projections for social insurance taxes by $42 billion from 2002 through 2011. That increase is based on information that current collections of Social Security and Medicare taxes are higher, given the level of economic activity, than models had projected. Such extra revenue is expected to persist. It does not raise total projected revenues, however, because it is linked to an offsetting decrease in individual income tax receipts.

Technical changes since August have lowered the 10-year projection for estate and gift tax receipts by $24 billion. That decline largely results from reductions in projected levels of wealth, which help determine how much money is subject to those taxes. However, the decline also reflects a new interpretation of how taxpayers will respond to the changes in tax law scheduled for 2010 and 2011. Under the provisions of the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), calendar year 2010 will be a particularly good year to make taxable gifts, because the tax rates will rise substantially in 2011. The taxes on those gifts would be paid in fiscal year 2011. The additional receipts expected in that year partially offset the decline caused by lower projections of wealth.

Box B-1.
Uncertainty About Credit Reestimates for Spectrum Loans

Radio frequencies are a scarce and valuable resource for wireless and broadcast services. Consequently, federal auctions of licenses to use parts of the electromagnetic spectrum have generated billions of dollars for government coffers. In most cases, auction winners pay cash for their licenses, and those payments are recorded in the budget as offsetting receipts. In the mid-1990s, however, some auction winners borrowed money from the Federal Communications Commission (FCC) to pay for their spectrum licenses. Because those loans are subject to credit reform procedures, the budget records only the net subsidy associated with them, measured on a net-present-value basis over the life of the loans. Estimates of that subsidy have fluctuated dramatically over the past few years because of ongoing litigation and other market factors.

The most widely reported—and perhaps misunderstood—source of uncertainty about those subsidy estimates involves the licenses that were awarded in 1997 to NextWave. That company borrowed $4.9 billion from the FCC to acquire spectrum licenses but later filed for bankruptcy. The FCC reclaimed NextWave's licenses and reauctioned them in 2001 for a total of about $16 billion. NextWave has disputed the FCC's authority to reclaim the licenses, and the issue remains in litigation.

For estimating purposes, the Congressional Budget Office (CBO) has assumed that the amount the government will recover on its loans to NextWave will be midway between what it would collect if it lost its court case (which CBO estimates at about $6 billion because of accrued interest) and what it would collect if it won (the $16 billion bid at the reauction). Hence, the credit reestimates included in CBO's baseline reflect an expected value of $11 billion.

At the end of the most recent session of Congress, the Administration proposed a legislative settlement that would allow the federal government to keep the $16 billion from the reauction and require that $9.55 billion be appropriated for a payment to NextWave.[1] The government would retain the difference, or a total of $6.45 billion.[2] That amount would be $4.5 billion less than the $11 billion that CBO estimated under current law. Thus, CBO estimated that the settlement would add $4.5 billion to subsidy costs over the 2002-2004 period.

No legislative action was taken on the proposed settlement agreement in 2001. The Supreme Court is expected to decide this spring whether to review lower-court rulings related to NextWave's spectrum licenses. Until those issues are resolved by the courts or the Congress, estimates of the credit subsidies for FCC loans will remain uncertain.

1. Key provisions of the Administration's proposal were included in the Prompt Utilization of Wireless Spectrum Act of 2001 (H.R. 3484), introduced on December 13, 2001.

2. Some media reports suggested that the settlement would yield a total of about $10 billion to the government rather than the $6.45 billion estimated by CBO, because the bill would have required NextWave to pay $3 billion in taxes on its receipts from the settlement. However, taxes paid on government payments or benefits are not included in budgetary calculations for legislative proposals.

Among other revenue sources, projections of excise tax receipts have declined since August, partly for technical reasons. Those reasons include lower projections for aviation-related taxes in the wake of the September 11 terrorist attacks and some as-yet-unexplained reductions in other excise tax collections this year that are assumed to continue.

Together, technical adjustments have a fairly consistent effect on revenue projections for 2002 through 2010, reducing them by $32 billion to $51 billion per year. The picture reverses in 2011, however, when technical adjustments increase projected revenues by $4 billion because of the new interpretation of how the expiration of EGTRRA will affect estate and gift taxes.

Outlays. Technical changes since August have added $113 billion to CBO's 10-year projections of spending. Other than an increase of $139 billion in debt-service costs (largely the result of CBO's new revenue estimates), net technical changes lower projected outlays for the 10-year period by $26 billion. That amount represents a $27 billion increase in dis-

cretionary outlays outweighed by a $54 billion decline in mandatory spending.

Among mandatory programs, technical reestimates have lowered projected spending for some programs and raised it for others. Medicare saw the largest technical revision to projected outlays—a total reduction of $96 billion for the 2002-2011 period. About one-third of that change reflects the fact that spending in 2001 was higher than anticipated for relatively slow-growing categories of Medicare services (such as hospital inpatient services) and lower than expected for relatively fast-growing categories (such as services furnished by hospitals' outpatient departments and other facilities). The other two-thirds of the change results from an ongoing review of CBO's projections of Medicare enrollment. CBO reduced those projections to make them more consistent with its projections of the population eligible for Social Security and with the Medicare trustees' projections of total enrollment in the program.

Projected spending for Medicaid was also subject to technical revisions, which increased 10-year outlays by $30 billion. A shift of eligible Medicaid recipients to the State Children's Health Insurance Program is expected to lower Medicaid costs during the 2002-2011 period. But that reduction is projected to be more than offset by significant growth in the cost of prescription drugs.

Since August, CBO has also made technical reestimates of Social Security expenditures over the next 10 years, raising them by a total of $38 billion. Virtually all of that increase occurs in the second half of the projection period. It reflects changes in projected enrollment (in part because of new population projections) as well as changes in the calculation of average benefits that are unrelated to changes in the economic forecast.

Outlays for unemployment insurance are projected to be $21 billion higher during the 2002-2011 period than in CBO's August baseline because of reestimates of two factors: the number of unemployed people who will qualify and file for unemployment benefits and the length of time that they will receive benefits.

CBO has changed its projections for the Universal Service Fund account—which subsidizes telecommunications service in underserved or high-cost areas—to reflect new estimates for state universal service funds. In contrast to its previous assumptions, CBO now expects that the activities of state funds will not be reflected in the federal budget because those activities are not likely to be the result of existing federal law. That change lowers projected outlays over the 10-year period by $60 billion. However, because it also reduces projected revenues by roughly the same amount, the effect on the surplus is negligible.

Since the previous baseline, CBO has also lowered its projection of credit subsidies for FCC loans related to recent auctions of spectrum licenses. Although CBO's estimate of the amount of receipts that the FCC will collect from those auctions has not changed since August, the Administration recorded a change (credit reestimate) of about $12 billion in outlays in September to reflect its judgment about the possible outcome of legal proceedings (see Box B-1). To maintain its previous estimate of the total subsidy cost that will eventually be realized, CBO had to adjust its projection of future subsidy reestimates downward by about $13 billion. The year-to-year differences shown in Table B-1 also reflect changes in the expected timing of future auctions of spectrum licenses.

Technical adjustments to projections of net interest spending largely reflect new Treasury data on the stock of outstanding federal debt and revisions to CBO's assumptions about the future composition and growth of debt. Those adjustments increase projected net interest outlays over 10 years by $64 billion relative to the August baseline. In addition, interest payments on the debt resulting from CBO's various technical reestimates since August total $139 billion over the 2002-2011 period.

Appendix C

Budget Resolution Targets and Actual Outcomes

Budget resolution targets, adopted by both Houses of Congress in most years, specify proposed levels of revenues and spending for the upcoming fiscal year. Those targets in the 2001 concurrent budget resolution, adopted in April 2000, yielded a proposed budget surplus of $170 billion. However, the actual surplus for fiscal year 2001 turned out to be significantly lower than the budget resolution anticipated.

This document analyzes the differences between the resolution's targets and the actual outcomes for the year. In 2001, actual revenues were $1,991 billion, almost $14 billion lower than expected for the year. The effects of legislation reduced revenues for that year by substantially more than anticipated; however, some of that reduction was offset by the effects of economic and technical factors. Total outlays, at $1,864 billion, ended up higher than anticipated by $29 billion—primarily because of legislation that was not included in the Congress's original plans. The actual surplus, then, for fiscal year 2001 was $127 billion, almost $43 billion less than the budget resolution anticipated.

Elements of the Analysis

The budget resolution is a concurrent resolution adopted by both Houses of Congress that sets forth the Congressional budget plan over five or more fiscal years. The resolution consists of targets for revenues, spending, the surplus or deficit, and debt held by the public. The budget resolution does not become law; instead, it is implemented through subsequent legislation, including appropriation acts and changes in the laws that affect revenues and spending, which are sometimes in response to reconciliation instructions that are included in the resolution. The targets established in the budget resolution are generally enforced through procedural mechanisms set out in the Congressional Budget and Impoundment Control Act of 1974.

For this analysis, the differences between the levels specified in the budget resolution and the actual outcomes are allocated among three categories: policy, economic, and technical. Although those categories help explain the discrepancies, the divisions are inexact and necessarily somewhat arbitrary.

Differences attributed to policy derive from enacted legislation not anticipated in the resolution (such as legislation providing aid to victims of natural disasters) or legislation that cost more (or less) than the resolution assumed. Differences attributed to policy may also reflect lawmakers' failure to enact legislation that the budget resolution assumed would pass. To identify such differences arising from legislation, the Congressional Budget Office (CBO) normally uses the cost estimates it made at the time the legislation was enacted. (To the extent that the actual budgetary impact differs from what CBO estimated, that difference is implicitly characterized as a technical change.)

A key element in preparing the budget resolution is forecasting how the economy will perform in

the upcoming fiscal year. Usually, for its resolution, the Congress adopts the most recent economic assumptions published by CBO. In 1982, and in most years between 1988 and 1992, it chose to use a different forecast (generally, the Administration's, published by the Office of Management and Budget).

The forecast for the budget resolution is usually made more than nine months before the fiscal year begins. Forecasting the economy is always an uncertain business, and almost invariably, the economy's actual performance differs from the forecast. Nevertheless, every resolution is based on the forecast's assumptions about numerous economic variables—mainly, gross domestic product (GDP), taxable income, unemployment, inflation, and interest rates. Those assumptions are used to estimate revenues, spending for benefit programs, and net interest. In CBO's analysis, differences that can be directly linked to its economic forecast are labeled economic. Other differences that might be tied to economic performance, such as changes to estimates of capital gains realizations or distributions from retirement plans, are categorized as technical.

In analyzing the deviation between budget resolution targets and outcomes, CBO cumulates differences that arise from changes in its economic forecast since the time that the resolution was completed. But CBO does not subsequently adjust that calculation, even though revisions to data about GDP and taxable income continue to trickle in over a number of years.

Technical differences between the budget resolution targets and outcomes are those variations that do not arise directly from legislative or economic sources as initially categorized. The largest dollar impacts of technical differences are concentrated in two areas: on the revenue side of the budget, and among the government's open-ended commitments, such as entitlement programs. In the case of revenues, technical differences stem from various factors, including changes in administrative tax rules, differences in sources of taxable income that are not captured by the economic forecast, and changes in the relative amounts of income taxed at the various income tax rates. In the case of entitlement programs, factors such as changes in the number of beneficiaries, unforeseen utilization of health care services, changes in farm prices, or new regulations can produce technical differences.

Table C-1.
Comparison of Budget Resolution Targets and Actual Budget Totals, Fiscal Year 2001
(In billions of dollars)

	Budget Resolution	Actual Budget Totals	Actual Minus Budget Resolution
Revenues	2,005	1,991	-14
Outlays	1,835	1,864	29
Surplus	170	127	-43

SOURCES: Congressional Budget Office using data from House Con. Res. 290, Concurrent Resolution on the Budget for Fiscal Year 2001, adopted April 13, 2000, and the Office of Management and Budget.

NOTES: The figures in this table include the Social Security trust funds and the Postal Service fund, which are off-budget.

These comparisons differ from those in the chapters of this volume, where differences are measured relative to CBO's baseline projections.

The 2002 budget resolution, adopted on May 10, 2001, revised the budget targets for fiscal year 2001. It increased the targets for revenues to $2,135 billion and for outlays to $1,948 billion; thus, the expected surplus climbed to $186 billion.

Table C-2.
Differences Between Budget Resolution Targets and Actual Budget Totals, Fiscal Year 2001
(In billions of dollars)

	Differences Arising from			
	Policy Changes	Economic Factors	Technical Factors	Total Differences
Revenues	-65	25	26	-14
Outlays				
Discretionary spending	20	2	2	24
Mandatory spending[a]	9	8	1	18
Net interest	1	-12	-2	-13
Subtotal	30	-1	*	29
Surplus	-95	26	26	-43

SOURCES: Congressional Budget Office using data from House Con. Res. 290, Concurrent Resolution on the Budget for Fiscal Year 2001, adopted April 13, 2000, and the Office of Management and Budget.

NOTES: Differences are actual outcomes minus budget resolution targets.

These comparisons differ from those in the chapters of this volume, where differences are measured relative to CBO's baseline projections.

* = between zero and $500 million.

a. Includes offsetting receipts.

Comparing the Budget Resolution and Actual Outcomes for Fiscal Year 2001

The budget resolution adopted the economic assumptions that CBO published in January 2000. Using those assumptions and incorporating policy changes, the resolution established the following targets for the year: total revenues of $2,005 billion, outlays of $1,835 billion, and a surplus of $170 billion (see Table C-1). Ultimately, revenues were lower by $14 billion, and outlays were higher by $29 billion, resulting in a surplus that was $43 billion lower than was anticipated in the resolution. Policy changes diminished the surplus by an estimated $95 billion, but that amount was partially offset by differences arising from economic and technical factors, which added a total of $52 billion to the surplus (see Table C-2).

Differences Arising from Policy Changes

The major policy change that affected the surplus in 2001 was the tax cut signed by the President in June 2001 (which was actually provided for in the 2002 budget resolution).[1] The budget resolution for 2001 incorporated a tax cut that would reduce revenues by about $12 billion that year. The Joint Committee on Taxation estimated that the total cost of the Economic Growth and Tax Relief Reconciliation Act of 2001 (Public Law 107-16) would be much larger—roughly $74 billion for 2001. Of that amount, the major components were the advance refund checks mailed to all taxpayers who filed returns for tax year 2000, which totaled about $40 billion, and the shift of

1. The 2002 budget resolution, adopted on May 10, 2001, revised the targets for fiscal year 2001. It increased the targets for revenues to $2,135 billion and for outlays to $1,948 billion; thus, the expected surplus climbed to $186 billion—$15 billion higher than was anticipated in the 2001 resolution.

corporate tax receipts—about $33 billion in payments—from fiscal year 2001 to fiscal year 2002.

Discretionary outlays were $20 billion higher than anticipated in the resolution, mostly because appropriations for 2001 were more than $40 billion greater than specified in the resolution. Mandatory spending was also higher than the original estimate, primarily as a result of aid to farmers.

Differences Arising from Economic Factors

Overall, the economic assumptions underlying the 2001 budget resolution proved to be pessimistic. In particular, because of economic factors, revenues turned out to be $25 billion higher than presumed. Much of that difference can be traced to estimates of nominal GDP in 2000, which had implications for revenues in 2001. The resolution assumed that GDP would grow by 5.1 percent in 2000, but its actual rate of growth was 6.7 percent. Despite the recession that began in March 2001, the level of nominal GDP in fiscal year 2001 remained above what was anticipated by the resolution.

Cost-of-living-adjustments (COLAs) accounted for most of the $8 billion in additional mandatory spending that was attributable to economic factors. The budget resolution assumed a COLA of 2.4 percent for January 2001; the actual COLA turned out to be 3.5 percent. As a result, Social Security and other benefit payments that are pegged to inflation were higher than originally estimated. In addition, the unemployment rate rose beyond what was expected, particularly in the latter part of the year, increasing claims for unemployment benefits by nearly $2 billion. Discretionary spending differed only slightly from the expected amount because of economic factors.

Reflecting another difference linked to the economic forecast, net interest was $12 billion lower than the budget resolution anticipated, mostly because of lower interest rates. The Federal Reserve reduced interest rates several times in 2001, which led to lower interest costs on the federal debt. The budget resolution assumed that the average rates in 2001 on three-month Treasury bills and 10-year Treasury notes would be 5.6 percent and 6.4 percent, respectively. Those rates actually averaged 4.4 percent and 5.2 percent, respectively.

Differences Arising from Technical Factors

Differences arising from technical factors—that is, differences between budget resolution targets and actual outcomes that cannot be traced to legislation or CBO's economic forecast—are mostly found on the revenue side of the budget. Technical factors accounted for about $26 billion in additional revenues but only a minimal amount of the increase in outlays. Much of the additional revenues was attributable to unexpectedly high individual income tax receipts stemming from growth in realizations of capital gains and unforeseen increases in effective tax rates.

Comparing Budget Resolutions and Actual Outcomes for Fiscal Years 1980 Through 2001

Actual outcomes always differ to varying degrees from budget resolution targets. Over the 1980-1992 period, the deficit consistently exceeded the target in the resolution by amounts ranging from $4 billion in 1984 to $119 billion in 1990 (see Table C-3). That pattern changed in 1993, in part because spending for deposit insurance was substantially lower than expected. From 1994 through 2000, actual outcomes continued to be more favorable than the targets (with the exception of 1999, when there was no conference agreement on a budget resolution). However, in 2001, lower-than-expected revenues and higher-than-anticipated outlays combined to reduce the surplus to less than was envisioned in the resolution. Over the entire 1980-2001 period, the differences netted out; that is, the total of the actual surpluses and deficits almost exactly matched the total of the surpluses and deficits in the budget resolutions.

Differences Arising from Policy Changes

From 1980 through 2001, policy action or inaction (for example, the failure to achieve savings called for in a budget resolution) decreased the surplus or increased the deficit by an average of $16 billion a year compared with the target. In only four of those years did policymakers trim the deficit by more, or add to it by less, than the resolution provided. The largest differences attributable to policy changes occurred in 2000 and 2001, when they decreased the surplus by $61 billion and $95 billion, respectively, in comparison to the targets. From 1980 through 1998, the differences ascribed to policy averaged less than $10 billion a year.

Most of the impact stemming from legislation over the period was on the outlay side of the budget. On average, policy decisions added about $14 billion a year to the spending totals. In fact, 1988 and 1991 were the only years in which legislative action reduced outlays below the resolution's targets. By far the biggest difference was in 2000, when the effects of legislation increased outlays by about $65 billion. On the revenue side of the budget, the largest difference arising from a policy change occurred in 2001, when legislation reduced taxes by $65 billion more than was anticipated by the resolution.

Differences Arising from Economic Factors

Overall, inaccuracies in the economic forecast over the 1980-2001 period have had a negligible net effect on the variations between targets and actual outcomes for surpluses or deficits. But the average, however, masks large differences in many years—deviations that were mostly negative before 1994 and positive more recently. Until 1993, budget resolutions tended to use short-term economic assumptions that proved optimistic. The largest overestimates in the 1980s and early 1990s, not surprisingly, were in years marked by recession or the early stages of recovery—namely, in 1982 and 1983 and in the 1990-1992 period. Since 1993, that pattern has largely been reversed. Short-term economic assumptions in 1993 through 2001 for the most part turned out to be pessimistic.

In absolute terms (disregarding whether the errors were positive or negative), the typical difference in the surplus or deficit attributable to incorrect economic assumptions was about $29 billion a year over the 1980-2001 period. Regardless of the direction of the error in the forecast, differences between the resolution's assumptions and what actually happened in the economy primarily affected revenues and net interest.

Differences Arising from Technical Factors

Technical factors accounted for differences between budget resolution targets and actual surpluses or deficits that averaged $16 billion a year during the past two decades. In absolute terms, however, such differences caused the targets to be off by $35 billion, on average. Overall, about two-thirds of those misestimates have been on the outlay side of the budget.

The magnitude and causes of the differences ascribed to technical factors have varied over the years. On the revenue side, technical misestimates were generally not very great through 1990, but the budget resolutions significantly overestimated revenues in 1991 and 1992, when tax collections were weaker than economic data had predicted. Over the past few years, revenues have been much higher than the budget resolution targets. The individual income tax has been the source of most of the technical discrepancies, primarily because of higher realizations of capital gains, unexpected increases in the effective tax rate, and higher reported incomes. Greater realizations of capital gains most likely stemmed from upturns in the prices of stocks and in the volume of stock transactions. The unexpected rise in the effective tax rate was largely due to a disproportionate increase in income among taxpayers taxed at the highest marginal rates. Also contributing to the inaccuracy in estimating individual income tax receipts were underestimates of reported incomes that were revised too late for CBO to incorporate in its forecasts.

Table C-3.
Differences Between Budget Resolution Targets and Actual Budget Totals, Fiscal Years 1980-2001 (In billions of dollars)

	Differences Arising from				
	Policy Changes	Economic Factors	Technical Factors	Total Differences	Total Differences as a Percentage of Actual Outcomes
			Revenues		
1980	6	8	-4	11	2.1
1981	-4	5	-13	-11	-1.8
1982	13	-52	-1	-40	-6.5
1983	-5	-58	-3	-65	-10.8
1984	-14	4	-4	-13	-2.0
1985	*	-20	3	-17	-2.3
1986	-1	-23	-2	-27	-3.5
1987	22	-27	7	2	0.2
1988	-11	4	-17	-24	-2.6
1989	1	34	-8	26	2.6
1990	-7	-36	9	-34	-3.3
1991[a]	-1	-31	-24	-56	-5.3
1992	3	-46	-34	-78	-7.1
1993	4	-28	3	-20	-1.7
1994	-1	12	4	15	1.2
1995	*	16	1	17	1.3
1996	-1	24	12	36	2.5
1997	20	44	46	110	7.0
1998	-1	62	59	120	7.0
1999	n.a.	n.a.	n.a.	n.a.	n.a.
2000	3	78	68	149	7.4
2001	-65	25	26	-14	-0.7
Average	-2	*	6	4	-0.9
Absolute Average[b]	9	30	17	42	3.8
			Outlays		
1980	20	12	16	48	8.1
1981	25	6	16	47	6.9
1982	1	24	8	33	4.4
1983	18	*	8	26	3.2
1984	1	7	-18	-9	-1.1
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[a]	-19	1	-22	-40	-3.0
1992	15	-21	-60	-66	-4.8
1993	16	-19	-90	-92	-6.5
1994	10	-9	-36	-35	-2.4
1995	2	17	-14	6	0.4
1996	25	-24	-29	-28	-1.8
1997	15	7	-43	-21	-1.3
1998	5	-9	-37	-41	-2.5
1999	n.a.	n.a.	n.a.	n.a.	n.a.
2000	65	-1	-10	54	3.0
2001	30	-1	*	29	1.6

(Continued)

Table C-3.
Continued

	Differences Arising from				
	Policy Changes	Economic Factors	Technical Factors	Total Differences	Total Differences as a Percentage of Actual Outcomes
Average	14	*	-10	5	1.0
Absolute Average[b]	16	11	26	36	3.2
		Surplus or Deficit (-)[c]			
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[a]	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	97	160	9.7
1999	n.a.	n.a.	n.a.	n.a.	n.a.
2000	-61	79	77	95	5.3
2001	-95	26	26	-43	-2.3
Average	-16	*	16	*	-1.3
Absolute Average[b]	21	29	35	56	4.8

SOURCE: Congressional Budget Office.

NOTES: Differences are actual outcomes minus budget resolution targets.

Differences are allocated among the three categories soon after a fiscal year ends. Later changes in economic and tax data are not reflected in those allocations.

* = between -$500 million and $500 million; n.a. = not applicable (there was no budget resolution in 1999).

a. Based on the budget summit agreement for fiscal year 1991 (as assessed by CBO in December 1990).

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

c. In the case of the surplus or deficit, total differences are calculated as a percentage of actual outlays.

Misestimates arising from technical factors show up to an even greater extent on the outlay side of the budget. Through the mid-1980s, discrepancies in estimating receipts from offshore oil leases and spending on farm price supports, defense, and entitlement programs constituted the dominant technical differences. In addition, in the early 1990s, during the savings and loan crisis, outlays for deposit insurance were a major source of discrepancies attributable to technical factors. In recent years, technical differences between estimates of outlays and actual outlays have been spread among a variety of programs. In addition, those differences were quite small in 2000 and 2001 (within $10 billion and near zero, respectively).

Differences as a Percentage of Actual Revenues or Outlays

Because the federal budget has grown considerably since 1980, differences between the revenue and spending levels in the budget resolutions and actual outcomes over the 1980-2001 period may be best compared as a percentage of total revenues or outlays. The total difference for revenues for 2001 was well below the absolute average of 3.8 percent; the amount anticipated in the budget resolution came within 0.7 percent of actual revenues. By contrast, revenues exceeded the budget resolution target by more than 7 percent in 2000. Outlays in 2001 were 1.6 percent above the budget resolution target but below the 3.2 percent absolute average difference for the 1980-2001 period. Differences between outlay targets and actual outcomes ranged from a high of 8.1 percent in 1980 to a low of 0.4 percent in 1995.

The size of the total difference between actual surpluses or deficits and the surpluses or deficits anticipated in budget resolutions depends in large part on whether the differences for revenues and outlays offset each other. For years in which the discrepancies for revenues and outlays affected the surplus or deficit in opposite ways, the total difference dropped to as little as 0.5 percent of actual outlays. But in other years in which the discrepancies for both revenues and outlays affected the surplus or deficit in the same way, the total difference was as much as 11.4 percent of outlays. Indeed, from 1980 to 2001, the differences between estimates of revenues and outlays in the budget resolutions and the actual amounts went in the same direction relative to the surplus or deficit in 12 years. In 2001, the actual surplus was below the resolution target by an amount equal to 2.3 percent of actual outlays—lower than the absolute average difference of 4.8 percent over the 21-year period.

Appendix D

The Federal Sector of the National Income and Product Accounts

The federal budget is not the only mechanism available for gauging the effect on the economy of the federal government's revenues and spending. That effect is also measured in the official national income and product accounts (NIPAs) produced by the Department of Commerce's Bureau of Economic Analysis (BEA). The NIPAs provide a picture of government activity in terms of production, distribution, and use of output. They recast the government's transactions into categories that affect gross domestic product (GDP), 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 number of major differences distinguish how federal receipts and expenditures are treated in the NIPAs from how they are accounted for in the total (or unified) budget. For example, the NIPAs shift certain items from the spending to the receipts side of the ledger 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 surplus or deficit (see Table D-1).

In contrast, other differences between the two accounting methodologies do affect the surplus or deficit that each reports. The NIPAs' totals (but not the budget's) exclude government transactions that transfer existing assets and liabilities and that therefore do not add to or subtract from current income and production. Prominent among such *lending and financial* adjustments, as they are termed in Table D-1, are those for deposit insurance outlays, cash flows from direct loans made by the government before credit reform, and sales of government assets. Other factors that separate the NIPAs' accounting from that of the budget include *geographic adjustments* (the NIPAs exclude Puerto Rico, the Virgin Islands, and a few other areas) and *timing adjustments* (the NIPAs correct for such things as irregular numbers of benefit checks in a year or shifts in the timing of corporate tax payments).

In the national economic accounts, *contributions for government employee retirement* are considered the personal income of federal workers covered by the retirement funds. Therefore, in the NIPAs, outlays from the funds are treated as transactions outside the government sector of the economy. In the budget, those contributions are classified as government receipts.

Intragovernmental transfers are an adjustment made to the NIPA totals to account for payments that the government makes to federal entities whose activities are not counted as part of the budget. Nearly all such transfers involve the financing of credit programs.

The government's *capital transfers*—which include grants to state and local governments for high-

Table D-1.
Relationship of the Budget to the Federal Sector of the National Income and Product Accounts (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Receipts												
Revenues (Budget)[a]	1,991	1,983	2,070	2,206	2,342	2,447	2,568	2,706	2,856	3,008	3,277	3,549
Differences												
Netting and grossing												
Medicare premiums	24	26	28	31	34	37	41	45	49	53	57	62
Deposit insurance premiums	*	*	*	1	1	1	1	1	2	2	2	2
Government contributions for employee OASDI and HI	11	12	13	13	14	15	16	17	18	19	21	22
Other	10	6	5	3	2	1	*	*	-2	-3	-5	-6
Geographic adjustments	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-6	-6
Contributions for employee retirement	-5	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3
Estate and gift taxes	-28	-26	-24	-25	-22	-25	-22	-23	-25	-16	-15	-44
Universal Service Fund receipts	-5	-5	-5	-6	-6	-6	-6	-6	-6	-6	-6	-7
Timing shift of corporate estimated tax payments	23	-23	0	7	-7	0	0	0	0	0	0	0
Other	24	-4	2	5	3	3	3	3	3	2	3	2
Total Difference	50	-23	10	20	12	17	24	27	30	42	47	21
Receipts (NIPAs)	2,041	1,960	2,081	2,226	2,353	2,464	2,593	2,734	2,886	3,050	3,324	3,570
Expenditures												
Outlays (Budget)[a]	1,864	2,003	2,085	2,152	2,238	2,319	2,402	2,504	2,606	2,714	2,838	2,908
Differences												
Netting and grossing												
Medicare premiums	24	26	28	31	34	37	41	45	49	53	57	62
Deposit insurance premiums	*	*	*	1	1	1	1	1	2	2	2	2
Government contributions for employee OASDI and HI	11	12	13	13	14	15	16	17	18	19	21	22
Other	10	6	5	3	2	1	*	*	-2	-3	-5	-6
Lending and financial adjustments	14	8	11	20	21	11	10	10	9	9	9	9
Geographic adjustments	-11	-12	-12	-13	-13	-14	-14	-15	-16	-16	-17	-18
Timing adjustments	7	3	0	0	-12	3	9	0	0	0	-15	15
Contributions for employee retirement	34	39	38	40	41	42	43	45	47	48	50	51
Intragovernmental transfers	-1	-6	-7	-7	-9	-9	-9	-10	-10	-10	-10	-10
Capital transfers	-40	-44	-47	-48	-49	-50	-51	-52	-53	-54	-55	-56
Treatment of investment and depreciation	-8	-9	-13	-17	-20	-24	-28	-32	-36	-41	-45	-48
Universal Service Fund payments	-5	-5	-5	-5	-5	-5	-6	-6	-6	-6	-6	-6
Other	-8	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Total Difference	27	12	6	13	-1	3	7	-2	-3	-4	-20	10
Expenditures (NIPAs)	1,891	2,016	2,090	2,165	2,238	2,322	2,409	2,502	2,603	2,710	2,819	2,918

(Continued)

Table D-1.
Continued

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
					Surplus							
Surplus (Budget)[a]	127	-21	-14	54	103	128	166	202	250	294	439	641
Differences												
Lending and financial transactions	-14	-8	-11	-20	-21	-11	-10	-10	-9	-9	-9	-9
Geographic adjustments	7	8	8	9	9	9	10	10	11	11	12	12
Timing adjustments	16	-26	0	7	5	-3	-9	0	0	0	15	-15
Contributions for employee retirement	-38	-43	-43	-44	-45	-47	-47	-49	-50	-52	-53	-55
Intragovernmental transfers	1	6	7	7	9	9	9	10	10	10	10	10
Capital transfers	40	44	47	48	49	50	51	52	53	54	55	56
Treatment of investment and depreciation	8	9	13	17	20	24	28	32	36	41	45	48
Universal Service Fund payments	*	*	*	*	*	*	*	*	*	*	*	*
Estate and gift taxes	-28	-26	-24	-25	-22	-25	-22	-23	-25	-16	-15	-44
Other	33	*	7	10	8	8	8	8	8	7	8	7
Total Difference	23	-35	5	7	12	14	17	29	33	46	67	11
Surplus (NIPAs)	150	-56	-9	61	115	142	183	232	283	340	506	652

SOURCE: Congressional Budget Office.

NOTES: * = between -$500 million and $500 million.

OASDI = Old-Age, Survivors, and Disability Insurance; HI = Hospital Insurance.

a. Includes Social Security and the Postal Service.

ways, transit, air transportation, and water treatment plants—are transactions in which one party provides something (usually cash) to another without receiving anything in return. Those transactions are linked to, or are conditional on, acquiring or disposing of an asset. Because such transactions shift existing assets from one party to another, they do not affect disposable income or production in the current period. Therefore, they are not counted in the NIPAs.

The NIPAs and the budget also differ in their *treatment of investment and depreciation*. The budget reflects all expenditures that the federal government makes, including its investment purchases of items such as buildings and aircraft carriers. The NIPAs show the current, or operating, account for the federal government; thus, they exclude government investment and include the government's consumption of fixed capital, or depreciation. (Government investment, although included in the NIPAs' calculation of GDP, is not part of its measure of federal expenditures.)

The *Universal Service Fund*, which is administered by a nonprofit entity, receives funds from providers of telecommunications service and disburses those funds to providers that serve high-cost areas, low-income households, libraries, and schools, as well as to rural health care providers. As a result, the fund's receipts and payments are classified in the NIPAs as intracorporate transfers and do not show up in the national economic statistics.

The Government's Receipts and Expenditures as Measured by the NIPAs

The federal sector of the NIPAs generally classifies receipts according to their source (see Table D-2). Taxes and fees paid by individuals are the leading source of the government's receipts in the 2002-2012 period. The next category in terms of size is contributions (including premiums) for social insurance programs such as Social Security, Medicare, unemployment insurance, and federal employees' retirement. The remaining categories of receipts are accruals of taxes on corporate profits, including the earnings of the Federal Reserve System, and indirect business tax and nontax accruals. (Examples of indirect business taxes are customs duties and excise taxes. Nontax accruals include deposit insurance premiums.)

The government's expenditures are classified according to their purpose and destination. Defense and nondefense consumption of goods and services represents purchases made by the government for immediate use. The largest share of current defense and nondefense consumption is the compensation of federal employees. The consumption of fixed capital is the use that the government receives from its fixed assets, such as buildings or equipment; as noted earlier, that consumption appears in the accounts as depreciation.

Transfer payments are cash payments made directly to individuals, private entities, or foreign nations. Grants-in-aid are payments that the federal government makes to state or local governments, which generally use them for transfers (such as paying Medicaid benefits) or consumption (such as hiring additional police officers).

Although both the total budget and the NIPAs contain a category labeled "net interest," the NIPAs' figure is larger. Various differences cause the two measures to diverge. The biggest difference is the contrasting treatment of the interest received by the Civil Service and Military Retirement Trust Funds. In the total budget, such receipts offset the payments made to those funds by the Treasury. In the NIPAs, however, those receipts are reclassified as contributions to personal income and do not appear on the ledger detailing the government's transactions.

The category in the NIPAs labeled "subsidies less current surplus of government enterprises" contains two components, as its name suggests. The first—subsidies—is defined as grants paid by the federal government to businesses, including state and local government enterprises. Subsidies are dominated by housing assistance.

The second part of the category is the current surplus of government enterprises, which are certain business-type operations of the government, such as the Postal Service. The operating costs of a government enterprise 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*, or GSEs, which are 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 Fannie Mae and the Farm Credit System. As privately owned, though publicly chartered, corporations, GSEs are not included in the budget or in the federal sector of the NIPAs.)

Table D-2.
Projections of Baseline Receipts and Expenditures as Measured by the National Income and Product Accounts (In billions of dollars)

	Actual 2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Receipts												
Personal Tax and Nontax Receipts	1,012	942	992	1,052	1,106	1,155	1,220	1,296	1,377	1,466	1,661	1,826
Contributions for Social Insurance	717	744	785	830	876	918	961	1,006	1,058	1,114	1,172	1,231
Corporate Profits Tax Accruals	200	169	197	234	257	275	291	307	323	338	355	373
Indirect Business Tax and Nontax Accruals	112	105	107	110	114	117	121	125	128	132	136	140
Total	2,041	1,960	2,081	2,226	2,353	2,464	2,593	2,734	2,886	3,050	3,324	3,570
Expenditures												
Purchases of Goods and Services												
Defense												
Consumption	273	311	313	319	328	336	345	354	363	373	383	393
Consumption of fixed capital	64	64	65	65	66	67	67	68	68	69	70	70
Nondefense												
Consumption	141	160	170	173	176	179	182	185	189	192	196	200
Consumption of fixed capital	29	30	30	31	32	33	34	35	36	37	38	40
Subtotal	506	565	577	589	602	614	627	641	656	671	687	704
Transfer Payments												
Domestic	808	880	922	956	998	1,056	1,115	1,179	1,250	1,328	1,409	1,486
Foreign	12	13	11	11	11	11	11	11	11	11	10	10
Subtotal	819	893	934	967	1,009	1,067	1,126	1,190	1,262	1,339	1,419	1,496
Grants-in-Aid to State and Local Governments	265	298	321	338	355	373	394	415	439	465	494	525
Net Interest[a]	247	215	218	233	233	229	222	214	204	191	174	148
Subsidies Less Current Surplus of Government Enterprises	53	45	41	39	39	40	40	41	42	43	44	45
Total	1,891	2,016	2,090	2,165	2,238	2,322	2,409	2,502	2,603	2,710	2,819	2,918
Surplus												
Surplus[a]	150	-56	-9	61	115	142	183	232	283	340	506	652

SOURCE: Congressional Budget Office.

a. Includes Social Security and the Postal Service.

Appendix E

CBO's Economic Projections for 2002 Through 2012

Year-by-year economic projections for 2002 through 2012 are shown in the accompanying tables (by calendar year in Table E-1 and by fiscal year in Table E-2). The Congressional Budget Office did not try to explicitly incorporate cyclical recessions and recoveries into its projections for years after 2003. Instead, the projected values shown here for 2004 through 2012 reflect CBO's assessment of average values for that period—which take into account potential ups and downs in the business cycle.

Table E-1.
CBO's Year-by-Year Forecast and Projections for Calendar Years 2002 Through 2012

	Estimated	Forecast		Projected								
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nominal GDP (Billions of dollars)	10,193	10,422	11,063	11,709	12,324	12,966	13,639	14,345	15,085	15,862	16,676	17,532
Nominal GDP (Percentage change)	3.2	2.2	6.1	5.8	5.3	5.2	5.2	5.2	5.2	5.1	5.1	5.1
Real GDP (Percentage change)	1.0	0.8	4.1	3.7	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0
GDP Price Index (Percentage change)	2.2	1.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Consumer Price Index[a] (Percentage change)	2.9	1.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Employment Cost Index[b] (Percentage change)	3.8	4.1	3.9	3.7	3.4	3.5	3.6	3.6	3.6	3.5	3.4	3.4
Unemployment Rate (Percent)	4.8	6.1	5.9	5.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Three-Month Treasury Bill Rate (Percent)	3.4	2.2	4.5	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Ten-Year Treasury Note Rate (Percent)	5.0	5.0	5.5	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Tax Bases (Billions of dollars)												
Corporate book profits	705	631	774	899	971	1,042	1,101	1,170	1,226	1,289	1,357	1,425
Wages and salaries	5,097	5,243	5,538	5,811	6,081	6,377	6,695	7,032	7,387	7,760	8,152	8,565
Tax Bases (Percentage of GDP)												
Corporate book profits	6.9	6.1	7.0	7.7	7.9	8.0	8.1	8.2	8.1	8.1	8.1	8.1
Wages and salaries	50.0	50.3	50.1	49.6	49.3	49.2	49.1	49.0	49.0	48.9	48.9	48.9

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

NOTE: Percentage change is year over year.

a. The consumer price index for all urban consumers.

b. The employment cost index is a measure of wages for private-industry workers.

Table E-2.
CBO's Year-by-Year Forecast and Projections for Fiscal Years 2002 Through 2012

	Actual	Forecast		Projected								
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Nominal GDP (Billions of dollars)	10,150	10,315	10,890	11,556	12,168	12,803	13,468	14,166	14,897	15,664	16,469	17,314
Nominal GDP (Percentage change)	4.1	1.6	5.6	6.1	5.3	5.2	5.2	5.2	5.2	5.1	5.1	5.1
Real GDP (Percentage change)	1.8	0.2	3.6	4.0	3.2	3.2	3.2	3.1	3.1	3.1	3.1	3.0
GDP Price Index (Percentage change)	2.3	1.5	1.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Consumer Price Index[a] (Percentage change)	3.2	1.8	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Employment Cost Index[b] (Percentage change)	3.8	4.1	4.0	3.7	3.5	3.5	3.6	3.6	3.6	3.5	3.4	3.4
Unemployment Rate (Percent)	4.4	6.0	6.0	5.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Three-Month Treasury Bill Rate (Percent)	4.4	2.0	4.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Ten-Year Treasury Note Rate (Percent)	5.2	4.9	5.3	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Tax Bases (Billions of dollars)												
Corporate book profits	748	625	736	873	955	1,025	1,087	1,152	1,213	1,273	1,341	1,407
Wages and salaries	5,062	5,186	5,461	5,747	6,011	6,301	6,614	6,946	7,296	7,665	8,052	8,460
Tax Bases (Percentage of GDP)												
Corporate book profits	7.4	6.1	6.8	7.6	7.8	8.0	8.1	8.1	8.1	8.1	8.1	8.1
Wages and salaries	49.9	50.3	50.2	49.7	49.4	49.2	49.1	49.0	49.0	48.9	48.9	48.9

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

NOTE: Percentage change is year over year.

a. The consumer price index for all urban consumers.

b. The employment cost index is a measure of wages for private-industry workers.

Appendix F

Historical Budget Data

This section shows historical data for revenues, outlays, and the surplus or deficit. Budget data consistent with the projections in Chapters 1, 3, and 4 are available for fiscal years 1962 through 2001 and are reported in Tables F-1 through F-10. The data are shown in both nominal dollars and as a percentage of gross domestic product (GDP). Data for 2001 come from the Department of the Treasury, *Final Monthly Treasury Statement* (October 2001) and from the Office of Management and Budget.

Federal revenues, outlays, the surplus or deficit, and debt held by the public are shown in Tables F-1 and F-2. Revenues, outlays, and the surplus or deficit have both on-budget and off-budget components. Social Security's 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-3 and F-4. Social insurance taxes include payments by employers and employees 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.

Total outlays for major spending categories are shown in Tables F-5 and F-6. (Those totals include on- and off-budget outlays.) To compare historical outlays with the projections in Chapters 1, 3, and 4, 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-7 and F-8 divide discretionary spending into its defense, international, and domestic components. Entitlements and other mandatory spending include programs whose spending is governed by laws that set requirements for eligibility. Additional detail on entitlement programs is shown in Tables F-9 and F-10. Net interest is identical to the budget function of the same name (function 900). Offsetting receipts include the federal government's contributions to retirement programs for its employees, various fees, charges such as Medicare premiums, and receipts from the use of federally controlled land and offshore territory.

Estimates of the standardized-budget surplus or deficit and its revenue and outlay components for fiscal years 1960 through 2001 are reported in Tables F-11 through F-13, along with estimates of potential and actual GDP and the nonaccelerating inflation rate of unemployment (NAIRU). The standardized-budget measure and its components are also shown as a percentage of potential GDP.

The change in the standardized-budget surplus or deficit is a commonly used measure of the short-term impact of fiscal policy on aggregate demand. The standardized-budget deficit (also called the structural deficit) excludes the effects that cyclical fluctuations in output and unemployment have on revenues and outlays; it also includes other adjustments. Historical estimates for standardized-budget revenues, outlays, and the surplus or deficit have been revised.

Finally, for additional historical perspective, Figure F-1 shows how debt held by the public has been affected by wars and recessions since 1790.

Table F-1.
Revenues, Outlays, Surpluses, Deficits, and Debt Held by the Public, 1962-2001
(In billions of dollars)

			Surplus or Deficit (-)				
	Revenues	Outlays	On-Budget[a]	Social Security	Postal Service[a]	Total	Debt Held by the Public[b]
1962	99.7	106.8	-5.9	-1.3	n.a.	-7.1	248.0
1963	106.6	111.3	-4.0	-0.8	n.a.	-4.8	254.0
1964	112.6	118.5	-6.5	0.6	n.a.	-5.9	256.8
1965	116.8	118.2	-1.6	0.2	n.a.	-1.4	260.8
1966	130.8	134.5	-3.1	-0.6	n.a.	-3.7	263.7
1967	148.8	157.5	-12.6	4.0	n.a.	-8.6	266.6
1968	153.0	178.1	-27.7	2.6	n.a.	-25.2	289.5
1969	186.9	183.6	-0.5	3.7	n.a.	3.2	278.1
1970	192.8	195.6	-8.7	5.9	n.a.	-2.8	283.2
1971	187.1	210.2	-26.1	3.0	n.a.	-23.0	303.0
1972	207.3	230.7	-26.4	3.0	n.a.	-23.4	322.4
1973	230.8	245.7	-15.4	0.5	n.a.	-14.9	340.9
1974	263.2	269.4	-8.0	1.8	n.a.	-6.1	343.7
1975	279.1	332.3	-55.3	2.0	n.a.	-53.2	394.7
1976	298.1	371.8	-70.5	-3.2	n.a.	-73.7	477.4
1977	355.6	409.2	-49.8	-3.9	n.a.	-53.7	549.1
1978	399.6	458.7	-54.9	-4.3	n.a.	-59.2	607.1
1979	463.3	504.0	-38.7	-2.0	n.a.	-40.7	640.3
1980	517.1	590.9	-72.7	-1.1	n.a.	-73.8	711.9
1981	599.3	678.2	-74.0	-5.0	n.a.	-79.0	789.4
1982	617.8	745.8	-120.1	-7.9	n.a.	-128.0	924.6
1983	600.6	808.4	-208.0	0.2	n.a.	-207.8	1,137.3
1984	666.5	851.9	-185.7	0.3	n.a.	-185.4	1,307.0
1985	734.1	946.4	-221.7	9.4	n.a.	-212.3	1,507.4
1986	769.2	990.5	-238.0	16.7	n.a.	-221.2	1,740.8
1987	854.4	1,004.1	-169.3	19.6	n.a.	-149.8	1,889.9
1988	909.3	1,064.5	-194.0	38.8	n.a.	-155.2	2,051.8
1989	991.2	1,143.7	-205.2	52.4	0.3	-152.5	2,191.0
1990	1,032.0	1,253.2	-277.8	58.2	-1.6	-221.2	2,411.8
1991	1,055.0	1,324.4	-321.6	53.5	-1.3	-269.4	2,689.3
1992	1,091.3	1,381.7	-340.5	50.7	-0.7	-290.4	3,000.1
1993	1,154.4	1,409.5	-300.5	46.8	-1.4	-255.1	3,248.8
1994	1,258.6	1,461.9	-258.9	56.8	-1.1	-203.3	3,433.4
1995	1,351.8	1,515.8	-226.4	60.4	2.0	-164.0	3,604.8
1996	1,453.1	1,560.6	-174.1	66.4	0.2	-107.5	3,734.5
1997	1,579.3	1,601.3	-103.4	81.3	*	-22.0	3,772.8
1998	1,721.8	1,652.6	-30.0	99.0	0.2	69.2	3,721.6
1999	1,827.5	1,701.9	1.8	124.7	-1.0	125.5	3,632.9
2000	2,025.2	1,788.8	86.6	151.8	-2.0	236.4	3,410.1
2001	1,991.0	1,863.9	-33.4	162.8	-2.3	127.1	3,320.0

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable; * = less than $500 million.

a. In 1962 through 1988, the Postal Service was on-budget and included in the on-budget total.

b. End of year.

Table F-2.
Revenues, Outlays, Surpluses, Deficits, and Debt Held by the Public, 1962-2001
(As a percentage of GDP)

			Surplus or Deficit (-)				Debt
	Revenues	Outlays	On-Budget[a]	Social Security	Postal Service[a]	Total	Held by the Public[b]
1962	17.5	18.8	-1.0	-0.2	n.a.	-1.3	43.6
1963	17.8	18.5	-0.7	-0.1	n.a.	-0.8	42.3
1964	17.5	18.5	-1.0	0.1	n.a.	-0.9	40.0
1965	17.0	17.2	-0.2	*	n.a.	-0.2	37.9
1966	17.3	17.8	-0.4	-0.1	n.a.	-0.5	34.8
1967	18.3	19.4	-1.6	0.5	n.a.	-1.1	32.8
1968	17.6	20.5	-3.2	0.3	n.a.	-2.9	33.3
1969	19.7	19.3	-0.1	0.4	n.a.	0.3	29.3
1970	19.0	19.3	-0.9	0.6	n.a.	-0.3	27.9
1971	17.3	19.4	-2.4	0.3	n.a.	-2.1	28.0
1972	17.6	19.6	-2.2	0.3	n.a.	-2.0	27.4
1973	17.6	18.7	-1.2	*	n.a.	-1.1	26.0
1974	18.3	18.7	-0.6	0.1	n.a.	-0.4	23.8
1975	17.9	21.3	-3.5	0.1	n.a.	-3.4	25.3
1976	17.2	21.4	-4.1	-0.2	n.a.	-4.2	27.5
1977	18.0	20.7	-2.5	-0.2	n.a.	-2.7	27.8
1978	18.0	20.7	-2.5	-0.2	n.a.	-2.7	27.4
1979	18.5	20.1	-1.5	-0.1	n.a.	-1.6	25.6
1980	18.9	21.6	-2.7	*	n.a.	-2.7	26.1
1981	19.6	22.2	-2.4	-0.2	n.a.	-2.6	25.8
1982	19.1	23.1	-3.7	-0.2	n.a.	-4.0	28.6
1983	17.4	23.5	-6.0	*	n.a.	-6.0	33.0
1984	17.3	22.1	-4.8	*	n.a.	-4.8	34.0
1985	17.7	22.9	-5.4	0.2	n.a.	-5.1	36.4
1986	17.5	22.5	-5.4	0.4	n.a.	-5.0	39.6
1987	18.4	21.6	-3.6	0.4	n.a.	-3.2	40.6
1988	18.1	21.2	-3.9	0.8	n.a.	-3.1	40.9
1989	18.3	21.2	-3.8	1.0	*	-2.8	40.5
1990	18.0	21.8	-4.8	1.0	*	-3.9	42.0
1991	17.8	22.3	-5.4	0.9	*	-4.5	45.4
1992	17.5	22.2	-5.5	0.8	*	-4.7	48.2
1993	17.6	21.5	-4.6	0.7	*	-3.9	49.5
1994	18.1	21.0	-3.7	0.8	*	-2.9	49.4
1995	18.5	20.7	-3.1	0.8	*	-2.2	49.2
1996	18.9	20.3	-2.3	0.9	*	-1.4	48.5
1997	19.3	19.5	-1.3	1.0	*	-0.3	46.0
1998	19.9	19.1	-0.3	1.1	*	0.8	43.0
1999	20.0	18.6	*	1.4	*	1.4	39.8
2000	20.8	18.4	0.9	1.6	*	2.4	35.0
2001	19.6	18.4	-0.3	1.6	*	1.3	32.7

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable; * = between -0.05 percent and 0.05 percent.

a. In 1962 through 1988, the Postal Service was on-budget and included in the on-budget total.

b. End of year.

Table F-3.
Revenues by Major Source, 1962-2001 (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	769.2
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	32.7	1,721.8
1999	879.5	184.7	611.8	70.4	27.8	18.3	34.9	1,827.5
2000	1,004.5	207.3	652.9	68.9	29.0	19.9	42.8	2,025.2
2001	994.3	151.1	694.0	66.1	28.4	19.4	37.8	1,991.0

SOURCE: Congressional Budget Office.

Table F-4.
Revenues by Major Source, 1962-2001 (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	17.5
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	17.5
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	18.3
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	8.9	3.2	4.4	1.5	0.4	0.2	0.3	19.0
1971	8.0	2.5	4.4	1.5	0.3	0.2	0.4	17.3
1972	8.0	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	0.3	0.2	0.4	18.3
1975	7.8	2.6	5.4	1.1	0.3	0.2	0.4	17.9
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	5.5	0.7	0.2	0.3	0.4	18.5
1980	8.9	2.4	5.8	0.9	0.2	0.3	0.5	18.9
1981	9.3	2.0	6.0	1.3	0.2	0.3	0.5	19.6
1982	9.2	1.5	6.2	1.1	0.2	0.3	0.5	19.1
1983	8.4	1.1	6.1	1.0	0.2	0.3	0.5	17.4
1984	7.8	1.5	6.2	1.0	0.2	0.3	0.4	17.3
1985	8.1	1.5	6.4	0.9	0.2	0.3	0.4	17.7
1986	7.9	1.4	6.5	0.7	0.2	0.3	0.5	17.5
1987	8.4	1.8	6.5	0.7	0.2	0.3	0.4	18.4
1988	8.0	1.9	6.7	0.7	0.2	0.3	0.4	18.1
1989	8.2	1.9	6.6	0.6	0.2	0.3	0.4	18.3
1990	8.1	1.6	6.6	0.6	0.2	0.3	0.5	18.0
1991	7.9	1.7	6.7	0.7	0.2	0.3	0.4	17.8
1992	7.7	1.6	6.6	0.7	0.2	0.3	0.4	17.5
1993	7.8	1.8	6.5	0.7	0.2	0.3	0.3	17.6
1994	7.8	2.0	6.6	0.8	0.2	0.3	0.3	18.1
1995	8.1	2.1	6.6	0.8	0.2	0.3	0.4	18.5
1996	8.5	2.2	6.6	0.7	0.2	0.2	0.3	18.9
1997	9.0	2.2	6.6	0.7	0.2	0.2	0.3	19.3
1998	9.6	2.2	6.6	0.7	0.3	0.2	0.4	19.9
1999	9.6	2.0	6.7	0.8	0.3	0.2	0.4	20.0
2000	10.3	2.1	6.7	0.7	0.3	0.2	0.4	20.8
2001	9.8	1.5	6.8	0.7	0.3	0.2	0.4	19.6

SOURCE: Congressional Budget Office.

Table F-5.
Outlays by Major Spending Category, 1962-2001 (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	106.5	50.9	10.3	-10.2	157.5
1968	118.0	59.7	11.1	-10.6	178.1
1969	117.3	64.6	12.7	-11.0	183.6
1970	120.3	72.5	14.4	-11.5	195.6
1971	122.5	86.9	14.8	-14.1	210.2
1972	128.5	100.8	15.5	-14.1	230.7
1973	130.4	116.0	17.3	-18.0	245.7
1974	138.2	130.9	21.4	-21.2	269.4
1975	158.0	169.4	23.2	-18.3	332.3
1976	175.6	189.1	26.7	-19.6	371.8
1977	197.1	203.7	29.9	-21.5	409.2
1978	218.7	227.4	35.5	-22.8	458.7
1979	240.0	247.0	42.6	-25.6	504.0
1980	276.3	291.2	52.5	-29.2	590.9
1981	307.9	339.4	68.8	-37.9	678.2
1982	326.0	370.8	85.0	-36.0	745.8
1983	353.3	410.6	89.8	-45.3	808.4
1984	379.4	405.6	111.1	-44.2	851.9
1985	415.8	448.2	129.5	-47.1	946.4
1986	438.5	461.8	136.0	-45.9	990.5
1987	444.2	474.2	138.7	-52.9	1,004.1
1988	464.4	505.0	151.8	-56.8	1,064.5
1989	488.8	549.6	169.0	-63.8	1,143.7
1990	500.6	626.9	184.4	-58.7	1,253.2
1991	533.3	702.3	194.5	-105.7	1,324.4
1992	533.8	716.8	199.4	-68.4	1,381.7
1993	539.4	738.0	198.7	-66.6	1,409.5
1994	541.4	786.1	203.0	-68.5	1,461.9
1995	544.9	818.5	232.2	-79.7	1,515.8
1996	532.7	858.7	241.1	-71.9	1,560.6
1997	547.2	896.3	244.0	-86.3	1,601.3
1998	552.1	938.6	241.2	-79.2	1,652.6
1999	572.0	976.8	229.7	-76.5	1,701.9
2000	614.8	1,029.8	223.2	-79.1	1,788.8
2001	649.3	1,095.2	206.2	-86.8	1,863.9

SOURCE: Congressional Budget Office.

Table F-6.
Outlays by Major Spending Category, 1962-2001 (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	12.5	6.0	1.3	-1.3	18.5
1964	12.3	6.1	1.3	-1.2	18.5
1965	11.3	5.8	1.2	-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	19.3
1970	11.9	7.2	1.4	-1.1	19.3
1971	11.3	8.0	1.4	-1.3	19.4
1972	10.9	8.6	1.3	-1.2	19.6
1973	9.9	8.8	1.3	-1.4	18.7
1974	9.6	9.1	1.5	-1.5	18.7
1975	10.1	10.9	1.5	-1.2	21.3
1976	10.1	10.9	1.5	-1.1	21.4
1977	10.0	10.3	1.5	-1.1	20.7
1978	9.9	10.2	1.6	-1.0	20.7
1979	9.6	9.9	1.7	-1.0	20.1
1980	10.1	10.7	1.9	-1.1	21.6
1981	10.1	11.1	2.2	-1.2	22.2
1982	10.1	11.5	2.6	-1.1	23.1
1983	10.3	11.9	2.6	-1.3	23.5
1984	9.9	10.5	2.9	-1.2	22.1
1985	10.0	10.8	3.1	-1.1	22.9
1986	10.0	10.5	3.1	-1.0	22.5
1987	9.5	10.2	3.0	-1.1	21.6
1988	9.3	10.1	3.0	-1.1	21.2
1989	9.0	10.2	3.1	-1.2	21.2
1990	8.7	10.9	3.2	-1.0	21.8
1991	9.0	11.8	3.3	-1.8	22.3
1992	8.6	11.5	3.2	-1.1	22.2
1993	8.2	11.2	3.0	-1.0	21.5
1994	7.8	11.3	2.9	-1.0	21.0
1995	7.4	11.2	3.2	-1.1	20.7
1996	6.9	11.2	3.1	-0.9	20.3
1997	6.7	10.9	3.0	-1.1	19.5
1998	6.4	10.8	2.8	-0.9	19.1
1999	6.3	10.7	2.5	-0.8	18.6
2000	6.3	10.6	2.3	-0.8	18.4
2001	6.4	10.8	2.0	-0.9	18.4

SOURCE: Congressional Budget Office.

Table F-7.
Discretionary Outlays, 1962-2001 (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	106.5
1968	82.2	4.9	31.0	118.0
1969	82.7	4.1	30.5	117.3
1970	81.9	4.0	34.4	120.3
1971	79.0	3.8	39.8	122.5
1972	79.3	4.6	44.6	128.5
1973	77.1	4.8	48.5	130.4
1974	80.7	6.2	51.3	138.2
1975	87.6	8.2	62.2	158.0
1976	89.9	7.5	78.2	175.6
1977	97.5	8.0	91.5	197.1
1978	104.6	8.5	105.5	218.7
1979	116.8	9.1	114.1	240.0
1980	134.6	12.8	128.9	276.3
1981	158.0	13.6	136.3	307.9
1982	185.9	12.9	127.1	326.0
1983	209.9	13.6	129.8	353.3
1984	228.0	16.3	135.1	379.4
1985	253.1	17.4	145.3	415.8
1986	273.8	17.7	147.0	438.5
1987	282.5	15.2	146.5	444.2
1988	290.9	15.7	157.8	464.4
1989	304.0	16.6	168.2	488.8
1990	300.1	19.1	181.4	500.6
1991	319.7	19.7	193.9	533.3
1992	302.6	19.2	212.1	533.8
1993	292.4	21.6	225.4	539.4
1994	282.3	20.8	238.3	541.4
1995	273.6	20.1	251.2	544.9
1996	266.0	18.3	248.4	532.7
1997	271.7	19.0	256.6	547.2
1998	270.2	18.1	263.8	552.1
1999	275.5	19.5	277.0	572.0
2000	295.0	21.3	298.6	614.8
2001	306.1	22.5	320.8	649.3

SOURCE: Congressional Budget Office.

Table F-8.
Discretionary Outlays, 1962-2001 (As a percentage of GDP)

	Defense	International	Domestic	Total
1962	9.2	1.0	2.5	12.7
1963	8.9	0.9	2.7	12.5
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	11.3
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	10.1
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	4.9	0.5	4.7	10.1
1981	5.2	0.4	4.5	10.1
1982	5.8	0.4	3.9	10.1
1983	6.1	0.4	3.8	10.3
1984	5.9	0.4	3.5	9.9
1985	6.1	0.4	3.5	10.0
1986	6.2	0.4	3.3	10.0
1987	6.1	0.3	3.1	9.5
1988	5.8	0.3	3.1	9.3
1989	5.6	0.3	3.1	9.0
1990	5.2	0.3	3.2	8.7
1991	5.4	0.3	3.3	9.0
1992	4.9	0.3	3.4	8.6
1993	4.5	0.3	3.4	8.2
1994	4.1	0.3	3.4	7.8
1995	3.7	0.3	3.4	7.4
1996	3.5	0.2	3.2	6.9
1997	3.3	0.2	3.1	6.7
1998	3.1	0.2	3.0	6.4
1999	3.0	0.2	3.0	6.3
2000	3.0	0.2	3.1	6.3
2001	3.0	0.2	3.2	6.4

SOURCE: Congressional Budget Office.

Table F-9.
Outlays for Entitlements and Other Mandatory Spending, 1962-2001 (In billions of dollars)

	Means-Tested Programs			Non-Means-Tested Programs								Total Entitlements and Other Mandatory Spending
	Medicaid	Other	Total Means-Tested	Social Security	Medicare	Other Retirement and Disability	Unemployment Compensation	Farm Price Supports	Deposit Insurance	Other	Total Non-Means-Tested	
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	3.1	3.4	-0.4	7.1	31.5	36.2
1964	0.2	4.8	5.0	16.2	0	3.3	2.9	3.4	-0.4	8.5	33.9	38.9
1965	0.3	4.9	5.2	17.1	0	3.6	2.3	2.8	-0.4	9.2	34.5	39.7
1966	0.8	5.0	5.8	20.3	*	4.1	2.0	1.4	-0.5	10.3	37.6	43.4
1967	1.2	5.0	6.2	21.3	3.2	4.8	2.0	2.0	-0.4	11.8	44.7	50.9
1968	1.8	5.7	7.5	23.3	5.1	5.7	2.3	3.3	-0.5	13.0	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	56.0	64.6
1970	2.7	7.4	10.1	29.6	6.8	6.6	3.1	3.8	-0.5	12.9	62.4	72.5
1971	3.4	10.0	13.4	35.1	7.5	8.3	5.8	2.9	-0.4	14.3	73.5	86.9
1972	4.6	11.7	16.3	39.4	8.4	9.6	6.6	4.1	-0.6	17.0	84.5	100.8
1973	4.6	11.4	16.0	48.2	9.0	11.7	4.9	3.6	-0.8	23.4	100.0	116.0
1974	5.8	13.7	19.5	55.0	10.7	13.8	5.6	1.0	-0.6	25.9	111.4	130.9
1975	6.8	18.6	25.4	63.6	14.1	18.3	12.8	0.6	0.5	34.2	144.0	169.4
1976	8.6	21.7	30.3	72.7	16.9	18.9	18.6	1.1	-0.6	31.2	158.8	189.1
1977	9.9	23.4	33.3	83.7	20.8	21.6	14.3	3.8	-2.8	29.0	170.4	203.7
1978	10.7	24.8	35.5	92.4	24.3	23.7	10.9	5.7	-1.0	35.9	191.9	227.4
1979	12.4	26.5	38.9	102.6	28.2	27.9	9.8	3.6	-1.7	37.8	208.1	247.0
1980	14.0	31.9	45.9	117.1	34.0	32.1	16.9	2.8	-0.4	43.0	245.3	291.2
1981	16.8	37.1	53.9	137.9	41.3	37.4	18.3	4.0	-1.4	48.0	285.5	339.4
1982	17.4	37.4	54.8	153.9	49.2	40.7	22.2	11.7	-2.1	40.4	316.0	370.8
1983	19.0	40.3	59.3	168.5	55.5	43.2	29.6	18.9	-1.2	36.8	351.3	410.6
1984	20.1	41.2	61.3	176.1	61.0	44.7	17.0	7.3	-0.8	39.1	344.3	405.6
1985	22.7	43.3	66.0	186.4	69.6	45.5	15.8	17.7	-2.2	49.3	382.2	448.2
1986	25.0	44.9	69.9	196.5	74.2	47.5	16.1	25.8	1.5	30.1	391.9	461.8
1987	27.4	45.5	72.9	205.1	79.9	50.8	15.5	22.4	3.1	24.5	401.3	474.2
1988	30.5	50.0	80.5	216.8	85.7	54.2	13.6	12.2	10.0	32.0	424.5	505.0
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	17.1	6.5	57.9	31.6	527.0	626.9
1991	52.5	69.7	122.2	266.8	114.2	64.4	25.1	10.1	66.2	33.4	580.1	702.3
1992	67.8	78.7	146.5	285.2	129.4	66.6	37.0	9.3	2.6	40.3	570.3	716.8
1993	75.8	86.5	162.3	302.0	143.1	68.7	35.5	15.6	-28.0	38.8	575.7	738.0
1994	82.0	95.0	177.0	316.9	159.5	72.1	26.4	9.9	-7.6	31.8	609.1	786.1
1995	89.1	101.5	190.6	333.3	177.1	75.2	21.3	5.8	-17.9	33.2	628.0	818.5
1996	92.0	104.2	196.2	347.1	191.3	77.3	22.6	5.0	-8.4	27.6	662.5	858.7
1997	95.6	107.2	202.8	362.3	207.9	80.6	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	19.6	8.5	-4.4	35.8	729.6	938.6
1999	108.0	112.7	220.7	387.0	209.3	85.3	21.4	18.0	-5.3	40.5	756.1	976.8
2000	117.9	118.0	235.9	406.0	216.0	87.8	20.7	30.5	-3.1	35.8	793.9	1,029.8
2001	129.4	119.3	248.7	429.4	237.9	92.7	27.9	22.4	-1.4	37.8	846.5	1,095.2

SOURCE: Congressional Budget Office.

NOTE: * = less than $50 million.

Table F-10.
Outlays for Entitlements and Other Mandatory Spending, 1962-2001 (As a percentage of GDP)

	Means-Tested Programs			Non-Means-Tested Programs								Total Entitlements and Other Mandatory Spending
	Medicaid	Other	Total Means-Tested	Social Security	Medicare	Other Retirement and Disability	Unemployment Compensation	Farm Price Supports	Deposit Insurance	Other	Total Non-Means-Tested	
1962	*	0.7	0.8	2.5	0	0.5	0.6	0.4	-0.1	1.4	5.3	6.1
1963	*	0.8	0.8	2.6	0	0.5	0.5	0.6	-0.1	1.2	5.2	6.0
1964	*	0.7	0.8	2.5	0	0.5	0.5	0.5	-0.1	1.3	5.3	6.1
1965	*	0.7	0.8	2.5	0	0.5	0.3	0.4	-0.1	1.3	5.0	5.8
1966	0.1	0.7	0.8	2.7	*	0.5	0.3	0.2	-0.1	1.4	5.0	5.7
1967	0.1	0.6	0.8	2.6	0.4	0.6	0.2	0.2	*	1.5	5.5	6.3
1968	0.2	0.7	0.9	2.7	0.6	0.7	0.3	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	*	1.3	6.2	7.2
1971	0.3	0.9	1.2	3.2	0.7	0.8	0.5	0.3	*	1.3	6.8	8.0
1972	0.4	1.0	1.4	3.3	0.7	0.8	0.6	0.3	-0.1	1.4	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	8.8
1974	0.4	0.9	1.4	3.8	0.7	1.0	0.4	0.1	*	1.8	7.7	9.1
1975	0.4	1.2	1.6	4.1	0.9	1.2	0.8	*	*	2.2	9.2	10.9
1976	0.5	1.3	1.7	4.2	1.0	1.1	1.1	0.1	*	1.8	9.1	10.9
1977	0.5	1.2	1.7	4.2	1.1	1.1	0.7	0.2	-0.1	1.5	8.6	10.3
1978	0.5	1.1	1.6	4.2	1.1	1.1	0.5	0.3	*	1.6	8.6	10.2
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	*	1.6	9.0	10.7
1981	0.6	1.2	1.8	4.5	1.3	1.2	0.6	0.1	*	1.6	9.3	11.1
1982	0.5	1.2	1.7	4.8	1.5	1.3	0.7	0.4	-0.1	1.2	9.8	11.5
1983	0.6	1.2	1.7	4.9	1.6	1.3	0.9	0.5	*	1.1	10.2	11.9
1984	0.5	1.1	1.6	4.6	1.6	1.2	0.4	0.2	*	1.0	8.9	10.5
1985	0.5	1.0	1.6	4.5	1.7	1.1	0.4	0.4	-0.1	1.2	9.2	10.8
1986	0.6	1.0	1.6	4.5	1.7	1.1	0.4	0.6	*	0.7	8.9	10.5
1987	0.6	1.0	1.6	4.4	1.7	1.1	0.3	0.5	0.1	0.5	8.6	10.2
1988	0.6	1.0	1.6	4.3	1.7	1.1	0.3	0.2	0.2	0.6	8.5	10.1
1989	0.6	1.0	1.6	4.3	1.7	1.1	0.3	0.2	0.4	0.6	8.5	10.2
1990	0.7	1.0	1.7	4.3	1.9	1.0	0.3	0.1	1.0	0.6	9.2	10.9
1991	0.9	1.2	2.1	4.5	1.9	1.1	0.4	0.2	1.1	0.6	9.8	11.8
1992	1.1	1.3	2.4	4.6	2.1	1.1	0.6	0.1	*	0.6	9.2	11.5
1993	1.2	1.3	2.5	4.6	2.2	1.0	0.5	0.2	-0.4	0.6	8.8	11.2
1994	1.2	1.4	2.5	4.6	2.3	1.0	0.4	0.1	-0.1	0.5	8.8	11.3
1995	1.2	1.4	2.6	4.6	2.4	1.0	0.3	0.1	-0.2	0.5	8.6	11.2
1996	1.2	1.4	2.5	4.5	2.5	1.0	0.3	0.1	-0.1	0.4	8.6	11.2
1997	1.2	1.3	2.5	4.4	2.5	1.0	0.3	0.1	-0.2	0.4	8.5	10.9
1998	1.2	1.2	2.4	4.3	2.4	1.0	0.2	0.1	-0.1	0.4	8.4	10.8
1999	1.2	1.2	2.4	4.2	2.3	0.9	0.2	0.2	-0.1	0.4	8.3	10.7
2000	1.2	1.2	2.4	4.2	2.2	0.9	0.2	0.3	*	0.4	8.1	10.6
2001	1.3	1.2	2.5	4.2	2.3	0.9	0.3	0.2	*	0.4	8.3	10.8

SOURCE: Congressional Budget Office.

NOTE: * = between -0.05 percent and 0.05 percent.

Table F-11.
Surpluses, Deficits, Debt, and Related Series, 1960-2001

	In Billions of Dollars			As a Percentage of GDP			GDP (Billions of Dollars)		
	Surplus or Deficit (-)	Standardized-Budget Surplus or Deficit (-)[a]	Debt Held by the Public	Surplus or Deficit (-)	Standardized-Budget Surplus or Deficit (-)[a,b]	Debt Held by the Public	Actual[c]	Potential	NAIRU[d] (Percent)
1960	*	*	237	0.1	0.1	45.6	520	520	5.5
1961	-3	3	238	-0.6	0.6	44.9	531	547	5.5
1962	-7	-4	248	-1.3	-0.7	43.6	569	575	5.5
1963	-5	-4	254	-0.8	-0.7	42.3	600	605	5.5
1964	-6	-6	257	-0.9	-1.0	40.0	642	637	5.6
1965	-1	-4	261	-0.2	-0.6	37.9	688	674	5.6
1966	-4	-14	264	-0.5	-1.9	34.8	757	719	5.7
1967	-9	-20	267	-1.1	-2.6	32.8	812	776	5.8
1968	-25	-29	290	-2.9	-3.5	33.3	870	840	5.8
1969	3	-10	278	0.3	-1.1	29.3	949	915	5.8
1970	-3	-8	283	-0.3	-0.8	27.9	1,014	1,001	5.9
1971	-23	-12	303	-2.1	-1.1	28.0	1,082	1,089	5.9
1972	-23	-19	322	-2.0	-1.6	27.4	1,178	1,179	6.0
1973	-15	-20	341	-1.1	-1.6	26.0	1,314	1,274	6.1
1974	-6	1	344	-0.4	0.1	23.8	1,442	1,415	6.2
1975	-53	-3	395	-3.4	-0.2	25.3	1,559	1,616	6.2
1976	-74	-36	477	-4.2	-2.0	27.5	1,736	1,787	6.2
1977	-54	-20	549	-2.7	-1.0	27.8	1,975	2,000	6.2
1978	-59	-32	607	-2.7	-1.4	27.4	2,219	2,212	6.3
1979	-41	-15	640	-1.6	-0.6	25.6	2,505	2,472	6.3
1980	-74	-12	712	-2.7	-0.4	26.1	2,732	2,775	6.2
1981	-79	-15	789	-2.6	-0.5	25.8	3,060	3,127	6.2
1982	-128	-46	925	-4.0	-1.3	28.6	3,231	3,433	6.1
1983	-208	-117	1,137	-6.0	-3.2	33.0	3,442	3,681	6.1
1984	-185	-143	1,307	-4.8	-3.6	34.0	3,847	3,929	6.1
1985	-212	-176	1,507	-5.1	-4.2	36.4	4,142	4,184	6.0
1986	-221	-211	1,741	-5.0	-4.8	39.6	4,398	4,424	6.0
1987	-150	-154	1,890	-3.2	-3.3	40.6	4,654	4,692	6.0
1988	-155	-127	2,052	-3.1	-2.5	40.9	5,017	4,998	5.9
1989	-152	-116	2,191	-2.8	-2.2	40.5	5,407	5,347	5.9
1990	-221	-120	2,412	-3.9	-2.1	42.0	5,738	5,710	5.9
1991	-269	-151	2,689	-4.5	-2.5	45.4	5,928	6,093	5.8
1992	-290	-185	3,000	-4.7	-2.9	48.2	6,222	6,411	5.7
1993	-255	-183	3,249	-3.9	-2.7	49.5	6,561	6,724	5.6
1994	-203	-141	3,433	-2.9	-2.0	49.4	6,949	7,046	5.4
1995	-164	-138	3,605	-2.2	-1.9	49.2	7,323	7,396	5.3
1996	-108	-92	3,735	-1.4	-1.2	48.5	7,700	7,764	5.2
1997	-22	-63	3,773	-0.3	-0.8	46.0	8,194	8,166	5.2
1998	69	-25	3,722	0.8	-0.3	43.0	8,655	8,563	5.2
1999	126	12	3,633	1.4	0.1	39.8	9,134	8,986	5.2
2000	236	120	3,410	2.4	1.3	35.0	9,747	9,508	5.2
2001	127	60	3,320	1.3	0.6	32.7	10,150	10,064	5.2

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

NOTE: * = less than $500 million.

a. Excludes deposit insurance, receipts from auctions of licenses to use the electromagnetic spectrum, timing adjustments, and contributions from allied nations for Operation Desert Storm (which were received in 1991 and 1992).

b. Shown as a percentage of potential GDP.

c. CBO calculated fiscal year numbers from quarterly national income and product account data from the Bureau of Economic Analysis.

d. The NAIRU is the nonaccelerating inflation rate of unemployment. It is the benchmark for computing potential GDP.

Table F-12.
Standardized-Budget Surplus or Deficit and Related Series, 1960-2001
(In billions of dollars)

	Budget Surplus or Deficit (-)	Cyclical Adjustment	Other Adjustments[a]	Standardized-Budget Surplus or Deficit (-)	Standardized-Budget Revenues	Standardized-Budget Outlays
1960	*	*	*	*	91	90
1961	-3	6	1	3	98	94
1962	-7	2	1	-4	99	104
1963	-5	1	-1	-4	105	110
1964	-6	-2	2	-6	109	115
1965	-1	-5	2	-4	110	115
1966	-4	-13	3	-14	116	130
1967	-9	-12	1	-20	133	153
1968	-25	-11	7	-29	141	171
1969	3	-14	1	-10	164	173
1970	-3	-6	1	-8	176	184
1971	-23	2	8	-12	185	197
1972	-23	*	5	-19	201	220
1973	-15	-14	9	-20	214	234
1974	-6	-10	17	1	250	249
1975	-53	20	31	-3	295	298
1976	-74	23	14	-36	308	344
1977	-54	12	22	-20	358	378
1978	-59	-3	31	-32	390	421
1979	-41	-12	38	-15	444	460
1980	-74	16	46	-12	519	532
1981	-79	25	40	-15	607	622
1982	-128	59	23	-46	652	698
1983	-208	83	8	-117	648	765
1984	-185	30	13	-143	672	815
1985	-212	16	20	-176	723	899
1986	-221	10	*	-211	749	960
1987	-150	10	-15	-154	812	966
1988	-155	-7	36	-127	870	997
1989	-152	-19	55	-116	938	1,054
1990	-221	-10	110	-120	991	1,112
1991	-269	46	73	-151	1,066	1,217
1992	-290	66	39	-185	1,124	1,309
1993	-255	58	14	-183	1,170	1,353
1994	-203	35	28	-141	1,251	1,392
1995	-164	20	6	-138	1,332	1,471
1996	-108	20	-5	-92	1,418	1,510
1997	-22	-9	-32	-63	1,501	1,564
1998	69	-34	-60	-25	1,606	1,631
1999	126	-53	-61	12	1,677	1,666
2000	236	-85	-31	120	1,832	1,712
2001	127	-33	-33	60	1,870	1,810

SOURCE: Congressional Budget Office.

NOTE: * = less than $500 million.

a. Consists of deposit insurance, receipts from auctions of licenses to use the electromagnetic spectrum, timing adjustments, and contributions from allied nations for Operation Desert Storm (which were received in 1991 and 1992).

Table F-13.
Standardized-Budget Surplus or Deficit and Related Series, 1960-2001
(As a percentage of potential GDP)

	Budget Surplus or Deficit (-)[a]	Cyclical Adjustment	Other Adjustments[b]	Standardized-Budget Surplus or Deficit (-)	Standardized-Budget Revenues	Standardized-Budget Outlays
1960	0.1	-0.1	0.1	0.1	17.4	17.4
1961	-0.6	1.1	0.1	0.6	17.9	17.3
1962	-1.3	0.3	0.2	-0.7	17.3	18.0
1963	-0.8	0.2	-0.1	-0.7	17.4	18.1
1964	-0.9	-0.3	0.2	-1.0	17.1	18.1
1965	-0.2	-0.7	0.3	-0.6	16.4	17.0
1966	-0.5	-1.8	0.4	-1.9	16.1	18.0
1967	-1.1	-1.6	0.1	-2.6	17.1	19.7
1968	-2.9	-1.3	0.8	-3.5	16.8	20.3
1969	0.3	-1.5	0.1	-1.1	17.9	18.9
1970	-0.3	-0.6	0.1	-0.8	17.6	18.4
1971	-2.1	0.2	0.8	-1.1	17.0	18.1
1972	-2.0	*	0.4	-1.6	17.0	18.7
1973	-1.1	-1.1	0.7	-1.6	16.8	18.4
1974	-0.4	-0.7	1.2	0.1	17.7	17.6
1975	-3.4	1.2	1.9	-0.2	18.3	18.4
1976	-4.2	1.3	0.8	-2.0	17.3	19.3
1977	-2.7	0.6	1.1	-1.0	17.9	18.9
1978	-2.7	-0.1	1.4	-1.4	17.6	19.1
1979	-1.6	-0.5	1.5	-0.6	18.0	18.6
1980	-2.7	0.6	1.7	-0.4	18.7	19.2
1981	-2.6	0.8	1.3	-0.5	19.4	19.9
1982	-4.0	1.7	0.7	-1.3	19.0	20.3
1983	-6.0	2.3	0.2	-3.2	17.6	20.8
1984	-4.8	0.8	0.3	-3.6	17.1	20.7
1985	-5.1	0.4	0.5	-4.2	17.3	21.5
1986	-5.0	0.2	*	-4.8	16.9	21.7
1987	-3.2	0.2	-0.3	-3.3	17.3	20.6
1988	-3.1	-0.1	0.7	-2.5	17.4	19.9
1989	-2.8	-0.4	1.0	-2.2	17.5	19.7
1990	-3.9	-0.2	1.9	-2.1	17.4	19.5
1991	-4.5	0.7	1.2	-2.5	17.5	20.0
1992	-4.7	1.0	0.6	-2.9	17.5	20.4
1993	-3.9	0.9	0.2	-2.7	17.4	20.1
1994	-2.9	0.5	0.4	-2.0	17.8	19.8
1995	-2.2	0.3	0.1	-1.9	18.0	19.9
1996	-1.4	0.3	-0.1	-1.2	18.3	19.5
1997	-0.3	-0.1	-0.4	-0.8	18.4	19.1
1998	0.8	-0.4	-0.7	-0.3	18.8	19.1
1999	1.4	-0.6	-0.7	0.1	18.7	18.5
2000	2.4	-0.9	-0.3	1.3	19.3	18.0
2001	1.3	-0.3	-0.3	0.6	18.6	18.0

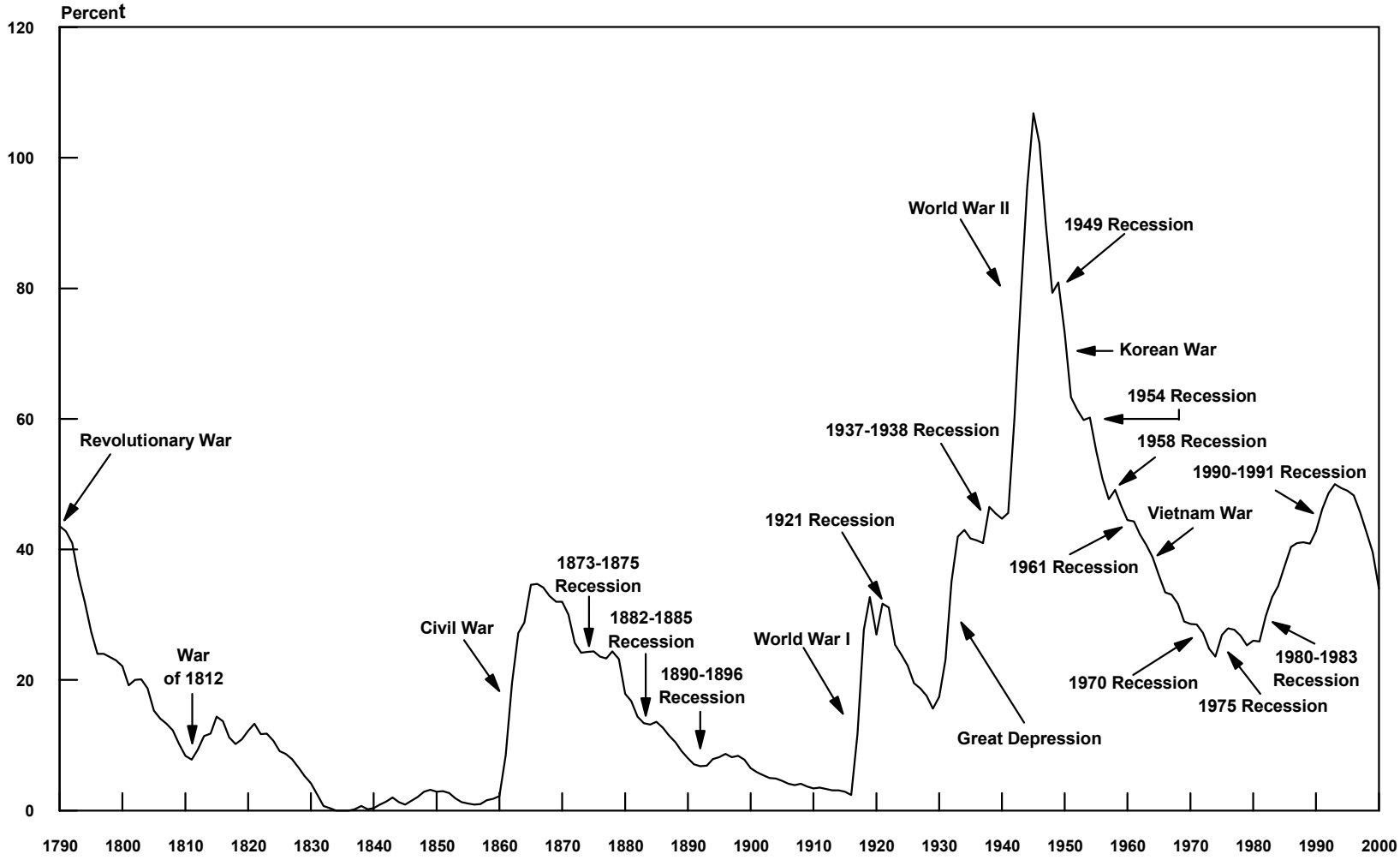
SOURCE: Congressional Budget Office.

NOTE: * = less than 0.05 percent.

a. Shown as a percentage of actual GDP.

b. Consists of deposit insurance, receipts from auctions of licenses to use the electromagnetic spectrum, timing adjustments, and contributions from allied nations for Operation Desert Storm (which were received in 1991 and 1992).

Figure F-1.
Federal Debt Held by the Public as a Percentage of Gross National Product, 1790-2000



SOURCE: Congressional Budget Office.

NOTE: This figure compares debt with gross national product rather than the more familiar gross domestic product because GNP is the measure used in the historical data. GNP measures the total income of all U.S. residents (including net payments for capital and labor income earned in other countries). GDP measures the income produced on U.S. soil. The difference between the two was about $10 billion in 1999.

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	Revenue forecasting
Paul Burnham	Pensions
Barbara Edwards	Individual income taxes
Pam Greene	Estate and gift taxes
Ed Harris	Social insurance taxes
Carolyn Lynch	Corporate income taxes, Federal Reserve System earnings
Larry Ozanne	Capital gains realizations
Andrew Shaw	Excise taxes
David Weiner	Revenue modeling
Erin Whitaker	Customs duties, miscellaneous receipts

Spending Projections

Defense, International Affairs, and Veterans' Affairs

Jo Ann Vines	Unit Chief
Kent Christensen	Defense
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)
Sarah Jennings	Military retirement, veterans' education
Sam Papenfuss	Veterans' health care, military health care
Michelle Patterson	Defense (military personnel), veterans' compensation and pensions
Matthew Schmit	Intelligence programs, energy employees' compensation, radiation exposure compensation
Joseph Whitehill	International affairs (development, security, international financial institutions)

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Thomas Bradley	Unit Chief
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Charles Betley	Medicare, Federal Employees Health Benefits program
Niall Brennan	Medicare, Public Health Service
Julia Christensen	Medicare, Public Health Service
Jeanne De Sa	Medicaid, State Children's Health Insurance Program
Eric Rollins	Medicaid, State Children's Health Insurance Program
Christopher Topoleski	Medicare, Public Health Service

Human Resources

Paul Cullinan	Unit Chief
Michael Carson	Computer and research support
Chad Chirico	Housing assistance
Sheila Dacey	Child Support Enforcement, Temporary Assistance for Needy Families, Social Services Block Grant
Geoff Gerhardt	Federal civilian retirement, Pension Benefit Guaranty Corporation, Supplemental Security Income
Deborah Kalcevic	Education
Kathy Ruffing	Social Security
Christina Hawley Sadoti	Unemployment insurance, training programs, administration on aging, foster care
Valerie Baxter Womer	Food Stamps, child nutrition, child care, low-income home energy assistance
Donna Wong	Elementary and secondary education, Pell grants, child and family services, arts and humanities

Natural and Physical Resources

Kim Cawley	Unit Chief
Megan Carroll	Conservation and land management
Lisa Cash Driskill	Energy, Outer Continental Shelf receipts
Mark Grabowicz	Justice, Postal Service
Kathleen Gramp	Spectrum auction receipts, energy, science, and space
Mark Hadley	Deposit insurance, credit unions, air transportation
Greg Hitz	Agriculture
David Hull	Agriculture
Ken Johnson	Commerce, Small Business Administration, Universal Service Fund
James Langley	Agriculture
Susanne Mehlman	Pollution control and abatement, Federal Housing Administration and other housing credit programs
Julie Middleton	Water resources, Federal Emergency Management Agency
Rachel Milberg	Highways, Amtrak, mass transit
Matthew Pickford	General government
Deborah Reis	Recreation, water transportation, community development, other natural resources, legislative branch
Lanette Keith Walker	Justice, regional development, Bureau of Indian Affairs

Other

Janet Airis	Unit Chief, Scorekeeping
Jeffrey Holland	Unit Chief, Projections
David Sanders	Unit Chief, Computer Support
Edward Blau	Authorization bills
Barry Blom	National income and product accounts, monthly Treasury data
Joanna Capps	Appropriation bills (Agriculture, Interior)
Sandy Davis	Budget process
Adaeze Enekwechi	Economic assumptions, budget aggregates
Kenneth Farris	Computer support
Mary Froehlich	Computer support
Ellen Hays	Federal pay
Catherine Little	Appropriation bills (VA-HUD, Treasury)
Felix LoStracco	Other interest, discretionary spending
Virginia Myers	Appropriation bills (Commerce-Justice-State, foreign operations)
Robert Sempsey	Appropriation bills (Labor-HHS, Transportation, military construction)
Amy Wendholt	Appropriation bills (Defense, energy and water)
Jina Yoon	Net interest on the public debt

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