APPENDIX

C

Automatic Stabilizers

The Congressional Budget Office's (CBO's) baseline projections of the budget deficit are affected by legislation that governs taxes and spending and by the automatic responses of revenues and outlays to developments in the economy. Among those latter factors, automatic stabilizers reflect cyclical movements in real (inflation-adjusted) output and unemployment.[1] During recessions, gross domestic product (GDP) falls relative to potential GDP (the quantity of output that corresponds to a high rate of use of labor and capital); tax liabilities and, therefore, revenues decline automatically with the reduction in output and income. In addition, some outlays—to pay unemployment insurance claims or to provide federal nutrition benefits, for example—automatically increase.[2] Those automatic reductions in revenues and increases in outlays help bolster economic activity during downturns, but they also temporarily increase the budget deficit. As GDP moves up closer to potential GDP, revenues automatically begin to rise and outlays automatically begin to fall, and thus the automatic stabilizers offer a smaller boost to output. When GDP rises above its potential, the automatic stabilizers begin to restrain, rather than boost, economic activity.

CBO estimates that automatic stabilizers have added significantly to the budget deficit for the past few years and will continue to do so for the next few years, before their effect declines significantly in response to improving economic conditions. In fiscal year 2011, CBO estimates, automatic stabilizers added $367 billion to the deficit, an amount equal to 2.3 percent of potential GDP (see Table C-1 on page 116 and Table C-2 on page 118).[3] That year marked the third consecutive year that automatic stabilizers added to the deficit an amount equal to or exceeding 2.0 percent of potential GDP, a mark that had been met or exceeded only twice in the past 50 years, in fiscal years 1982 and 1983 (see Figure C-1).

According to CBO's baseline projections, the contribution of automatic stabilizers to the budget deficit, measured as a share of potential GDP, will be 2.2 percent in fiscal year 2012 and 2.7 percent in fiscal years 2013 and 2014. The size of those effects in 2013 and 2014 derives mostly from the weaker economy caused by the sharp rise in taxes and reduction in spending that will occur in calendar year 2013 under current law.[4] After 2014, the projected effect of automatic stabilizers on the budget deficit shrinks steadily and reaches about zero in fiscal year 2018, when CBO projects that output will be back up to its potential.

The budget balance with the effects of automatic stabilizers filtered out is an estimate of what the surplus or deficit

1. For a description of a methodology for estimating automatic stabilizers that is similar to CBO's methodology, see Darrel Cohen and Glenn Follette, "The Automatic Fiscal Stabilizers: Quietly Doing Their Thing," *Economic Policy Review,* Federal Reserve Bank of New York, vol. 6, no. 1 (April 2000), pp. 35–68. See also Glenn Follette and Byron Lutz, *Fiscal Policy in the United States: Automatic Stabilizers, Discretionary Fiscal Policy Actions, and the Economy*, Finance and Economic Discussion Series, 2010–43 (Federal Reserve Board, September 2010).

2. CBO's estimates of the automatic stabilizers reflect the assumption that discretionary spending and interest payments do not have automatic responses to the business cycle.

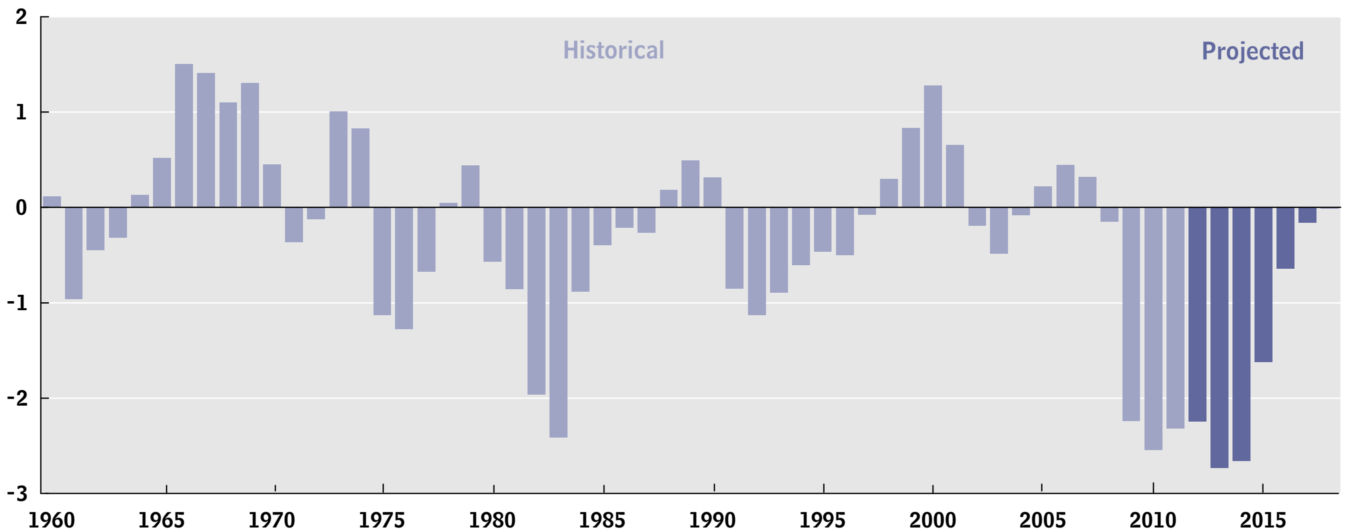
3. Those calculations and subsequent ones in this appendix involve potential, rather than actual, GDP because potential GDP excludes fluctuations that are attributable to the business cycle.

4. The size of the automatic stabilizers depends not only on the amount of slack in the economy but also on the characteristics of the tax structure. For example, revenues are more sensitive to the business cycle when tax rates are relatively high because losses in taxable income due to economic weakness then result in greater losses of tax revenues than when tax rates are lower. In particular, the higher tax rates scheduled under current law for 2013 increase the size of the automatic stabilizers, but the economic effect of the larger automatic stabilizers is far outweighed by the restraining effect that the higher tax rates have on short-term growth.

Figure C-1.

Contribution of Automatic Stabilizers to Budget Deficits and Surpluses

(Percentage of potential gross domestic product)



Sources: Congressional Budget Office; Office of Management and Budget.

Notes: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) output and unemployment.

Potential gross domestic product is the quantity of output that corresponds to a high rate of use of labor and capital.

Data are fiscal year values, plotted through 2018.

would be if GDP was at its potential, the unemployment rate was at a corresponding level, and all other factors were unchanged.[5] That budget measure has been used in different ways. For example, some analysts use it to discern underlying trends in government saving or dissaving (that is, trends in surpluses or deficits). Others use it to approximate whether the short-run influence of the budget on aggregate demand and real output is positive or negative.[6] More generally, the measure helps analysts evaluate the extent to which changes in the budget balance are caused by cyclical developments in the economy and thus are likely to prove temporary rather than long lasting.

Under the assumptions used for CBO's baseline, the budget deficit without automatic stabilizers is projected to equal 4.3 percent of potential GDP in fiscal year 2012, down from 5.9 percent in 2011 (see Figure C-2). About half of that decrease results from a projected rise in revenues (measured as a share of potential GDP) that would occur without automatic stabilizers. The other half reflects mostly a decline in discretionary outlays (again, measured as a share of potential GDP).

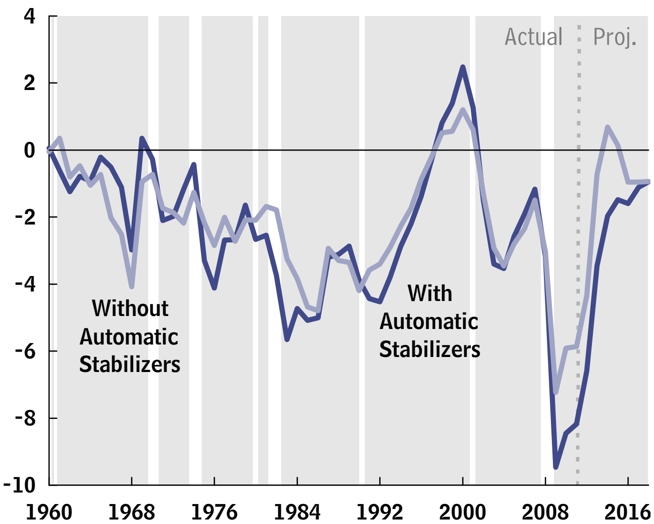
5. The "budget deficit without automatic stabilizers" has also been referred to as the "cyclically adjusted deficit" or "structural deficit."

6. For the purpose of assessing the impact of federal fiscal policy on output in the short term, economists generally prefer to use "net federal saving" with the effects of automatic stabilizers filtered out rather than the federal budget balance with those effects filtered out. Net federal saving, a figure reported by the Department of Commerce in the national income and product accounts (NIPAs), is similar to but not the same as the budget deficit because it includes various adjustments to the cash flows recorded in the federal budget to obtain a measure more directly related to current production and income. For example, net federal saving excludes some purely financial transactions of the government, such as sales of government assets and most federal outlays to bolster the financial system, that are recorded in the budget but are not clearly related to current production and income. For a discussion of the differences between the budget and NIPA measures of federal inflows and outflows, see Congressional Budget Office, *CBO's Projections of Federal Receipts and Expenditures in the Framework of the National Income and Product Accounts* (February 2011).

Figure C-2.

Budget Deficits and Surpluses With and Without Automatic Stabilizers

(Percentage of potential gross domestic product)



Sources: Congressional Budget Office; Federal Reserve.

Note: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) output and unemployment.

Potential gross domestic product is the quantity of output that corresponds to a high rate of use of labor and capital.

Data are fiscal year values, plotted through 2018.

The projected budget deficit adjusted to remove the effects of automatic stabilizers falls sharply in 2013, to 0.7 percent of potential GDP, reflecting the large increases in revenues and reductions in spending scheduled to take place under current law. Revenues without automatic stabilizers are projected to jump to 20.1 percent of potential GDP, up from 17.3 percent in 2012, and outlays without automatic stabilizers are projected to decline to 20.8 percent of potential GDP, down from 21.7 percent in 2012.

In fiscal year 2014, the projected budget balance with the effects of automatic stabilizers excluded improves further, reaching a surplus amounting to 0.7 percent of potential GDP. Nearly all of the improvement stems from an increase in revenues (rising from 20.1 percent of potential GDP to 21.3 percent). Outlays decline by 0.2 percent of potential GDP.

Later in the coming decade, the projected budget balance without automatic stabilizers is close to zero in fiscal year 2015 and is a deficit amounting to about 1.0 percent of potential GDP in 2016, 2017, and 2018. The renewed worsening of the budget balance with the effects of automatic stabilizers filtered out primarily reflects increases in both interest payments and mandatory spending. For the years beyond 2018, CBO projects that automatic stabilizers have no effect on the budget because GDP is assumed to be at its potential level; consequently, the projected budget deficit without automatic stabilizers is the same as the projected baseline budget deficit.

Table C-1.

Deficit or Surplus With and Without Automatic Stabilizers and Related Series, by Fiscal Year, in Billions of Dollars

	Deficit (-) or Surplus With Automatic Stabilizers	— Automatic Stabilizers	= Deficit (-) or Surplus Without Automatic Stabilizers	Revenues and Outlays Without Automatic Stabilizers: Revenues	Revenues and Outlays Without Automatic Stabilizers: Outlays	GDP Gap[a]	Unemployment Gap[b] (Percent)
				Historical			
1960	*	1	*	92	92	1	-0.2
1961	-3	-5	2	99	97	-16	0.9
1962	-7	-3	-5	102	106	-7	0.5
1963	-5	-2	-3	108	111	-6	0.1
1964	-6	1	-7	112	119	3	-0.1
1965	-1	4	-5	114	119	10	-0.7
1966	-4	11	-15	122	136	34	-1.7
1967	-9	11	-20	140	160	30	-2.0
1968	-25	9	-34	146	181	23	-2.0
1969	3	12	-9	178	187	27	-2.4
1970	-3	5	-7	191	198	4	-1.9
1971	-23	-4	-19	191	211	-15	-0.2
1972	-23	-1	-22	209	231	-4	-0.1
1973	-15	13	-28	220	247	39	-0.9
1974	-6	12	-18	254	272	28	-1.2
1975	-53	-18	-35	294	329	-56	1.2
1976	-74	-23	-51	316	367	-53	1.8
1977	-54	-13	-40	366	406	-28	1.1
1978	-59	1	-60	398	459	6	**
1979	-41	11	-52	454	506	26	-0.4
1980	-74	-16	-58	530	588	-48	0.6
1981	-79	-27	-52	621	673	-56	1.2
1982	-128	-67	-61	675	736	-192	3.0
1983	-208	-89	-119	678	797	-232	4.1
1984	-185	-35	-151	697	848	-78	1.8
1985	-212	-17	-196	747	943	-35	1.2
1986	-221	-9	-212	775	987	-17	1.0
1987	-150	-12	-137	866	1,003	-32	0.4
1988	-155	9	-164	902	1,066	27	-0.3
1989	-153	26	-179	968	1,147	67	-0.7
1990	-221	18	-239	1,016	1,254	39	-0.5
1991	-269	-52	-218	1,101	1,319	-152	0.8
1992	-290	-72	-218	1,153	1,371	-168	1.7
1993	-255	-60	-195	1,206	1,401	-141	1.5
1994	-203	-43	-161	1,296	1,457	-90	0.9
1995	-164	-35	-129	1,385	1,514	-92	0.3
1996	-107	-39	-68	1,491	1,559	-94	0.2
1997	-22	-6	-16	1,586	1,602	-2	**
1998	69	25	44	1,701	1,657	61	-0.5
1999	126	75	51	1,759	1,708	181	-0.7

Continued

Table C-1. **Continued**

Deficit or Surplus With and Without Automatic Stabilizers and Related Series, by Fiscal Year, in Billions of Dollars

	Deficit (-) or Surplus With Automatic Stabilizers	— Automatic Stabilizers	= Deficit (-) or Surplus Without Automatic Stabilizers	Revenues and Outlays Without Automatic Stabilizers: Revenues	Revenues and Outlays Without Automatic Stabilizers: Outlays	GDP Gap[a]	Unemployment Gap[b] (Percent)
				Historical (Continued)			
2000	236	122	114	1,912	1,797	280	-1.0
2001	128	66	62	1,929	1,867	114	-0.7
2002	-158	-20	-138	1,865	2,003	-53	0.7
2003	-378	-54	-324	1,825	2,149	-126	1.0
2004	-413	-9	-403	1,885	2,288	1	0.6
2005	-318	27	-346	2,125	2,471	90	0.2
2006	-248	58	-306	2,353	2,659	152	-0.3
2007	-161	44	-205	2,530	2,734	97	-0.5
2008	-459	-21	-437	2,539	2,976	-83	0.2
2009	-1,413	-334	-1,079	2,382	3,461	-988	3.3
2010	-1,293	-389	-904	2,488	3,393	-942	4.3
2011	-1,296	-367	-928	2,614	3,543	-892	3.7
				Projected			
2012	-1,079	-368	-711	2,839	3,550	-867	3.3
2013	-585	-462	-124	3,391	3,515	-990	3.5
2014	-345	-464	120	3,720	3,601	-914	3.5
2015	-269	-294	25	3,825	3,800	-526	2.3
2016	-302	-121	-181	3,889	4,070	-194	1.0
2017	-220	-31	-189	4,066	4,255	-41	0.3
2018	-196	-3	-193	4,246	4,439	-1	**

Sources: Congressional Budget Office; Office of Management and Budget.

Notes: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) GDP and unemployment.

GDP = gross domestic product; * = between -$500 million and $500 million; ** = between -0.05 percent and 0.05 percent.

a. The GDP gap equals GDP minus potential GDP, which is the quantity of output that corresponds to a high rate of use of labor and capital.

b. The unemployment gap equals the rate of unemployment minus the natural rate of unemployment, which is the rate of unemployment arising from all sources except fluctuations in aggregate demand.

Table C-2.

Deficit or Surplus With and Without Automatic Stabilizers and Related Series, by Fiscal Year, as a Percentage of Potential Gross Domestic Product

	Deficit (-) or Surplus With Automatic Stabilizers	— Automatic Stabilizers	= Deficit (-) or Surplus Without Automatic Stabilizers	Revenues and Outlays Without Automatic Stabilizers: Revenues	Revenues and Outlays Without Automatic Stabilizers: Outlays	GDP Gap[a]	Unemployment Gap[b] (Percent)
				Historical			
1960	0.1	0.1	-0.1	17.8	17.8	0.3	-0.2
1961	-0.6	-1.0	0.3	18.1	17.8	-2.9	0.9
1962	-1.2	-0.4	-0.8	17.7	18.5	-1.1	0.5
1963	-0.8	-0.3	-0.5	17.9	18.4	-1.0	0.1
1964	-0.9	0.1	-1.1	17.5	18.6	0.5	-0.1
1965	-0.2	0.5	-0.7	16.8	17.6	1.5	-0.7
1966	-0.5	1.5	-2.0	16.9	18.9	4.7	-1.7
1967	-1.1	1.4	-2.5	18.0	20.5	3.8	-2.0
1968	-3.0	1.1	-4.1	17.3	21.4	2.8	-2.0
1969	0.4	1.3	-1.0	19.3	20.3	2.9	-2.4
1970	-0.3	0.4	-0.7	18.9	19.7	0.4	-1.9
1971	-2.1	-0.4	-1.7	17.5	19.2	-1.3	-0.2
1972	-2.0	-0.1	-1.9	17.7	19.6	-0.4	-0.1
1973	-1.2	1.0	-2.2	17.3	19.5	3.1	-0.9
1974	-0.4	0.8	-1.3	18.0	19.3	2.0	-1.2
1975	-3.3	-1.1	-2.2	18.2	20.4	-3.5	1.2
1976	-4.1	-1.3	-2.8	17.6	20.5	-3.0	1.8
1977	-2.7	-0.7	-2.0	18.3	20.3	-1.4	1.1
1978	-2.7	*	-2.7	18.0	20.7	0.3	*
1979	-1.6	0.4	-2.1	18.3	20.4	1.0	-0.4
1980	-2.7	-0.6	-2.1	19.1	21.2	-1.7	0.6
1981	-2.5	-0.9	-1.7	19.9	21.6	-1.8	1.2
1982	-3.7	-2.0	-1.8	19.8	21.6	-5.6	3.0
1983	-5.7	-2.4	-3.2	18.5	21.7	-6.3	4.1
1984	-4.7	-0.9	-3.8	17.8	21.6	-2.0	1.8
1985	-5.1	-0.4	-4.7	17.9	22.5	-0.8	1.2
1986	-5.0	-0.2	-4.8	17.5	22.3	-0.4	1.0
1987	-3.2	-0.3	-2.9	18.5	21.4	-0.7	0.4
1988	-3.1	0.2	-3.3	18.1	21.4	0.5	-0.3
1989	-2.9	0.5	-3.4	18.2	21.5	1.3	-0.7
1990	-3.9	0.3	-4.2	17.8	22.0	0.7	-0.5
1991	-4.4	-0.8	-3.6	18.1	21.7	-2.5	0.8
1992	-4.5	-1.1	-3.4	18.0	21.4	-2.6	1.7
1993	-3.8	-0.9	-2.9	17.9	20.8	-2.1	1.5
1994	-2.9	-0.6	-2.3	18.3	20.6	-1.3	0.9
1995	-2.2	-0.5	-1.7	18.6	20.4	-1.2	0.3
1996	-1.4	-0.5	-0.9	19.1	20.0	-1.2	0.2
1997	-0.3	-0.1	-0.2	19.3	19.5	*	*
1998	0.8	0.3	0.5	19.8	19.3	0.7	-0.5
1999	1.4	0.8	0.6	19.5	18.9	2.0	-0.7

Continued

Table C-2. **Continued**

Deficit or Surplus With and Without Automatic Stabilizers and Related Series, by Fiscal Year, as a Percentage of Potential Gross Domestic Product

	Deficit (-) or Surplus With Automatic Stabilizers	— Automatic Stabilizers	= Deficit (-) or Surplus Without Automatic Stabilizers	Revenues and Outlays Without Automatic Stabilizers		GDP Gap[a]	Unemployment Gap[b] (Percent)
				Revenues	Outlays		
				Historical (Continued)			
2000	2.5	1.3	1.2	20.0	18.8	2.9	-1.0
2001	1.3	0.7	0.6	19.1	18.5	1.1	-0.7
2002	-1.5	-0.2	-1.3	17.6	18.9	-0.5	0.7
2003	-3.4	-0.5	-2.9	16.4	19.4	-1.1	1.0
2004	-3.5	-0.1	-3.5	16.1	19.6	*	0.6
2005	-2.6	0.2	-2.8	17.2	20.0	0.7	0.2
2006	-1.9	0.4	-2.3	18.0	20.4	1.2	-0.3
2007	-1.2	0.3	-1.5	18.4	19.9	0.7	-0.5
2008	-3.2	-0.1	-3.0	17.6	20.6	-0.6	0.2
2009	-9.5	-2.2	-7.2	16.0	23.2	-6.6	3.3
2010	-8.5	-2.5	-5.9	16.3	22.2	-6.2	4.3
2011	-8.2	-2.3	-5.9	16.5	22.4	-5.6	3.7
				Projected			
2012	-6.6	-2.2	-4.3	17.3	21.7	-5.3	3.3
2013	-3.5	-2.7	-0.7	20.1	20.8	-5.9	3.5
2014	-2.0	-2.7	0.7	21.3	20.6	-5.2	3.5
2015	-1.5	-1.6	0.1	21.1	20.9	-2.9	2.3
2016	-1.6	-0.6	-1.0	20.6	21.5	-1.0	1.0
2017	-1.1	-0.2	-1.0	20.6	21.5	-0.2	0.3
2018	-0.9	*	-0.9	20.5	21.5	*	*

Sources: Congressional Budget Office; Office of Management and Budget.

Notes: Automatic stabilizers are automatic changes in revenues and outlays that are attributable to cyclical movements in real (inflation-adjusted) GDP and unemployment.

GDP = gross domestic product; * = between -0.05 percent and 0.05 percent.

a. The GDP gap equals GDP minus potential GDP, which is the quantity of output that corresponds to a high rate of use of labor and capital.

b. The unemployment gap equals the rate of unemployment minus the natural rate of unemployment, which is the rate of unemployment arising from all sources except fluctuations in aggregate demand.