CHAPTER

4

The Outlook for Deficits and Debt

Overview

Federal budget deficits are set to increase rapidly this year and over the next four years, the Congressional Budget Office projects, and then to remain largely stable relative to the size of the economy—but at a very high level by historical standards—over the rest of the projection period (see Figure 4-1). Those deficits would result in rising federal debt. Moreover, CBO's baseline projections reflect a number of significant changes to tax and spending policies that are scheduled to take effect under current law. If those changes did not occur, deficits and debt would be substantially larger.

Rising Deficits

As required by statute, when constructing its baseline projections, CBO incorporates the assumption that current laws governing taxes and spending will generally remain unchanged in future years.[1] Under that assumption, in CBO's baseline, federal deficits average $1.2 trillion per year and total $12.4 trillion over the 2019–2028 period. As a percentage of gross domestic product (GDP), the deficit increases from 3.5 percent in 2017 to 5.4 percent in 2022 (see Table 4-1). Thereafter, the deficit fluctuates between 4.6 percent and 5.2 percent of GDP from 2023 through 2028. Over the past 50 years, the annual deficit has averaged 2.9 percent of GDP.

That pattern of deficits is expected to occur mainly because, under current law, revenues and outlays would grow at different rates. Revenues would be roughly flat as a percentage of GDP over the next several years before rising steadily in the second half of the period. In contrast, outlays would increase in most years through 2028.

1. CBO constructs its baseline in accordance with provisions set forth in the Balanced Budget and Emergency Deficit Control Act of 1985 (Deficit Control Act, Public Law 99-177) and the Congressional Budget and Impoundment Control Act of 1974 (P.L. 93-344). CBO's baseline is not intended to be a forecast of budgetary outcomes; rather, it is meant to provide a neutral benchmark that policymakers can use to assess the potential effects of policy decisions.

Growing Debt

The large deficits over the next 10 years would cause debt held by the public to rise steadily. Relative to the nation's output, debt held by the public is projected to increase from 76.5 percent of GDP in 2017 to 96.2 percent at the end of 2028 (see Table 4-2 on page 82). At that point, federal debt would be higher as a percentage of GDP than at any point since just after World War II—and heading still higher.

Outcomes If Certain Changes Scheduled in Law Did Not Occur

In CBO's baseline projections, deficits in the latter half of the decade, though quite large, are not trending upward relative to the size of the economy. That pattern occurs in large part because CBO's projections reflect the assumption that substantial tax increases and spending cuts will take place as scheduled under current law.

If those changes did not occur and current policies were continued instead, much larger deficits and much greater debt would result: The deficit would grow to 7.1 percent of GDP by 2028 and would average 6.3 percent of GDP from 2023 to 2028, CBO estimates, compared with 4.9 percent in the baseline. With cumulative deficits of $15.0 trillion over the projection period, debt held by the public under that alternative fiscal scenario would reach 105 percent of GDP by the end of 2028, an amount that has been exceeded only one time in the nation's history. Moreover, the pressures that are projected to contribute to that rise would accelerate and drive up debt even more in subsequent decades.

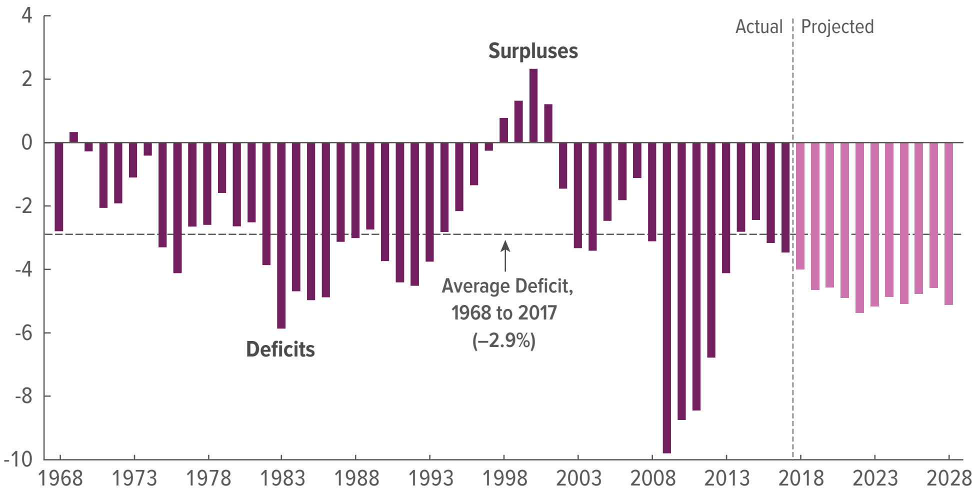
Deficits

Under the assumption that current laws governing taxes and spending generally remain in place, the amount by which the government's outlays exceed its revenues would nearly double in nominal terms over the next several years, rising from $665 billion in 2017 to $1.3 trillion in 2022. The budget deficit would increase more slowly thereafter—to a total of $1.5 trillion in 2028.

Figure 4-1.

Total Deficits or Surpluses

Percentage of Gross Domestic Product



Deficits as a percentage of gross domestic product are projected to increase over the next few years and then largely stabilize. They exceed their 50-year average throughout the 2018–2028 period.

Source: Congressional Budget Office.

The Deficit in 2018

CBO estimates that, under current law, the budget deficit in 2018 will be $804 billion, $139 billion more than the shortfall last year. That increase would be even larger if not for shifts in the timing of certain payments. The 2018 deficit will be reduced by $44 billion because certain payments that would ordinarily have been made on October 1, 2017 (the first day of fiscal year 2018), were instead made in fiscal year 2017 because October 1 fell on a weekend.[2] For 2017, the net effect of those timing shifts and of similar shifts in spending from fiscal year 2017 into fiscal year 2016 was to increase outlays by $3 billion. If not for those shifts, the estimated deficit in 2018 would have been $186 billion more than last year's shortfall, climbing from $662 billion in 2017 to $848 billion this year.

CBO projects that, under current law, revenues—which rose by 1.5 percent in 2017—will increase by only 0.6 percent (or $21 billion) this year, to $3.3 trillion. The main reason for the smaller increase is the effect of Public Law 115-97 (referred to here as the 2017 tax act), which, on net, will reduce revenues by an estimated $144 billion (or 0.7 percent of GDP) in 2018.

Outlays (adjusted to exclude the effects of the timing shifts)—which rose by 4.4 percent in 2017—will increase by 5.2 percent (or $208 billion) this year, to $4.2 trillion, CBO estimates. All three major components of spending contribute to that increase:

- Net outlays for interest are anticipated to jump from $263 billion in 2017 to $316 billion in 2018, an increase of 20 percent (or $53 billion). Higher interest rates this year account for most of that change.
- Discretionary outlays are expected to rise by 7 percent (or $84 billion) this year, significantly faster than the 2 percent increase in 2017 and the fastest rate of increase since 2010. The rapid growth projected for discretionary outlays stems primarily from recently enacted legislation.
- Mandatory spending is expected to increase by almost 3 percent (or $71 billion) in 2018, to $2.6 trillion. That rate of growth, which occurs for many different reasons, is roughly half the rate of increase recorded for such outlays in 2017.

2. October 1 will fall on a weekend again in 2022, 2023, and 2028. In such cases, certain payments due on October 1 are made at the end of September and thus are recorded in the previous fiscal year. Those shifts will noticeably boost spending and the deficit in fiscal years 2022 and 2028; the timing shifts will reduce federal spending and deficits in fiscal year 2024.

Table 4-1.

CBO's Baseline Budget Projections, by Category

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
							In Billions of Dollars							
Revenues														
Individual income taxes	1,587	1,639	1,744	1,833	1,900	1,990	2,092	2,199	2,316	2,574	2,804	2,924	9,558	22,376
Payroll taxes	1,162	1,178	1,231	1,284	1,337	1,395	1,456	1,519	1,583	1,646	1,712	1,780	6,704	14,944
Corporate income taxes	297	243	276	307	327	353	388	421	447	449	431	448	1,651	3,847
Other	270	278	238	253	263	275	291	306	318	332	352	368	1,320	2,995
Total	**3,316**	**3,338**	**3,490**	**3,678**	**3,827**	**4,012**	**4,228**	**4,444**	**4,663**	**5,002**	**5,299**	**5,520**	**19,234**	**44,162**
On-budget	2,466	2,477	2,590	2,736	2,845	2,990	3,164	3,338	3,513	3,807	4,058	4,230	14,327	33,273
Off-budget[a]	851	860	899	941	981	1,022	1,063	1,106	1,150	1,194	1,241	1,290	4,907	10,889
Outlays														
Mandatory	2,519	2,546	2,719	2,861	3,031	3,266	3,392	3,513	3,760	3,983	4,189	4,524	15,269	35,238
Discretionary	1,200	1,280	1,362	1,340	1,348	1,380	1,406	1,436	1,481	1,522	1,562	1,608	6,836	14,445
Net interest	263	316	390	485	570	643	702	739	774	817	864	915	2,789	6,897
Total	**3,982**	**4,142**	**4,470**	**4,685**	**4,949**	**5,288**	**5,500**	**5,688**	**6,015**	**6,322**	**6,615**	**7,046**	**24,893**	**56,580**
On-budget	3,180	3,288	3,556	3,706	3,901	4,168	4,303	4,414	4,658	4,883	5,084	5,416	19,634	44,088
Off-budget[a]	801	853	915	980	1,048	1,120	1,197	1,274	1,357	1,439	1,531	1,631	5,259	12,492
Deficit (-) or Surplus	**-665**	**-804**	**-981**	**-1,008**	**-1,123**	**-1,276**	**-1,273**	**-1,244**	**-1,352**	**-1,320**	**-1,316**	**-1,526**	**-5,660**	**-12,418**
On-budget	-715	-811	-965	-969	-1,056	-1,178	-1,139	-1,076	-1,144	-1,076	-1,026	-1,186	-5,307	-10,815
Off-budget[a]	49	7	-16	-38	-67	-98	-134	-168	-208	-245	-290	-340	-352	-1,603
Debt Held by the Public	14,665	15,688	16,762	17,827	18,998	20,319	21,638	22,932	24,338	25,715	27,087	28,671	n.a.	n.a.
Memorandum:														
Gross Domestic Product	19,178	20,103	21,136	22,034	22,872	23,716	24,621	25,583	26,595	27,608	28,677	29,803	114,379	252,646
							As a Percentage of Gross Domestic Product							
Revenues														
Individual income taxes	8.3	8.2	8.3	8.3	8.3	8.4	8.5	8.6	8.7	9.3	9.8	9.8	8.4	8.9
Payroll taxes	6.1	5.9	5.8	5.8	5.8	5.9	5.9	5.9	6.0	6.0	6.0	6.0	5.9	5.9
Corporate income taxes	1.5	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.6	1.5	1.5	1.4	1.5
Other	1.4	1.4	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Total	**17.3**	**16.6**	**16.5**	**16.7**	**16.7**	**16.9**	**17.2**	**17.4**	**17.5**	**18.1**	**18.5**	**18.5**	**16.8**	**17.5**
On-budget	12.9	12.3	12.3	12.4	12.4	12.6	12.9	13.0	13.2	13.8	14.2	14.2	12.5	13.2
Off-budget[a]	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Outlays														
Mandatory	13.1	12.7	12.9	13.0	13.3	13.8	13.8	13.7	14.1	14.4	14.6	15.2	13.3	13.9
Discretionary	6.3	6.4	6.4	6.1	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4	6.0	5.7
Net interest	1.4	1.6	1.8	2.2	2.5	2.7	2.8	2.9	2.9	3.0	3.0	3.1	2.4	2.7
Total	**20.8**	**20.6**	**21.2**	**21.3**	**21.6**	**22.3**	**22.3**	**22.2**	**22.6**	**22.9**	**23.1**	**23.6**	**21.8**	**22.4**
On-budget	16.6	16.4	16.8	16.8	17.1	17.6	17.5	17.3	17.5	17.7	17.7	18.2	17.2	17.5
Off-budget[a]	4.2	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.1	5.2	5.3	5.5	4.6	4.9
Deficit (-) or Surplus	**-3.5**	**-4.0**	**-4.6**	**-4.6**	**-4.9**	**-5.4**	**-5.2**	**-4.9**	**-5.1**	**-4.8**	**-4.6**	**-5.1**	**-4.9**	**-4.9**
On-budget	-3.7	-4.0	-4.6	-4.4	-4.6	-5.0	-4.6	-4.2	-4.3	-3.9	-3.6	-4.0	-4.6	-4.3
Off-budget[a]	0.3	*	-0.1	-0.2	-0.3	-0.4	-0.5	-0.7	-0.8	-0.9	-1.0	-1.1	-0.3	-0.6
Debt Held by the Public	76.5	78.0	79.3	80.9	83.1	85.7	87.9	89.6	91.5	93.1	94.5	96.2	n.a.	n.a.

Source: Congressional Budget Office.

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

a. The revenues and outlays of the Social Security trust funds and the net cash flow of the Postal Service are classified as off-budget.

Table 4-2.

Key Projections in CBO's Baseline

Percentage of Gross Domestic Product

	2018	2019	Projected Annual Average 2020–2023	Projected Annual Average 2024–2028
Revenues				
Individual income taxes	8.2	8.3	8.4	9.3
Payroll taxes	5.9	5.8	5.9	6.0
Corporate income taxes	1.2	1.3	1.5	1.6
Other	1.4	1.1	1.2	1.2
Total Revenues	**16.6**	**16.5**	**16.9**	**18.0**
Outlays				
Mandatory				
Social Security	4.9	4.9	5.2	5.7
Major health care programs[a]	5.2	5.3	5.6	6.3
Other	2.6	2.6	2.6	2.4
Subtotal	12.7	12.9	13.5	14.4
Discretionary	6.4	6.4	5.9	5.5
Net interest	1.6	1.8	2.6	3.0
Total Outlays	**20.6**	**21.2**	**21.9**	**22.9**
Deficit	**-4.0**	**-4.6**	**-5.0**	**-4.9**
Debt Held by the Public at the End of the Period	**78.0**	**79.3**	**87.9**	**96.2**
Memorandum:				
Social Security				
Revenues[b]	4.4	4.4	4.5	4.6
Outlays[c]	4.9	4.9	5.2	5.7
Contribution to the Federal Deficit[d]	-0.4	-0.5	-0.7	-1.2
Medicare				
Revenues[b]	1.4	1.4	1.5	1.5
Outlays[c]	3.5	3.7	4.0	4.6
Offsetting receipts	-0.6	-0.6	-0.7	-0.8
Contribution to the Federal Deficit[d]	-1.5	-1.6	-1.9	-2.3
Gross Domestic Product at the End of the Period (Trillions of dollars)	20.1	21.1	24.6	29.8

Source: Congressional Budget Office.

This table satisfies a requirement specified in section 3111 of S. Con. Res. 11, the Concurrent Resolution on the Budget for Fiscal Year 2016.

a. Consists of spending for Medicare (net of premiums and other offsetting receipts), Medicaid, and the Children's Health Insurance Program, as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

b. Includes payroll taxes other than those paid by the federal government on behalf of its employees. Those payments are intragovernmental transactions. Also includes income taxes paid on Social Security benefits, which are credited to the trust funds.

c. Does not include outlays related to administration of the program, which are discretionary. For Social Security, outlays do not include intragovernmental offsetting receipts stemming from the employer's share of payroll taxes paid to the Social Security trust funds by federal agencies on behalf of their employees.

d. The net increase in the deficit shown in this table differs from the change in the trust fund balance for the associated program. It does not include intragovernmental transactions, interest earned on balances, or outlays related to administration of the program.

Table 4-3.

CBO's Baseline Outlay and Deficit Projections Adjusted to Exclude the Effects of Timing Shifts

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
						In Billions of Dollars						
Payments That Are Shifted in CBO's Baseline[a]	3	-44	0	0	0	62	5	-67	0	0	0	89
Outlays Adjusted for Timing Shifts												
Mandatory	2,516	2,587	2,719	2,861	3,031	3,208	3,387	3,575	3,760	3,983	4,189	4,440
Discretionary	1,200	1,284	1,362	1,340	1,348	1,375	1,406	1,441	1,481	1,522	1,562	1,602
Net interest	263	316	390	485	570	643	702	739	774	817	864	915
Total	**3,978**	**4,186**	**4,470**	**4,685**	**4,949**	**5,226**	**5,495**	**5,755**	**6,015**	**6,322**	**6,615**	**6,957**
Deficit Adjusted to Exclude Timing Shifts	**-662**	**-848**	**-981**	**-1,008**	**-1,123**	**-1,214**	**-1,267**	**-1,311**	**-1,352**	**-1,320**	**-1,316**	**-1,437**
						As a Percentage of Gross Domestic Product						
Outlays Adjusted for Timing Shifts												
Mandatory	13.1	12.9	12.9	13.0	13.3	13.5	13.8	14.0	14.1	14.4	14.6	14.9
Discretionary	6.3	6.4	6.4	6.1	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.4
Net interest	1.4	1.6	1.8	2.2	2.5	2.7	2.8	2.9	2.9	3.0	3.0	3.1
Total	**20.7**	**20.8**	**21.2**	**21.3**	**21.6**	**22.0**	**22.3**	**22.5**	**22.6**	**22.9**	**23.1**	**23.3**
Deficit Adjusted to Exclude Timing Shifts	**-3.5**	**-4.2**	**-4.6**	**-4.6**	**-4.9**	**-5.1**	**-5.1**	**-5.1**	**-5.1**	**-4.8**	**-4.6**	**-4.8**
Memorandum:												
Baseline Deficit												
In billions of dollars	-665	-804	-981	-1,008	-1,123	-1,276	-1,273	-1,244	-1,352	-1,320	-1,316	-1,526
As a percentage of GDP	-3.5	-4.0	-4.6	-4.6	-4.9	-5.4	-5.2	-4.9	-5.1	-4.8	-4.6	-5.1

Source: Congressional Budget Office.

a. When October 1 falls on a weekend, certain payments that are due on that date are made at the end of September and thus are recorded in the previous fiscal year. Those shifts primarily affect mandatory spending and, to a much lesser degree, discretionary spending. Net interest outlays are not affected.

With adjustments to exclude the effects of timing shifts, this year's deficit is projected to total 4.2 percent of GDP, well above last year's level of 3.5 percent (see Table 4-3). Because the rate of growth of revenues is significantly less than the rate at which the agency expects GDP to increase, revenues are estimated to drop as a percentage of GDP in 2018, from 17.3 percent in 2017 to 16.6 percent. That drop explains nearly all of the increase in the deficit relative to the economy, as CBO's projection of outlays (adjusted to exclude shifts in timing) increases by only 0.1 percent of GDP.

Deficits From 2019 to 2028

In CBO's baseline projections, the budget deficit (adjusted to exclude shifts in timing) continues increasing after 2018, rising to 5.1 percent in 2022, a level exceeded only five times in the past 50 years. Although the growth in revenues accelerates after this year, increasing at an average annual rate of 4.7 percent through 2022, outlays rise faster, at an average annual rate of 5.7 percent (see Figure 4-2).

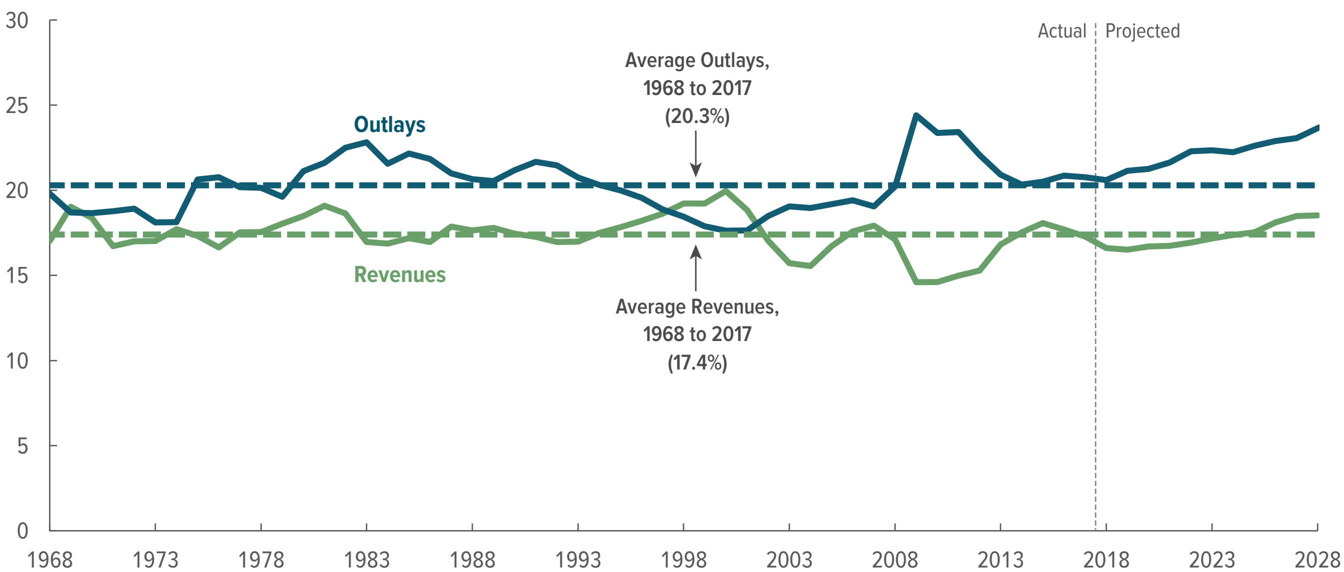
Between 2022 and 2025, in CBO's baseline, deficits remain at 5.1 percent before dipping at the end of the period, primarily because projected revenues increase more rapidly as many provisions of the 2017 tax act expire. Outlays increase more slowly after 2022, mostly because the rate of increase in net interest outlays slows.

Growth of Revenues. Revenues are expected to grow modestly relative to GDP over the first half of the projection period, rising from 16.6 percent in 2018 to 16.9 percent in 2022. Receipts from corporate income taxes are projected to grow from 1.2 percent to 1.5 percent of GDP over that period, largely because recently observed weakness in corporate tax receipts—beyond that which can be explained by currently available data on business activity—is expected to gradually dissipate.

Figure 4-2.

Total Revenues and Outlays

Percentage of Gross Domestic Product



Source: Congressional Budget Office.

Individual income tax receipts are projected to rise from 8.2 percent of GDP in 2018 to 8.4 percent in 2022. The most significant source of that increase is continued economic growth, which will cause people's income, in the aggregate, to rise faster than the rate of inflation.

CBO projects that if current laws generally remained unchanged, revenues would grow more quickly toward the end of the projection period, increasing from 16.9 percent of GDP in 2022 to 18.5 percent in 2027 and 2028. An increase in receipts from individual income taxes, from 8.4 percent of GDP in 2022 to 9.8 percent in 2028, explains much of that growth. Most of the increase in individual income taxes results from the scheduled expiration, after tax year 2025, of nearly all the provisions of the 2017 tax law that affect individual income taxes. Those expirations will cause tax liabilities to rise in calendar year 2026, boosting receipts in 2027 and 2028.

Growth of Outlays. Total outlays are projected to rise over the projection period, boosted by increased spending for net interest costs and large benefit programs (see Figure 4-3). In the baseline, outlays (adjusted to exclude shifts in timing) rise from 20.8 percent of GDP in 2018 to 23.3 percent in 2028. The projected rate of increase after 2022, an annual average of 4.9 percent, is 0.8 percentage points slower than CBO projects for the years between 2018 and 2022.

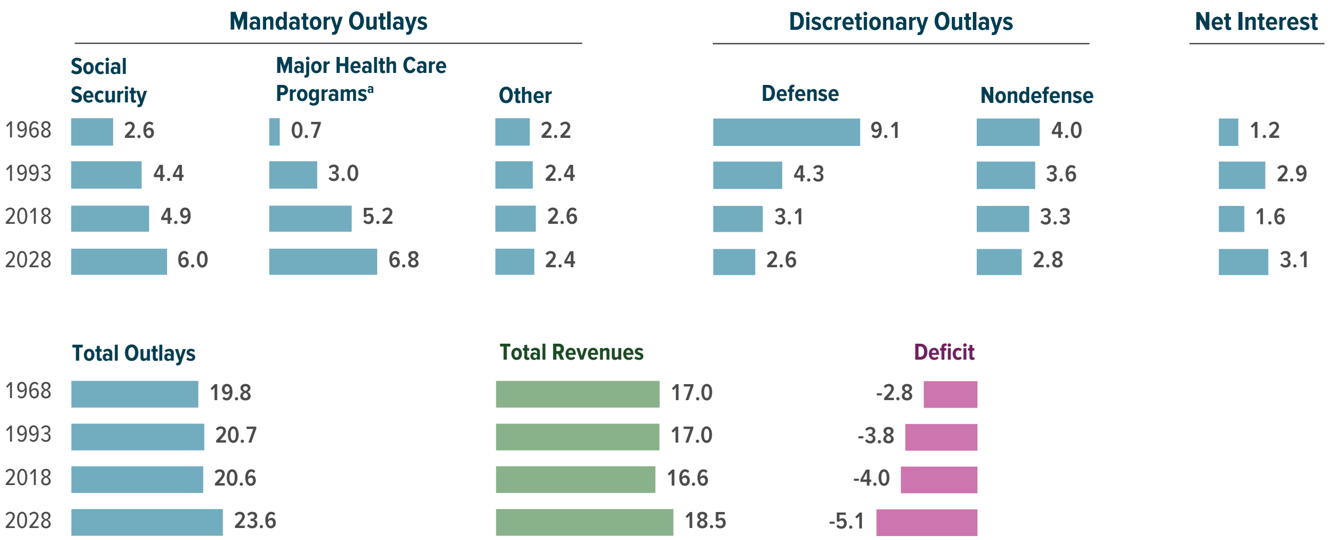
Net interest outlays grow about three times faster, on average, from 2018 to 2022 than they do later in the projection period, accounting for most of the dip in the projected rate of growth in total outlays during the latter part of the 10-year period. That slower rate of increase in later years occurs primarily because interest rates under CBO's economic forecast fall slightly over the second half of the projection period after rising during the first half. Nevertheless, net interest outlays in CBO's baseline reach 3.1 percent of GDP in 2028, nearly double the 1.6 percent projected for 2018.

Mandatory outlays are projected to increase steadily over the coming decade, rising by about 5.5 percent a year, on average, in both halves of the projection period. By 2028, spending for mandatory programs (adjusted to exclude timing shifts) would total 14.9 percent of GDP, up from 12.9 percent in 2018. By comparison, mandatory outlays have exceeded 14.0 percent of GDP only once since 1962 (the earliest year for which such data have been reported).

Figure 4-3.

Outlays and Revenues Projected in CBO's Baseline, Compared With Actual Values 25 and 50 Years Ago

Percentage of Gross Domestic Product



Source: Congressional Budget Office.

a. Consists of spending on Medicare (net of premiums and other offsetting receipts), Medicaid, and the Children's Health Insurance Program as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

Growth in spending for Social Security and Medicare (adjusted to exclude the effects of timing shifts) accounts for roughly three-quarters of the increase in mandatory spending over the 10-year period. The aging of the population and rising health care costs are key drivers of that spending:

- The number of people age 65 or older is now more than twice what it was 50 years ago. Over the next decade, as members of the baby-boom generation age and as life expectancy continues to increase, that number is expected to rise by about one-third, boosting the number of people receiving Social Security and Medicare benefits (see Figure 4-4).

- Health care costs per beneficiary are projected to grow faster than the economy over the long term, contributing to growth in spending for Medicare and Medicaid in particular.

CBO projects that, under current law, discretionary spending would fall in dollar terms in 2020 as the statutory caps on discretionary funding drop after 2019. Discretionary spending is projected to increase at an annual average rate of 2.6 percent over the second half of the projection period—reflecting the assumption that funding will grow with inflation once those caps expire after 2021.[3] Because that rate of growth is slower than the growth rate projected for the economy, such outlays continue falling in CBO's baseline as a percentage of GDP. In 2028, discretionary spending is projected to total 5.4 percent of GDP, about 1 percentage point below CBO's estimate of such outlays in 2018.

Debt

Federal debt held by the public consists mostly of the securities that the Treasury issues to raise cash to fund the federal government's activities and to pay off its maturing liabilities.[4] The Treasury borrows money from the public by selling securities in the capital markets; that debt is purchased by various buyers in the United

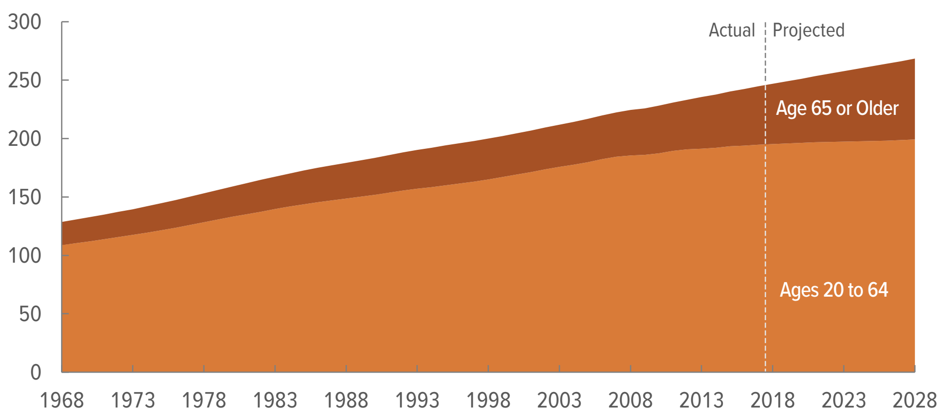
3. In CBO's baseline projections, discretionary funding related to federal personnel is inflated using the employment cost index for wages and salaries of workers in private industry; other discretionary funding is adjusted using the gross domestic product price index.

4. A small amount of debt held by the public is issued by other agencies, mainly the Tennessee Valley Authority.

Figure 4-4.

Population, by Age Group

Millions of People



Enrollment in Social Security and Medicare is expected to rise as the number of people age 65 or older grows.

Source: Congressional Budget Office.

States, by private investors overseas, and by the central banks of other countries. Of the $14.7 trillion in federal debt held by the public at the end of 2017, 57 percent ($8.3 trillion) was held by domestic investors and 43 percent ($6.3 trillion) was held by foreign investors.[5] Other measures of federal debt are sometimes used for various purposes, such as to provide a more comprehensive picture of the government's financial condition or to account for debt held by federal trust funds.

Debt Held by the Public

Under the assumptions that govern CBO's baseline, the federal government is projected to borrow another $14.0 trillion from the end of 2017 through 2028, boosting debt held by the public to 96 percent of GDP by the end of the projection period (see Table 4-4). That amount of debt relative to the size of the economy would be the greatest since 1946 and more than double the 50-year average of 41 percent (see Summary Figure 2 on page 5).

Consequences of Growing Debt. Such high and rising debt would have significant negative consequences, both for the economy and for the federal budget, including these:

- When interest rates returned to more typical, higher levels, federal spending on interest payments would increase substantially.
- Because federal borrowing reduces national saving over time, the nation's capital stock ultimately would be smaller, and productivity and total wages would be lower than would be the case if the debt was smaller.[6]
- Lawmakers would have less flexibility than otherwise to use tax and spending policies to respond to unexpected challenges.
- The likelihood of a fiscal crisis in the United States would increase. Specifically, the risk would rise of investors' becoming unwilling to finance the government's borrowing unless they were

5. The largest domestic holders of public Treasury debt are the Federal Reserve (20 percent) and mutual funds (11 percent). Investors in China and Japan have the largest foreign holdings of Treasury securities, together accounting for 16 percent of U.S. public debt. For additional information, see Congressional Budget Office, *Federal Debt and Interest Costs* (December 2010), Chapter 1, www.cbo.gov/publication/21960.

6. National saving is total saving by all sectors of the economy: personal saving, business saving (corporate after-tax profits not paid as dividends), and government saving (budget surpluses). National saving represents all income not consumed, publicly or privately, during a given period.

The nation's capital stock consists of land and the stock of products set aside to support future production and consumption, including business inventories and fixed capital (residential and nonresidential structures, producers' durable equipment, and intellectual property products, such as software).

Table 4-4.

Federal Debt Projected in CBO's Baseline

Billions of Dollars

	Actual, 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Debt Held by the Public at the Beginning of the Year	14,168	14,665	15,688	16,762	17,827	18,998	20,319	21,638	22,932	24,338	25,715	27,087
Changes in Debt Held by the Public												
Deficit	665	804	981	1,008	1,123	1,276	1,273	1,244	1,352	1,320	1,316	1,526
Other means of financing	-168	218	94	58	48	45	46	50	54	56	57	58
Total	498	1,022	1,074	1,065	1,171	1,321	1,319	1,294	1,406	1,376	1,373	1,584
Debt Held by the Public at the End of the Year												
In billions of dollars	**14,665**	**15,688**	**16,762**	**17,827**	**18,998**	**20,319**	**21,638**	**22,932**	**24,338**	**25,715**	**27,087**	**28,671**
As a percentage of GDP	**76.5**	**78.0**	**79.3**	**80.9**	**83.1**	**85.7**	**87.9**	**89.6**	**91.5**	**93.1**	**94.5**	**96.2**
Memorandum:												
Debt Held by the Public Minus Financial Assets[a]												
In billions of dollars	13,198	14,002	14,983	15,990	17,113	18,389	19,662	20,906	22,258	23,578	24,894	26,420
As a percentage of GDP	68.8	69.7	70.9	72.6	74.8	77.5	79.9	81.7	83.7	85.4	86.8	88.6
Gross Federal Debt[b]	20,206	21,375	22,546	23,675	24,877	26,179	27,468	28,730	30,042	31,367	32,542	33,851
Debt Subject to Limit[c]	20,209	21,378	22,550	23,680	24,883	26,185	27,475	28,738	30,050	31,376	32,552	33,861
Average Interest Rate on Debt Held by the Public (Percent)	2.0	2.3	2.6	3.0	3.3	3.5	3.5	3.5	3.5	3.4	3.4	3.4

Source: Congressional Budget Office.

GDP = gross domestic product.

a. Debt held by the public minus the value of outstanding student loans and other credit transactions, cash balances, and various financial instruments.

b. Federal debt held by the public plus Treasury securities held by federal trust funds and other government accounts.

c. The amount of federal debt that is subject to the overall limit set in law. Debt subject to limit differs from gross federal debt mainly in that it excludes most debt issued by agencies other than the Treasury and the Federal Financing Bank and includes certain other adjustments that are excluded from gross debt. That limit was most recently set at $20.5 trillion but has been suspended through March 1, 2019. On March 2, 2019, the debt limit will be raised to its previous level plus the amount of federal borrowing that occurred while the limit was suspended.

compensated with very high interest rates. If that occurred, interest rates on federal debt would rise suddenly and sharply relative to rates of return on other assets.

How Debt Is Related to Deficits. The net amount the Treasury borrows by selling securities (the amounts that are sold minus the amounts that have matured) is determined primarily by the annual budget deficit. In addition, several factors—collectively labeled "other means of financing" and not directly included in budget totals—also affect the government's need to borrow from the public. Those factors include changes in the government's cash balances, as well as the cash flows associated with federal credit programs such as student loans (because only the subsidy costs of those programs, calculated on a present-value basis, are reflected in the budget deficit).[7]

For two main reasons, CBO projects that the increase in debt held by the public will exceed the $804 billion deficit in 2018 by $218 billion. First, CBO expects the Treasury to borrow an additional $140 billion in order to increase its cash balance in 2018. That balance was

7. Present value is a single number that expresses a flow of revenues or outlays over time in terms of an equivalent lump sum received or paid at a specific time.

unusually small at the end of 2017 and the beginning of 2018 as a result of debt-ceiling constraints.

Second, the government's need for cash to finance new student loans and other credit programs will boost the debt by roughly $80 billion in 2018. The subsidy costs for those credit programs are part of the projected deficit for each year from 2019 to 2028, but the cash outlays needed to finance those programs each year are greater than the net subsidy costs, which are calculated on a present-value basis. (For more information on CBO's treatment of credit programs, see the section titled "Other Mandatory Programs" in Chapter 2.) As a result, CBO estimates that the government will need to borrow between $45 billion and $94 billion more per year during that period than the budget deficits would suggest.

Other Measures of Debt

Three other measures are sometimes used in reference to federal debt:

- *Debt held by the public minus financial assets* subtracts from debt held by the public the value of the government's financial assets, such as student loans. That measure provides a more comprehensive picture of the government's financial condition and its overall effect on credit markets than does debt held by the public. Calculating that measure is not straightforward, however, because neither the financial assets that are included nor the methods for evaluating them are well-defined. Under CBO's baseline assumptions, that measure is about 10 percent smaller than debt alone but varies roughly in line with it.

- *Gross federal debt* consists of debt held by the public and debt held by government accounts (for example, the Social Security trust funds). The latter type of debt does not directly affect the economy and has no net effect on the budget. In CBO's projections, debt held by the public increases by $13.0 trillion between the end of 2018 and the end of 2028, and debt held by government accounts falls by $0.5 trillion, reflecting declines in the balances of many trust funds.[8] As a result, gross federal debt is projected to rise by $12.5 trillion over that period and to total $33.9 trillion at the end of 2028. About 15 percent of that sum would be debt held by government accounts.

- *Debt subject to limit* is the amount of debt that is subject to the statutory limit on federal borrowing; it differs from gross federal debt mainly in that it excludes most debt issued by agencies other than the Treasury and the Federal Financing Bank and includes certain other adjustments that are excluded from gross debt.[9] Currently, there is no statutory limit on the issuance of new federal debt because the Bipartisan Budget Act of 2018 (P.L. 115-123) suspended the debt ceiling from February 9, 2018, through March 1, 2019. In the absence of any legislative action on the debt limit before the suspension ends, the amount of borrowing accumulated during that period will be added to the previous debt limit of $20.5 trillion on March 2, 2019. In CBO's baseline projections, the amount of outstanding debt subject to limit increases from $21.4 trillion at the end of 2018 to $33.9 trillion at the end of 2028. (For the purpose of those projections, CBO assumes that increases in the statutory ceiling will occur as necessary.)

Alternative Assumptions About Fiscal Policy

CBO's baseline budget projections—which are constructed in accordance with provisions of law—are intended to show what would happen to federal spending, revenues, and deficits if current laws generally remained unchanged. To assist policymakers and analysts who may hold differing views about the most useful benchmark against which to consider possible changes to laws, CBO has estimated the effects on budgetary projections of some alternative assumptions about future policies (see Table 4-5 on page 90). The discussion below focuses on how those policy actions would directly affect revenues and outlays. (Those estimates do not incorporate any economic effects of changes in fiscal policies relative to current law.) Such changes also would

8. In keeping with the rules in section 257 of the Deficit Control Act, CBO's baseline incorporates the assumption that scheduled payments will continue to be made in full after a trust fund has been exhausted, even though there is no legal authority to make such payments.

9. The Federal Financing Bank, a government corporation under the general supervision of the Treasury Department, assists federal agencies in managing their borrowing and lending programs. It can issue up to $15 billion of its own debt securities, and that amount does not count against the debt limit.

influence the costs of servicing the federal debt (shown separately in the table).

Emergency Spending

Recently, lawmakers provided $102 billion in nondefense discretionary funding designated as emergency requirements related to Hurricanes Irma, Harvey, and Maria and wildfires in western states.[10] Such funding is not constrained by the caps and, following the rules governing CBO's baseline projections, is assumed to be provided each year, with adjustments for inflation. But those amounts are very large by historical standards. If, instead, lawmakers chose to provide $11 billion—the average annual amount of such funding declared an emergency requirement from 2012 through 2017—each year after 2018, with adjustments for inflation, discretionary outlays would be $577 billion lower between 2019 and 2028 than in CBO's baseline.

Other Discretionary Spending

Policymakers could vary discretionary funding in many ways from the amounts projected in the baseline. For example: If, after 2018, appropriations were to grow each year through 2028 at the same rate as inflation, rather than being constrained by the caps, discretionary spending during that period would be $1.7 trillion higher than it is in CBO's baseline. All told, discretionary outlays under that scenario would fall from 6.4 percent of GDP in fiscal year 2018 to 6.1 percent in 2028. By comparison, in the baseline such spending is projected to end up at 5.4 percent of GDP in 2028.

If, by contrast, lawmakers kept appropriations for 2019 through 2028 at the nominal 2018 amount, total discretionary outlays would be $0.2 trillion lower over that period than in the baseline. Under that scenario (sometimes called a freeze in regular appropriations), total discretionary spending would dip below the amount in CBO's baseline in 2019, exceed baseline amounts between 2020 and 2023, and then again drop below the baseline (by increasing amounts) between 2024 and 2028. That pattern reflects certain assumptions incorporated in CBO's baseline—specifically, that the caps on most new discretionary funding will fall sharply in 2020 (as scheduled under current law) and that such funding will increase with inflation after those caps expire in 2021. In 2028, discretionary outlays under that scenario would decline to 4.9 percent of GDP in 2028.

Revenues

A number of tax provisions have recently expired or are scheduled to expire over the next decade. They include many provisions of the 2017 tax act, most of which expire at the end of 2025 (see Appendix B). The expiring provisions affect major elements of the individual income tax, including provisions that specify tax rates and brackets, the amount of deductions that are allowed, the size and refundability of the child tax credit, and the reach of the alternative minimum tax.[11] In addition, the act's expansion of the estate and gift tax exemption expires at the end of 2025. According to estimates by the staff of the Joint Committee on Taxation (JCT), if those and certain other expiring elements of the 2017 tax act were extended, deficits would be larger than those in CBO's baseline, on net, by $650 billion over the 2019–2028 period (excluding added debt-service costs); most of those effects would occur in 2027 and 2028.

The 2017 tax act also temporarily expanded the ability of businesses to immediately deduct the cost of their investments. That bonus depreciation was expanded to 100 percent of the cost of such investments through 2022; it then phases down over the 2023–2026 period. Extending expensing at 100 percent, thus averting the phasedown, would increase deficits by $122 billion (excluding added debt-service costs) over the 2019–2028 period.

Deficits also would increase if delays in implementing certain taxes established by the Affordable Care Act were extended or made permanent. The Extension of Continuing Appropriations Act, 2018 (P.L. 115-120), temporarily suspended or delayed the medical device excise tax, the excise tax on high-cost employment-based health care coverage, and the annual fee on health insurance providers. Permanently repealing those taxes would reduce revenues by a total of $324 billion over the 2019–2028 period, JCT estimates.

10. Lawmakers have also provided $6 billion in defense funding that was declared an emergency requirement for 2018 and an additional $7 billion in funding designated as disaster funding (as defined in the Budget Control Act of 2011). Both types of funding have been extrapolated in CBO's baseline, although the disaster funding is subject to constraints in future years.

11. The alternative minimum tax is similar to the regular income tax, but its calculation includes fewer exemptions, deductions, and rates. People who file individual income tax returns must calculate the tax owed under each system and pay the larger of the two amounts.

Table 4-5.

Budgetary Effects of Selected Policy Alternatives Not Included in CBO's Baseline

Billions of Dollars

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Policy Alternatives That Affect Discretionary Outlays													
Provide Emergency Nondefense Funding at the Average Historical Amount[a]													
Decrease in the deficit[b]	0	14	30	40	49	58	66	73	79	81	86	192	577
Debt service	0	*	1	2	4	6	8	10	13	16	20	14	82
Increase Discretionary Appropriations at the Rate of Inflation After 2018[c]													
Increase (-) in the deficit[b]	0	-9	-104	-153	-176	-189	-200	-207	-213	-220	-225	-631	-1,696
Debt service	0	*	-2	-7	-14	-21	-27	-33	-40	-48	-59	-44	-252
Freeze Discretionary Appropriations at the 2018 Amount[d]													
Increase (-) or decrease in the deficit[b]	0	10	-56	-68	-52	-27	1	36	72	109	149	-193	175
Debt service	0	*	-1	-3	-6	-7	-7	-7	-5	-2	3	-16	-34
Policy Alternatives That Affect the Tax Code[e]													
Extend Certain Expiring Revenue Provisions													
Extend Certain Provisions of the 2017 Tax Act[f]	0	*	-3	-4	-4	-5	-5	-11	-103	-248	-266	-16	-650
Extend Expensing of Equipment and Property at a Rate of 100 Percent[g]	0	0	0	0	0	-6	-14	-21	-26	-29	-25	-6	-122
Repeal Certain Postponed or Suspended Health Taxes[h]	0	0	-15	-16	-24	-32	-37	-41	-47	-53	-60	-86	-324
Extend Other Expiring Revenue Provisions[i]	-1	-4	-5	-5	-6	-8	-9	-10	-11	-12	-13	-28	-85
Total increase (-) in the deficit[b]	-1	-5	-22	-25	-34	-51	-66	-84	-187	-343	-364	-137	-1,180
Debt service	*	*	-1	-2	-3	-4	-6	-9	-13	-22	-37	-9	-96

Continued

The Bipartisan Budget Act of 2018 extended a number of expiring tax provisions through December 31, 2017. If roughly 30 of those provisions, plus a number of trade programs that are scheduled to expire between 2020 and 2026, were permanently extended, JCT and CBO estimate that revenues would be lower by a total of $85 billion over the 2019–2028 period.

In total, if all of those tax provisions were permanently extended, CBO and JCT estimate, revenues would be lower by a total of $1.2 trillion over the 2019–2028 period.

An Alternative Fiscal Scenario

If a combination of those changes to current law was made so as to maintain major policies that are currently in place and also to provide more typical levels of funding for emergencies, far larger deficits and much greater debt would result than are shown in CBO's current baseline. Relative to the baseline projections for the 2019–2028 period, deficits would be larger by a total of $2.6 trillion (including debt-service costs), causing cumulative deficits of nearly $15 trillion over that period if the following policy decisions were made:

- More than 50 expiring revenue provisions were extended, including the individual income tax provisions of the 2017 tax act.
- Delays in implementing certain taxes established by the Affordable Care Act were extended or made permanent.

Table 4-5. Continued

Budgetary Effects of Selected Policy Alternatives Not Included in CBO's Baseline

Billions of Dollars

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Policy Alternatives That Affect Spending and Revenues													
Changes in Deficits From the Alternative Fiscal Scenario[j]													
Increase (-) in the deficit[b]	-1	*	-96	-138	-160	-182	-200	-218	-321	-481	-503	-576	-2,300
Debt service	*	*	-2	-6	-12	-19	-25	-31	-40	-54	-77	-39	-267
Memorandum:													
Alternative Fiscal Scenario													
Revenues	3,336	3,485	3,656	3,802	3,978	4,177	4,379	4,579	4,802	4,973	5,173	19,097	43,003
Outlays	4,142	4,465	4,761	5,069	5,427	5,650	5,847	6,181	6,484	6,824	7,279	25,372	57,987
Deficit in CBO's April 2018 Baseline	-804	-981	-1,008	-1,123	-1,276	-1,273	-1,244	-1,352	-1,320	-1,316	-1,526	-5,660	-12,418

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

n.a. = not applicable; * = between -$500 million and $500 million.

a. For this alternative, CBO does not extrapolate the $102 billion in budget authority for nondefense discretionary programs related to Hurricanes Harvey, Irma, and Maria and wildfires in western states that was designated as an emergency requirement. Rather, the alternative incorporates the assumption that such funding will fall to $11 billion in 2019—the average annual amount of nondefense discretionary funding declared an emergency requirement from 2012 through 2017—and will grow at the rate of inflation from that 2019 level.

b. Excludes debt service.

c. These estimates reflect the assumption that appropriations will not be constrained by caps set by the Budget Control Act of 2011 (as amended) and will instead grow at the rate of inflation from their 2018 amount. Discretionary funding related to federal personnel is inflated using the employment cost index for wages and salaries; other discretionary funding is inflated using the gross domestic product price index.

d. This option reflects the assumption that appropriations would generally be frozen at the 2018 level through 2028.

e. The estimates are mainly from the staff of the Joint Committee on Taxation and are preliminary. The estimates include some effects on outlays for refundable tax credits. The option includes the effects of extending several expiring trade provisions that affect customs duties.

f. This alternative incorporates the assumption that lawmakers will permanently extend many provisions of Public Law 115-97 (called the 2017 tax act in this report). Most significantly, this alternative includes extension of the provisions that lower individual income tax rates, expand the income tax base, expand the child credit, reduce the amount of income subject to the alternative minimum tax, and increase the estate and gift tax exemption. It does not incorporate the assumption that the expensing of equipment and property is extended; the effects of that alternative are shown separately.

g. This alternative would extend the provisions that allow businesses with large amounts of investment to expense (immediately deduct from their taxable income) the cost of their investment in equipment and certain other property. Under current law, the portion that can be expensed is 100 percent through 2022, 80 percent in 2023, 60 percent in 2024, 40 percent in 2025, and 20 percent in 2026, after which the provisions expire. The option would extend the 100 percent allowance permanently beyond 2022.

h. This alternative would repeal the health insurance provider tax, the medical device excise tax, and the excise tax on certain health insurance plans with high premiums. All were postponed for either one or two years in the Extension of Continuing Appropriations Act, 2018. The component of the estimate from repealing the high-premium excise tax does not include largely offsetting effects that would result because some people who would otherwise have been enrolled in insurance through Medicaid or the marketplaces established by the Affordable Care Act would instead enroll in employment-based coverage.

i. This alternative would extend about 30 tax provisions that generally expired on December 31, 2017, and were extended by the Bipartisan Budget Act of 2018. It also includes the extension of a number of trade provisions scheduled to expire between 2020 and 2026 that affect customs duties. It does not include an extension of the expensing provisions or a repeal of certain health-related provisions; those effects are shown separately.

j. The alternative fiscal scenario incorporates all of the policy alternatives in this table except the one labeled "Freeze Discretionary Appropriations at the 2018 Amount."

- The caps on discretionary appropriations did not take effect and appropriations instead grew each year from their 2018 amount at the rate of inflation.

- Lawmakers provided $11 billion in appropriations designated as an emergency requirement for nondefense discretionary programs each year between 2019 and 2028 (with adjustments for inflation), rather than the roughly $100 billion a year projected in the baseline.

Under that scenario, revenues from 2019 through 2028 would average 17.0 percent of GDP, almost 0.5 percentage points below their 50-year average, and outlays would average 23.0 percent, roughly 3 percentage points above their 50-year average. Deficits would average nearly 6 percent of GDP through 2028, a full percentage point higher than under CBO's baseline. Debt held by the public would reach about 105 percent of GDP by the end of 2028—the largest share since 1946—and would rise even more sharply in subsequent decades.