

3. LONG-TERM BUDGET OUTLOOK

When the current Administration took office, budget deficits and debt were rising sharply, primarily as a result of the Great Recession. Revenues as a share of Gross Domestic Product (GDP) were at their lowest level since 1950, and spending on countercyclical programs had also risen sharply.

As a result of both economic recovery and policy changes, deficits have since fallen rapidly. Last year's deficit (2.5 percent of GDP) was about three-quarters lower than the deficit the President inherited, reflecting the fastest sustained deficit reduction since just after World War II. However, with economic recovery well underway, and with the enactment of legislation extending a large number of expiring tax provisions at the end of the last congressional session, both the Administration and the Congressional Budget Office (CBO) project that, absent any changes in policy, the deficit will begin to rise this year and continue to rise over the following ten years. The ratio of debt to GDP will increase by about 10 percentage points over that period under current policy.

While the detailed estimates of receipts and outlays in the President's Budget extend only 10 years, this chapter reviews the longer-term budget outlook, both under a continuation of current policies and under the policies proposed in the Budget. The analysis finds:

- Legislation and other developments since 2010 have not only improved near-term projections, they have also substantially improved the medium- and long-term budget outlook.
- The most significant sources of progress are lower projected health spending (revised in light of slower health care cost growth rates of the last several years), discretionary policy changes, and revenue increases enacted in the American Taxpayer Relief Act of 2012 (ATRA).
- Enacted policy changes, while significant, are insufficient to stabilize debt over the next 10 or 25 years. Additional changes of about 1.7 percent of GDP are needed to achieve fiscal sustainability over the 25-year horizon.
- The deficit reduction proposed in the President's Budget puts the Nation on course towards fiscal sustainability, essentially closing the 25-year fiscal gap. With the Budget's proposals for health, tax, and immigration reforms and other policy changes, debt as a share of GDP declines modestly over the next decade and stabilizes after that.

The projections discussed in this chapter are highly uncertain. As highlighted below, small changes in economic or other assumptions can make a large difference to the

results. This is even more relevant for projections over longer horizons. For this reason, the chapter focuses primarily on 25-year projections, although it also provides budget estimates for a 75-year period, as well as results under different economic assumptions and for different policy scenarios.

The chapter also discusses the status of the Social Security and Medicare Hospital Insurance (HI) trust funds, which are financed from dedicated revenue sources. The proposals contained in the 2017 Budget would extend the life of both the Social Security and HI trust funds. While immigration reform is primarily responsible for the improvements to Social Security trust fund solvency, the HI trust fund benefits from a robust package of health savings proposals, reforms to the net investment income tax (NIIT), and the dedication of NIIT tax revenues—which are currently deposited into the General Fund—to the HI trust fund. Still, additional measures would be needed to achieve 75-year trust fund solvency.

The Basis for the Long-Run Projections

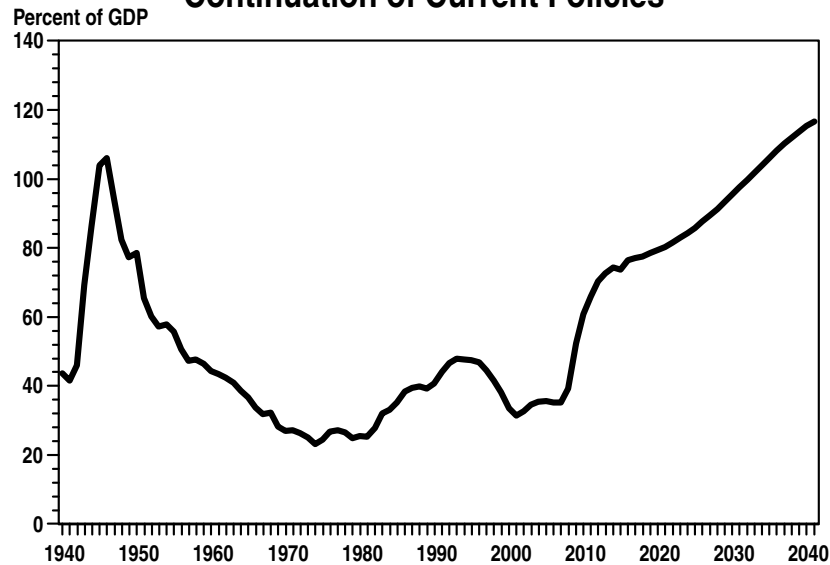
For the 10-year budget window, the Administration produces both baseline projections, which show how deficits and debt would evolve under current policies, and projections showing the impact of proposed policy changes. Like the budget baseline more generally, long-term projections should provide policymakers with information about the Nation's expected fiscal trajectory in the absence of spending and tax changes. For this reason, the baseline long-term projections in this chapter assume that current policy continues for Social Security, Medicare, Medicaid, other mandatory programs, and revenues.¹ (See the appendix for details.)

In the case of discretionary spending, it is less clear how to project a continuation of current policy. After the period covered by the statutory caps, both the Administration's and CBO's 10-year baselines assume that discretionary funding levels generally grow slightly above the rate of inflation (about 2.4 percent per year). Long-run projections sometimes assume that discretionary funding remains constant as a share of the economy, implying long-run growth of a little over 4 percent per year. Meanwhile, over the past five years, discretionary funding has failed to even keep pace with inflation, falling by 13 percent in real terms.

The projections here adopt an intermediate approach, assuming that real per-person discretionary funding

¹ The long-run baseline projections are consistent with the Budget's adjusted baseline concept. The Budget's adjusted baseline concept is explained in more detail in Chapter 25, "Current Services Estimates," in this volume. The projections assume full payment of scheduled Social Security and Medicare benefits without regard to the projected depletion of the trust funds for these programs.

Chart 3-1. Publicly Held Debt Under Continuation of Current Policies



remains constant over the long run, which implies an annual growth rate of about 3 percent. For the many discretionary programs that provide services to individuals, it is reasonable to define current policy as maintaining the same level of services for the same share of the population, which can be approximated by holding real per-person discretionary funding constant. In contrast, holding discretionary spending constant as a share of GDP effectively assumes large increases in per-person service levels over time, as well as large increases in real funding levels for national defense, research, infrastructure, and other public goods.

Long-Run Projections Under Continuation of Current Policies

Chart 3-1 shows the path of debt as a share of GDP under continuation of current policies, *without* the policy changes proposed in the President's Budget. Over the next 10 years, debt rises from 74 percent of GDP last year to 88 percent of GDP in 2026. Beyond the 10-year horizon, debt increases more sharply, reaching 117 percent of GDP by 2041, the end of the 25-year projection window.

The key drivers of that increase are an aging population, health care cost growth, and insufficient revenues to keep pace with these trends.

Aging population. — Over the next 10 years, an aging population will put significant pressure on the budget. In 2008, when the oldest members of the baby boom generation became eligible for early retirement under Social Security, the ratio of workers to Social Security beneficiaries was 3.2. By the end of the 10-year budget window, that ratio will fall to 2.4, and it will reach about 2.1 in the early 2030s, at which point most of the baby boomers will have retired.

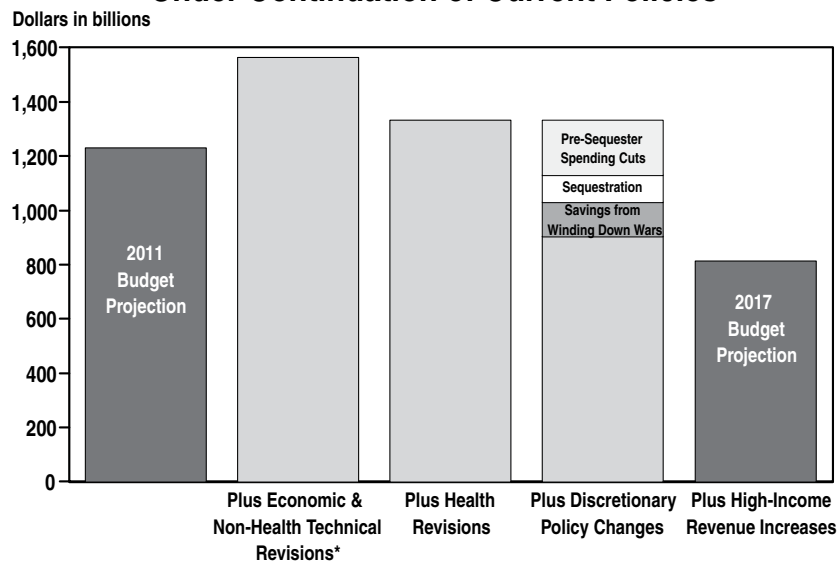
With fewer active workers paying taxes and more retired workers eligible for Social Security, Medicare, and

Medicaid (including long-term care), budgetary pressures will increase. Social Security program costs will grow from 5.0 percent of GDP today to 5.9 percent of GDP by 2041, with most of that growth occurring within the 10-year budget window. Likewise, even if per-beneficiary health care costs grew at the same rate as GDP per capita, Medicare and Medicaid costs would still increase substantially as a share of GDP, due solely to the aging population.

Health costs. — Health care costs per capita have risen much faster than per-capita GDP growth for decades, leading both public and private spending on health care to increase as a share of the economy. However, the last few years have seen a sharp departure from long-term trends, with spending per enrollee growing in line with or more slowly than per-capita GDP in both the public and private sectors, and recent data indicate that slow growth in per-enrollee spending has continued through 2015. (Coverage expansions under the Affordable Care Act have temporarily increased growth in aggregate health care spending, but trends in per-enrollee costs, together with the demographic trends discussed above, are what matter for long-term fiscal projections.)

While some of the slowdown reflects the Great Recession and its aftermath, there is strong evidence that a portion of it is the result of structural changes. For example, since Medicare beneficiaries are typically retired or disabled, Medicare costs tend to be less sensitive to economic conditions than overall health spending. But Medicare cost growth has slowed in line with the overall slowdown in health care costs, suggesting that the recession was not the primary driver of the recent slowdown, particularly in public programs. The fact that growth in per-enrollee health care spending remains low more than five years into the economic recovery also implies that factors other than the recession are playing an important role.

**Chart 3-2. Changes to Projected 2020 Deficit
Under Continuation of Current Policies**



Based on projections of Medicare enrollment and expenditures included in the 2015 Medicare Trustees Report, the projections here assume that Medicare per-beneficiary spending growth will accelerate over the next few years, with the growth rate averaging about 0.7 percentage points above the growth rate of per-capita GDP over the next 25 years.² (This average growth rate is still below the historical average for the last 25 years.) Under these assumptions, Medicare and Medicaid costs increase by a total of 2.4 percentage points as a share of GDP by 2041.

Revenues. — Without any further changes in tax laws, revenues will grow slightly faster than GDP over the long run, but not fast enough to keep pace with the increase in social insurance costs that results from an aging population. The increase in revenues as a share of GDP occurs primarily because individuals' real, inflation-adjusted incomes grow over time, and so a portion of their income falls into higher tax brackets. (Bracket thresholds are indexed for inflation but do not grow in real terms.)

Other programs. — Other mandatory programs are generally projected to decline relative to the size of the economy and to consume a smaller share of revenues over time. For example, spending on non-health safety net programs will decline as incomes grow. Likewise, pension benefits for Federal workers will shrink as a share of the economy as a result of reductions initiated in the 1980s. Overall, spending on mandatory programs outside of health care and Social Security equals 16.3 percent of revenues today, but is projected to equal 14.3 percent of revenues by 2041. Likewise, discretionary spending will consume a smaller share of revenues over time under current projections.

² The projections in this year's Trustees report reflect the enactment of the Medicare Access and CHIP Reauthorization Act (MACRA) of 2015. This law repealed the sustainable growth rate formula that set physician fee schedule payments, which were usually modified.

Fiscal Progress to Date

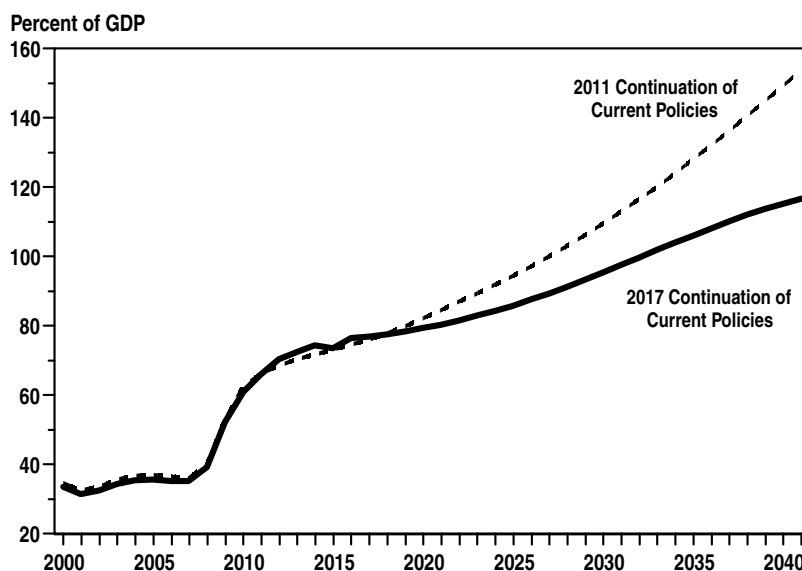
The deficit as a share of the economy began declining in 2010. Since then, deficits have fallen rapidly, sharply improving the near-term budget outlook. Taking 2010 as the point of departure, Charts 3-2 and 3-3 show that this progress extends to reducing medium- and long-term deficits and debt.

As Chart 3-2 shows, in the 2011 Mid-Session Review, published in July 2010, the Administration projected a 2020 deficit of \$1,230 billion, or 5.1 percent of GDP, under continuation of current policies.³ The 2017 Budget projects a baseline deficit of \$814 billion, or 3.7 percent of GDP in 2020, a reduction of 1.4 percentage points or \$416 billion (34 percent). As shown in the chart, one major contributor to the improvement is lower than expected Federal health spending. Revisions to health spending forecasts based on the slower growth of the past several years (and based on the assumption that only a portion of the slowdown will continue) will save the Federal government \$231 billion in 2020, accounting for about half of the net improvement in the deficit.⁴ Another important factor is the high-income revenue increases enacted in ATRA (about a fifth of the net improvement). Discretionary spending restraint has also played a large role, although the impact of sequestration (less than a quarter of the total discretionary contribution to deficit reduction) is much smaller than the impact of the pre-sequestration Budget Control Act cuts and less than the savings from winding down wars.⁵

³ For comparability, this projection includes continuation of the 2001 and 2003 tax cuts and Alternative Minimum Tax Relief and assumes that the Medicare SGR reductions do not take effect.

⁴ Aggregate projected Federal health care spending for 2020 has decreased by \$185 billion when compared with the 2011 Mid-Session Review, excluding debt service and including premium tax credit revenues.

⁵ To simplify the comparisons of projected health spending, these

Chart 3-3. Comparison of Publicly Held Debt

There has been a similar improvement in projected long-term deficits and debt. Chart 3-3 shows the projected path of debt as a share of GDP under the 2011 Budget (February 2010) current policy projection and as of the 2017 current policy projection.⁶ A few years ago, debt in 2040 was projected to reach 149 percent of GDP. Today, it is projected to reach 115 percent of GDP. While it is difficult to precisely decompose the contributing factors over long periods, the major drivers behind the improvement

comparisons start from the 2011 Mid-Session Review, following the enactment of the Affordable Care Act. However, the ACA itself also reduced projected deficits. CBO estimated that the ACA would reduce the deficit by \$25 billion in 2020 and by over \$1 trillion in the decade starting in 2023. These direct, scored effects of the ACA are separate from any contributions to the broader health care cost growth slowdown, discussed below.

⁶ The “2010 projections” are based on 2010 data and Trustees assumptions but—for comparability—use the Administration’s current methodology for long-term projections, in particular assuming that discretionary funding grows with inflation plus population growth. While the Administration did not produce a comparable long-term projection for the 2011 Mid-Session Review, the long-term projections from the 2011 Budget projection of current policy can be used to illustrate the fiscal improvements achieved since 2010; the comparison relative to the 2011 Mid-Session Review would be qualitatively similar.

**Table 3-1. 25-YEAR FISCAL GAP (–)/SURPLUS (+)
UNDER ALTERNATIVE BUDGET SCENARIOS**
(Percent of GDP)

2011 Budget Continuation of Current Policies	–2.4
2017 Budget Continuation of Current Policies	–1.7
2017 Budget policy	–0.1
Breakdown of changes in 2017 Budget Policy:	
Health reform	+0.3
High-income tax proposals	+0.4
Immigration reform	+0.2
Other policies	+0.8

are the same: lower projected health care costs, revenue increases from ATRA, and lower discretionary spending.

The Fiscal Gap

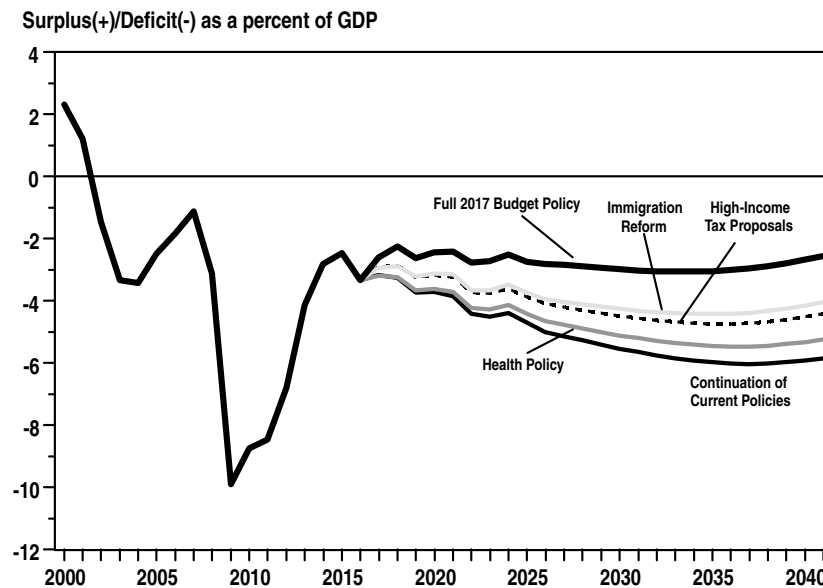
One way to quantify the size of the Nation’s long-term fiscal challenges is the “fiscal gap.” The fiscal gap is defined as the present value of the combined increase in taxes or reduction in non-interest spending needed to keep the debt-to-GDP ratio stable over a given period (more precisely, the present value adjustment required for the debt-to-GDP ratio at the end of the period to equal its level at the beginning of the period). If publicly held debt at the end of the period is projected to be lower than current debt, there is a fiscal surplus rather than a fiscal gap.

Table 3-1 shows the 25-year fiscal gap under the baseline projections, under the President’s policies, and as of 2010. Under the base case current policy projections, the 25-year fiscal gap is 1.7 percent of GDP. This means that policy adjustments of about 1.7 percent of GDP would be needed each year to put the Nation on a sustainable fiscal course for the next two-and-a-half decades. In contrast, as of 2010, adjustments of 2.4 percent of GDP would have been needed to achieve the goal of stabilizing debt over 25 years. While the two values are not strictly comparable (due to the different 25-year time periods), the difference underscores the significant improvement in the fiscal outlook over the last few years.

The Impact of 2017 Budget Policies on the Long-Term Fiscal Outlook

The President’s 2017 Budget proposes non-interest spending reductions and revenue increases equal to about 1.8 percent of GDP when fully in effect, nearly closing the 25-year fiscal gap and putting the Nation on a fiscally sustainable

Chart 3-4. 2017 Budget Policies



course over the next 75 years. As shown in Chart 3-4, over the 10-year budget window, the Budget stabilizes deficits around 2.8 percent of GDP and modestly reduces the debt-to-GDP ratio. Over the next decade and a half, the debt-to-GDP ratio reaches 78 percent of GDP and subsequently decreases. The Budget policies result in a small 25-year fiscal gap of 0.1 percent of GDP.

In addition to paying for all new investments, the 2017 Budget reduces deficits and debt through health, tax, and immigration reform.

Additional health reforms building on the ACA.—As discussed above, the last few years have seen slower growth in health care spending in both Medicare and the private market. While the slowdown reflects a variety of factors, there is evidence that the reforms enacted in the Affordable Care Act are already contributing to this slowdown, as discussed below.

The 2017 Budget builds on the ACA with a robust package of health savings proposals, estimated to reduce Medicare and Medicaid spending by about \$380 billion, that will strengthen the Medicare trust fund, create incentives for both providers and beneficiaries to choose more cost-effective methods of care, and improve health care quality. The Budget also backstops these savings with a proposal to strengthen the Independent Payment Advisory Board (IPAB) by lowering its target growth rate to 0.5 percentage points above per-capita GDP growth.⁷

As shown in Chart 3-4 and Table 3-1, these reforms have a large effect on the long-run budget outlook, reducing the fiscal gap by 0.3 percent of GDP.

⁷ The ACA established an Independent Payment Advisory Board (IPAB) that is required to propose changes in Medicare should Medicare per beneficiary cost growth exceed target growth rates specified in law; such IPAB-proposed changes would take effect automatically, unless overridden by the Congress. The Budget includes a proposal that would strengthen the IPAB mechanism by lowering the target growth rate applicable for 2020 onward from GDP +1.0 percentage points to GDP +0.5 percentage points.

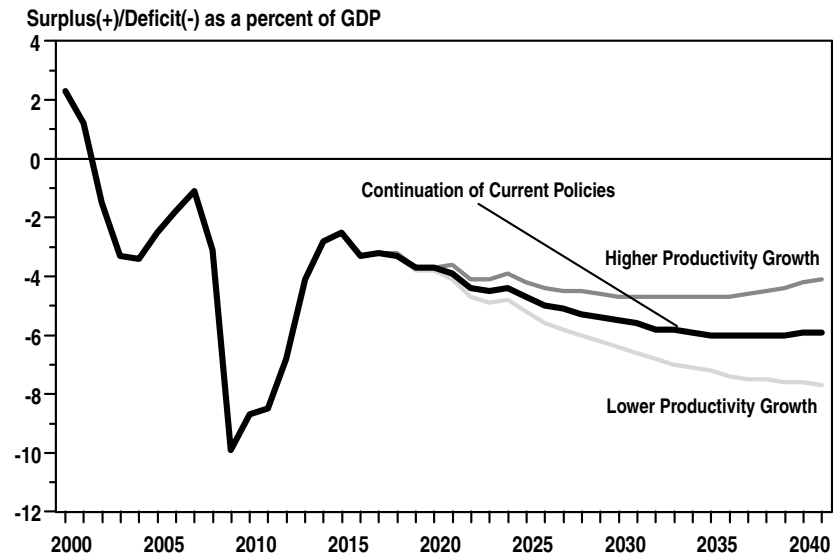
High-income tax proposals.—The Budget includes proposals to implement the Buffet Rule by imposing a new “Fair Share Tax,” rationalize net investment income and Self-Employed Contributions Act taxes, and reduce the value of certain tax expenditures that increase revenues by about \$955 billion over the first 10 years. These proposals to curb inefficient tax benefits for high-income households and close loopholes reduce the fiscal gap by an additional 0.4 percent of GDP.

Commonsense comprehensive immigration reform.—The 2017 Budget continues to propose commonsense, comprehensive immigration reform that would strengthen border security, modernize the legal immigration system, and provide a path to earned citizenship. By adding younger workers to the labor force, immigration reform would help balance an aging population as the baby boom generation retires. CBO estimates that the 2013 Senate-passed immigration bill would have reduced deficits by almost \$1 trillion over 20 years. It would also boost economic growth and strengthen Social Security.

The Budget’s 10-year projections include an allowance for deficit reduction from immigration reform based on the CBO estimate. The long-run projections are based on CBO’s “second-decade” estimate extended as a constant share of GDP from 2035 to 2041. As shown in Chart 3-4 and Table 3-1, higher immigration has a positive effect on the budget, reducing the fiscal gap by an additional 0.2 percentage points.

Other 2017 Budget policies.—The remaining policies in the 2017 Budget reduce the fiscal gap by 0.8 percentage points. The Budget obtains these additional savings from additional spending reductions and tax changes beyond those needed to pay for its investments in education, infrastructure, research, and other areas.

Chart 3-5. Alternative Productivity and Interest Assumptions



Uncertainty and Alternative Assumptions

Future budget outcomes depend on a host of unknowns: changing economic conditions, unforeseen international developments, unexpected demographic shifts, and unpredictable technological advances. These uncertainties make even short-run budget forecasting quite difficult. For example, the budget's projection of the deficit in five years is 2.4 percent of GDP, but a distribution of probable outcomes ranges from a deficit of 7.9 percent of GDP to a surplus of 3.1 percent of GDP, at the 10th and 90th percentiles, respectively.

The longer budget projections are extended, the more the uncertainties increase. Table 3-2 gives a sense of the degree of uncertainty in the 25-year projections under continuation of current policies. Under plausible alternative assumptions, the 25-year fiscal gap ranges from a gap of 2.5 percent of GDP to a gap of 0.9 percent of GDP. Alternative assumptions considered include:

Productivity and interest rates.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 3-5). Higher productivity growth improves the budget outlook, because it adds directly to the growth of the major tax bases while having a smaller effect on outlay growth. Meanwhile, productivity and interest rates tend to move together, but have opposite effects on the budget. Economic growth theory suggests that a 0.1 percentage point increase in productivity should be associated with a roughly equal increase in interest rates.

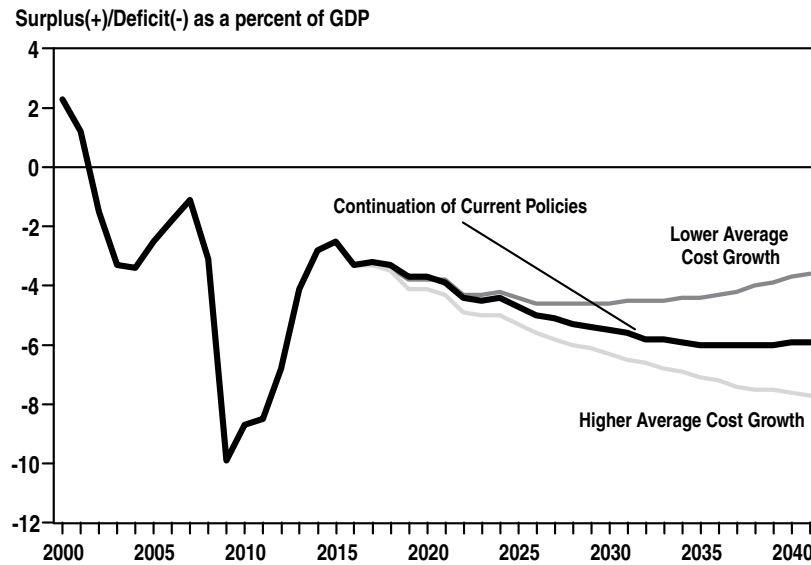
Productivity growth is also highly uncertain. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2.2 percent per year, but there were long periods of sustained output growth at notably higher and lower rates than the long-term aver-

age. The base case long-run projections assume that real GDP per hour worked will grow at an average annual rate of 1.7 percent per year, slower than the historical average, and assume interest rates on 10-year Treasury securities of 4.2 percent. The alternative scenarios illustrate the effect of raising and lowering the projected productivity growth rate by 0.25 percentage point and changing interest rates commensurately. The 25-year fiscal gap ranges from a fiscal gap of 0.9 percent of GDP in the high productivity scenario to a gap of 1.7 percent of GDP in the base case and 2.5 percent of GDP in the low productivity scenario. This variation highlights the importance of investments, like those in research and development, education, and training, and smarter tax policy, which can contribute to higher productivity.

**Table 3-2. 25-YEAR FISCAL GAP (-)/SURPLUS (+)
UNDER ALTERNATIVE BUDGET SCENARIOS**
(Percent of GDP)

2017 Budget Continuation of Current Policies	-1.7
Health:	
Excess cost growth averages 1.5%	-2.3
Zero Excess cost growth	-0.9
Discretionary Outlays:	
Grow with inflation	-1.5
Grow with GDP	-1.9
Revenues:	
Income tax brackets are regularly increased	-1.8
Fixed as a percent of GDP	-2.1
Productivity and Interest: ¹	
Productivity grows by 0.25 percentage point per year faster than the base case	-0.9
Productivity grows by 0.25 percentage point per year slower than the base case	-2.5

¹ Interest rates adjust commensurately with increases or decreases in productivity.

Chart 3-6. Alternative Health Care Costs

Health spending.—Health care cost growth represents another large source of uncertainty in the long-term budget projections (see Chart 3-6). As noted above, the baseline projections follow the Medicare Trustees in assuming that Medicare per-beneficiary costs grow an average of about 0.7 percentage points faster than per-capita GDP growth over the next 25 years. But historically, especially prior to 1990, health care costs grew even more rapidly. Conversely, over the last few years, per-enrollee health care costs have grown roughly in line with or more slowly than GDP per-capita, with particularly slow growth in Medicare and Medicaid.

As noted above, there is evidence that a significant portion of the recent decline in health care cost growth

is structural (rather than related to the recession), and that the ACA is playing a contributing role, for example through Medicare provider payment reforms and incentives for hospitals to reduce readmissions. The ACA also enacted an array of more fundamental delivery system reforms that encourage efficient, high-quality care, including incentives for the creation of accountable care organizations and the launch of a wide variety of payment reform demonstrations. These reforms have generated promising early results and could have major effects on health care quality and cost going forward.

Table 3-2 shows the large impact that either slower or faster health care cost growth would have on the budget.

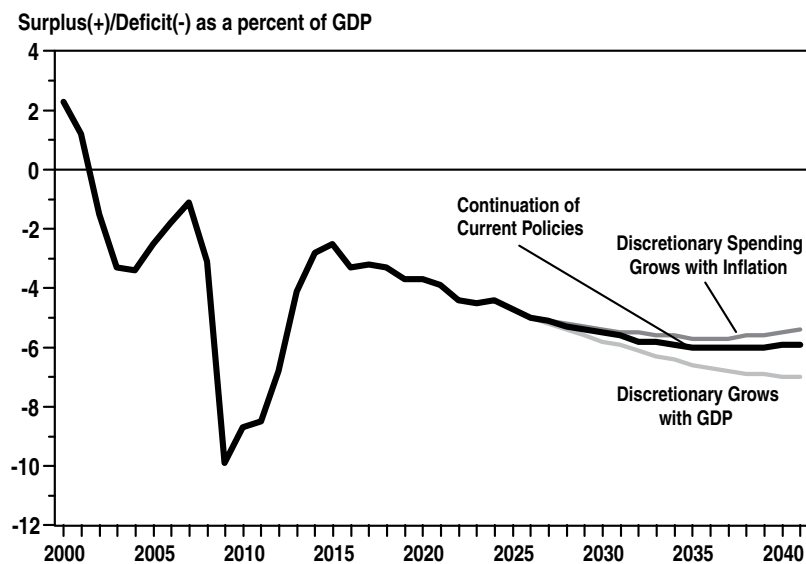
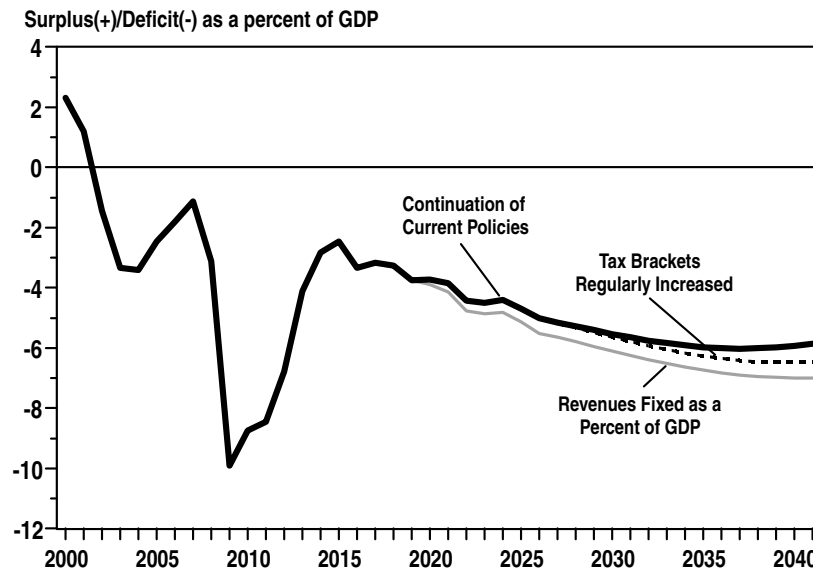
Chart 3-7. Alternative Discretionary Projections

Chart 3-8. Alternative Revenue Projections



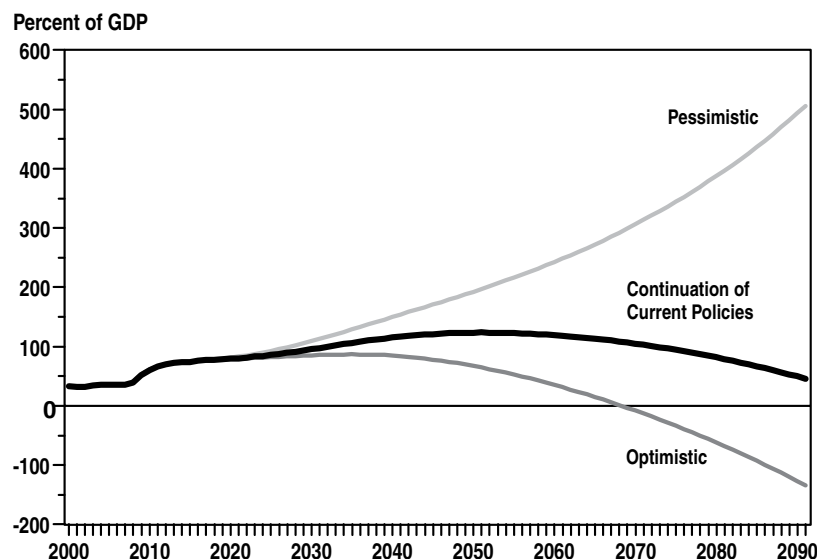
If health care cost growth averaged 1.5 percentage points, instead of roughly 0.7 percentage points, faster than per-capita GDP growth, the current policy 25-year fiscal gap would increase from 1.7 to 2.3 percent of GDP. If health care costs grew with GDP per capita, the 25-year fiscal gap would be 0.9 percent of GDP.

Policy assumptions.—As evident from the discussion of the 2017 Budget, policy choices will also have a large impact on long-term budget deficits and debt. The current base projection for discretionary spending assumes that after 2026, discretionary spending grows with inflation and population (see Chart 3-7). As discussed above, al-

ternative assumptions are to grow discretionary spending with GDP or inflation. As shown in Table 3-2, the 25-year fiscal gap increases from 1.7 percent of GDP in the base case to 1.9 percent of GDP if discretionary spending grows with GDP, and falls to 1.5 percent of GDP if discretionary spending grows with inflation.

In the base case projection, tax receipts rise gradually relative to GDP as real incomes rise, consistent with what would occur under current law. Chart 3-8 shows two alternative receipts assumptions. Cutting taxes to avoid the revenue increases associated with rising incomes would bring about higher deficits and debt. The

Chart 3-9. Long-Term Uncertainties



25-year fiscal gap rises from 1.7 percent of GDP in the base case to 1.8 percent of GDP in the alternative case where tax brackets are regularly increased after 2026. Further cutting taxes to keep revenues constant as a share of GDP at current levels results in a 25-year fiscal gap of 2.1 percent.

Finally, Chart 3-9 shows how uncertainties magnify over a 75-year forecast horizon. As the chart shows, under the baseline projections, without policy changes, debt exceeds 100 percent of GDP by 2033 before starting a slow decline in the very long run. Alternatively, assuming a combination of slower productivity growth and higher health care cost growth results in a debt explosion, with debt-to-GDP reaching over 500 percent by the end of the window. Meanwhile, assuming a combination of higher productivity growth and slower health care cost growth results in the debt being completely paid off by 2069.

Despite the striking uncertainties, long-term projections are helpful in highlighting some of the known budget challenges on the horizon, especially the impact of an aging population. In addition, the projections highlight the need for policy awareness and potential action to address drivers of future budgetary costs.

Actuarial Projections for Social Security and Medicare

While the Administration's long-run projections focus on the unified budget outlook, Social Security and Medicare Hospital Insurance benefits are paid out of trust funds financed by dedicated payroll tax revenue. Projected trust fund revenues fall short of the levels necessary to finance projected benefits over the next 75 years.

The Social Security and Medicare Trustees' reports feature the actuarial balance of the trust funds as a summary measure of their financial status. For each trust fund, the balance is calculated as the change in receipts or program benefits (expressed as a percentage of taxable payroll) that would be needed to preserve a small positive balance in the trust fund at the end of a specified time period. The estimates cover periods ranging in length from 25 to 75 years.

Table 3-3 shows the projected income rate, cost rate, and annual balance for the Medicare HI and combined OASDI trust funds at selected dates under the Trustees' intermediate assumptions. Data from the 2013 and the 2014 reports are shown along with the latest data from the 2015 reports. Following the passage of the ACA in 2010, there have been major improvements in trust fund solvency, although there is a continued imbalance in the long-run projections of the HI program due to demographic trends and continued high per-person costs. In the 2013 Trustees' report, Medicare HI trust fund costs as a percentage of Medicare covered payroll were projected to rise from 3.5 percent to 5.9 percent between 2014 and 2080 and the HI trust fund imbalance was projected to be -1.6 percent in 2080. In the 2014 report, costs rose from 3.4 percent of Medicare taxable payroll in 2014 to 5.6 percent in 2080 and the imbalance in the HI trust fund in 2080 was -1.4 percent. On average, the HI cost rate declined slightly in the 2015 report compared with 2014. In

the 2015 report, HI costs rise from 3.4 percent of Medicare taxable payroll in 2014 to 5.1 percent in 2080 and the imbalance in the HI trust fund in 2080 is -0.9 percent. The HI trust fund is projected to become insolvent in 2030, the same year projected in the 2014 report, versus 2017 in the last report before passage of the ACA.

Under the Medicare Modernization Act (MMA) of 2003, the Medicare Trustees must issue a "warning" when two consecutive Trustees' reports project that the share of Medicare funded by general revenues will exceed 45 percent in the current year or any of the subsequent six years. For the first time since 2007, the 2014 Trustees' Report did not include such a warning. The 2015 Trustees' Report also did not include this warning. The MMA requires that, if there is a Medicare funding warning, the President submit proposed legislation responding to that warning, within 15 days of submitting the Budget. In accordance with the Recommendations Clause of the Constitution and as the Executive Branch has noted in prior years, the Executive Branch considers a requirement to propose specific legislation to be advisory.

As a result of reforms legislated in 1983, Social Security had been running a cash surplus with taxes exceeding costs up until 2009. This surplus in the Social Security trust fund helped to hold down the unified budget deficit. The cash surplus ended in 2009, when the trust fund began using a portion of its interest earnings to cover benefit payments. The 2015 Social Security Trustees' report projects that the trust fund will not return to cash surplus, but the program will continue to experience an overall surplus for several more years because of the interest earnings. After that, however, Social Security will begin to draw on its trust fund balances to cover current expenditures. Over time, as the ratio of workers to retirees falls, costs are projected to rise further from 14.0 percent of Social Security covered payroll in 2014 to 14.2 percent of payroll in 2020, 16.1 percent of payroll in 2030 and 17.7 percent of payroll in 2080. Revenues excluding interest are projected to rise only slightly from 12.8 percent of payroll today to 13.3 percent in 2080. Thus the annual balance is projected to decline from -1.2 percent of payroll in 2014 to -1.3 percent of payroll in 2020, -2.9 percent of payroll in 2030, and -4.4 percent of payroll in 2080. On a 75-year basis, the actuarial deficit is projected to be -2.7 percent of payroll. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and eventually be exhausted in 2034. These projections assume that benefits would continue to be paid in full despite the projected exhaustion of the trust fund to show the long-run implications of current benefit formulas. Under current law, not all scheduled benefits would be paid after the trust funds are exhausted. However, benefits could still be partially funded from current revenues. According to the 2015 Trustees' report, beginning in 2034, 79 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 73 percent by 2089.

Table 3-3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI
(Percent of Payroll)

	2014	2020	2030	2040	2080
Medicare Hospital Insurance (HI)					
Income Rate					
2013 Trustees' Report	3.3	3.4	3.6	3.7	4.2
2014 Trustees' Report	3.3	3.4	3.6	3.7	4.2
2015 Trustees' Report	3.3	3.4	3.6	3.7	4.2
Cost Rate					
2013 Trustees' Report	3.5	3.5	4.4	5.2	5.9
2014 Trustees' Report	3.4	3.3	4.2	4.8	5.6
2015 Trustees' Report	3.4	3.3	4.2	4.7	5.1
Annual Balance					
2013 Trustees' Report	-0.2	-0.1	-0.8	-1.4	-1.6
2014 Trustees' Report	-0.1	*	-0.6	-1.1	-1.4
2015 Trustees' Report	-0.2	0.1	-0.6	-1.0	-0.9
Projection Interval:			25 years	50 years	75 years
Actuarial Balance: 2013 Trustees' Report			-0.6	-1.0	-1.1
Actuarial Balance: 2014 Trustees' Report			-0.4	-0.8	-0.9
Actuarial Balance: 2015 Trustees' Report			-0.4	-0.6	-0.7
Old Age Survivors and Disability Insurance (OASDI)					
Income Rate					
2013 Trustees' Report	12.8	13.0	13.1	13.2	13.2
2014 Trustees' Report	12.7	13.0	13.2	13.2	13.3
2015 Trustees' Report	12.8	13.0	13.2	13.2	13.3
Cost Rate					
2013 Trustees' Report	14.0	14.3	16.5	17.0	17.8
2014 Trustees' Report	14.0	14.3	16.6	17.1	17.9
2015 Trustees' Report	14.0	14.2	16.1	16.7	17.7
Annual Balance					
2013 Trustees' Report	-1.2	-1.3	-3.4	-3.8	-4.5
2014 Trustees' Report	-1.3	-1.4	-3.5	-3.9	-4.6
2015 Trustees' Report	-1.2	-1.3	-2.9	-3.5	-4.4
Projection Interval:			25 years	50 years	75 years
Actuarial Balance: 2013 Trustees' Report			-1.3	-2.2	-2.7
Actuarial Balance: 2014 Trustees' Report			-1.5	-2.4	-2.9
Actuarial Balance: 2015 Trustees' Report			-1.4	-2.2	-2.7

* 0.05 percent or less.

Note: Values from the 2014 Trustees' Report are not fully comparable to values for earlier years' reports, as 2014 Trustees Report numbers are based on a projected baseline rather than a current law baseline.

The 2017 Budget would improve the condition of both trust funds. The health savings proposed in the Budget and tax proposals directly affecting HI tax receipts, including transfers of revenue from the net investment income tax, would extend the life of the HI trust fund by more than 15

years. Meanwhile, the Social Security Actuary estimated the Senate-passed immigration bill would reduce the Social Security shortfall by 8 percent, extending the life of the trust fund by two years. Nonetheless, additional reforms will be needed to restore 75-year solvency in both programs.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-run budget projections are based on demographic and economic assumptions. A simplified model of the Federal budget, developed at OMB, is used to compute the budgetary implications of these assumptions.

Demographic and economic assumptions.—For the years 2016-2026, the assumptions are drawn from the Administration's economic projections used for the 2017 Budget. The economic assumptions are extend-

ed beyond this interval by holding inflation, interest rates, and the unemployment rate constant at the levels assumed in the final year of the budget forecast. Population growth and labor force growth are extended using the intermediate assumptions from the 2015 Social Security Trustees' report. The projected rate of growth for real GDP is built up from the labor force assumptions and an assumed rate of productiv-

ity growth. Productivity growth, measured as real GDP per hour, is assumed to equal its average rate of growth in the Budget's economic assumptions—1.7 percent per year.

CPI inflation holds stable at 2.3 percent per year, the unemployment rate is constant at 4.9 percent, the yield on 10-year Treasury notes is steady at 4.2 percent, and the 91-day Treasury bill rate is 3.3 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the 75-year projection period total population growth is slightly above 0.4 percent per year. Real GDP growth is projected to be less than its historical average of around 3.4 percent per year because the slowdown in population growth and the increase in the population over age 65 reduce labor supply growth. In these projections, real GDP growth averages between 2.1 percent and 2.3 percent per year for the period following the end of the 10-year budget window.

The economic and demographic projections described above are set by assumption and do not automatically change in response to changes in the budget outlook. This

makes it easier to interpret the comparisons of alternative policies and is a reasonable simplification given the large uncertainties surrounding the long-run outlook.

Budget projections.—For the period through 2026, receipts and outlays in the baseline and policy projections follow the 2017 Budget's adjusted baseline and policy estimates respectively. After 2026, total tax receipts rise gradually relative to GDP as real incomes also rise. Discretionary spending grows at the rate of growth in inflation plus population afterwards. Long-run Social Security spending is projected by the Social Security actuaries using this chapter's long-run economic and demographic assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2015 Medicare Trustees' report current law baseline; for the policy projections, these assumptions are then also adjusted to account for the Budget's IPAB proposal. Medicaid outlays are based on the economic and demographic projections in the model, which assume average excess cost growth of approximately 1.2 percentage points above growth in GDP per capita after 2026. Other entitlement programs are projected based on rules of thumb linking program spending to elements of the economic and demographic projections such as the poverty rate.

