3. LONG-TERM BUDGET OUTLOOK

The 2019 President's Budget improves the Federal Government's long-term fiscal picture by promoting rapid economic growth, responsibly controlling spending, and increasing efficiencies Government-wide. This chapter demonstrates the positive impact of the Administration's policies by comparing long-term budget forecasts under current policy (baseline projections) with forecasts based on the 2019 Budget proposals (policy projections). Baseline projections indicate that the deficit will continue at elevated levels beyond the 10-year window and that publicly held debt will continue to rise as a share of the economy. Conversely, policy projections indicate that enacting the Budget's proposed reforms could dramatically reduce deficits and publicly held debt as a percentage of GDP.

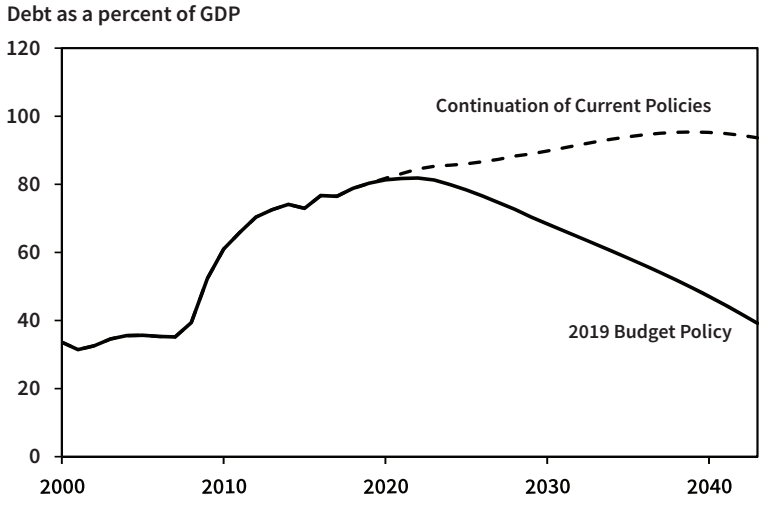
Chart 3-1 shows the path of debt as a percent of GDP under continuation of current policy, *without* the proposed changes in the President's Budget, as well as the debt trajectory under the President's policies. Under current policy, the ratio of debt to GDP will rise from 78.8 percent in 2018 to 88.3 percent in 2028, an increase of about 9.5 percentage points over that period. In contrast, the debt ratio is projected to be 72.6 percent in 2028 under the proposed policy changes. By the end of the 25-year horizon, the difference in the debt burden—93.7 percent of GDP under current policy compared to 39.2 percent of GDP under Budget policy—is even starker. The savings proposed by the Administration from 2019-2028 are a significant down payment towards reducing debt and reaching a balanced budget by 2039.

While the detailed estimates of receipts and outlays in the President's Budget extend only 10 years, this chapter presents the longer-term budget outlook, both under a continuation of current policies and under the policies proposed in the Budget. The projections in this chapter are highly uncertain. Small changes in economic or other assumptions can cause large differences to the results especially for projections over longer horizons.

The chapter is organized as follows:

- The first section details the assumptions used to create the baseline projection and analyzes the long-term implications of leaving current policies in place. This forecast serves as a point of comparison against the proposals in the 2019 Budget in the second section.
- The second section demonstrates how the Administration's policies will significantly alter the current trajectory of the Federal budget by reducing deficits and debt, and by balancing the budget by 2039 under a long-term term extension of the Budget's policies.
- The third section discusses alternative assumptions about the evolution of key variables and uncertainties in the resulting projections.
- The fourth section discusses the actuarial projections for Social Security and Medicare.
- The appendix provides further detail on data sources, assumptions, and other methods for estimation.

Chart 3-1. Comparison of Publicly Held Debt



Long-Run Projections under Continuation of Current Policies

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, a set of economic assumptions based in current law, including the projected effects of the 2017 tax reform and excluding the growth-increasing effects of the Administration's proposed fiscal policies, underlie the baseline projections in this chapter. Using the same set of economic assumptions for baseline and policy projections would understate the severity of the current-law fiscal problem and fail to illustrate the full impact of the 2019 Budget policies.

The baseline long-term projections assume that current policy continues for Social Security, Medicare, Medicaid, other mandatory programs, and revenues.[1] For discretionary spending, it is less clear how to project a continuation of current policy. After the expiration of the statutory caps in 2021, both the Administration's and CBO's 10-year baselines assume that discretionary funding levels generally grow slightly above the rate of inflation (about 2.5 percent per year) per statutory baseline rules. Thereafter, the baseline long-run projections assume that per-person discretionary funding remains constant, which implies an annual nominal growth rate of about 2.9 percent.

Over the next 10 years, debt in the baseline projection rises from 78.8 percent of GDP in 2018 to 88.3 percent of GDP in 2028. Beyond the 10-year horizon, debt continues to increase, reaching 93.7 percent of GDP by 2043, the end of the 25-year projection window. The key drivers of that increase are an aging population and rapid health care cost growth, which are only partly offset by growth in Federal revenues and a decline in discretionary spending relative to GDP. Without policy changes, the public debt will continue to grow, increasing the burden on future generations.

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 2.3, and it will reach about 2.1 in the mid-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 4.9 percent of GDP today to 5.6 percent of GDP by 2043, 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 percent 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, thus requiring both public and private spending on health care to increase as a share of the economy. While in recent years spending per enrollee has grown roughly in line with, or more slowly than, per-capita GDP in both the public and private sectors, this slower per-enrollee growth is not projected to continue. Trends in per-enrollee costs, together with the demographic trends discussed above, are the primary drivers of long-term fiscal projections.

Based on projections of Medicare enrollment and expenditures included in the 2017 Medicare Trustees Report, the projections here assume that Medicare per-beneficiary spending growth will increase, with the growth rate averaging about 1.0 percentage points above the growth rate of per-capita GDP over the next 25 years. (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 2.5 percentage points as a percent of GDP by 2043.

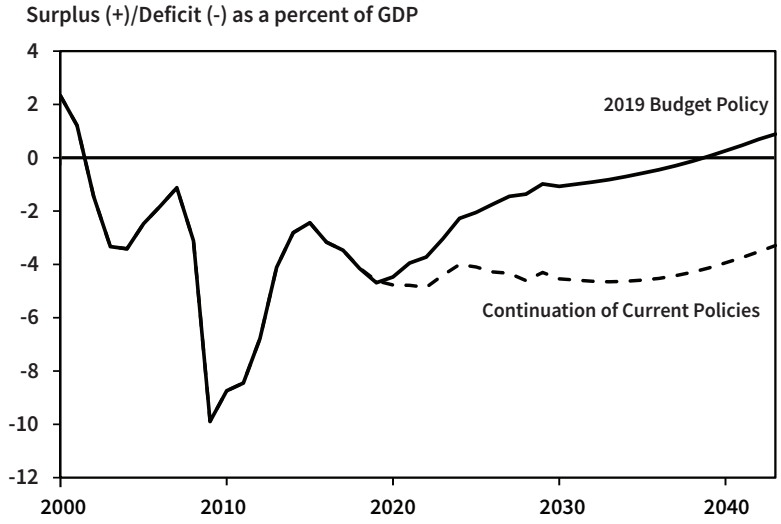
Revenues and Discretionary Spending.—Under the 2017 tax reform law, receipts will grow slightly faster than GDP over the long run. The increase in revenues as a percent of GDP occurs primarily because individuals' real, inflation-adjusted incomes grow over time, and so a portion of their income falls into higher tax brackets. (Bracket thresholds are indexed for inflation but do not grow in real terms.) In addition, under baseline assumptions discretionary spending grows slower than GDP. Both of these factors act to restrain deficits relative to GDP, partially offsetting the pressure from increases in spending for Social Security and health programs.

The Impact of 2019 Budget Policies on the Long-Term Fiscal Outlook

To show the long-term effects of implementing new policies, expenditures and revenues are extended through the 25-year timeframe. The President's 2019 Budget proposals reduce deficits while continuing to invest in national security and other critical priorities that promote economic growth by decreasing non-defense discretionary and mandatory spending over the next 10 years. Beyond the 10-year window, most categories of mandatory spending grow at the same rates as under the baseline projection, discretionary spending keeps up with inflation and population, and revenues continue as a fixed percentage of GDP based on their level in 2028. Details about the assumptions are available in the appendix.

[1] The long-run baseline projections are consistent with the Budget's baseline concept, which is explained in more detail in Chapter 22, "Current Services Estimates," in this volume. The projections assume extension of the individual income tax and estate tax provisions of the Tax Cuts and Jobs Act beyond their expiration in 2025, and also assume full payment of scheduled Social Security and Medicare benefits without regard to the projected depletion of the trust funds for these programs. Additional baseline assumptions beyond the 10-year window are detailed in the appendix to this chapter.

Chart 3-2. Comparison of Annual Surplus/Deficit



As shown in Chart 3-2, 2019 Budget policies reduce the deficit to 1.4 percent of GDP by 2028 and ultimately lead to a balanced budget by 2039. Over the decade and a half after 2028, the debt-to-GDP ratio continues to decline. At the end of the 25-year horizon, the debt ratio would be the lowest since before 2008, representing significant progress in reducing the Federal debt burden.

One way to quantify the size of the Nation's long-term fiscal challenges is to determine the size of the increase in taxes or reduction in non-interest spending needed to reach a target debt-to-GDP ratio over a given period. There is no one optimal debt ratio, but two illustrative targets are keeping the debt ratio stable, and reaching the average postwar debt ratio of 45 percent. Policy adjustments of about 0.7 percent of GDP to baseline projections would be needed each year to keep the debt ratio stable at 79 percent. Alternatively, policy adjustments of about 2.2 percent of GDP would steer the debt ratio to the postwar average by the end of the 25-year horizon. In comparison, the President's Budget policies are projected to decrease the debt ratio within the 10-year window and reduce it by nearly 40 percentage points by 2043, more than satisfying the definition of fiscal sustainability.

The Budget achieves these fiscal goals through prioritizing expenditures that promote economic growth and security while improving the efficiency of the Federal government. For example, the President's Budget includes a $200 billion initiative to improve the Nation's crumbling infrastructure and an increase of $65 billion to defense spending for 2019 above the current discretionary caps. Continuing reductions of regulatory burden will promote job creation, and extending tax reform will allow families to keep more of their earnings. In addition, the Budget proposes streamlining Medicare to make it a better deal for seniors and the Government. Eliminating fraud, waste, and abuse from Medicare contributes to a lower debt and deficit in the long run.

Table 3–1. 25-YEAR DEBT PROJECTIONS UNDER ALTERNATIVE BUDGET SCENARIOS
(Percent of GDP)

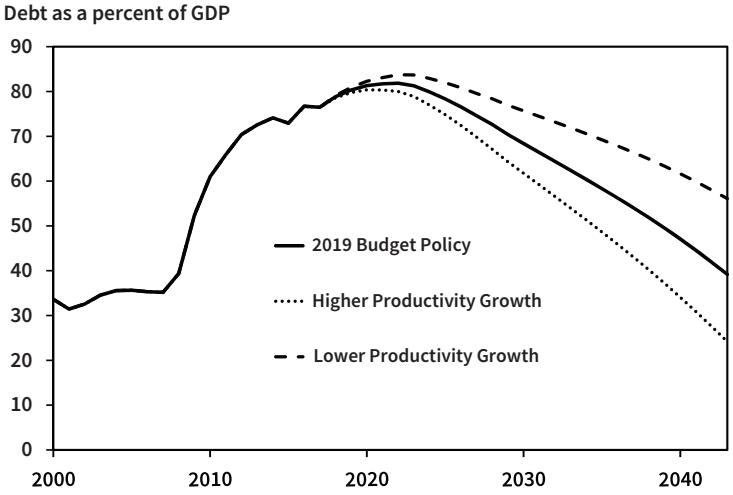
2019 Budget Policy	39.2
Health:	
Excess cost growth averages 1.5%	51.3
Zero excess cost growth	32.1
Discretionary Outlays:	
Grow with inflation	37.1
Grow with GDP	45.6
Revenues:	
Revenues rise as as a share of GDP, with bracket creep	32.7
Productivity and Interest:[1]	
Productivity grows by 0.25 percentage point per year faster than the base case	24.2
Productivity grows by 0.25 percentage point per year slower than the base case	56.1

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

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. The longer budget projections are extended, the more the uncertainties increase. These uncertainties make even accurate short-run budget forecasting quite difficult. For example, the Budget's projection of the deficit in five years is 3.0 percent of GDP, but a distribution of probable outcomes ranges from a deficit of 8.4 percent of GDP to a surplus

Chart 3-3. Alternative Productivity and Interest Assumptions



of 2.4 percent of GDP, at the 10th and 90th percentiles, respectively.

Productivity and Interest Rates.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 3-3). 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. 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 2.1 percent per year, but there were long periods of sustained productivity growth at notably higher and lower rates than the long-term average. The base case long-run projections assume that real GDP per hour worked will grow at an average annual rate of 2.0 percent per year and assume interest rates on 10-year Treasury securities of 3.6 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. At the end of the 25-year horizon, the public debt ranges from 24.2 percent of GDP in the high productivity scenario to 56.1 percent of GDP in the low productivity scenario. This variation highlights the importance of investment and smarter tax policy, which can contribute to higher productivity.

Health Spending.—Health care cost growth represents another major source of uncertainty in the long-term budget projections. As noted above, the baseline projections follow the Medicare Trustees in assuming that Medicare per-beneficiary costs grow an average of about 1.0 percentage points faster than per-capita GDP growth over the next 25 years. However, in the past, especially prior to 1990, health care costs grew even more rapidly. Over the last few years, per-enrollee health care costs

Chart 3-4. Alternative Health Care Costs

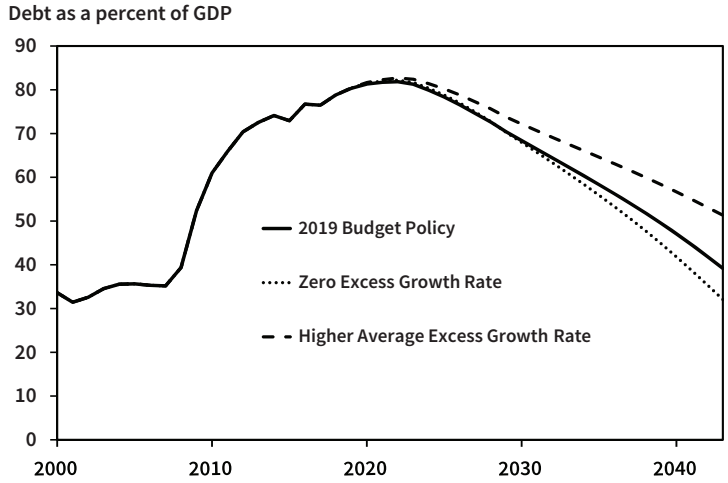
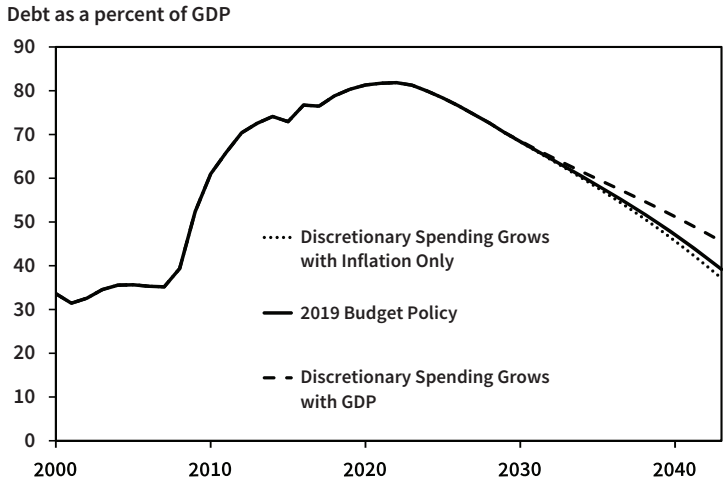


Chart 3-5. Alternative Discretionary Assumptions



have grown roughly in line with or more slowly than GDP per capita, with particularly slow growth in Medicare and Medicaid.

Chart 3-4 shows the large impacts that either slower or faster health care cost growth would have on the budget. If health care cost growth averaged 1.5 percentage points faster than per-capita GDP growth, the debt ratio in 25 years would increase from 39.2 percent of GDP under the base case Budget policy to 51.3 percent of GDP. If health care costs grew with GDP per-capita, the debt ratio in 25 years would be 32.1 percent of GDP.

Policy Assumptions.—As evident from the discussion of the 2019 Budget proposals, policy choices will also have a large impact on long-term budget deficits and debt. The base case policy projection for discretionary spending assumes that after 2028, discretionary spending grows with inflation and population (see Chart 3-5). Alternative assumptions are to grow discretionary spending with GDP or inflation only. At the end of the 25-year horizon, the debt ratio ranges from 37.1 percent of GDP if discretionary spending grows with inflation only to 39.2 percent of GDP in the base case and 45.6 percent of GDP if discretionary spending grows with GDP.

In the base case policy projection, tax receipts remain a constant percent of GDP after the budget window. Chart 3-6 shows an alternative receipts assumption. Without changes in law, revenues would gradually increase with rising real incomes adding to budget surpluses that can further improve the debt outlook. At the end of the 25-year horizon, the debt ratio falls from 39.2 percent of GDP in the base case to 32.7 percent of GDP in the alternative case where tax brackets are not regularly increased after 2028.

Finally, Chart 3-7 shows how uncertainties compound over the forecast horizon. As the chart shows, under the base case Budget policy projections, debt declines to 39.2 percent of GDP. Alternatively, assuming a combination of slower productivity growth and higher health care cost growth results in less debt reduction, with the debt ratio reaching 69.0 percent by the end of the window.

Chart 3-6. Alternative Revenue Assumptions

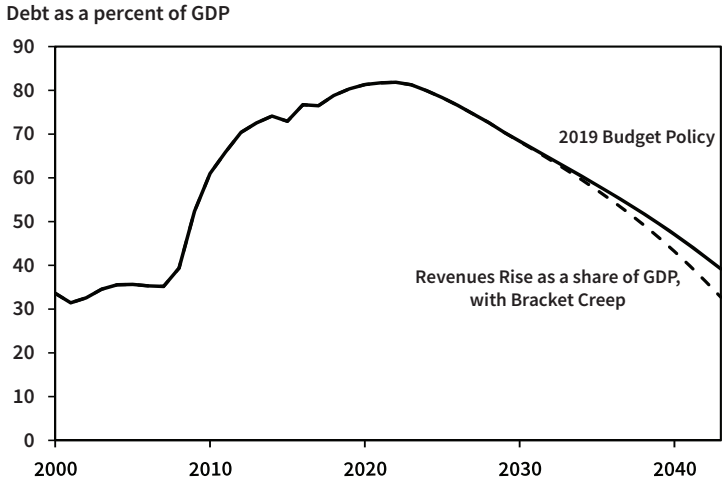
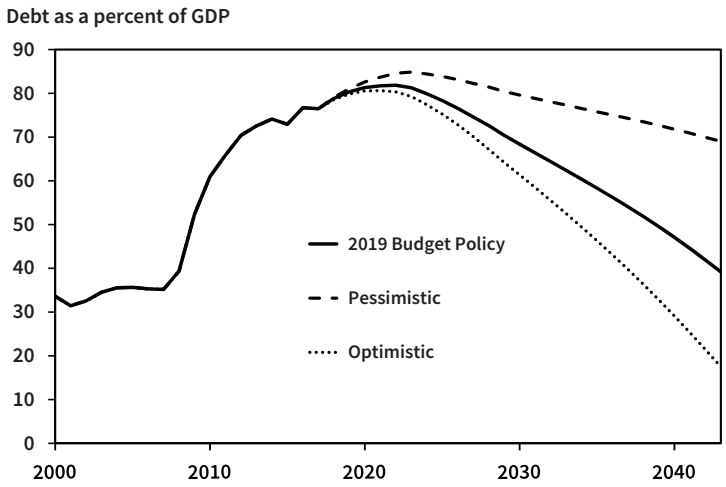


Chart 3-7. Long-Term Uncertainties



Meanwhile, assuming a combination of higher productivity growth and slower health care cost growth results in the debt ratio reaching 17.5 percent in 2043.

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

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 revenues. 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.

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. The 2017 Trustees' Report made a determination of excess revenues, but did not issue a warning since no such determination was made in the 2016 Trustees' Report. 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.

Table 3-2 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 in the 2017 reports. There is a continued imbalance in the long-run projections of the HI program due to demographic trends and continued high per-person costs. The HI trust fund is projected to become insolvent in 2029.

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 2017 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 a few 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 while revenues excluding interest are projected to rise slightly. 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 could be paid after the trust funds are exhausted. However, benefits could still be partially funded from current revenues. According to the 2017 Trustees' report, beginning in 2034, 77 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 73 percent by 2091.

Table 3–2. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI, 2017 TRUSTEES' REPORTS

	2015	2020	2030	2040	2080
	Percent of Payroll				
Medicare Hospital Insurance (HI):					
Income Rate	3.4	3.4	3.6	3.8	4.3
Cost Rate	3.4	3.4	4.2	4.7	5.0
Annual Balance	–0.1	*	–0.5	–0.9	–0.7
Projection Interval			25 years	50 years	75 years
Actuarial Balance			–0.5	–0.6	–0.6
	Percent of Payroll				
Old Age Survivors and Disability Insurance (OASDI):					
Income Rate	12.8	13.0	13.2	13.3	13.3
Cost Rate	13.9	13.9	16.3	17.0	17.5
Annual Balance	–1.1	–0.9	–3.1	–3.7	–4.2
Projection Interval			25 years	50 years	75 years
Actuarial Balance			–1.7	–2.4	–2.8

* 0.05 percent or less.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-run budget projections are based on actuarial projections for Social Security and Medicare as well as 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 2018-2028, the assumptions are drawn from the Administration's economic projections used for the 2019 Budget. The economic assumptions are extended beyond this interval by holding the inflation rate, interest rates, and the unemployment rate constant at the levels assumed in the final year (2028) of the budget forecast. Population growth and labor force growth are extended using the intermediate assumptions from the 2017 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 productivity growth. Productivity growth, measured as real GDP per hour, is assumed to equal its average annual rate of growth in the Budget's economic assumptions—2.3 percent per year. For the baseline projections, GDP growth is adjusted to remove the growth-increasing effects of the Administration's fiscal policies.

Under Budget policies, the CPI inflation rate is held constant at 2.3 percent per year, the unemployment rate is held constant at 4.8 percent, the yield to maturity on 10-year Treasury notes is constant at 3.6 percent, and the 91-day Treasury bill rate is kept at 2.9 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from an average of 0.8 percent per year during the budget window to about three-quarters of that rate by 2035, and slower rates of growth beyond that point. By the end of the 25-year projection period total population growth is slightly above 0.5 percent per year. Real GDP growth is projected to be less than its historical average of around 3.3 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 2.7 percent and 2.8 percent per year for the period following the end of the 10-year budget window.

The economic and demographic projections described above are set exogenously and do not change in response to changes in the budget outlook. This makes it easier to interpret the comparisons of alternative policies.

Budget Projections.—For the period through 2028, receipts and outlays in the baseline and policy projections follow the 2019 Budget's baseline and policy estimates respectively. Under Budget policies, total tax receipts are constant relative to GDP after 2028. Discretionary spending grows at the rate of growth in inflation and population outside the budget window. 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 2017 Medicare Trustees' report current law baseline. For the policy projections, these assumptions are adjusted based on the Budget proposal to streamline Medicare. Medicaid outlays are based on the economic and demographic projections[2] in the model, which assume average excess cost growth of approximately 1.0 percentage point above growth in GDP per capita after 2028. For the policy projections, these assumptions are adjusted based on the Budget proposals to reform Medicaid funding. 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.

[2] The Medicaid per capita projections assumed in this chapter contain a higher degree of uncertainty than they have in past years. This is due to ongoing system changes that have resulted in complete Medicaid claims and enrollment data being unavailable for the most recent several years.