# 3. LONG-TERM BUDGET OUTLOOK

The horizon for most numbers in this Budget is 10 years. This 10-year horizon reflects a balance between the importance of considering both the current and future implications of budget decisions made today, and a practical limit on the construction of detailed budget projections for years in the future.

Nonetheless, it can be informative to look further into the future, despite the uncertainty surrounding the assumptions needed for such estimates. This chapter begins by discussing the fiscal outlook under current law over the next 25 years. The second section discusses the fiscal impact of the Administration's policies, finding they will cut deficits and debt over the long run, compared to the baseline. The third section discusses the actuarial projections for Social Security and Medicare. The appendix to this chapter provides further detail on data sources, assumptions, and other methods for estimation.

## Long-Run Projections under Continuation of Current Policies

The baseline long-term projections assume that current policy continues for Social Security, Medicare, Medicaid, other mandatory programs, and revenues.[1] Projections for all mandatory programs and revenues maintain consistency with other Federal agency projections. From 2032-2046, total mandatory spending grows by 4.2 percentage points as a share of GDP (Gross Domestic Product), while revenues increase by 3.8 percent. For discretionary spending, it is less clear how to project a continuation of current policy. After the expiration of the statutory caps in 2021, the Administration's 10-year baseline assumes that discretionary funding levels generally grow slightly below the rate of CPI (Consumer Price Index) inflation (about 2.2 percent per year). Thereafter, the baseline long-run projections assume that real per-person discretionary funding remains constant, implying an average growth rate of 2.8 percent per year. The appendix provides additional detail on the methodology behind these projections.

The COVID-19 public health and economic crisis and measures taken to address them significantly increased deficits and debt for 2020 and 2021. In the baseline projections (not including proposed policy), the deficit is 14.9 percent of GDP in 2020 and 16.7 percent of GDP in 2021. The deficit is then projected to fall sharply in 2022 and 2023 and then gradually fall to 4.0 percent of GDP in 2027, though it is projected to rise through the end of the 10-year window and reach 5.0 percent of GDP in 2031. Debt rose to 100.1 percent of GDP in 2020 and is projected to rise to 109.7 percent of GDP in 2022 and 111.2 percent of GDP in 2023 before leveling off to a more gradual ascent, rising to 112.9 percent of GDP in 2031.

Over the past several decades, interest rates have fallen even as debt has risen. This has been a widespread, persistent, and global phenomenon, and it has meant that the burden associated with debt has gone down. Under the baseline projections, real net interest payments will remain at or below 0.5 percent of GDP over the 10-year window, below the approximately one percent average over the last four decades and well below the roughly two percent average level in the 1990s.

Beyond the 10-year horizon, deficits continue to rise under the baseline projections, reaching 5.8 percent of GDP in 2041 before falling back to 5.7 percent of GDP by the end of the 25-year window. Debt is projected to increase gradually from 112.9 percent of GDP in 2031 to 130.8 percent of GDP by 2046, an increase of about 1.2 percentage points per year. Real net interest steadily rises after the 10-year window, but never exceeds 0.7 percent of GDP.

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 5.1 percent of GDP, but a distribution of probable outcomes ranges from a deficit of 11.0 percent of GDP to a surplus of 0.8 percent of GDP, at the 10th and 90th percentiles, respectively.[2]

Among the risks, the rate of future productivity growth is both highly uncertain and a major driver of the long-term budget outlook. Lower productivity growth would directly reduce the growth of major tax bases while higher productivity growth would have the opposite effect. If productivity were to grow 0.25 percentage points slower per year, we would expect the annual deficits to deteriorate significantly from baseline projections. The same would be true if excess cost growth for healthcare was higher than expected or if interest rates grew faster than expected. These risks are roughly symmetric, so faster productivity growth, less healthcare excess cost growth and lower interest rates would significantly improve the fiscal outlook.

Another primary risk not addressed in the long-run economic assumptions or baseline budget projections is the impact of climate change. Climate change will likely

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[1] The long-run baseline projections are consistent with the Budget's baseline concept, which is explained in more detail in Chapter 17, "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. Additional baseline assumptions beyond the 10-year window are detailed in the appendix to this chapter.

[2] These estimates are derived in Chart 2-4 of Chapter 2, "Economic Assumptions and Overview," in this volume.

**Chart 3-1.  Comparison of Annual Surplus/Deficit**

Surplus (+)/Deficit (-) as a percent of GDP
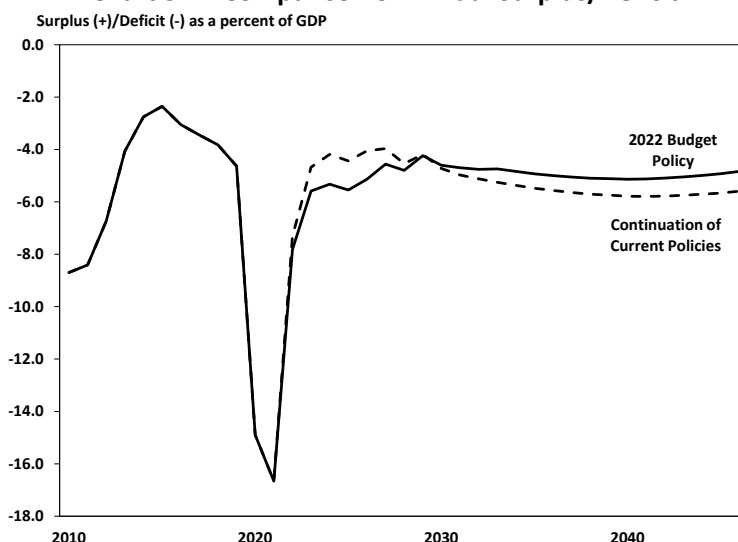


have significant effects on the long-run fiscal outlook. The Administration is undertaking additional analysis to assess these long-run impacts. The Budget's climate policies serve to mitigate long-run impacts of climate change.[3]

### Impact of 2022 Budget Policies on the Long-Term Fiscal Outlook

The Budget proposes major investments in infrastructure, education and training, manufacturing, the care economy, and improving economic security, coupled with major reforms to both corporate and individual taxation. Because many of the investments are front-loaded, while the reforms are permanent, the Budget improves the long-term fiscal outlook.

By 2030, the Budget's policies lower annual deficits compared to the baseline projections. To assess long-run impact, this chapter develops more detailed 25-year projections for the impact of the Administration's policies on the budget. As described in the appendix, the projections attempt to make reasonable extensions of policy impact by making assumptions about the growth rates for individual policy proposals beyond the 10-year window. The resulting projections show that the revenue and spending increases in the American Jobs Plan (AJP) and the American Families Plan (AFP) are projected to offset in 15 years, while generating additional savings over the long run. In total, all Budget proposals are offset within two decades and are projected to reduce deficits by more than $2 trillion in the second decade.  Table S-2—Effect of Budget Proposals on Projected Deficits, in the main *Budget* volume—shows the deficit impact of the Administration's proposals over the second decade, using the assumptions described here.  In the long run, this set of investments and tax reforms will improve the fiscal outlook.

Charts 3-1 and 3-2 illustrate the improvement in deficits and debt. The initial investments in the Administration's

AJP and AFP contribute to a larger deficit in the near term, but that trend reverses, and the plans improve the fiscal outlook over the long term. Beginning in 2030, the AJP and AFP result in a lower deficit through the end of the 25-year window. Similarly, the Budget's policies significantly flatten the projected debt increase compared to the baseline, with debt as a percent of GDP rising by less than 0.6 percentage points per year between 2031 and 2046. Budget proposals would result in further improvement in the fiscal outlook after 25 years.

Notably, these projections may understate the impact that the Budget's policies will have on improving the fiscal outlook because the underlying economic assumptions understate the impact that the Budget's policies will have on economic growth. As noted in the Economic Assumptions chapter, the Administration's economic assumptions incorporate the impact of Administration policies, but were formulated before the details of the AJP and AFP were finalized. Moreover, the Budget makes historic investments in children that will raise their productivity in adulthood, spurring faster economic growth in the long term.

### 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 (HI) 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 actuarial balance is calculated as the magnitude of 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

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[3] This additional analysis is part of the broader Administration effort to address climate-related risks, as outlined in Executive Order 13707.

**Chart 3-2. Comparison of Publicly Held Debt**

Debt as a percent of GDP
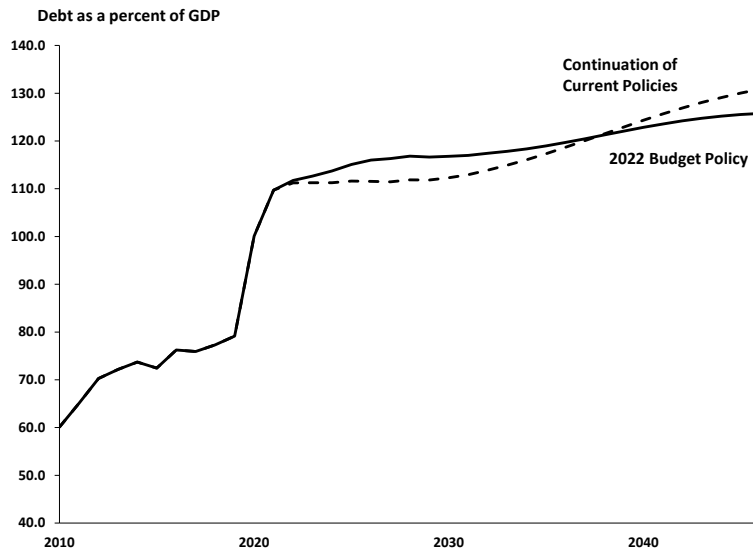


end of a specified time period. The estimates cover periods ranging in length from 25 to 75 years.

Table 3-1 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 2020 reports. There is a continued imbalance in the long-run projections of the HI program due to revenues that do not match costs over time. According to the 2020 Trustees' report, the HI trust fund reserves are projected to become depleted in 2026, at which point dedicated revenues would be expected to be able to cover 90 percent of scheduled payments.

The 2020 Social Security Trustees' report projects that under current law, there is a long-term mismatch between program revenue and costs. Social Security is currently drawing 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 less rapidly. In the process, the Social Security trust fund reserves, which were built up since 1983, would be drawn down and eventually become depleted in 2035, based on the projections in the 2020 report. At that point, the dedicated revenues could pay for 79 percent of program expenditures in the rest of 2035, declining to 73 percent in 2094. Note that the projections in the 2020 Trustees' report do not reflect the effects of the COVID-19 pandemic on the Social Security program, which may advance reserve depletion to 2034.

The long-term budget projections in this chapter assume that benefits would continue to be paid in full despite the projected depletion of the trust fund reserves to show the long-run cost of maintaining current benefit formulas.

**Table 3–1.  INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI, 2020 TRUSTEES' REPORTS**

|  | 2019 | 2020 | 2030 | 2040 | 2090 |
|---|---|---|---|---|---|
|  | Percent of Payroll | | | | |
| **Medicare Hospital Insurance (HI):** | | | | | |
| Income Rate | 3.3 | 3.4 | 3.7 | 3.8 | 4.4 |
| Cost Rate | 3.4 | 3.5 | 4.3 | 4.8 | 5.0 |
| Annual Balance | −0.1 | −0.2 | −0.6 | −1.0 | −0.6 |
| Projection Interval: | | | 25 years | 50 years | 75 years |
| Actuarial Balance | | | −0.8 | −0.8 | −0.8 |
|  | Percent of Payroll | | | | |
| **Old Age Survivors and Disability Insurance (OASDI):** | | | | | |
| Income Rate | 12.8 | 13.0 | 13.2 | 13.3 | 13.4 |
| Cost Rate | 13.9 | 13.9 | 16.0 | 16.8 | 17.9 |
| Annual Balance | −1.0 | −0.9 | −2.8 | −3.5 | −4.4 |
| Projection Interval: | | | 25 years | 50 years | 75 years |
| Actuarial Balance | | | −2.0 | −2.8 | −3.2 |

## 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 after the 10-year budget window.

***Demographic and Economic Assumptions.***—For the years 2021-2031, the assumptions are drawn from the Administration's economic projections used for the 2022 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 (2031) of the budget forecast. Population growth and labor force growth are extended using the intermediate assumptions from the 2020 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: 1.4 percent per year.

Under the Budget's policies, the CPI inflation rate is held constant at 2.3 percent per year, the unemployment rate is held constant at 3.8 percent, the yield to maturity on 10-year Treasury notes is kept at 2.8 percent, and the 91-day Treasury bill rate is kept at 2.2 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from an average of just over 0.5 percent per year during the budget window to about three-quarters of that rate by the end of the 25-year projection period. Real GDP growth is projected to be less than its historical average of around 2.5 percent per year because the slowdown in population growth and the increase in the share of the population over age 65 reduce labor supply growth. In these projections, real GDP growth averages between 1.7 percent and 1.8 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.

***Baseline Budget Projections***.—For the period through 2031, receipts and outlays in the baseline and policy projections follow the 2022 Budget's baseline and policy estimates, respectively. Outside the budget window, discretionary spending grows at the rate of growth in inflation and population. 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 healthcare cost growth from the 2020 Medicare Trustees' report current law baseline. Excess cost growth for private health insurance is assumed to grow at a rate that averages the excess cost growth assumed in the Medicare actuarial assumptions and provided in their Illustrative Alternative. In these projections, private health insurance excess cost growth averages 1.3 percent after 2031. Medicaid outlays

are based on the economic and demographic projections in the model, which assume average excess cost growth of approximately 0.9 percentage points above growth in GDP per capita after 2031. 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. Individual income tax revenues are projected using a microsimulation model that incorporates real bracket creep. Corporate tax and other receipts are projected to grow with GDP.

***Policy Budget Projections.***—The long-run impact of the President's policy proposals is based on the same set of economic and demographic assumptions, but make the following assumptions for the growth of costs and savings from specific policy proposals.

*Discretionary Spending*.—Discretionary spending is assumed to grow at the rate of growth in inflation and population outside the budget window, as in the baseline model.

*American Jobs Plan Investments*.—In general, the proposed outlays for the AJP investments do not continue beyond the budget window. The projections take into account that a small amount of budget authority provided in the first decade is spent outside the budget window.

*Made in America Tax Plan*.—Other than tax credit expansions, tax provisions in the AJP are assumed to grow at the rate of growth in GDP. Four energy credit expansions (the Energy Investment Credit, the Renewable Production Tax Credit, the Carbon Oxide Sequestration Tax Credit, and the new tax credits for qualified advanced energy manufacturing) can be claimed outside the budget window. The outlays for these credits beyond the budget window are projected separately for each proposal and assume different paths for spend-out, based on guidance from the Department of the Treasury's Office of Tax Analysis (OTA). The remaining energy credits with 2031 outlays will likely have smaller carry-overs; the Budget assumes that their 2032 outlays are half of their 2031 outlays and that their 2033-2046 outlays are zero. For the Low-Income Housing Tax Credit and Neighborhood Homes Investment Tax Credit, the Budget assumes that initial allocations not resulting in credits claimed in the first decade will lead to a declining pattern of credits claimed during 2032-36 before remaining at zero in 2037 and beyond.

*American Families Plan*.—As a general rule, investments that are expected to be largely paying for wages or providing goods or services that increase in quality are assumed to grow with GDP. Investments that provide constant-quality goods or services are assumed to grow with inflation and population.

*Paid Leave and Child Care Initiatives*: The 10-year Budget projections assume that providing universal paid family and medical leave, universal preschool, creating a new child care entitlement, and providing pay parity for Head Start teachers and ensuring all early childhood program staff make a $15 minimum wage are fully phased in (with take-up reaching steady state levels) by the tenth year. After that, the budget authority for these provisions is projected based on the GDP growth rate, and the outlay

rates for these programs from the budget window are carried through beyond the budget window.

*Education Initiatives:* Policies to fund free community college and advance affordability for students at Historically Black Colleges and Universities, Tribal Colleges and Universities, and Minority Serving Institutions have their budget authority grow with relevant populations and tuition inflation, as specified in the proposals, with respective outlays growing according to the applicable outlay rate. Increasing the Pell Grant and making recipients of DACA (Deferred Action for Childhood Arrivals) eligible for Pell Grants have their budget authority grow with inflation and population because eligibility is likely to grow with population and the value of the grants is proposed to grow with inflation, and the policies follow the same outlay rate beyond the budget window as during the budget window. Education proposals with flat funding for the first 10 years are assumed to have budget authority grow with inflation and population so that they do not decrease in value in subsequent years. Investments in teacher credentials are funded only in the first five years of the budget window and not beyond.

*Nutrition Initiatives*: Proposals related to nutrition, including expanding the Summer Electronic Benefit Transfer to all eligible children nationwide, facilitating re-entry for formerly incarcerated individuals through eligibility for the Supplemental Nutrition Assistance Program, and expanding school meal programs, each grow at the rate of inflation and population because the cost of these proposals is affected by food prices, which grow with inflation, while participation will generally grow with population.

*Family Coordinators at Veterans Affairs Medical Centers*: This proposal grows with GDP because costs would increase with wages.

*Investments in Maternal Health*: This funding expires before 2031, so funding beyond the budget window is zero.

*Tax Investments*: These proposals, which include making permanent the American Rescue Plan (ARP) expansion to the Earned Income Tax Credit for workers without children, making permanent ARP changes to the Child and Dependent Care Tax Credit (CDCTC), extending ARP changes to the Child Tax Credit, and making permanent full refundability, were estimated directly by OTA through 2041; the provisions grow in 2042-2046 according to their 2032-2041 growth patterns. The Budget accounts for the CDCTC interaction with the proposed child care entitlement, and the interaction grows at the same rate as the permanent CDCTC. Making permanent the ARP expansion of premium tax credits is projected assuming average excess cost growth of approximately 1.3 percentage points above growth in GDP after 2031.

*Offsets*: Most tax provisions in the American Families Plan are projected to grow with GDP, based on guidance from OTA. Receipts from Internal Revenue Service (IRS) tax compliance reforms, net of IRS discretionary and mandatory outlay reforms, are assumed to grow with GDP. Capital income proposals were estimated directly by OTA through 2041 and grow at a faster rate than GDP growth based on modeled deferral behavior; the provision grows in 2042-2046 according to its growth pattern in 2032-2041.