THE 2022 ANNUAL REPORT OF THE BOARDS OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE AND FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUNDS

COMMUNICATION

FROM

THE BOARDS OF TRUSTEES, FEDERAL HOSPITAL INSURANCE AND FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUNDS

TRANSMITTING

THE 2022 ANNUAL REPORT OF THE BOARDS OF TRUSTEES OF THE FEDERAL HOSPITAL INSURANCE AND FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUNDS

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BOARDS OF TRUSTEES OF THE
FEDERAL HOSPITAL INSURANCE AND
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUNDS,
Washington, D.C., June 2, 2022

HONORABLE NANCY PELOSI,
Speaker of the House of Representatives

HONORABLE KAMALA D. HARRIS,
President of the Senate

DEAR MADAM SPEAKER AND MADAM PRESIDENT:

We have the honor of transmitting to you the 2022 Annual Report of the Boards of Trustees of the Federal Hospital Insurance Trust Fund and the Federal Supplementary Medical Insurance Trust Fund, the 57th such report.

Respectfully,

JANET YELLEN,
Secretary of the Treasury,
and Managing Trustee of the Trust Funds.

MARTIN J. WALSH,
Secretary of Labor,
and Trustee.

XAVIER BECERRA,
Secretary of Health and Human Services,
and Trustee.

KILOLO KIJAKAZI,
Acting Commissioner of Social Security,
and Trustee.

VACANT,
Public Trustee.

VACANT,
Public Trustee.

CHIQUITA BROOKS-LASURE,
Administrator,
Centers for Medicare & Medicaid Services,
and Secretary, Boards of Trustees.

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I. INTRODUCTION

The Medicare program helps pay for health care services for the aged, disabled, and individuals with end-stage renal disease (ESRD). It has two separate trust funds, the Hospital Insurance trust fund (HI) and the Supplementary Medical Insurance trust fund (SMI). HI, otherwise known as Medicare Part A, helps pay for inpatient hospital services, hospice care, and skilled nursing facility and home health services following hospital stays. SMI consists of Medicare Part B and Part D. Part B helps pay for physician, outpatient hospital, home health, and other services for individuals who have voluntarily enrolled. Part D provides subsidized access to drug insurance coverage on a voluntary basis for all beneficiaries and premium and cost-sharing subsidies for low-income enrollees. Medicare also has a Part C, which serves as an alternative to traditional Part A and Part B coverage. Under this option, beneficiaries can choose to enroll in and receive care from private Medicare Advantage and certain other health insurance plans. Medicare Advantage and Program of All-Inclusive Care for the Elderly (PACE) plans receive prospective, capitated payments for such beneficiaries from the HI and SMI Part B trust fund accounts; the other plans are paid from the accounts on the basis of their costs.

The Social Security Act established the Medicare Board of Trustees to oversee the financial operations of the HI and SMI trust funds.[1] The Board has six members. Four members serve by virtue of their positions in the Federal Government: the Secretary of the Treasury, who is the Managing Trustee; the Secretary of Labor; the Secretary of Health and Human Services; and the Commissioner of Social Security. Two other members are public representatives whom the President appoints and the Senate confirms. These positions have been vacant since 2015. The Administrator of the Centers for Medicare & Medicaid Services (CMS) serves as Secretary of the Board.

The Social Security Act requires that the Board, among other duties, report annually to the Congress on the financial and actuarial status of the HI and SMI trust funds. The 2022 report is the 57th that the Board has submitted.

With one exception, the projections are based on the current-law provisions of the Social Security Act. The one exception is that the Part A projections disregard payment reductions that would result from the projected depletion of the Medicare HI trust fund. Under

[1]The Social Security Act established separate boards for HI and SMI. Both boards have the same membership, so for convenience they are collectively referred to as the Medicare Board of Trustees in this report.

current law, payments would be reduced to levels that could be covered by incoming tax and premium revenues when the HI trust fund was depleted. If the projections reflected such payment reductions, then any imbalances between payments and revenues would be automatically eliminated, and the report would not fulfill one of its critical functions, which is to inform policymakers and the public about the size of any trust fund deficits that would need to be resolved to avert program insolvency. To date, lawmakers have never allowed the assets of the Medicare HI trust fund to become depleted.

Beginning in 2020, the Medicare program was dramatically affected by the COVID-19 pandemic. The amount of payroll taxes expected to be collected by the HI trust fund was greatly reduced due to the economic effects of the pandemic on labor markets. Spending was directly affected by the coverage of testing and treatment of the disease. In addition, several regulatory policies and legislative provisions were enacted during the public health emergency that increased spending; notably, the 3-day inpatient stay requirement to receive skilled nursing facility services was waived, payments for inpatient admission related to COVID-19 were increased by 20 percent, and the use of telehealth was greatly expanded. More than offsetting these additional costs in 2020, spending for non-COVID care declined significantly (compared to both actual 2019 spending and pre-pandemic expectations for 2020).

Spending for services other than COVID-19 was significantly lower than expected in 2020 and 2021. This decline was more pronounced for elective services. In addition, Medicare beneficiaries whose deaths were identified as related to COVID had costs that were much higher than the average Medicare beneficiary prior to the onset of the pandemic. As a result, compared to the pre-pandemic Medicare population, the surviving Medicare population had lower morbidity, on average, reducing costs by an estimated 1.5 percent in 2020 and 2.9 percent in 2021. This morbidity effect is expected to continue over the next few years but is assumed to decrease over time before ending in 2028.

Overall, the projections are based primarily on actual experience through 2019. However, program costs in 2020 and 2021 were used to help inform the development of adjustment factors by type of service, which account for the impact of COVID-19 through 2028. These factors are based on (i) projections of the pandemic; (ii) direct costs associated with the testing and treatment of COVID-19; (iii) projections for non-COVID costs; and (iv) costs for the vaccines. Certain services, such as prescription drugs, durable medical equipment, physician-

administered drugs, and hospice, are not materially affected by the pandemic.

Because of the large wave of COVID-19 cases in late 2021 through early 2022, the Trustees estimate that non-COVID-related spending will be lower than previously expected for the beginning of 2022. For the latter part of 2022 and 2023, the return of deferred care that is assumed to be more intensive, and thus more costly, results in spending that increases to a level that is closer to the pre-pandemic expectations. The Trustees assume that health care spending patterns will return to pre-pandemic levels in 2024 but that the lingering morbidity effects will continue through 2028.

The estimates also incorporate the costs of the COVID-19 vaccines, which consist of both the payments for the vaccines themselves and the payments for their administration. The Trustees expect vaccine utilization to decrease somewhat over time, reflecting the likely reduction in the required number of doses and the possibility that the seriousness of COVID-19 will decrease.

It should be noted that there is an unusually large degree of uncertainty with these COVID-related impacts and that future projections could change significantly as more information becomes available. Moreover, as a result of developments that have occurred since the assumptions for this report were selected in mid-February 2022, uncertainty has increased regarding the path of the COVID-19 pandemic and the economy. The Trustees will continue to monitor developments and modify the projections in later reports as appropriate.

The Medicare *Accelerated and Advance Payments (AAP) Program* was significantly expanded during the COVID-19 public health emergency period, by both legislative provisions and administrative actions taken by CMS early on during the emergency. Total payments of approximately $107.2 billion were made from March 2020 through June 2021: roughly $67.2 billion from the HI trust fund and $40.1 billion from the SMI Part B trust fund account. The Trustees assume that the accelerated and advance payments will be fully repaid by September of 2022, resulting in no net changes to trust fund expenditures, but the AAP program significantly affects the timing of expenditures from 2020 through 2022.

While the COVID-19 pandemic has significantly affected Medicare short-term financing and spending, it is not expected to have a large effect on the financial status of the trust funds after 2028. As discussed

throughout the report, the key measures of the financial adequacy for each trust fund shown in this year's report are fairly comparable to those included in last year's report. This consistency is partly due to the offsetting effects of lower income and expenditures in the HI trust fund and partly due to the expectation that the effects of the pandemic will last only several years. The pandemic is an example of the inherent uncertainty in projecting health care financing and spending over any duration.

A more typical reason for uncertainty in projecting Medicare costs, especially when looking out more than several decades, is that scientific advances will make possible new interventions, procedures, and therapies. Some conditions that are untreatable today may be handled routinely in the future. Spurred by economic incentives, the institutions through which care is delivered will evolve, possibly becoming more efficient. While most health care technological advances to date have tended to increase expenditures, the health care landscape is shifting. No one knows whether future developments will, on balance, increase or decrease costs.

Certain features of current law may result in some challenges for the Medicare program. Physician payment update amounts are specified for all years in the future, and these amounts do not vary based on underlying economic conditions, nor are they expected to keep pace with the average rate of physician cost increases. These rate updates could be an issue in years when levels of inflation are high and would be problematic when the cumulative gap between the price updates and physician costs becomes large. Payment rate updates for most non-physician categories of Medicare providers are reduced by the growth in economy-wide private nonfarm business total factor productivity[2] although these health providers have historically achieved lower levels of productivity growth. If the health sector cannot transition to more efficient models of care delivery and if the provider reimbursement rates paid by commercial insurers continue to be based on the same negotiated process used to date, then the availability, particularly with respect to physician services, and quality of health care received by Medicare beneficiaries would, under current law, fall over time compared to that received by those with private health insurance.

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[2]For convenience the term *economy-wide private nonfarm business total factor productivity* will henceforth be referred to as *economy-wide productivity*. Beginning with the November 18, 2021 release of the productivity data, the Bureau of Labor Statistics (BLS) replaced the term *multifactor productivity* with the term *total factor productivity*, a change in name only as the underlying methods and data were unchanged.

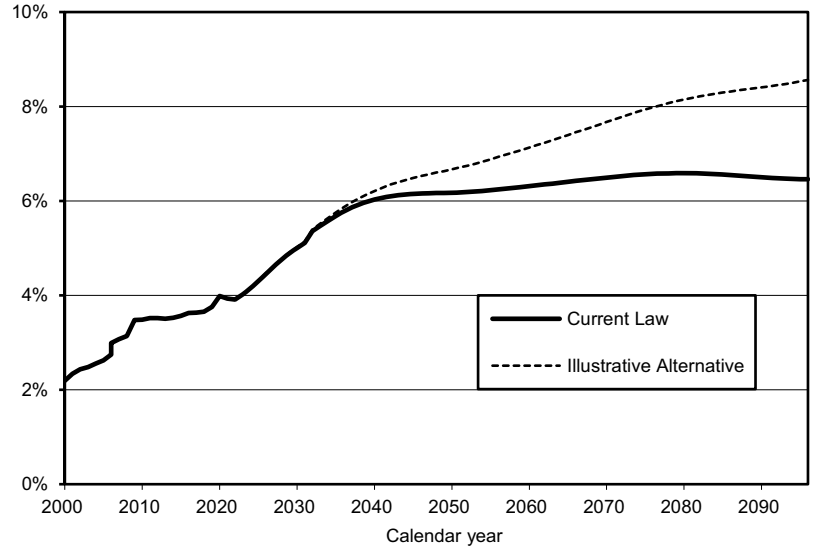
Since 1960, U.S. national health expenditure (NHE) growth rates typically outpaced economic growth rates, though the magnitude of the differences has been declining. The Trustees have long assumed that this differential would continue to narrow over the long-term projection period and that cost-reduction provisions required under current law would further decrease this gap. Since 2008, average annual NHE growth has been below historical averages, though it has generally continued to outpace average annual growth of the economy. There is some debate regarding whether this recent slower growth in national health expenditures reflects the impact of economic factors that are mostly cyclical in nature, such as modest income growth over the last decade, or factors that would lead to a permanently slower growth environment, such as structural changes to the health sector that could result in lower health care cost growth. The Trustees' outlook for long-range NHE growth is consistent with the trajectory observed over the past half century and has not been materially affected by this recent experience.

Current-law projections indicate that Medicare still faces a substantial financial shortfall that will need to be addressed with further legislation. Such legislation should be enacted sooner rather than later to minimize the impact on beneficiaries, providers, and taxpayers.

Figure I.1 shows Medicare's projected expenditures as a percentage of the Gross Domestic Product (GDP) under two sets of assumptions: current law and an illustrative alternative, described below.[3]

[3]A set of illustrative alternative Medicare projections has been prepared under a hypothetical modification to current law. A summary of the projections under the illustrative alternative is contained in section V.C of this report, and a more detailed discussion is available at https://www.cms.gov/files/document/illustrative-alternative-scenario-2022.pdf. Readers should not infer any endorsement of the policies represented by the illustrative alternative by the Trustees, CMS, or the Office of the Actuary. Section V.C also provides additional information on the uncertainties associated with productivity adjustments to specific provider payment updates and the scheduled physician payment updates.

Figure I.1.—Medicare Expenditures as a Percentage of the Gross Domestic Product under Current Law and Illustrative Alternative Projections



Note: Percentages are affected by economic cycles.

The expenditure projections reflect the cost-reduction provisions required under current law but not the payment reductions and/or delays that would result from the HI trust fund depletion. In the year of asset depletion, which is projected to be 2028 in this report, HI revenues are projected to cover 90 percent of incurred program costs.

The illustrative alternative shown in the top line of figure I.1 assumes that (i) there would be a transition from current-law[4] payment updates for providers affected by the economy-wide productivity adjustments to payment updates that reflect adjustments for health care productivity; (ii) the average physician payment updates would transition from current law[5] to payment updates that reflect the Medicare Economic Index; and (iii) the 5-percent bonuses for qualified physicians in advanced alternative payment models (advanced APMs) and the $500-million payments for physicians in the merit-based incentive

[4]Medicare's annual payment rate updates for most categories of provider services would be reduced below the increase in providers' input prices by the growth in economy-wide productivity (1.0 percent over the long range).

[5]The law specifies physician payment rate updates of 0.75 percent or 0.25 percent annually thereafter for physicians in advanced alternative payment models (advanced APMs) or the merit-based incentive payment system (MIPS), respectively. These updates are notably lower than the projected physician cost increases, which are assumed to average 2.05 percent per year in the long range.

payment system (MIPS) would continue indefinitely rather than expire in 2025. The difference between the illustrative alternative and the current-law projections continues to demonstrate that the long-range costs could be substantially higher than shown throughout much of the report if the cost-reduction measures prove problematic and new legislation scales them back.

As figure I.1 shows, Medicare's costs under current law rise steadily from their current level of 3.9 percent of GDP in 2021 to 6.2 percent in 2046. Costs then rise more slowly before leveling off at around 6.5 percent in the final 25 years of the projection period. Under the illustrative alternative, projected costs would continue rising steadily throughout the projection period, reaching 6.5 percent of GDP in 2046 and 8.6 percent in 2096.

As the preceding discussion explains, and as the substantial differences between current-law and illustrative alternative projections demonstrate, Medicare's actual future costs are highly uncertain for reasons apart from the inherent challenges in projecting health care cost growth over time. The Board recommends that readers interpret the current-law estimates in the report as the outcomes that would be experienced under the Trustees' economic and demographic assumptions if the required cost-reduction provisions can be sustained in the long range. Readers are encouraged to review section V.C for further information on this important subject. The key financial outcomes under the illustrative alternative scenario are shown with the current-law projections throughout this report.

II. OVERVIEW

A. HIGHLIGHTS

The major findings of this report under the intermediate set of assumptions appear below. The balance of the Overview and the following Actuarial Analysis section describe these findings in more detail.

In 2021

In 2021, Medicare covered 63.8 million people: 55.5 million aged 65 and older, and 8.3 million disabled. About 43 percent of these beneficiaries have chosen to enroll in Part C private health plans that contract with Medicare to provide Part A and Part B health services. Total expenditures in 2021 were $839.3 billion, and total income was $887.6 billion, which consisted of $882.3 billion in non-interest income and $5.3 billion in interest earnings. Assets held in special issue U.S. Treasury securities increased by $48.3 billion to $325.7 billion. The significant increase in assets was due to lower actual expenditures than estimated in last year's report.

Short-Range Results

The estimated depletion date for the HI trust fund is 2028, 2 years later than projected in last year's report. As in past years, the Trustees have determined that the fund is not adequately financed over the next 10 years. HI income is projected to be higher than last year's estimates because both the number of covered workers and average wages are projected to be higher. HI expenditures are projected to be lower than last year's estimates in the beginning of the short-range period mainly due to the pandemic but are projected to become larger after 2023 due to higher projected provider payment updates.

In 2021, HI income exceeded expenditures by $8.5 billion due in part to repayments of the accelerated and advance payments that were made in 2020. These repayments are assumed to continue until September of 2022, when the outstanding balance is expected to be fully repaid, resulting in another surplus in 2022. After that, the Trustees project deficits in all future years until the trust fund becomes depleted in 2028. The assets were $142.7 billion at the beginning of 2022, representing about 40 percent of expenditures projected for 2022, which is below the Trustees' minimum recommended level of 100 percent. The HI trust fund has not met the Trustees' formal test of short-range financial adequacy since 2003. Growth in HI expenditures has averaged 2.9 percent annually over the last 5 years, compared with

non-interest income growth of 3.4 percent. Over the next 5 years, projected average annual growth rates for expenditures and non-interest income are 9.2 percent and 7.1 percent, respectively.

The SMI trust fund is expected to be adequately financed over the next 10 years and beyond because income from premiums and general revenue for Parts B and D are reset each year to cover expected costs and ensure a reserve for Part B contingencies. The monthly Part B premium for 2022 is $170.10.

Part B and Part D costs have averaged annual growth rates of 6.7 percent and 1.0 percent, respectively, over the last 5 years, as compared to growth of 4.2 percent for GDP. The Trustees project that cost growth over the next 5 years will average 10.3 percent for Part B and 7.4 percent for Part D, faster than the projected average annual GDP growth rate of 5.3 percent over the period.

The Trustees are issuing a determination of projected *excess general revenue Medicare funding* in this report because the difference between Medicare's total outlays and its dedicated financing sources[6] is projected to exceed 45 percent of outlays within 7 years. Since this determination was made last year as well, this year's determination triggers a *Medicare funding warning,* which (i) requires the President to submit to Congress proposed legislation to respond to the warning within 15 days after the submission of the Fiscal Year 2024 Budget and (ii) requires Congress to consider the legislation on an expedited basis. This is the sixth consecutive year that a determination of excess general revenue Medicare funding has been issued, and the fifth consecutive year that a Medicare funding warning has been issued.

Long-Range Results

For the 75-year projection period, the HI actuarial deficit has decreased to 0.70 percent of taxable payroll from 0.77 percent in last year's report. (Under the illustrative alternative projections, the HI actuarial deficit would be 1.56 percent of taxable payroll.) Several factors contributed to the change in the actuarial deficit, most notably changes to private health plan assumptions (+0.07 percent) and changes to economic and demographic assumptions (+0.06 percent). These improvements are partially offset by changes to hospital

[6]Dedicated financing sources consist of HI payroll taxes, the HI share of income taxes on Social Security benefits, Part D State transfers, Part B drug fees, and beneficiary premiums.

assumptions (−0.03 percent), changes to other provider assumptions (−0.02 percent), and other minor changes (−0.01 percent).

Part B outlays were 1.9 percent of GDP in 2021, and the Board projects that they will grow to about 3.6 percent by 2096 under current law. The long-range projections as a percent of GDP are slightly higher than those projected last year, with outpatient hospital services and physician-administered drugs contributing to the difference. (Part B costs in 2096 would be 4.7 percent under the illustrative alternative scenario.)

The Board estimates that Part D outlays will increase from 0.5 percent of GDP in 2021 to about 0.8 percent by 2096. The long-range expenditure projections as a percent of GDP are slightly lower for the current report due to (i) higher GDP assumptions and (ii) lower spending attributable to slower price growth and higher direct and indirect remuneration (DIR), which are partially offset by higher enrollment.

General revenue transfers and premium income comprise the vast majority of SMI income. Transfers from the general fund finance about three-quarters of SMI costs and are central to the automatic financial balance of the fund's two accounts. Such transfers represent a large and growing requirement for the Federal budget. SMI general revenues were 1.8 percent of GDP in 2021 and are projected to increase to approximately 3.1 percent in 2096. (SMI general revenues in 2096 would be 3.8 percent under the illustrative alternative scenario.)

Conclusion

Total Medicare expenditures were $839 billion in 2021. The Board estimates that the COVID-19 pandemic has had significant effects on the short-term financing and spending of the Medicare program, but the financial status of the trust funds has not materially changed. The Trustees project that expenditures will increase in future years at a faster pace than either aggregate workers' earnings or the economy overall and that, as a percentage of GDP, spending will increase from 3.9 percent in 2021 to 6.5 percent by 2096 (based on the Trustees' intermediate set of assumptions). Under the relatively higher price increases for physicians and other health services assumed for the illustrative alternative projection, Medicare spending would represent roughly 8.6 percent of GDP in 2096. Growth under either of these scenarios would substantially increase the strain on the nation's workers, the economy, Medicare beneficiaries, and the Federal budget.

The Trustees project that HI tax income and other dedicated revenues will fall short of HI incurred expenditures in all future years. (There are surpluses in 2022 and 2023, on a cash basis, attributable to repayments of the Accelerated and Advance Payments Program.) The HI trust fund does not meet either the Trustees' test of short-range financial adequacy or their test of long-range close actuarial balance.

The Part B and Part D accounts in the SMI trust fund are expected to be adequately financed because income from premiums and general revenue are reset each year to cover expected costs. Such financing, however, would have to increase faster than the economy to cover expected expenditure growth.

The financial projections in this report indicate a need for substantial changes to address Medicare's financial challenges. The sooner solutions are enacted, the more flexible and gradual they can be. The early introduction of reforms increases the time available for affected individuals and organizations—including health care providers, beneficiaries, and taxpayers—to adjust their expectations and behavior. The Trustees recommend that Congress and the executive branch work closely together with a sense of urgency to address these challenges.

B. MEDICARE DATA FOR CALENDAR YEAR 2021

HI (Part A) and SMI (Parts B and D) have separate trust funds, sources of revenue, and categories of expenditures. Table II.B1 presents Medicare data for calendar year 2021, in total and for each part of the program. For additional information, see section III.B for HI and sections III.C and III.D for SMI.

For fee-for-service Medicare, the largest category of Part A expenditures is inpatient hospital services, while the largest Part B expenditure category is physician services. Payments to private health plans for providing Part A and Part B services represented roughly 48 percent of total A and B benefit outlays in 2021.

Table II.B1.—Medicare Data for Calendar Year 2021

		SMI		
	HI or Part A	Part B	Part D	Total
Assets at end of 2020 (billions)	$134.1	$133.3	$10.0	$277.4
Total income	$337.4	$435.5	$114.6	$887.6
Payroll taxes	302.5	—	—	302.5
Interest	2.6	2.7	0.1	5.3
Taxation of benefits	25.0	—	—	25.0
Premiums	4.2	111.0	17.0	132.1
General revenue	1.4	318.6	85.3	405.4
Transfers from States	—	—	12.1	12.1
Other	1.7	3.3	0.3	5.3
Total expenditures	$328.9	$405.5	$104.9	$839.3
Benefits	323.6	400.5	104.4	828.5
Hospital	144.8	64.5	—	209.3
Skilled nursing facility	28.4	—	—	28.4
Home health care	6.2	10.8	—	17.0
Physician fee schedule services	—	73.8	—	73.8
Private health plans (Part C)	147.7	202.2	—	349.9
Prescription drugs	—	—	104.4	104.4
Other[1]	−3.5	49.2	—	45.7
Administrative expenses	5.3	5.0	0.5	10.8
Net change in assets	$8.5	$30.1	$9.7	$48.3
Assets at end of 2021	$142.7	$163.3	$19.7	$325.7
Enrollment (millions)				
Aged	55.1	50.8	43.2	55.5
Disabled	8.3	7.6	6.8	8.3
Total	63.4	58.4	49.9	63.8
Average benefit per enrollee[1]	$5,105	$6,860	$2,091	$14,056

[1]Includes net repayments of $29.1 billion and $19.0 billion to Part A and Part B, respectively, for the Medicare Accelerated and Advance Payments Program.

Note: Totals do not necessarily equal the sums of rounded components.

For HI, the primary source of financing is the payroll tax on covered earnings. Employers and employees each pay 1.45 percent of a worker's wages, while self-employed workers pay 2.9 percent of their net earnings. Starting in 2013, high-income workers pay an additional 0.9-percent tax on their earnings above an unindexed threshold ($200,000 for single taxpayers and $250,000 for married couples).

Other HI revenue sources include a portion of the Federal income taxes that Social Security recipients with incomes above certain unindexed thresholds pay on their benefits, as well as interest earned on the securities held in the HI trust fund.

For SMI, transfers from the general fund of the Treasury represent the largest source of income. The transfers covered about 79 percent of program costs in 2021.[7] Also, beneficiaries pay monthly premiums for Parts B and D that finance a portion of the total cost. As with HI, the securities held in the SMI trust fund earn interest.

[7]Transfers from the general fund were higher than usual in 2021 due to a provision of the Continuing Appropriations Act, 2021 and Other Extensions Act, which required a transfer to Part B to cover the premium income that was lost in 2021 as a result of the specification of the aged actuarial rate calculation.

C. MEDICARE ASSUMPTIONS

Future Medicare expenditures will depend on a number of factors, including the size and composition of the population eligible for benefits, changes in the volume and intensity of services, and increases in the price per service. Future HI trust fund income will depend on the size of the covered work force and the level of workers' earnings, and future SMI trust fund income will depend on projected program costs. These factors will depend in turn upon future birth rates, death rates, labor force participation rates, wage increases, and many other economic and demographic factors affecting Medicare. To illustrate the uncertainty and sensitivity inherent in estimates of future Medicare trust fund operations, the Board has prepared current-law projections under a low-cost and a high-cost set of economic and demographic assumptions as well as under an intermediate set. In addition, the Trustees asked the CMS Office of the Actuary to develop the illustrative alternative projections to demonstrate the potential effect on the Medicare financial status if certain current-law features are not fully implemented in the future.

Table II.C1 summarizes the key assumptions used in this report. Many of the demographic and economic variables that determine Medicare costs and income are common to the Old-Age, Survivors, and Disability Insurance (OASDI) program, and the OASDI annual report explains these variables in detail. These variables include changes in the Consumer Price Index (CPI) and wages, real interest rates, fertility rates, mortality rates, and net immigration levels. (*Real* indicates that the effects of inflation have been removed.) The assumptions vary, in most cases, from year to year during the first 5 to 25 years before reaching the ultimate values[8] assumed for the remainder of the 75-year projection period.

[8]The assumptions do not include economic cycles beyond the first 10 years.

Table II.C1.—Key Assumptions, 2046–2096

	Intermediate	Low-Cost	High-Cost
Economic:			
Annual percentage change in:			
Gross Domestic Product (GDP) per capita[1]	3.7	4.8	2.5
Average wage in covered employment	3.55	4.77	2.33
Private nonfarm business total factor productivity[2]	1.0	—	—
Consumer Price Index (CPI)	2.4	3.0	1.8
Real-wage differential (percent)	1.15	1.77	0.53
Real interest rate (percent)	2.3	2.8	1.8
Demographic:			
Total fertility rate (children per woman)	1.99	2.19	1.69
Annual percentage reduction in total age-sex adjusted death rates	0.74	0.28	1.25
Net lawful permanent resident (LPR) immigration	788,000	1,000,000	595,000
Net other-than-LPR immigration	458,000	684,000	234,000
Health cost growth:			
Annual percentage change in per beneficiary Medicare expenditures (excluding demographic impacts)[1]			
HI (Part A)	3.5	[3]	[3]
SMI Part B	3.8	[3]	[3]
SMI Part D	4.2	[3]	[3]
Total Medicare	3.7	[3]	[3]

[1]The assumed ultimate increases in per capita GDP and per beneficiary Medicare expenditures can also be expressed in real terms, adjusted to remove the impact of assumed inflation. When adjusted by the chain-weighted GDP price index, assumed real per capita GDP growth under the intermediate assumptions is 1.7 percent, and real per beneficiary Medicare cost growth is 1.5 percent, 1.7 percent, and 2.2 percent for Parts A, B, and D, respectively.
[2]Private nonfarm business total factor productivity is published by the Bureau of Labor Statistics and is used as the economy-wide private nonfarm business total factor productivity to adjust certain provider payment updates.
[3]See section III.B3 for further explanation of the Part A alternative (low-cost and high-cost) assumptions. Long-range alternative projections are not prepared for Parts B and D.

Other assumptions are specific to Medicare. As with all of the assumptions underlying the financial projections, the Trustees review the Medicare-specific assumptions annually and update them based on the latest available data and analysis of trends. In addition, the assumptions and projection methodology are subject to periodic review by independent panels of expert actuaries and economists. The most recent completed review occurred with the 2016–2017 Technical Review Panel on the Medicare Trustees Report.[9]

Section IV.D describes the methodology used to derive the long-range Medicare cost growth assumptions,[10] which reflect the annual percent change in per beneficiary Medicare expenditures (excluding demographic effects), for the following four categories of provider services:

[9]The Panel's final report is available at https://aspe.hhs.gov/system/files/pdf/257821/MedicareTechPanelFinalReport2017.pdf.
[10]When Medicare cost growth rates are compared to the per capita increase in GDP, they are characterized as GDP plus X percent.

(i) *All HI, and some SMI Part B, services that are updated annually by provider input price increases less the increase in economy-wide productivity.*

HI services are inpatient hospital, skilled nursing facility, home health, and hospice. The primary Part B services affected are outpatient hospital, home health, and dialysis. Under the Trustees' intermediate economic assumptions, the year-by-year cost growth rates for these provider services start at 3.6 percent in 2046, or GDP plus 0 percent, declining gradually to 3.4 percent in 2096, or GDP minus 0.3 percent.

(ii) *Physician services*

Payment rate updates are 0.75 percent per year for those qualified physicians assumed to be participating in advanced alternative payment models (advanced APMs) and 0.25 percent for those assumed to be participating in the merit-based incentive payment system (MIPS). The year-by-year cost growth rates for physician payments are assumed to decline from 3.2 percent in 2046, or GDP minus 0.4 percent, to 2.8 percent in 2096, or GDP minus 0.9 percent.

(iii) *Certain SMI Part B services that are updated annually by the CPI increase less the increase in productivity.*

Such services include durable medical equipment that is not subject to competitive bidding,[11] care at ambulatory surgical centers, ambulance services, and medical supplies. The Trustees assume the year-by-year cost growth rates for these services to decline from 2.8 percent in 2046, or GDP minus 0.8 percent, to 2.6 percent in 2096, or GDP minus 1.1 percent.

(iv) *All other Medicare services, for which payments are established based on market processes, such as prescription drugs provided through Part D and the remaining Part B services.*

These Part B outlays constitute an estimated 36 percent of total Part B expenditures in 2031 and consist mostly of payments for laboratory tests, physician-administered drugs, and small facility services. Medicare payments to Part D plans are based on a competitive-bidding process and are not affected by the

[11]The portion of durable medical equipment that is subject to competitive bidding is included with all other Medicare services since the price is determined by a competitive bidding process. For more information on the bidding process, see section IV.B.

productivity adjustments. Similarly, payments for the other Part B services are based on market factors.[12] The long-range cost growth rates for Part D and these Part B services are assumed to equal the growth rates as determined from the "factors contributing to growth" model. The corresponding year-by-year cost growth rates for these services decline from 4.3 percent in 2046, or GDP plus 0.7 percent, to 4.1 percent by 2096, or GDP plus 0.4 percent.

After combining the rates of growth from the four long-range assumptions, the weighted average cost growth rate for Part B is 3.8 percent in 2046, or GDP plus 0.2 percent, declining to 3.7 percent by 2096, or GDP plus 0 percent. When Parts A, B, and D are combined, the weighted average cost growth rate for Medicare is 3.8 percent, or GDP plus 0.2 percent in 2046, declining to 3.7 percent, or GDP plus 0 percent by 2096.

In addition, these cost growth rates must be modified to account for demographic impacts, which reflect the changing distribution of the Medicare population by age, sex, and time-to-death.[13] Those who are closer to death have higher health spending, regardless of age. The Trustees assume that as mortality rates for Medicare beneficiaries continue to improve in the future, a smaller portion of the population will be closer to death at a given age, which somewhat offsets the effect of individuals getting older and spending more on health care. This is particularly the case for Part A services—such as inpatient hospital, skilled nursing, and home health services—for which the distribution of spending is more concentrated in the period right before death. For Part B services and Part D, the incorporation of the time-to-death adjustment has a smaller effect.

As in the past, the Trustees establish detailed growth rate assumptions for the initial 10 years (2022 through 2031) by individual type of service (for example, inpatient hospital care and physician services). These assumptions reflect recent trends and the impact of all applicable statutory provisions. For each of Parts A, B, and D, the assumed cost growth rates for years 11 through 25 of the projection period (adjusted to reflect discontinuities in yearly payment policies) are set by interpolating between the rate at the end of the short-range projection period and the rate at the start of the last 50 years of the

[12]For example, physician-administered Part B drugs are reimbursed at the level of the average sales price in the market plus 6 percent.

[13]More information on the time-to-death adjustment is available at https://www.cms.gov/files/document/incorporation-time-death-medicare-demographic-assumptions.pdf.

long-range period described above. The 2016–2017 Medicare Technical Review Panel concluded that both the current length of the transition period and the current approach to the transition are reasonable, and they recommended that the Trustees continue to use the same approach to transition between short-range and long-range projections for both HI and SMI.[14]

The basis for the Medicare cost growth rate assumptions, described above, has been chosen primarily to incorporate the productivity adjustments and the physician payment structure in a relatively simple, straightforward manner and with the assumption that these elements of current law will operate in all future years as specified. The Trustees use this approach in part due to the uncertainty associated with these provisions and in part due to the difficulty of modeling such consequences as access to care, health status, and utilization if these provisions of current law do not operate as intended.[15] They have incorporated the effects of changes in payment mechanisms, delivery systems, and other aspects of health care that have been implemented recently, including modest savings from accountable care organizations. However, they have not considered the possible effects of future changes that could arise in response to the payment limitations or future innovative payment models, nor have they taken into account the potential effects of sustained slower payment increases on provider participation, beneficiary access to care, quality of services, and other factors.[16]

Consistent with the practice in recent reports, a set of illustrative alternative Medicare projections has been developed. This information is presented in section V.C. An actuarial memorandum on the illustrative alternative is available on the CMS website.[17] The illustrative alternative projection assumes that (i) there would be a transition from current-law payment updates for providers affected by the economy-wide productivity adjustments to payment updates that reflect adjustments for health care productivity; (ii) the average physician payment updates would transition from current law to payment updates that reflect the Medicare Economic Index; and (iii) the 5-percent bonuses for qualified physicians in advanced APMs and the $500-million payments for physicians in MIPS would continue indefinitely rather than expire in 2025. The transition from current

[14]See Findings 6-2 and 6-3 and Recommendation 6-1.
[15]For a detailed discussion of uncertainty, see section V.C.
[16]The 2016–2017 Medicare Technical Review Panel considered these issues at some length. Their final report contains a discussion of the delivery system changes to date and the impact on the Medicare projections.
[17]See https://www.cms.gov/files/document/illustrative-alternative-scenario-2022.pdf.

law to the ultimate illustrative alternative assumptions starts at the same dates that were assumed in last year's report. The year-by-year cost growth rate assumptions for HI and SMI Part B under the illustrative alternative projections decline from approximately 4.3 percent in 2046, or GDP plus 0.7 percent, to 4.1 percent by 2096, or GDP plus 0.4 percent. On average over this period, the growth rate of per beneficiary expenditures for these services is equal to the growth rate for per capita national health expenditures, as described previously for Part D and other Medicare services for which price updates are based on market processes.

For the HI low-cost and high-cost projections, Medicare expenditures are determined by changing the assumption for the ratio of aggregate costs to taxable payroll (the cost rate). These changes are intended to provide an indication of how Medicare expenditures could vary in the future as a result of different economic, demographic, and health care trends.[18] For the HI high-cost assumptions, the assumed annual increase in the cost rate during the initial 25-year period is 2 percentage points greater than under the intermediate assumptions. Under the low-cost assumptions, the assumed annual rate of increase in the cost rate for the initial period is 2 percentage points less than under the intermediate assumptions. The Trustees assume that, after 25 years, the 2-percentage-point differentials will decline gradually to zero in 2071, after which the growth in cost rates is the same under all three sets of assumptions.

While it is possible that actual economic, demographic, and health cost-growth experience will fall within the range defined by the three alternative sets of assumptions, there can be no assurances that it will do so in light of the wide variations in these factors over past decades. In general, readers can place a greater degree of confidence in the assumptions and estimates for the earlier years than for the later years. Nonetheless, even for the earlier years, the estimates are only an indication of the expected trends and the general ranges of future Medicare experience. Also, as a result of the uncertain long-range adequacy of physician payments and payments affected by the statutory productivity adjustments, actual future Medicare expenditures could exceed the intermediate projections shown in this report, possibly by large amounts. Reference to key results under the illustrative alternative projection demonstrates this potential understatement.

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[18]Under the automatic financing provisions for the SMI programs, Parts B and D will be adequately financed. Accordingly, the Trustees have not conducted high-cost and low-cost analyses of the general revenue transfers.

D. FINANCIAL OUTLOOK FOR THE MEDICARE PROGRAM

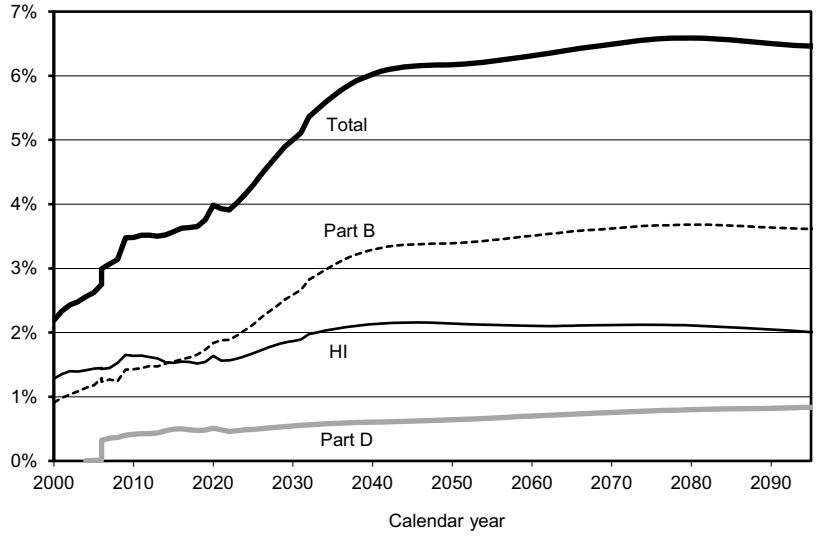
This report evaluates the financial status of the HI and SMI trust funds. For HI, the Trustees apply formal tests of financial status for both the short range and the long range; for SMI, the Trustees assess the ability of the trust fund to meet incurred costs over the period for which financing has been set.

HI and SMI are financed in very different ways. Within SMI, current law provides for the annual determination of Part B and Part D beneficiary premiums and general revenue financing to cover expected costs for the following year. In contrast, HI is subject to substantially greater variation in asset growth, since employee and employer tax rates under current law do not change or adjust to meet expenditures except through new legislation.

Despite the significant differences in benefit provisions and financing, the two components of Medicare are closely related. HI and SMI operate in an interdependent health care system. Most Medicare beneficiaries are enrolled in HI and SMI Parts B and D, and many receive services from all three. Accordingly, efforts to improve and reform either component must necessarily have repercussions for the other component. In view of the anticipated growth in Medicare expenditures, it is also important to consider the distribution among the various sources of revenues for financing Medicare and the manner in which this distribution will change over time.

This section reviews the projected total expenditures for the Medicare program, along with the primary sources of financing. Figure II.D1 shows projected costs as a percentage of GDP. Medicare expenditures represented 3.9 percent of GDP in 2021. Under current law, costs increase to 6.2 percent of GDP by 2046, largely due to the rapid growth in the number of beneficiaries, and then to 6.5 percent of GDP in 2096, with growth in health care cost per beneficiary becoming the larger factor later in the valuation period, particularly for Part D costs, which are not affected by legislated price reductions. (If the payment update constraints were phased down as in the illustrative alternative projections, then Medicare expenditures would reach an estimated 8.6 percent of GDP in 2096.)

Figure II.D1.—Medicare Expenditures as a Percentage of the Gross Domestic Product



Note: Percentages are affected by economic cycles.

Table II.D1 shows five components of Medicare expenditure growth over three valuation periods: (i) growth of overall prices as measured by the CPI; (ii) growth of Medicare prices relative to growth in the CPI; (iii) growth in the number of beneficiaries; (iv) change in the demographic composition of the beneficiaries; and (v) change in the volume and intensity of services. The price growth for Part A is projected to be below CPI growth initially, at CPI growth in the 2032–2046 period, and below in the long run, and for Part B it is projected to be below CPI growth during each of the three valuation periods. As discussed in section IV.D, prices for all of Part A and some of Part B are constrained by the payment updates specified under current law, and Part B prices are further constrained by the current-law physician payment updates. For Part D, during the valuation periods 2032–2046 and 2047–2096, prices are projected to grow faster than the CPI and to be more in line with the price growth assumed for the overall health sector; during the period 2022–2031, however, price growth for Part D is projected to be below CPI growth, as is the case for Part B. For all parts of Medicare, growth in the number of beneficiaries is highest over the next 10 years, as the baby boom generation continues to enter Medicare, and slows continually thereafter.

Table II.D1.—Components of Increase in Medicare Incurred Expenditures by Part

[In percent]

	Average annual percentage change						
	Prices						
Valuation period	CPI	Medicare relative to CPI	Overall Medicare	Number of beneficiaries	Beneficiary demographic mix	Volume and intensity	Total increase
Part A:							
2022–2031	2.6%	−0.3%	2.2%	2.1%	−0.3%	2.5%	6.7%
2032–2046	2.4	0.1	2.5	0.6	0.4	1.4	4.9
2047–2096	2.4	−0.2	2.2	0.5	−0.1	1.3	3.9
Part B:							
2022–2031	2.6	−1.1	1.5	2.2	0.0	4.5	8.4
2032–2046	2.4	−0.2	2.2	0.6	0.1	2.6	5.7
2047–2096	2.4	−0.2	2.2	0.5	−0.1	1.5	4.2
Part D:							
2022–2031	2.6	−0.4	2.2	2.5	−0.2	1.5	6.1
2032–2046	2.4	0.4	2.8	0.6	−0.1	1.5	4.9
2047–2096	2.4	0.4	2.8	0.5	−0.1	1.4	4.7

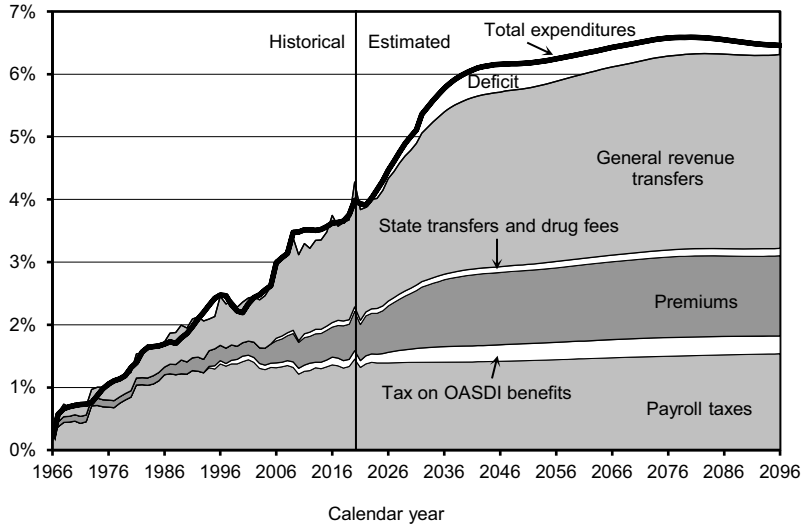
Notes: 1. Price reflects annual updates, total factor productivity reductions, and any other reductions required by law or regulation.
2. Volume and intensity is the residual after the other four factors shown in the table (CPI, excess Medicare price, number of beneficiaries, and beneficiary demographic mix) are removed.
3. Totals do not necessarily equal the sums of rounded components.

Most beneficiaries have the option to enroll in private health insurance plans that contract with Medicare to provide Part A and Part B medical services. The share of Medicare beneficiaries in such plans has risen rapidly in recent years; it reached 43 percent in 2021 from 12.8 percent in 2004. Payments to Medicare Advantage plans are based on benchmarks that range from 95 to 115 percent of local fee-for-service Medicare costs, with bonus amounts payable for plans meeting high quality-of-care standards. The Trustees project that the overall participation rate for private health plans will continue to increase—from about 46 percent in 2022 to about 53 percent in 2031 and thereafter.[19]

Figure II.D2 shows the past and projected amounts of Medicare revenues under current law excluding interest income, which will not be a significant part of program financing in the long range as trust fund assets decline. The figure compares total Medicare expenditures to Medicare non-interest income—from HI payroll taxes, HI income from the taxation of Social Security benefits, HI and SMI premiums, SMI Part D State transfers for certain Medicaid beneficiaries, fees on manufacturers and importers of brand-name prescription drugs (allocated to Part B), and HI and SMI general revenues. The Trustees expect total Medicare expenditures to exceed non-interest revenue for all future years.

[19]For more detail on the Medicare Advantage program, see section IV.C.

Figure II.D2.—Medicare Sources of Non-Interest Income and Expenditures as a Percentage of the Gross Domestic Product



Note: Percentages are affected by economic cycles.

As shown in figure II.D2, for most of the historical period, payroll tax revenues increased steadily as a percentage of GDP due to increases in the HI payroll tax rate and in the limit on taxable earnings, the latter of which lawmakers eliminated in 1994. Beginning in 2013, the HI trust fund receives an additional 0.9-percent tax on earnings in excess of a threshold amount.[20] The Trustees project that, as a result of this provision, payroll taxes will grow slightly faster than GDP.[21] Beginning in 2022, HI revenue from income taxes on Social Security benefits is

[20]Current law also specifies that individuals with incomes greater than $200,000 per year and couples above $250,000 pay an additional Medicare contribution of 3.8 percent on some or all of their non-work income (such as investment earnings). However, the revenues from this tax are not allocated to the Medicare trust funds.

[21]Although the Trustees expect total worker compensation to grow at the same rate as GDP after the first 10 years of the projection, wages and salaries are projected to increase more slowly than fringe benefits (health insurance costs in particular). Thus, projected taxable earnings (wages and salaries) gradually decline as a percentage of GDP. Absent any change to the tax rate scheduled under current law, HI payroll tax revenue would similarly decrease as a percentage of GDP. Over time, however, a growing proportion of workers will have earnings that exceed the fixed earnings thresholds specified in the law ($200,000 and $250,000), and an increasing portion of taxable earnings will therefore become subject to the additional 0.9-percent HI payroll tax. The net effect of these factors is an increasing trend in payroll taxes as a percentage of GDP.

expected to gradually increase as a share of GDP as the share of benefits subject to such taxes increases.[22]

The Trustees expect growth in SMI Part B and Part D premiums and general fund transfers to continue to outpace GDP growth and HI payroll tax growth in the future. This phenomenon occurs primarily because SMI revenue increases at the same rate as expenditures, whereas HI revenue does not. Accordingly, as the HI sources of revenue become increasingly inadequate to cover HI costs, SMI revenues will represent a growing share of total Medicare revenues. Beginning in 2009, as HI payroll tax receipts declined due to the recession and general revenue transfers increased, the latter income source became the largest single source of income to the Medicare program as a whole. General revenue transfers to the Part B account increased significantly in 2016, as required by the Bipartisan Budget Act of 2015 to compensate for premium revenue that was not received in 2016 due to the hold-harmless provision, which limited the Part B premium increase for a majority of beneficiaries. They increased again in 2020 and 2021, as required by the Continuing Appropriations Act, 2021 and Other Extensions Act to account for the outstanding balance of the Accelerated and Advance Payments (AAP) Program in 2020 and to compensate for premium revenue that was not received in 2021 due to the legislated specification of the aged actuarial rate calculation. After decreasing in 2022, general revenues are projected to gradually increase through 2040 to about 49 percent of Medicare financing, stabilizing thereafter. Growth in general revenue financing as a share of GDP adds significantly to the Federal budget pressures. SMI premiums will also increase in proportion to general revenue transfers, placing a growing burden on beneficiaries. High-income beneficiaries have paid an income-related premium for Part B since 2007 and for Part D since 2011.

The interrelationship between the Medicare program and the Federal budget is an important topic—one that will become increasingly critical over time as the general revenue requirements for SMI continue to grow. Transfers from the general fund are the major source of financing for the SMI trust fund and are central to the automatic financial balance of the fund's two accounts, while representing a large and growing requirement for the Federal budget. SMI general revenues equaled 1.8 percent of GDP in 2021 and will increase to an estimated 3.1 percent in 2096 under current law. Moreover, in the absence of legislation to address the financial imbalance, interest

[22]See section V.C7 of the 2022 OASDI Trustees Report for more detailed information on the projection of income from taxation of Social Security benefits.

earnings on trust fund assets and redemption of those assets will cover the difference between HI dedicated revenues and expenditures until 2028.[23] In 2027, these financial resources for the HI trust fund represent 0.2 percent of GDP. Section V.F describes the interrelationship between the Federal budget and the Medicare and Social Security trust funds; it illustrates the programs' long-range financial outlook from both a trust fund perspective and a budget perspective.

Federal law requires that the Board of Trustees issue a determination of excess general revenue Medicare funding if they project that under current law the difference between program outlays and dedicated financing sources[24] will exceed 45 percent of Medicare outlays within the first 7 fiscal years of the projection. For this year's report, the difference between program outlays and dedicated revenues is expected to exceed 45 percent in fiscal year 2025, and therefore the Trustees are issuing this determination. (Section V.B contains additional details on these tests.) Since this determination was made last year as well, this year's determination triggers a Medicare funding warning, which (i) requires the President to submit to Congress proposed legislation to respond to the warning within 15 days after the submission of the Fiscal Year 2024 Budget and (ii) requires Congress to consider the legislation on an expedited basis. Such funding warnings were previously issued in each of the 2007 through 2013 reports and in the 2018 through 2021 reports.

This section has summarized the total financial obligation posed by Medicare and the manner in which it is financed. However, the HI and SMI components of Medicare have separate and distinct trust funds, each with its own sources of revenues and mandated expenditures. Accordingly, it is necessary to assess the financial status of each Medicare trust fund separately. Sections II.E and II.F present such assessments for the HI trust fund and the SMI trust fund, respectively.

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[23]After asset depletion in 2028, as described in section II.E, no provision exists to use general revenues or any other means to cover the HI deficit.

[24]The dedicated financing sources are HI payroll taxes, the HI share of income taxes on Social Security benefits, Part B receipts from the fees on manufacturers and importers of brand-name prescription drugs, Part D State transfers, and beneficiary premiums. These sources are the first four layers depicted in figure II.D2.

E. FINANCIAL STATUS OF THE HI TRUST FUND

1. 10-Year Actuarial Estimates (2022–2031)

Expenditures from the HI trust fund exceeded income each year from 2008 through 2015. In 2016 and 2017, however, there were fund surpluses amounting to $5.4 billion and $2.8 billion, respectively. In 2018, 2019, and 2020, expenditures again exceeded income, with trust fund deficits of $1.6 billion, $5.8 billion, and $60.4 billion, respectively. The large deficit in 2020 was mostly due to accelerated and advance payments to providers from the trust fund. In 2021, there was a small surplus of $8.5 billion as these payments began to be repaid to the trust fund, and this continued repayment will result in a larger surplus in 2022. Deficits are projected to return in 2023 and persist for the remainder of the projection period, requiring redemption of trust fund assets until the trust fund's depletion in 2028.

Table II.E1 presents the projected operations of the HI trust fund under the intermediate assumptions for the next decade. At the beginning of 2022, HI assets represented 40 percent of annual expenditures. This ratio has declined from 150 percent since 2007. The Board has recommended an asset level at least equal to annual expenditures, to serve as an adequate contingency reserve in the event of adverse economic or other conditions.

The Trustees apply an explicit test of short-range financial adequacy, described in section III.B2 of this report. Based on the 10-year projection shown in table II.E1, the HI trust fund does not meet this test because estimated assets are below 100 percent of annual expenditures and are not projected to attain this level under the intermediate assumptions. This outlook indicates the need for prompt legislative action to achieve financial adequacy for the HI trust fund throughout the short-range period.

Table II.E1.—Estimated Operations of the HI Trust Fund under Intermediate Assumptions, Calendar Years 2021–2031

[Dollar amounts in billions]

Calendar year	Total income[1]	Total expenditures	Change in fund	Fund at year end	Ratio of assets to expenditures[2]
2021[3]	$337.4	$328.9[4]	$8.5	$142.7	41%
2022	386.0	356.2[4]	29.8	172.4	40
2023	412.6	415.6	−3.0	169.4	41
2024	430.2	444.6	−14.3	155.1	38
2025	450.5	476.7	−26.2	128.9	33
2026	475.1	510.7	−35.6	93.3	25
2027	500.4	545.4	−45.0	48.3	17
2028[5]	523.7	580.6	−56.9	−8.6	[6]
2029[5]	547.9	616.6	−68.7	−77.3	[6]
2030[5]	570.4	650.5	−80.1	−157.4	[6]
2031[5]	593.7	683.7	−90.0	−247.4	[6]

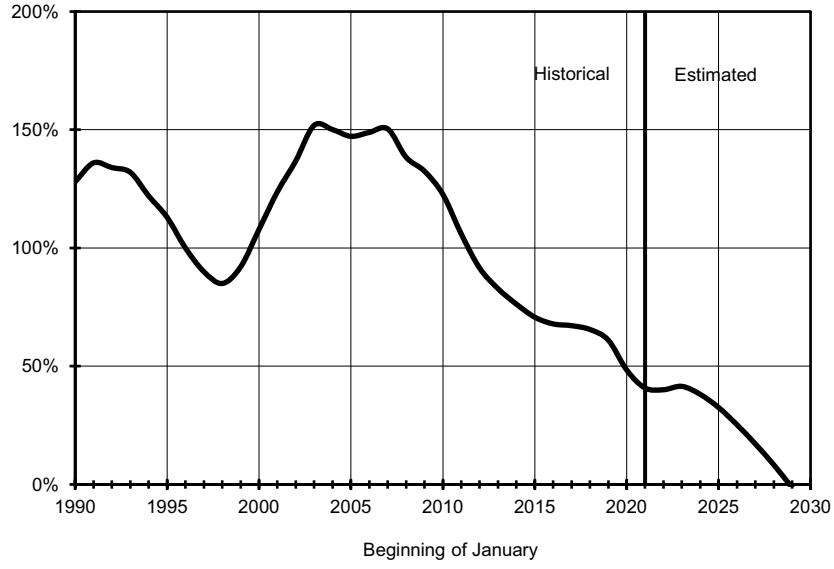
[1]Includes interest income.
[2]Ratio of assets in the fund at the beginning of the year to expenditures during the year.
[3]Figures for 2021 represent actual experience.
[4]Includes net repayments of $29.1 billion and $34.4 billion in calendar years 2021 and 2022, respectively, for the Medicare Accelerated and Advance Payments Program.
[5]Estimates for 2028 and later are hypothetical since the HI trust fund would be depleted in those years.
[6]Trust fund reserves would be depleted at the beginning of this year.

Note: Totals do not necessarily equal the sums of rounded components.

The short-range financial outlook for the HI trust fund is slightly more favorable than the projections in last year's annual report. HI income is projected to be higher throughout the projection period because both the number of covered workers and average wages are projected to be higher. HI expenditures are projected to be lower in the beginning of the short-range period mainly due to the pandemic but to become larger after 2023 due to higher projected provider payment updates.

Under the intermediate assumptions, after 2022 the assets of the HI trust fund would steadily decrease as a percentage of annual expenditures throughout the remainder of the short-range projection period, as illustrated in figure II.E1. The ratio declines until the fund is depleted in 2028, 2 years later than projected last year. If assets were depleted, Medicare could pay health plans and providers of Part A services only to the extent allowed by ongoing tax revenues—and these revenues would be inadequate to fully cover costs. Beneficiary access to health care services could rapidly be curtailed. To date, Congress has never allowed the HI trust fund to become depleted.

Figure II.E1.—HI Trust Fund Balance at Beginning of Year as a Percentage of Annual Expenditures



There is substantial uncertainty in the economic, demographic, and health care projection factors for HI trust fund expenditures and revenues. Accordingly, the date of HI trust fund depletion could differ substantially in either direction from the 2028 intermediate estimate. As shown in greater detail in section III.B, trust fund assets would increase throughout the entire projection period under the low-cost assumptions. Under the high-cost assumptions, however, asset depletion would occur in 2025.

2. 75-Year Actuarial Estimates (2022–2096)

Each year, the Board prepares 75-year estimates of the financial and actuarial status of the HI trust fund. Although financial outcomes are inherently uncertain, particularly over periods as long as 75 years, such estimates are helpful for assessing the trust fund's long-term financial condition.

Due to the difficulty in comparing dollar values for different periods without some type of relative scale, the Trustees show income and expenditure amounts relative to the earnings in covered employment that are taxable under HI (referred to as *taxable payroll*). The ratio of HI income (including payroll taxes, income from taxation of Social Security benefits, premiums, general revenue transfers for uninsured beneficiaries, and monies from fraud and abuse control activities, but

excluding interest income) to taxable payroll is called the *income rate*, and the ratio of expenditures to taxable payroll is the *cost rate*.[25]

The standard HI payroll tax rate is scheduled to remain constant at 2.90 percent (for employees and employers, combined). In addition, starting in 2013, high-income workers pay an additional 0.9 percent of their earnings above $200,000 (for single workers) or $250,000 (for married couples filing joint income tax returns). Since income thresholds for determining eligibility for the additional HI tax are not indexed, over time an increasing proportion of workers and their earnings will become subject to a higher HI tax rate. (By the end of the long-range projection period, an estimated 80 percent of workers would be subject to this additional tax.) Thus, HI payroll tax revenues will increase steadily as a percentage of taxable payroll. Similarly, HI income from taxation of Social Security benefits will also increase faster than taxable payroll because the income thresholds determining taxable benefits are not indexed for inflation and because the income tax brackets are indexed to the chained CPI (C-CPI-U), which increases at a slower rate than average wages. After the 10th year of the projection period, income tax brackets are assumed to rise with average wages, rather than with the C-CPI-U as specified in the Internal Revenue Code. As a result of this assumption, income from the taxation of Social Security benefits increases at a similar rate as, rather than significantly faster than, taxable payroll. [26]

The cost rate has mostly been declining since 2010 largely due to (i) expenditure growth that was constrained in part by low utilization and low payment updates and (ii) a rebound of taxable payroll growth from 2007–2009 recession levels. The cost rate increased in 2019, as taxable payroll growth slowed, and in 2020, as taxable payroll growth slowed because of the pandemic, but then it declined again in 2021 as a result of a decrease in expenditures attributable to the impact of the pandemic. In 2022 and beyond, the cost rate is projected to rise primarily due to the continued retirements of those in the baby boom generation and partly due to an acceleration of health services cost growth. This cost rate increase is moderated by the accumulating effect of the productivity adjustments to provider price updates, which are estimated to reduce annual HI per capita cost growth by an average of 0.7 percent through 2031 and 1.0 percent thereafter. After 25, 50, and 75 years, for example, the prices paid to HI providers under current

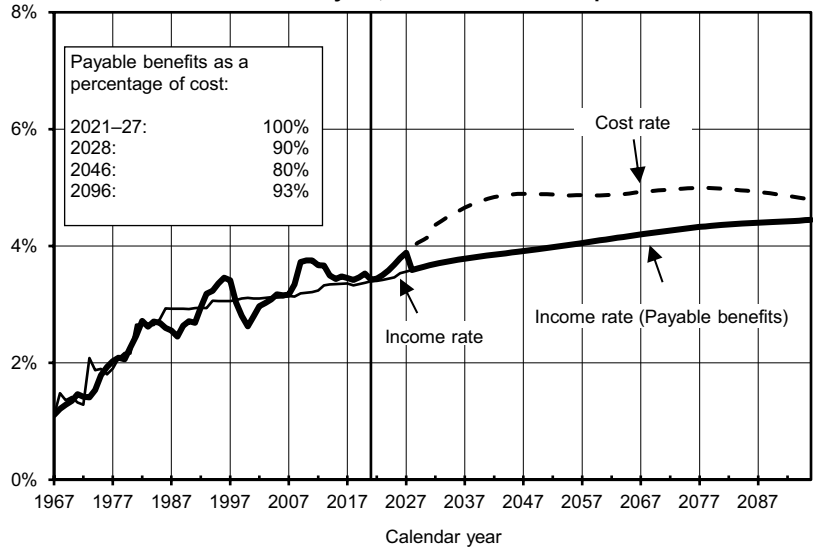
[25]The Trustees estimate these costs on an incurred basis.
[26]See section V.C7 of the 2022 OASDI Trustees Report for more detailed information on the projection of income from taxation of Social Security benefits.

law would be 20 percent, 37 percent, and 51 percent lower, respectively, than prices absent the productivity reductions.

Figure II.E2 shows projected income and cost rates under the intermediate assumptions. As indicated, estimated HI incurred expenditures continue to exceed non-interest income for all projected years. (The projected excess of costs over non-interest income until 2028 is covered by interest earnings and the redemption of trust fund assets.)

The HI cost rate increases more rapidly than the income rate through about 2046. The projected annual deficits expressed as a share of taxable payroll increase from 0.03 percent in 2021 to a high of 0.99 percent in 2044 and then gradually decrease to 0.35 percent by the end of the projection period. The convergence of growth rates for income and costs reflects the continuing effects of slower payment rate updates, assumed decelerating growth in the volume and intensity of services, and the increasing portion of earnings that are subjected to the additional 0.9-percent payroll tax. The percentage of expenditures covered by non-interest income is projected to decrease from 90 percent in 2028 to 80 percent in 2046 and then to increase to about 93 percent by the end of the projection period. (Under the illustrative alternative, the expenditures covered by non-interest income are projected to decline from 90 percent in 2028 to 74 percent in 2046 and then to decrease to about 62 percent by the end of the projection period.)

Figure II.E2.—Long-Range HI Non-Interest Income and Cost as a Percentage of Taxable Payroll, Intermediate Assumptions



It is possible to summarize the year-by-year cost rates and income rates shown in figure II.E2 into single values[27] representing, in effect, the average value over a given period. Based on the intermediate assumptions, the Trustees project an HI actuarial deficit of 0.70 percent of taxable payroll for the 75-year period under current law, which represents the difference between the summarized income rate of 4.03 percent and the corresponding cost rate of 4.73 percent. As a result, the HI trust fund fails the Trustees' test for long-range financial balance, as it has every year since 1991 when this test was first applied. (Under the illustrative alternative projections, the long-range HI deficit would be 1.56 percent of payroll.)

The following two examples illustrate the magnitude of the changes needed to eliminate the deficit. For the HI trust fund to remain solvent throughout the 75-year projection period, (i) the standard 2.90-percent payroll tax could be immediately increased by the amount of the actuarial deficit to 3.60 percent, or (ii) expenditures could be reduced

[27]See section III.B3 for details on the summarized income and cost rates.

immediately by 15 percent.[28,29] More realistically, the tax and/or benefit changes could occur gradually but would require ultimate adjustments that would be higher than adjustments that were done immediately. Lawmakers have many options to address the long-range financial imbalance.

The projected HI cost rates shown in this report are lower than those from the 2021 report for all years because of (i) lower health care utilization through 2028 due to the pandemic and (ii) higher taxable payroll in all years resulting from the changing economic and demographic assumptions.

[28]Under the illustrative alternative projection, the corresponding immediate changes would be (i) an increase from 2.90 percent to 4.46 percent in the standard tax rate or (ii) a decrease in expenditure levels of 28 percent.

[29]Under the two examples for addressing the actuarial deficit, tax income would initially be substantially greater than expenditures, and trust fund assets would accumulate rapidly. Subsequently, however, tax income would be inadequate, and assets would be drawn down to cover the difference. This example illustrates that if lawmakers designed legislative solutions to eliminate only the 75-year actuarial deficit, without consideration of such year-by-year patterns, then a substantial financial imbalance could still remain at the end of the period, and the long-range sustainability of the program could still be in doubt.

F. FINANCIAL STATUS OF THE SMI TRUST FUND

SMI comprises two parts, Part B and Part D, each with its own separate account within the SMI trust fund. The Trustees must determine the financial status of the SMI trust fund by evaluating the financial status of each account separately, since there is no provision in the law for transferring assets or income between the Part B and Part D accounts. The nature of the financing for both parts of SMI is similar in that the law establishes a mechanism by which income from the Part B premium and the Part D premium, and the corresponding general revenue transfers for each part, are sufficient to cover the following year's estimated expenditures. Accordingly, each account within SMI is automatically in financial balance under current law.

Parts B and D differ fundamentally from HI and OASDI in regard to the nature of their financing and the method by which their financial status is evaluated. Both parts of SMI are voluntary and are mostly financed by premiums from participants and contributions from the general fund of the Treasury. OASDI and HI are generally compulsory and are primarily financed from payroll taxes. The financial assessment of the SMI program in this section therefore differs in important ways from that for OASDI or HI.

1. 10-Year Actuarial Estimates (2022–2031)

Table II.F1 shows the estimated operations of the Part B account, the Part D account, and the total SMI trust fund under the intermediate assumptions during calendar years 2021 through 2031. For Part B, expenditures grew at an average annual rate of 6.7 percent over the past 5 years, exceeding GDP growth by 2.5 percentage points annually, on average. Estimated Part B cost increases average about 10.3 percent for the 5-year period 2022–2026, faster than the GDP growth rate of 5.3 percent for the same 5-year period.

Table II.F1.—Estimated Operations of the SMI Trust Fund under Intermediate Assumptions, Calendar Years 2021–2031

[Dollar amounts in billions]

Calendar year	Total income[1]	Total expenditures	Change in fund	Fund at year end
Part B account:				
2021[2]	$435.5[3]	$405.5[4]	$30.1	$163.3
2022	464.6	451.9[4]	12.7	176.0
2023	520.8	510.9	9.9	186.0
2024	543.6	555.3	−11.7	174.3
2025	599.7	604.0	−4.3	170.0
2026	669.6[3]	660.6	9.0	179.0
2027	723.0[3]	716.5	6.5	185.5
2028	789.3	775.4	13.9	199.5
2029	854.0	840.3	13.6	213.1
2030	914.9	901.0	13.9	227.0
2031	986.2	964.3	21.9	248.9
Part D account:				
2021[2]	114.6[3]	104.9	9.7	19.7
2022	122.6	132.2	−9.7	10.0
2023	122.1	121.3	0.8	10.8
2024	133.1	132.4	0.7	11.5
2025	141.1	140.4	0.8	12.2
2026	150.6[3]	149.8	0.8	13.0
2027	160.1[3]	159.3	0.8	13.8
2028	170.0	169.1	0.9	14.7
2029	180.5	179.6	0.9	15.6
2030	191.3	190.4	0.9	16.5
2031	202.2	201.3	0.9	17.5
Total SMI:				
2021[2]	550.2[3]	510.4[4]	39.7	183.0
2022	587.2	584.1[4]	3.0	186.1
2023	642.9	632.2	10.7	196.8
2024	676.7	687.7	−11.1	185.7
2025	740.9	744.4	−3.5	182.2
2026	820.2[3]	810.4	9.8	192.0
2027	883.2[3]	875.8	7.3	199.4
2028	959.3	944.5	14.8	214.2
2029	1,034.5	1,020.0	14.5	228.7
2030	1,106.2	1,091.4	14.8	243.5
2031	1,188.4	1,165.6	22.8	266.3

[1]Includes interest income.

[2]Figures for 2021 represent actual experience.

[3]Section 708 of the Social Security Act modifies the provisions for the payment of Social Security benefits when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Payment of those benefits normally due January 3, 2021 occurred on December 31, 2020. Consequently, the Part B and Part D premiums withheld from these benefits and the associated Part B general revenue contributions were added to the respective Part B (about $10.0 billion) or Part D (about $0.1 billion) account on December 31, 2020. Similarly, the payment date for those benefits normally due January 3, 2027 will be December 31, 2026. Accordingly, an estimated $6.3 billion will be added to the Part B account, and an estimated $0.2 billion will be added to the Part D account, on December 31, 2026. These estimated amounts are lower than those in last year's report to reflect that, over time, a lower percentage of Social Security benefits are paid out on the third of the month.

[4]Includes net repayments of $19.0 billion and $18.0 billion in calendar years 2021 and 2022, respectively, for the Medicare Accelerated and Advance Payments Program.

Due to the nature of Part B financing, Part B income growth is normally quite close to expenditure growth. The financing for 2022 was set to accommodate the uncertainty of the cost of a new Alzheimer's drug, to accommodate the uncertainty of the COVID-19 pandemic, and to ensure that the assets held in the Part B account would be within

the customary range by the end of 2022.[30] The projected short-range Part B expenditures shown in table II.F1 reflect the expected impact of the pandemic, including the effects of the Accelerated and Advance Payments Program and the changes in the utilization of services.

For the Part D account, the Trustees project that income and expenditures will grow at an average annual rate of 7.4 percent over the 5-year period 2022–2026, mainly due to expected increases in enrollment and growth in per capita drug costs. The delay of the reconciliation payments for policy year 2020 from November 2021 to January 2022, as described in section III.D, contributes to an annual rate that is higher than in last year's report. As with Part B, income and outgo would remain in balance as a result of the annual adjustment of income from premiums and general revenue to cover costs. The appropriation for Part D general revenues has generally been set such that amounts can be transferred to the Part D account on an as-needed basis; under this process, there is no need to maintain a contingency reserve. The Part D account reflects a policy to transfer amounts from the Treasury into the account 5 business days before the benefit payments to the plans.

The projected Part D costs shown in table II.F1 and elsewhere in this report are slightly lower than those in the 2021 report. The difference is primarily attributable to slower growth in overall drug prices and higher direct and indirect remuneration (DIR), partially offset by higher enrollment growth.

The primary test of financial adequacy for Parts B and D pertains to the level of the financing established for a given period (normally, through the end of the current calendar year). The financing for each part of SMI is considered satisfactory if it is sufficient to fund all services, including benefits and administrative expenses, provided through a given period. In addition, to protect against the possibility that cost increases under either part of SMI will be higher than expected, the accounts of the trust fund would normally need assets adequate to cover a reasonable degree of variation between actual and projected costs. For Part B, the Trustees estimate that the financing established through December 2022 will be sufficient to cover benefits

[30]The traditional measure used to evaluate the status of the Part B account of the SMI trust fund is defined as the ratio of the excess of Part B assets over Part B liabilities to the next year's Part B incurred expenditures. The customary range for this ratio is 15 to 20 percent, and the minimally financially adequate level is 14 percent; the CMS Office of the Actuary developed these amounts based on private health insurance standards and past studies indicating that this asset reserve level is sufficient to protect against adverse events.

and administrative costs incurred through that time period, and they estimate that assets will be adequate to cover potential variations in costs as a result of new legislation or cost growth factors that exceed expectations. The estimated financing established for Part D, together with the flexible appropriation authority for this trust fund account, would be sufficient to cover benefits and administrative costs incurred through 2022.

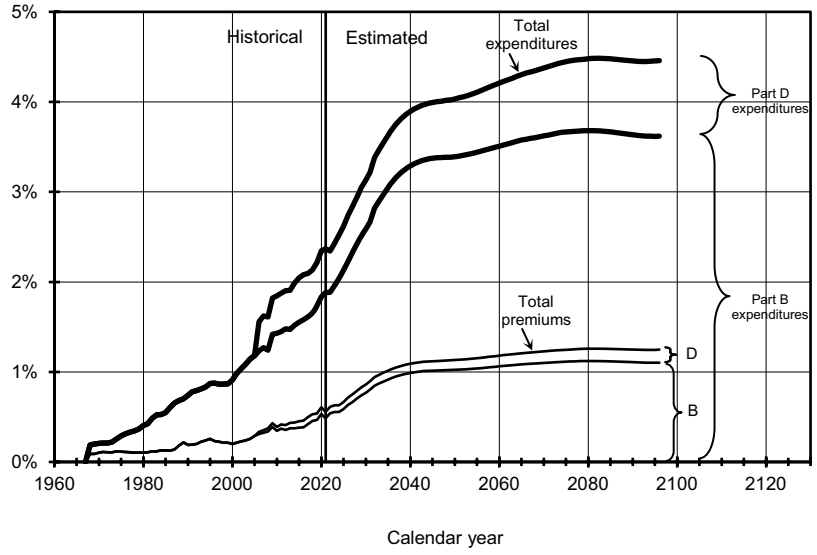
The amount of the contingency reserve needed in Part B is normally much smaller (both in absolute dollars and as a fraction of annual costs) than in HI or OASDI. A smaller reserve is adequate because the premium rate and corresponding general revenue transfers for Part B are determined annually based on estimated future costs, while the HI and OASDI payroll tax rates are fixed under law and are therefore much more difficult to adjust should circumstances change. A statutory competitive bidding process establishes Part D revenues annually to cover estimated costs. Moreover, the flexible appropriation authority established by lawmakers for Part D allows additional general fund financing if costs are higher than anticipated.

2. 75-Year Actuarial Estimates (2022–2096)

Figure II.F1 shows past and projected total SMI expenditures and premium income as a percentage of the Gross Domestic Product (GDP). Total SMI expenditures amounted to 2.4 percent of GDP in 2021 and are projected to grow to about 4.0 percent of GDP within 25 years and to 4.5 percent by the end of the projection period. (Under the illustrative alternative, total SMI expenditures in 2096 would be 5.5 percent of GDP.)

The projected Part B expenditures as a share of GDP shown in figure II.F1 are slightly lower in the near term than the projections in the 2021 Trustees Report due to somewhat higher GDP assumptions and are slightly higher in the long term than the corresponding amounts in last year's report, with outpatient hospital services and physician-administered drugs contributing to the difference. For Part D, projected expenditures as a percentage of GDP are slightly lower than the corresponding amounts in the 2021 report due to (i) higher GDP assumptions and (ii) lower spending attributable to slower price growth and higher DIR, which are partially offset by higher enrollment.

Figure II.F1.—SMI Expenditures and Premiums as a Percentage of the Gross Domestic Product



Note: Percentages are affected by economic cycles.

3. Implications of SMI Cost Growth

Financing for the SMI trust fund is adequate because beneficiary premiums and general revenue contributions, for both Part B and Part D, are established annually to cover the expected costs for the upcoming year. Should actual costs exceed those anticipated when the financing is determined, future financing rates can include adjustments to recover the shortfall. Likewise, should actual costs be less than those anticipated, the savings would result in lower future financing rates. As long as the future financing rates continue to cover the following year's estimated costs, both parts of the SMI trust fund will remain financially solvent.

A critical issue for the SMI program is the impact of the rapid growth of SMI costs, which places steadily increasing demands on beneficiaries and taxpayers. This section compares the past and projected growth in SMI costs with GDP growth; it also assesses the implications of the rapid growth on beneficiaries and the budget of the Federal Government.

Table II.F2 compares the growth in SMI expenditures with that of the economy as a whole. SMI costs are expected to continue to outpace growth in GDP throughout the projection period, but eventually at a slower rate compared to the last 10 years or prior periods. The

relatively high growth during 2022–2031 is due to the continuing retirement of the baby boom generation and modest increases in cost trends. Growth rates are projected to decline during 2032–2046 primarily as a result of a deceleration in beneficiary population growth. For the last 50 years of the projection period, cost growth moderates further due to the continued deceleration in beneficiary population growth and lower health care cost growth rate assumptions. On a per capita basis, SMI expenditure growth has substantially exceeded GDP growth historically, but it is projected to slow and increase only slightly faster than GDP after 2050 as a result of several legislatively specified payment updates, including those for physician prices.

Table II.F2.—Average Annual Rates of Growth in SMI and the Economy

[In percent]

Calendar years	SMI			U.S. Economy			Growth differential[1]
	Beneficiary population	Per capita expenditures	Total expenditures	Total population	Per capita GDP	Total GDP	
Historical data:							
1968–2001	2.2%	11.1%	13.5%	1.0%	6.6%	7.7%	5.4%
2002–2011	1.8	9.0[2]	10.9[2]	0.9	3.1	4.0	6.7[2]
2012–2021	2.7	3.7	6.4	0.5	3.4	4.0	2.4
Intermediate estimates:							
2022–2031	2.2	5.7	8.0	0.6	4.0	4.7	3.1
2032–2046	0.6	4.9	5.6	0.5	3.5	4.0	1.5
2047–2071	0.6	3.8	4.5	0.4	3.6	4.1	0.4
2072–2096	0.4	3.8	4.2	0.4	3.7	4.1	0.1

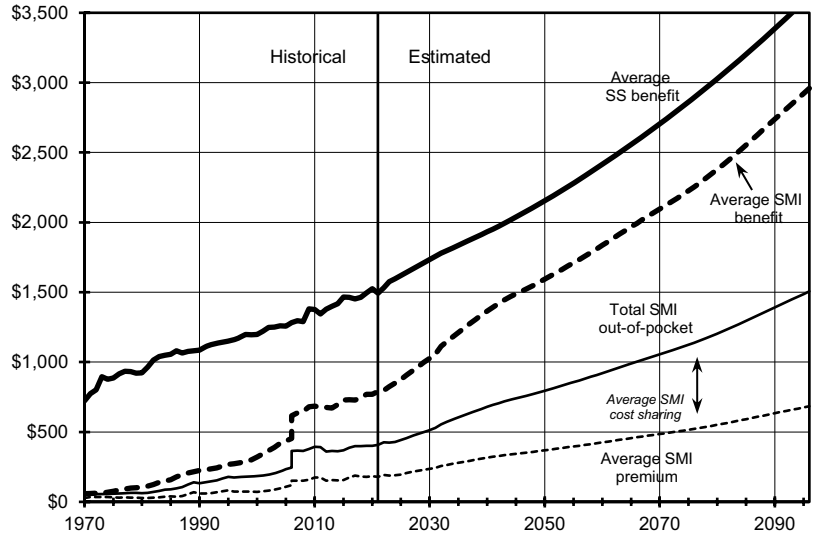
[1]Excess of total SMI expenditure growth above total GDP growth, calculated as a multiplicative differential.
[2]Includes the addition of the prescription drug benefit to the SMI program in 2006. Excluding 2006, the average annual per capita expenditure increase is 6.2 percent, the total expenditure increase is 8.1 percent, and the growth differential is 4.2 percent.

As SMI per capita benefits grow faster than average income or per capita GDP, the premiums and coinsurance amounts paid by beneficiaries represent a growing share of their total income. Figure II.F2 compares past and projected growth in average benefits for SMI versus Social Security. The figure also shows amounts for the average SMI premium payments and average cost-sharing payments. To facilitate comparison across long time periods, all values are in constant 2021 dollars.

Over time, the average Social Security benefit tends to increase at about the rate of growth in average earnings. Health care costs generally reflect increases in the earnings of health care professionals, growth in the utilization and intensity of services, and other medical cost inflation. As indicated in figure II.F2, average SMI benefits in 1970 were only about one-twelfth the level of average Social Security benefits but had grown to more than one-third by 2005. With the introduction of the Part D prescription drug benefit in 2006, this ratio grew to almost one-half. Under the intermediate projections, SMI benefits would continue increasing at a faster rate and would represent

about four-fifths of the average Social Security retired-worker benefit in 2096.

Figure II.F2.—Comparison of Average Monthly SMI Benefits, Premiums, and Cost Sharing to the Average Monthly Social Security Benefit
[Amounts in constant 2021 dollars]



Average beneficiary premiums and cost-sharing payments for SMI will increase at about the same rate as average SMI benefits.[31] Thus, a growing proportion of most beneficiaries' Social Security and other income would be necessary over time to pay total out-of-pocket costs for SMI, including both premiums and cost-sharing amounts. Most SMI enrollees have other income in addition to Social Security benefits. Other possible sources include earnings from employment, employer-sponsored pension benefits, and investment earnings. In addition, most draw down their accumulated assets to supplement their income in retirement. For simplicity, the comparisons in figure II.F2 apply to Social Security benefits only; a comparison of average SMI premiums and cost-sharing amounts to average total beneficiary income would likely lead to similar conclusions. For illustration, the Trustees estimate that the average Part B plus Part D premium in 2022 would equal about 13 percent of the average Social Security benefit but would increase to an estimated 19 percent in 2096. Similarly, an average cost-sharing amount in 2022 would be equivalent to about 15 percent of the Social Security benefit but would increase to about 23 percent in 2096.

[31]As a result, the projected ratio of average SMI out-of-pocket payments to average SMI benefits is nearly constant over time.

The combination of premium and cost-sharing amounts for Parts B and D would equal about 28 percent of the average Social Security benefit in 2022 and would increase to an estimated 42 percent in 2096.

The availability of SMI Part B and Part D benefits greatly reduces the costs that beneficiaries would otherwise pay for health care services. The introduction of the prescription drug benefit increased beneficiaries' costs for SMI premiums and cost sharing, but it reduced their costs for previously uncovered services by substantially more. Figure II.F2 highlights the impact of rapid cost growth for a given SMI benefit package.

The average OASI benefit amount for all retired workers is the basis for the Social Security benefits shown in figure II.F2; individual retirees may receive significantly more or less than the average, depending on their past earnings and other factors. For purposes of illustration, figure II.F2 shows the average SMI benefit value and cost-sharing liability for all beneficiaries. The value of SMI benefits to individual enrollees and their cost-sharing payments vary even more substantially than OASI benefits, depending on their income, assets, and use of covered health services in a given year. In particular, Medicaid pays Part B premiums and cost-sharing amounts for beneficiaries with very low incomes, and the Medicare low-income drug subsidy pays the corresponding Part D amounts (except for nominal copayments). Moreover, high-income beneficiaries have paid an income-related premium for Part B since 2007 and for Part D since 2011. Further information on the nature of this comparison, and on the variations from the average results, is available in a memorandum by the CMS Office of the Actuary at http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Beneficiaryoop.html.

Another way to evaluate the implications of rapid SMI cost growth is to compare government contributions to the SMI trust fund with total Federal income taxes (personal and corporate income taxes). Table II.F3 shows SMI general revenues as a percentage of total Federal income taxes. Should such taxes in the future maintain their historical average level of the last 50 years relative to the national economy, then, based on the intermediate assumptions, SMI general revenue financing in 2096 would represent about 30.3 percent of total income taxes. These figures are somewhat lower than those in last year's report because personal and corporate Federal income taxes are projected to be higher as a result of somewhat higher GDP assumptions.

Table II.F3.—SMI General Revenues as a Percentage of Personal and Corporate Federal Income Taxes

Fiscal year	Percentage of income taxes[1]
Historical data:	
1970	0.8%
1980	2.2
1990	5.9
2000	5.4
2010	19.6
2015	14.0
2016	16.2
2017	16.4
2018	16.8
2019	17.0
2020	19.6
2021	18.5
Intermediate estimates:	
2030	21.5
2040	26.6
2050	27.5
2060	28.7
2070	29.8
2080	30.5
2090	30.3
2096	30.3

[1]Includes the Part D prescription drug benefit beginning in 2006.

These examples illustrate the significant impact of SMI expenditure growth on beneficiaries, taxpayers, and the Federal budget. The projected SMI expenditure increases associated with the cost of providing health care, plus the impact of the baby boom generation reaching eligibility age, would continue to require a growing share of the economic resources available to finance these costs. This outlook reinforces the Trustees' recommendation for development and enactment of further reforms to reduce the rate of growth in SMI expenditures.

G. CONCLUSION

Total Medicare expenditures were $839 billion in 2021, and the Board projects that they will increase in most future years at a somewhat faster pace than either aggregate workers' earnings or the economy overall. The faster increase is primarily due to the number of beneficiaries increasing more rapidly than the number of workers, coupled with an increase in the volume and intensity of services delivered. Based on the intermediate set of assumptions under current law, expenditures as a percentage of GDP would increase from the current 3.9 percent to a projected 6.5 percent by 2096.

As it has since 2004, the HI trust fund fails to meet the Board of Trustees' short-range test of financial adequacy. In addition, as in all past reports, the HI trust fund fails to meet the Trustees' long-range test of close actuarial balance.

HI experienced small surpluses in 2016 and 2017 after having deficits from 2008 through 2015. In 2018 and 2019 small deficits returned, and in 2020 a large deficit occurred due to the expansion of the Accelerated and Advance Payments Program during the COVID-19 public health emergency. Payments made to providers under this program are assumed to be repaid in 2021 and 2022, resulting in a surplus in those years. After this, deficits are expected for the remainder of the 75-year projection period. The projected trust fund depletion date is 2028, 2 years later than estimated in last year's report. HI income is projected to be higher than last year's estimates because both the number of covered workers and average wages are projected to be higher. HI expenditures are projected to be lower than last year's estimates in the beginning of the short-range period mainly due to the pandemic but are projected to become larger after 2023 due to higher projected provider payment updates.

The HI actuarial deficit in this year's report is 0.70 percent of taxable payroll, down from 0.77 percent in last year's report. This result is largely due to changes in private health plan assumptions and economic and demographic assumptions that were partially offset by changes in hospital and other provider assumptions.

The financial outlook for SMI is fundamentally different than for HI as a result of the statutory differences in the methods of financing for these two components of Medicare.

The Trustees project that both the Part B and Part D accounts of the SMI trust fund will remain in financial balance for all future years

because beneficiary premiums and general revenue transfers are assumed to be set at a level to meet expected costs each year. However, SMI costs are projected to increase significantly as a share of GDP over the next 75 years, from 2.4 percent to 4.5 percent under current law. The projected Part B costs as a share of GDP are, in the near term, slightly lower than the estimates in the 2021 report due to somewhat higher GDP assumptions, and they are slightly higher in the long term than projected last year, with outpatient hospital services and physician-administered drugs contributing to the difference. The Part D projections as a percentage of GDP are slightly lower than in last year's report primarily due to (i) higher GDP assumptions and (ii) lower spending attributable to slower price growth and higher direct and indirect remuneration (DIR), which are partially offset by higher enrollment.

The financial projections shown for the Medicare program in this report reflect substantial, but very uncertain, cost savings deriving from current-law provisions that lower increases in Medicare payment rates to most categories of health care providers. Without fundamental change in the current delivery system, these adjustments would probably not be viable indefinitely.

In view of these issues with provider payment rates, the Trustees note that the actual future costs for Medicare could exceed those shown in this report. Projections under an alternative scenario, as provided in section V.C and in a memorandum from the Office of the Actuary,[32] can help illustrate the potential magnitude of the understatement. For example, the total cost of Medicare in 2096 would be 8.6 percent of GDP under the alternative projections (versus 6.5 percent under current law), and the HI actuarial deficit would be 1.56 percent of taxable payroll (versus 0.70 percent). The projected depletion date for the HI trust fund would be unchanged. Readers should interpret the projections shown in this report as illustrations of the very favorable impact of permanently slower growth in health care costs, if such slower growth is achievable. The illustrative alternative projections show the higher costs if not for these elements of current law.

Policymakers should determine effective solutions to the long-range HI financial imbalance. Even assuming that the provider payment rates will be adequate, the HI program does not meet either the Trustees' short-range test of financial adequacy or long-range test of close actuarial balance. HI revenues would cover only 90 percent of estimated expenditures in 2028 and 80 percent in 2046. By the end of

[32]See https://www.cms.gov/files/document/illustrative-alternative-scenario-2022.pdf.

the 75-year projection period, HI revenues could pay 93 percent of HI costs. Policymakers should also consider the likelihood that the price adjustments in current law may prove difficult to adhere to fully and may require even more changes to address the financial imbalance.

The projections in this year's report continue to demonstrate the need for timely and effective action to address Medicare's remaining financial challenges—including the projected depletion of the HI trust fund, this fund's long-range financial imbalance, and the rapid growth in Medicare expenditures. Furthermore, if the growth in Medicare costs is comparable to growth under the illustrative alternative projections, then policy reforms will have to address much larger financial challenges than those assumed under current law. The Board of Trustees believes that solutions can and must be found to ensure the financial integrity of HI in the short and long term and to reduce the rate of growth in Medicare costs through viable means. The sooner solutions are enacted, the more flexible and gradual they can be. Moreover, the early introduction of reforms increases the time available for affected individuals and organizations—including health care providers, beneficiaries, and taxpayers—to adjust their expectations and behavior. The Board recommends that Congress and the executive branch work together with a sense of urgency to address these challenges.

III. ACTUARIAL ANALYSIS

A. INTRODUCTION

The Actuarial Analysis section focuses on the costs and financing of the individual HI and SMI trust fund accounts. The Trustees perform an analysis for each trust fund individually, to determine whether each account's income and expenditures are balanced as necessary to maintain solvency. (It is also valuable to consider Medicare's total expenditures and the sources and relative magnitudes of the program's revenues. Section V.B presents such information for Medicare overall.)

For this report, projections are shown in two different ways. The cash basis reflects the date when payment for the service was made, whereas the incurred basis reflects the date when the service was performed. The projections are first prepared on an incurred basis, and then adjustments are made to account for costs on a cash basis. Generally, trust fund operations show the actual or projected income and expenditures on a cash basis, while analysis and methodology are presented on an incurred basis.

The HI and SMI trust funds are separate and distinct, each with its own sources of financing. There are no provisions for using HI revenues to finance SMI expenditures, or vice versa, or for lending assets between the two trust funds. Moreover, the benefit provisions, financing methods, and, to a lesser degree, eligibility rules are very different between these Medicare components. In particular, both accounts of the SMI trust fund are automatically in financial balance, whereas the HI fund is not.

For these reasons, the Trustees can evaluate the financial status of the Medicare trust funds only by separately assessing the status of each fund. Sections III.B, III.C, and III.D of this report present such assessments for HI (Part A), SMI Part B, and SMI Part D, respectively. The Trustees also provide key results based on an illustrative alternative scenario in section V.C.

B. HI FINANCIAL STATUS

This section presents actual HI trust fund operations in 2021 and HI trust fund projections for the next 75 years. Section III.B1 discusses HI financial results for 2021, and sections III.B2 and III.B3 discuss the short-range HI projections and the long-range projections, respectively. The projections shown in sections III.B2 and III.B3 assume no changes will occur in the statutory provisions and regulations under which HI now operates.[33]

1. Financial Operations in Calendar Year 2021

On July 30, 1965, the Social Security Act established the Federal Hospital Insurance Trust Fund as a separate account in the U.S. Treasury. All the HI financial operations occur within this fund.

Table III.B1 presents a statement of the revenue and expenditures of the fund in calendar year 2021, and of its assets at the beginning and end of the calendar year.

The total assets of the trust fund amounted to $134.1 billion on December 31, 2020. During calendar year 2021, total revenue amounted to $337.4 billion, and total expenditures were $328.9 billion. Total assets thus increased by $8.5 billion during the year to $142.7 billion on December 31, 2021.

[33]The one exception is that the projections disregard payment reductions that would result from the projected depletion of the HI trust fund.

Table III.B1.—Statement of Operations of the HI Trust Fund during Calendar Year 2021

[In thousands]

Total assets of the trust fund, beginning of period	$134,118,882
Revenue:	
Payroll taxes	$302,542,144
Income from taxation of OASDI benefits	24,975,000
Interest on investments	2,567,791
Premiums collected from voluntary participants	4,181,055
Premiums collected from Medicare Advantage participants	267,021
ACA Medicare shared savings program receipts	111,071
Transfer from Railroad Retirement account	551,800
Reimbursement, transitional uninsured coverage	95,000
Reimbursement, program management general fund	904,000
Interfund interest payments to OASDI[1]	−607
CMS Interfund interest receipts[1]	1,159
Interest on reimbursements, Railroad Retirement	16,362
Other	1,747
Reimbursement, union activity	678
Fraud and abuse control receipts:	
Criminal fines	67,453
Civil monetary penalties	72,177
Civil penalties and damages, Department of Justice	500,727
Asset forfeitures, Department of Justice	96,160
3% administrative expense reimbursement, Department of Justice	19,286
General fund appropriation fraud and abuse, FBI	148,039
General fund transfer, Discretionary	298,511
Total revenue	$337,416,574
Expenditures:	
Net benefit payments[2]	$323,602,307
Administrative expenses:	
Treasury administrative expenses	151,389
Salaries and expenses, SSA[3]	1,131,645
Salaries and expenses, CMS[4]	1,607,970
Salaries and expenses, Office of the Secretary, HHS	93,268
Medicare Payment Advisory Commission	7,743
Medicare Access Children's Health Insurance Program (CHIP)	130
Assistant Secretary for Planning and Evaluation (IMPACT Act)[5]	2,872
Fraud and abuse control expenses:	
HHS Medicare integrity program	829,957
HHS Office of Inspector General	326,430
Department of Justice	36,252
FBI	148,079
HCFAC Discretionary, CMS	790,251
HCFAC Other HHS Discretionary, CMS	4,736
HCFAC Department of Justice Discretionary, CMS	84,152
HCFAC Office of Inspector General Discretionary, CMS	56,657
Total administrative expenses	5,271,531
Total expenditures	$328,873,838
Net addition to the trust fund	8,542,736
Total assets of the trust fund, end of period	$142,661,618

[1]Reflects interest adjustments on the reallocation of administrative expenses among the Medicare trust funds, the OASDI trust funds, and the general fund of the Treasury. Estimated payments are made from the trust funds and then are reconciled, with interest, the next year when the actual costs are known. A positive figure represents a transfer to the HI trust fund from the other trust funds. A negative figure represents a transfer from the HI trust fund to the other funds.

[2]Includes net repayments of $29.1 billion made through the Medicare Accelerated and Advance Payments Program: $0.1 billion in payments to providers and $29.2 billion in repayments.

[3]For facilities, goods, and services provided by the Social Security Administration (SSA).

[4]Includes expenses of the Medicare Administrative Contractors.

[5]Reflects amount transferred from the HI trust fund for a study to examine the impact of risk factors on quality measures, resource use, and other measures under the Medicare program, as required by section 2 of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act).

Note: Totals do not necessarily equal the sums of rounded components.

a. Revenues

The trust fund's primary source of income consists of amounts appropriated to it, under permanent authority, on the basis of taxes paid by workers, their employers, and individuals with self-employment earnings, in work covered by HI. Included in HI are workers covered under the OASDI program, those covered under the Railroad Retirement program, and certain Federal, State, and local employees not otherwise covered under the OASDI program.

HI taxes are payable without limit on a covered individual's total wages and self-employment earnings. For calendar years prior to 1994, taxes were computed on a person's annual earnings up to a specified maximum annual amount called the *maximum tax base*. Table III.B2 presents the maximum tax bases for 1966–1993. Legislation enacted in 1993 removed the limit on taxable income beginning in calendar year 1994.

Table III.B2 also shows the HI tax rates applicable in each of calendar years 1966 and later. For 2023 and thereafter, the tax rates shown are the rates scheduled in current law. As indicated in the footnote to the table, in 2013 and later employees and self-employed individuals pay an additional HI tax of 0.9 percent on their earnings above certain thresholds.

Table III.B2.—Tax Rates and Maximum Tax Bases

Calendar years	Maximum tax base	Tax rate (Percentage of taxable earnings) Employees and employers, each	Self-employed
Past experience:			
1966	$6,600	0.35%	0.35%
1967	6,600	0.50	0.50
1968–71	7,800	0.60	0.60
1972	9,000	0.60	0.60
1973	10,800	1.00	1.00
1974	13,200	0.90	0.90
1975	14,100	0.90	0.90
1976	15,300	0.90	0.90
1977	16,500	0.90	0.90
1978	17,700	1.00	1.00
1979	22,900	1.05	1.05
1980	25,900	1.05	1.05
1981	29,700	1.30	1.30
1982	32,400	1.30	1.30
1983	35,700	1.30	1.30
1984	37,800	1.30	2.60
1985	39,600	1.35	2.70
1986	42,000	1.45	2.90
1987	43,800	1.45	2.90
1988	45,000	1.45	2.90
1989	48,000	1.45	2.90
1990	51,300	1.45	2.90
1991	125,000	1.45	2.90
1992	130,200	1.45	2.90
1993	135,000	1.45	2.90
1994–2012	no limit	1.45	2.90
2013–2022	no limit	1.45[1]	2.90[1]
Scheduled in current law:			
2023 & later	no limit	1.45[1]	2.90[1]

[1]Beginning in 2013, workers pay an additional 0.9 percent of their earnings above $200,000 (for those who file an individual tax return) or $250,000 (for those who file a joint income tax return).

Total HI payroll tax income in calendar year 2021 amounted to $302.5 billion—a decrease of 0.2 percent over the amount of $303.3 billion for the preceding 12-month period. This decrease occurred primarily because of adjustments that were made for prior years during 2021.

Up to 85 percent of an individual's or couple's OASDI benefits may be subject to Federal income taxation if their income exceeds certain thresholds. The income tax revenue attributable to the first 50 percent of OASDI benefits is allocated to the OASI and DI trust funds. The revenue associated with the amount between 50 and 85 percent of benefits is allocated to the HI trust fund. Income from the taxation of OASDI benefits amounted to $25.0 billion in calendar year 2021.

Another substantial source of trust fund income is interest credited from investments in government securities held by the fund. In calendar year 2021, the fund received $2.6 billion in such interest. A

description of the trust fund's investment procedures appears later in this section.

Section 1818 of the Social Security Act provides that certain persons not otherwise eligible for HI protection may obtain coverage by enrolling in HI and paying a monthly premium. In 2021, premiums collected from such voluntary participants (or paid on their behalf by Medicaid) amounted to about $4.2 billion.

The Railroad Retirement Act provides for a system of coordination and financial interchange between the Railroad Retirement program and the HI trust fund. This financial interchange requires a transfer that would place the HI trust fund in the same position in which it would have been if the Social Security Act had always covered railroad employment. In accordance with these provisions, a transfer of $552 million in principal and about $9 million in interest from the Railroad Retirement program's Social Security Equivalent Benefit Account to the HI trust fund balanced the two systems as of September 30, 2020. The trust fund received this transfer, together with interest to the date of transfer totaling about $7 million, in June 2021.

Legislation in 1982 added transitional entitlement for those Federal employees who retire before having had a chance to earn sufficient quarters of Medicare-qualified Federal employment. The general fund of the Treasury provides reimbursement for the costs of this coverage, including administrative expenses. In calendar year 2021, such reimbursement amounted to $95 million for estimated benefit payments for these beneficiaries.

Legislation in 1996 established a health care fraud and abuse control account within the HI trust fund. Monies derived from the fraud and abuse control program are transferred from the general fund of the Treasury to the HI trust fund. During calendar year 2021, the trust fund received about $1.2 billion from this program.

b. Expenditures

The HI trust fund pays expenditures for HI benefit payments and administrative expenses. All HI administrative expenses incurred by the Department of Health and Human Services, the Social Security Administration, the Department of the Treasury (including the Internal Revenue Service), and the Department of Justice in administering HI are charged to the trust fund. Such administrative duties include payment of benefits, the collection of taxes, fraud and

abuse control activities, and experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services, while maintaining the quality of such services, under HI and SMI.

In addition, Congress has authorized expenditures from the trust funds for construction, rental and lease, or purchase contracts of office buildings and related facilities for use in connection with the administration of HI. Although trust fund expenditures include these costs, the statement of trust fund assets presented in this report does not carry the net worth of facilities and other fixed capital assets because the proceeds of sales of such assets revert to the General Services Administration. Since the value of fixed capital assets does not represent funds available for benefit or administrative expenditures, the Trustees do not consider it in assessing the actuarial status of the funds.

Of the $328.9 billion in total HI expenditures, $323.6 billion represented net benefits paid from the trust fund for health services.[34] Net benefit payments decreased 18.6 percent in calendar year 2021 over the corresponding amount of $397.7 billion paid during the preceding calendar year. This decrease in spending reflects the large amount of accelerated and advance repayments to providers (which constituted $29.1 billion of net repayments in 2021 compared to $63.5 billion of payments in 2020), partially offset by the change in the number of beneficiaries, the price of health services, and the volume and intensity of services. Further information on HI benefits by type of service is available in section IV.A.

The remaining $5.3 billion in expenditures was for net HI administrative expenses, after adjustments to the preliminary allocation of administrative costs among the Social Security and Medicare trust funds and the general fund of the Treasury. The expenditure amount of $5.3 billion also included $2.3 billion for the health care fraud and abuse control program.

c. Actual experience versus prior estimates

Table III.B3 compares the actual experience in calendar year 2021 with the estimates presented in the 2020 and 2021 annual reports. A number of factors can contribute to differences between estimates and subsequent actual experience. In particular, actual values for key

[34]Net benefits equal the total gross amounts initially paid from the trust fund during the year, less recoveries of overpayments identified through fraud and abuse control activities.

economic and other variables can differ from assumed levels, and legislative and regulatory changes may occur after a report's preparation.

As shown in table III.B3, actual HI payroll tax income in 2021 was slightly higher than estimated in the 2021 report because the adjustments that were made for prior years in 2021 were not as large as estimated in last year's report and the economy recovered more rapidly from the 2020 recession than previously expected. Actual HI benefit payments in calendar year 2021 were much lower than projected in 2021 primarily as a result of large reductions in the utilization of services.

Compared to the estimates in the 2020 report, actual HI payroll tax income in calendar year 2021 was lower due to the impact of the COVID-19 pandemic and the recovery from the accompanying recession in 2020. Actual HI benefit payments in calendar year 2020 were also much lower than projected in the 2020 report primarily as a result of the large amount of accelerated and advance payments repaid to providers and large reductions in the utilization of services.

Table III.B3.—Comparison of Actual and Estimated Operations of the HI Trust Fund, Calendar Year 2021

[Dollar amounts in millions]

		Comparison of actual experience with estimates for calendar year 2021 published in—			
		2021 report		2020 report	
Item	Actual amount	Estimated amount[1]	Actual as a percentage of estimate	Estimated amount[1]	Actual as a percentage of estimate
Payroll taxes	$302,542	$298,500	101%	$313,585	96%
Benefit payments[2]	323,602[3]	340,579	95	365,804	88

[1]Under the intermediate assumptions.
[2]Benefit payments include (i) additional premiums for Medicare Advantage plans that are deducted from beneficiaries' Social Security benefits, (ii) costs of Quality Improvement Organizations, and (iii) health information technology payments.
[3]See footnote 2 of table III.B1.

d. Assets

The Department of the Treasury invests, on a daily basis, the portion of the trust fund not needed to meet current expenditures for benefits and administration in interest-bearing obligations of the U.S. Government. The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that these special public-debt obligations bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month immediately preceding the date of such issue) for all marketable interest-bearing obligations of the United States forming a part of the public debt that

are not due or callable until after 4 years from the end of that month. Currently, all invested assets of the HI trust fund are in the form of such special-issue securities.[35] Table V.H9, presented in section V.H, shows the assets of the HI trust fund at the end of fiscal years 2020 and 2021.

2. 10-Year Actuarial Estimates (2022–2031)

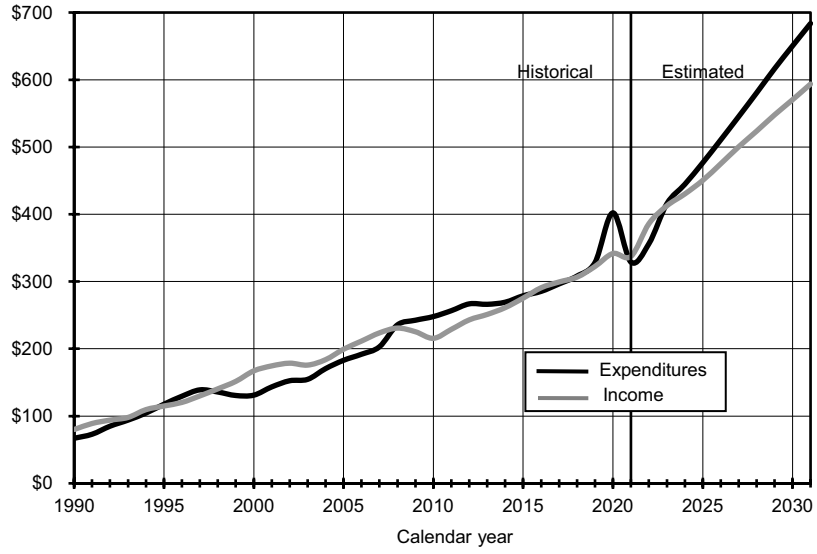
This section provides detailed information concerning the short-range financial status of the trust fund, including projected annual income, outgo, differences between income and outgo, and trust fund balances. Also discussed is the Trustees' test of short-range financial adequacy.

To illustrate the sensitivity of future costs to different economic and demographic factors and to portray a reasonable range of possible future trends, the Trustees show estimates under three alternative sets of economic and demographic assumptions—intermediate, low-cost, and high-cost assumptions. Due to the uncertainty inherent in such projections, however, the actual operations of the HI trust fund in the future could differ significantly from these estimates.

Figure III.B1 shows past and projected income and expenditures for the HI trust fund under the Trustees' intermediate assumptions. Following the Balanced Budget Act of 1997, the fund experienced annual surpluses through 2007. Beginning in 2008, expenditures exceeded total income, and this situation continued through 2015. In 2016 and 2017, the fund experienced small surpluses. In 2018 through 2019 there were deficits, and in 2020 there was a very large deficit due to the accelerated and advance payments made to providers. There was a small surplus in 2021 as these payments began to be repaid, and more repayments will occur in 2022, leading to a larger surplus. After that, the annual deficits are expected to return throughout the rest of the projection period.

[35]The Department of the Treasury may also make investments in obligations guaranteed as to both principal and interest by the United States, including certain federally sponsored agency obligations.

Figure III.B1.—HI Expenditures and Income
[In billions]



The impact of the December 2007 through June 2009 recession on HI payroll tax income is apparent in figure III.B1. In 2009 and 2010, payroll taxes decreased substantially as a result of higher unemployment and slow growth in wages along with collection lags; these factors contributed to the $32.3-billion trust fund deficit in 2010. For 2011 through 2015, revenues rebounded somewhat but not enough to reach the level of expenditures, which continued to grow due to increased enrollment and the regular updating of the payment rates. Together these factors resulted in a decline in trust fund deficits from $27.7 billion in 2011 to $3.5 billion in 2015. In 2016 and 2017, a lower level of growth in expenditures combined with higher growth in payroll taxes led to surpluses of $5.4 billion and $2.8 billion, respectively, in the trust fund. In 2018 and 2019 the trend reversed, with a higher level of growth in expenditures and lower growth in payroll taxes leading to trust fund deficits of $1.6 billion and $5.8 billion, respectively. In 2020, a very large deficit of $60.4 billion was reached because of the accelerated and advance payments to providers, which amounted to $63.5 billion net of repayments and which were paid from the trust fund. The net repayment of about $29.1 billion of these payments was completed in 2021, resulting in a surplus of $8.5 billion.

Despite a significant increase in the number of beneficiaries over the last decade, expenditure growth has been slower than observed throughout the history of the program due to a reduction in price updates and low growth in the utilization of services. For example,

beginning in 2012, price updates for all HI providers were reduced by the growth in economy-wide productivity. For 2012 through 2021, these update reductions slowed expenditure growth rates by 0.5 percentage point on average and are projected to lower HI expenditure growth by 0.9 percentage point by 2031.

HI expenditures are further affected by the *sequestration* required by current law, which reduces benefit payments by the percentages listed below:

- 2 percent from April 1, 2013 through April 30, 2020;
- 1 percent from April 1, 2022 through June 30, 2022;
- 2 percent from July 1, 2022 through March 31, 2030;
- 2.25 percent from April 1, 2030 through September 30, 2030;
- 3 percent from October 1, 2030 through March 31, 2031; and
- 4 percent from April 1, 2031 through September 30, 2031.

Because of sequestration, non-salary administrative expenses are reduced by an estimated 5 to 7 percent from March 1, 2013 through September 30, 2031, excluding May 1, 2020 through March 31, 2022. (See section V.A for recent legislative changes affecting the sequestration of Medicare expenditures.)

As figure III.B1 illustrates, HI income increased at a faster rate during 2011–2016 than HI expenditures, in contrast to the situation that has prevailed during most of the program's history. The recovery from the economic recession (which ended in 2009) accelerated income growth during this period. At the same time, the provider payment updates mentioned previously slowed expenditure growth significantly. From 2017 through 2020, however, expenditure growth increased more rapidly than income growth, a reversal that is expected to continue for most years of the projection period.

Table III.B4 shows the expected operations of the HI trust fund during calendar years 2022–2031 based on the intermediate set of assumptions, together with the past experience. Section IV.A of this report presents the detailed assumptions underlying the intermediate projections.

Table III.B4.—Operations of the HI Trust Fund during Calendar Years 1970–2031

[In billions]

	Income								Expenditures			Trust fund	
Calendar year	Payroll taxes	Income from taxation of benefits	Railroad Retirement account transfers	Reimbursement for uninsured persons	Premiums from voluntary enrollees	Payments for military wage credits	Interest and other[1,2]	Total	Benefit payments[2,3]	Administrative expenses[4]	Total	Net change	Fund at end of year
Historical data:													
1970	$4.9	—	$0.1	$0.9	—	$0.0	$0.2	$6.0	$5.1	$0.2	$5.3	$0.7	$3.2
1975	11.5	—	0.1	0.6	$0.0	0.0	0.7	13.0	11.3	0.3	11.6	1.4	10.5
1980	23.8	—	0.2	0.7	0.0	0.1	1.1	26.1	25.1	0.5	25.6	0.5	13.7
1985	47.6	—	0.4	0.8	0.0	−0.7[5]	3.4	51.4	47.6	0.8	48.4	4.8[6]	20.5
1990	72.0	—	0.4	0.4	0.1	−1.0[7]	8.5	80.4	66.2	0.8	67.0	13.4	98.9
1995	98.4	$3.9	0.4	0.5	1.0	0.1	10.8	115.0	116.4	1.2	117.6	−2.6	130.3
2000	144.4	8.8	0.5	0.5	1.4	0.0	11.7	167.2	128.5[8]	2.6	131.1	36.1	177.5
2005	171.4	8.8	0.4	0.3	2.4	0.0	16.1	199.4	180.0	2.9	182.9	16.4	285.8
2010	182.0	13.8	0.5	−0.1	3.3	0.0	16.1	215.6	244.5	3.5	247.9	−32.3	271.9
2015	241.1	20.2	0.6	0.2	3.2	0.0	10.1	275.4	273.4	5.5	278.9	−3.5	193.8
2016	253.5	23.0	0.7	0.2	3.3	0.0	10.1	290.8	280.5	4.9	285.4	5.4	199.1
2017	261.5	24.2	0.6	0.1	3.5	0.0	9.4	299.4	293.3	3.2[9]	296.5	2.8	202.0
2018	268.3	24.2	0.6	0.1	3.6	0.0	9.8	306.6	303.0	5.2	308.2	−1.6	200.4
2019	285.1	23.8	0.6	0.1	3.9	0.0	9.0	322.5	322.8	5.4	328.3	−5.8	194.6
2020	303.3	26.9	0.6	0.1	4.0	0.0	6.7	341.7	397.7[10]	4.5	402.2	−60.4	134.1
2021	302.5	25.0	0.6	0.1	4.2	0.0	5.1	337.4	323.6[10]	5.3	328.9	8.5	142.7
Intermediate estimates:													
2022	342.3	32.7	0.5	0.1	4.8	0.0	5.6	386.0	351.0[10]	5.2	356.2	29.8	172.4
2023	366.1	34.9	0.5	0.1	5.0	0.0	6.1	412.6	410.3	5.3	415.6	−3.0	169.4
2024	379.8	38.2	0.6	0.0	5.3	0.0	6.3	430.2	439.0	5.6	444.6	−14.3	155.1
2025	396.2	41.8	0.6	0.0	5.7	0.0	6.1	450.5	470.8	5.9	476.7	−26.2	128.9
2026	413.6	49.2	0.6	0.0	6.0	0.0	5.7	475.1	504.5	6.2	510.7	−35.6	93.3
2027	431.2	57.2	0.6	0.0	6.4	0.0	4.9	500.4	538.9	6.5	545.4	−45.0	48.3
2028[11]	449.7	62.5	0.6	0.0	6.8	0.0	4.0	523.7	573.8	6.8	580.6	−56.9	−8.6
2029[11]	468.9	68.0	0.6	0.0	7.2	0.0	3.2	547.9	609.5	7.1	616.6	−68.7	−77.3
2030[11]	487.9	74.0	0.7	0.0	7.6	0.0	0.2	570.4	643.1	7.4	650.5	−80.1	−157.4
2031[11]	507.9	80.6	0.7	0.0	8.1	0.0	−3.6	593.7	676.0	7.8	683.7	−90.0	−247.4

[1]Other income includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund, receipts from the fraud and abuse control program, and a small amount of miscellaneous income. These receipts amount to $2.0–$3.1 billion each year for the 10-year projection period.
[2]Values after 2005 include additional premiums for Medicare Advantage (MA) plans that are deducted from beneficiaries' Social Security benefits. These additional premiums are beneficiary obligations and occur when a beneficiary chooses an MA plan whose monthly plan payment exceeds the benchmark amount. Beneficiaries subject to such premiums may choose to either reimburse the plans directly or have the premiums deducted from their Social Security benefits. The premiums deducted from the Social Security benefits are transferred to the HI and SMI trust funds and then transferred from the trust funds to the plans.
[3]Includes costs of Peer Review Organizations from 1983 through 2001 (beginning with the implementation of the prospective payment system on October 1, 1983) and costs of Quality Improvement Organizations beginning in 2002.
[4]Includes costs of experiments and demonstration projects. Beginning in 1997, includes fraud and abuse control expenses.
[5]Includes lump-sum general revenue adjustment of −$0.8 billion.
[6]Includes repayment of loan principal, from the OASI trust fund, of $1.8 billion.
[7]Includes lump-sum general revenue adjustment of −$1.1 billion.
[8]For 1998 through 2003, includes monies transferred to the SMI trust fund for home health agency costs.
[9]Reflects a larger-than-usual downward adjustment of $1.8 billion for prior-year allocations among Part A, Part B, and Part D.
[10]Includes net payments of $63.5 billion made through the Medicare Accelerated and Advance Payments Program in calendar year 2020 and subsequent net repayments of $29.1 billion and $34.4 billion in calendar years 2021 and 2022, respectively.
[11]Estimates for 2028 and later are hypothetical since the HI trust fund would be depleted in those years.

Note: Totals do not necessarily equal the sums of rounded components.

The increases in estimated income shown in table III.B4 primarily reflect increases in payroll tax income to the trust fund since such taxes are the main source of HI financing. As noted, payroll tax revenues increase in 2013 and later as a result of the additional 0.9-percent tax rate on earnings for high-income workers. For all other workers, while the payroll tax rate will remain constant under current law, covered earnings will increase every year under the intermediate assumptions due to projected increases in both the number of HI workers covered and the average earnings of these workers.

The income from taxation of Social Security benefits is affected by 2017 legislation that reduced individual income tax rates beginning in 2018. This income is expected to increase after 2022, with a larger increase in 2026 when the tax rate reductions expire.

Interest earnings have been a source of income to the trust fund for many years, surpassed only by payroll taxes and income from the taxation of OASDI benefits. As the trust fund balance continues to decrease, interest earnings will follow the same pattern.

The Trustees project that over the next 10 years most of the remaining sources of financing for the HI trust fund will increase along with payroll tax revenues and covered earnings. More detailed descriptions of these sources of income were discussed earlier in this section.

The Trustees have recommended maintenance of HI trust fund assets at a level of at least 100 percent of annual expenditures throughout the projection period. Such a level would provide a cushion of several years in the event that income falls short of expenditures, thereby allowing time for policymakers to implement legislative corrections. The trust fund balance has been below 1 year's expenditures in every year since 2012 and is not projected to reach that level under the intermediate assumptions.

The Trustees have also prepared projections using two alternative sets of assumptions. Table III.B5 summarizes the estimated operations under all three alternatives. Section IV.A presents in substantial detail the assumptions underlying the intermediate assumptions, as well as the assumptions used in preparing estimates under the low-cost and high-cost alternatives.

Table III.B5.—Estimated Operations of the HI Trust Fund during Calendar Years 2021–2031, under Alternative Sets of Assumptions

[Dollar amounts in billions]

Calendar year	Total income	Total expenditures	Net increase in fund	Fund at end of year	Ratio of assets to expenditures[1] (percent)	Expenditures as a percentage of taxable payroll
Intermediate:						
2021[2]	$337.4	$328.9[3]	$8.5	$142.7	41%	3.42%
2022	386.0	356.2[3]	29.8	172.4	40	3.44
2023	412.6	415.6	−3.0	169.4	41	3.50
2024	430.2	444.6	−14.3	155.1	38	3.59
2025	450.5	476.7	−26.2	128.9	33	3.68
2026	475.1	510.7	−35.6	93.3	25	3.79
2027	500.4	545.4	−45.0	48.3	17	3.88
2028[4]	523.7	580.6	−56.9	−8.6	8	3.97
2029[4]	547.9	616.6	−68.7	−77.3	[5]	4.05
2030[4]	570.4	650.5	−80.1	−157.4	[5]	4.11
2031[4]	593.7	683.7	−90.0	−247.4	[5]	4.17
Low-cost:						
2021[2]	337.4	328.9[3]	8.5	142.7	41	3.42
2022	388.3	349.4[3]	39.0	181.6	41	3.35
2023	424.9	402.3	22.6	204.2	45	3.29
2024	450.3	428.3	21.9	226.2	48	3.30
2025	478.4	456.5	21.9	248.1	50	3.33
2026	512.6	486.0	26.7	274.7	51	3.36
2027	548.9	515.6	33.3	308.0	53	3.37
2028	584.6	545.4	39.2	347.2	56	3.38
2029	622.4	575.5	46.9	394.1	60	3.39
2030	662.0	603.0	59.0	453.1	65	3.36
2031	704.8	629.8	75.0	528.1	72	3.35
High-cost:						
2021[2]	337.4	328.9[3]	8.5	142.7	41	3.45
2022	375.8	362.4[3]	13.4	156.1	39	3.62
2023	381.6	418.7	−37.1	118.9	37	3.83
2024	396.5	450.3	−53.8	65.2	26	3.96
2025[4]	412.8	489.8	−77.1	−11.9	13	4.14
2026[4]	433.0	531.2	−98.2	−110.1	[5]	4.34
2027[4]	450.2	572.4	−122.2	−232.3	[5]	4.53
2028[4]	463.0	613.6	−150.6	−382.9	[5]	4.73
2029[4]	474.6	655.4	−180.8	−563.7	[5]	4.91
2030[4]	484.2	695.6	−211.4	−775.0	[5]	5.08
2031[4]	494.5	735.3	−240.8	−1,015.9	[5]	5.25

[1]Ratio of assets in the fund at the beginning of the year to expenditures during the year.
[2]Figures for 2021 represent actual experience.
[3]See footnote 10 of table III.B4.
[4]Estimates are hypothetical for 2028 and later under the intermediate assumptions, and for 2025 and later under the high-cost assumptions, since the HI trust fund would be depleted in those years.
[5]Trust fund reserves would be depleted at the beginning of this year.

Note: Totals do not necessarily equal the sums of rounded components.

Because of the price assumptions for these alternative scenarios, the expenditures presented in these scenarios represent a narrow range of outcomes, and actual experience could easily fall outside of this range. For the low-cost scenario, the Trustees assume higher price inflation, which leads to higher spending. Similarly, under the high-cost scenario, the Trustees assume lower price inflation, which leads to lower spending. These price inflation assumptions partially offset the effects of the other assumptions in the high-cost and low-cost scenarios, resulting in a narrow range of expenditures. Given the considerable

variation in the factors affecting health care spending, actual Part A experience could easily fall outside of this range. Because the taxable payroll assumptions in these scenarios are similarly affected by the price inflation assumptions, Part A expenditures as a percent of taxable payroll provide better insight into the variability of spending than the nominal dollar amounts, as shown in table III.B5.

The Board of Trustees has established an explicit test of short-range financial adequacy. The requirements of this test are as follows: (i) if the HI trust fund ratio is at least 100 percent at the beginning of the projection period, then it must remain at or above 100 percent throughout the 10-year projection period; (ii) alternatively, if the fund ratio is initially less than 100 percent, it must reach a level of at least 100 percent within 5 years (with no depletion of the trust fund at any time during this period) and then remain at or above 100 percent throughout the rest of the 10-year period. The Trustees apply this test based on the intermediate projections.

The HI trust fund does not meet this short-range test. Failure of the trust fund to meet this test is an indication that HI solvency over the next 10 years is in question and that action is necessary to improve the short-range financial adequacy of the fund. While the short-range test is stringent, its purpose is to ensure that health care benefits continue to be available without interruption to the millions of aged and disabled Americans who rely on such coverage. Table III.B6 shows the ratios of assets in the HI trust fund at the beginning of a calendar year to total expenditures during that year. As table III.B6 shows, the Trustees project that the trust fund ratio, which was below the 100-percent level at the beginning of 2022, will remain at about the same level for a few years before decreasing for the rest of the projection period until the fund is depleted in 2028. Accordingly, the financing for HI is not considered adequate in the short range (2022–2031).

The projected trust fund depletion date is 2028, 2 years later than estimated in last year's report. HI income is projected to be higher than last year's estimates due to higher payroll taxes. HI expenditures are projected to be lower than last year's estimates through 2023 mainly due to the pandemic and then to become larger than last year's estimates due to higher projected provider payment updates. In total, for the period 2021–2028, income is $176 billion (or 5 percent) higher, and expenditures are $33 billion (or 1 percent) higher.

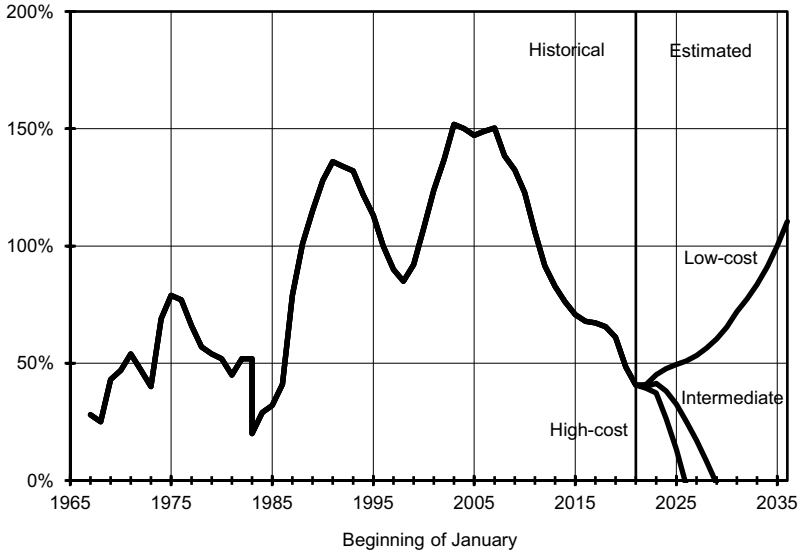
Table III.B6.—Ratio of Assets at the Beginning of the Year to Expenditures during the Year for the HI Trust Fund

Calendar year	Ratio
Historical data:	
1967	28%
1970	47
1975	79
1980	52
1985	32
1990	128
1995	113
2000	108
2005	147
2010	123
2015	71
2016	68
2017	67
2018	66
2019	61
2020	48
2021	41
Intermediate Estimates:	
2022	40
2023	41
2024	38
2025	33
2026	25
2027	17
2028	8
2029	[1]
2030	[1]
2031	[1]

[1]Trust fund reserves would be depleted at the beginning of this year.

Figure III.B2 shows the historical trust fund ratios and the projected ratios under the three sets of assumptions. It also shows the declining level of assets (as a percentage of expenditures) through 2022 under all three sets of assumptions. The fund ratio would continue to decline after 2023 under both the intermediate and the high-cost assumptions. Only under conditions of robust economic growth and extremely low health care cost increases, as assumed in the low-cost alternative, would HI assets grow significantly relative to expenditures under current law.

Figure III.B2.—HI Trust Fund Balance at the Beginning of the Year as a Percentage of Annual Expenditures



The HI trust fund is projected to be depleted in 2028 under the intermediate assumptions. Under the low-cost assumptions, trust fund assets are projected to increase throughout the entire projection period, while asset depletion would occur in 2025 under the high-cost assumptions.

3. Long-Range Estimates

This section examines the long-range actuarial status of the trust fund under the three alternative sets of economic and demographic assumptions, while section IV.A summarizes the assumptions used in preparing projections.

The Trustees measure the long-range actuarial status of the HI trust fund by comparing, on a year-by-year basis, the non-interest income (from payroll taxes, taxation of OASDI benefits, premiums, general revenue transfers for uninsured persons, and monies derived from the fraud and abuse control program) with the corresponding incurred costs, expressed as percentages of taxable payroll.[36] These percentages are referred to as *income rates* and *cost rates*, respectively.

[36]Taxable payroll is the total amount of wages, salaries, tips, self-employment income, and other earnings subject to the HI payroll tax.

Table III.B7 shows historical and projected HI costs and income under the intermediate assumptions, expressed as percentages of taxable payroll. The ratio of expenditures to taxable payroll has generally increased over time; it rose from 1.11 percent in 1967 to 3.46 percent in 1996—an increase that reflected rapid growth in HI expenditures, which more than offset growth in average earnings per worker, and increases in (and eventual elimination of) the maximum taxable wage base for HI. Cost rates declined significantly during 1997–2000 to 2.63 percent due to favorable economic performance, the impact of legislation, and efforts to curb fraud and abuse in the Medicare program. The cost rate increased to 3.17 percent by 2005 as a result of legislation and, after remaining about level through 2007, increased rapidly to 3.75 percent in 2010, reflecting the impact of the recession, which lowered taxable payroll. The resulting deficit in 2010 as a percentage of taxable payroll was the largest since the program began (0.55 percent). Cost rates generally decreased from 2011 through 2015 as the economy recovered, while health care cost growth rates were low. Cost rates remained fairly level until 2020, when there was a slight increase due to very low growth in taxable payroll as a result of the pandemic. In 2021, cost rates declined as utilization remained low during the pandemic.

Table III.B7.—HI Cost and Income Rates[1]

Calendar year	Cost rates	Income rates	Difference[2]
Historical data:			
1967	1.11%	1.09%	−0.01%
1970	1.35	1.41	+0.07
1975	1.79	1.90	+0.11
1980	2.26	2.16	−0.10
1985	2.68	2.74	+0.06
1990	2.72	2.92	+0.21
1995	3.36	3.05	−0.30
2000	2.63	3.11	+0.49
2005	3.17	3.12	−0.05
2010	3.75	3.20	−0.55
2015	3.43	3.35	−0.09
2016	3.48	3.35	−0.12
2017	3.45	3.36	−0.10
2018	3.42	3.33	−0.09
2019	3.46	3.35	−0.12
2020	3.53	3.37	−0.16
2021	3.42	3.40	−0.03
Intermediate estimates:			
2022	3.44	3.40	−0.04
2023	3.50	3.42	−0.08
2024	3.59	3.44	−0.15
2025	3.68	3.46	−0.22
2026	3.79	3.54	−0.25
2027	3.88	3.56	−0.32
2028	3.97	3.59	−0.38
2029	4.05	3.61	−0.44
2030	4.11	3.64	−0.47
2031	4.17	3.67	−0.50
2035	4.55	3.75	−0.80
2040	4.78	3.83	−0.95
2045	4.88	3.89	−0.99
2050	4.89	3.95	−0.94
2055	4.87	4.02	−0.85
2060	4.87	4.10	−0.77
2065	4.90	4.17	−0.73
2070	4.95	4.24	−0.71
2075	4.99	4.30	−0.69
2080	4.99	4.35	−0.63
2085	4.95	4.39	−0.56
2090	4.89	4.41	−0.47
2095	4.81	4.44	−0.37
2096	4.79	4.45	−0.35

[1]Based on the Trustees' intermediate assumptions, and expressed as a percentage of taxable payroll. Taxable payroll includes statutory wage credits for military service for 1957−2001.
[2]Difference between the income rates and cost rates. Negative values represent deficits.

The Trustees expect growing deficits through about 2045, as cost rates grow faster than income rates. The increase in cost rates during this period is mostly attributable to rising per beneficiary spending and the impact of demographic shifts—notably, the aging of the baby boom population. After 2045, the size of the projected deficits decreases as subsequent demographic shifts reduce the growth in cost rates, resulting in cost-rate growth that is lower than income-rate growth. Projected HI expenditures are 4.89 and 4.79 percent of taxable payroll in 2050 and 2096, respectively. (Under the illustrative alternative projections, the HI cost rates for 2050 and 2096 would equal 5.39 and 7.23 percent, respectively.)

Figure III.B3 shows the year-by-year costs as a percentage of taxable payroll for each of the three sets of assumptions. It also shows the income rates, but only for the intermediate assumptions in order to simplify the presentation.

Figure III.B3.—Estimated HI Cost and Income Rates as a Percentage of Taxable Payroll

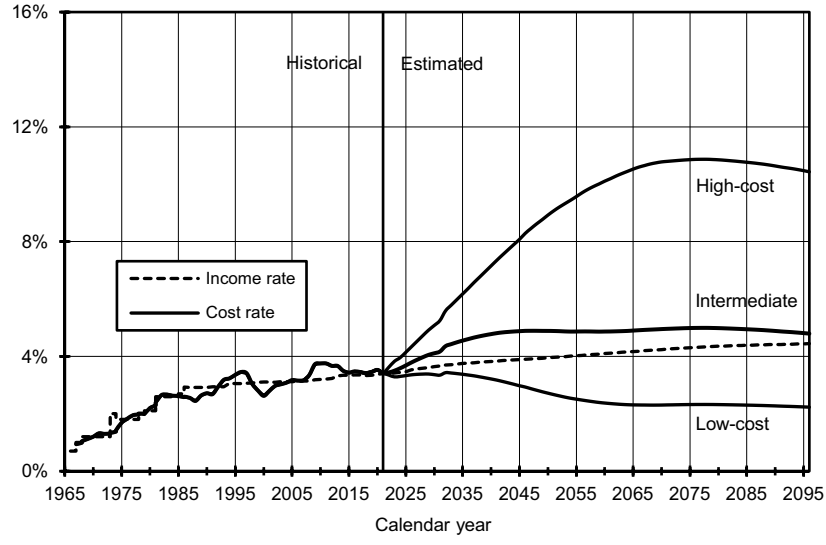


Figure III.B3 shows the remaining projected financial imbalance, based on the intermediate assumptions. The Trustees project that cost rates will continue to exceed income rates in all years of the projection period. By the end of the 75 years, the difference between income rates and cost rates would be about 0.4 percent of taxable payroll. Throughout the period, cost rate growth is constrained by the productivity reductions in provider payments, and income rates continue to increase as a larger share of earnings becomes subject to the additional 0.9-percent payroll tax and a larger share of Social Security benefits becomes subject to income tax that is credited to the HI trust fund.

Under the more favorable economic and demographic conditions assumed in the low-cost assumptions, HI costs would be lower than scheduled income during 2023–2096, and surpluses would steadily grow throughout the entire 75-year projection period. This very favorable result is due in large part to HI expenditure growth rates that would average only about 5 percent per year, reflecting the combined effects of (i) slower growth in utilization and intensity of services and (ii) lower Medicare enrollment.

The high-cost projections illustrate the large financial imbalance that could occur if future economic conditions resemble those of the 1973–1995 period, if HI expenditure growth accelerates toward pre-1997 levels, and if fertility rates decline.[37]

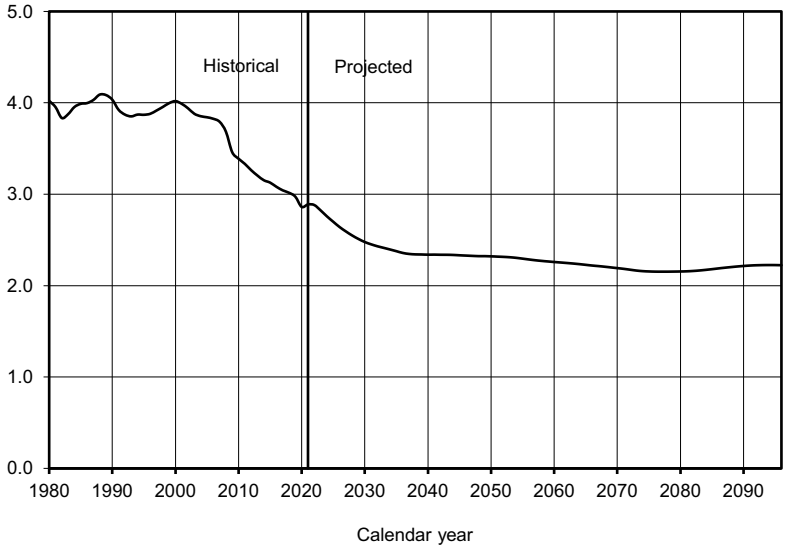
The Trustees project costs beyond the initial 25-year period for the intermediate estimate based on the assumption that average HI expenditures per beneficiary will increase at a rate determined by the economic model described in sections II.C and IV.D, less the price update adjustments based on economy-wide productivity gains. This net rate is about 0.1 percentage point faster than the increase in Gross Domestic Product (GDP) per capita in 2046 and declines to about 0.3 percentage point *slower* than the growth in GDP by 2096. Beyond the initial 25-year projection period, the low-cost and high-cost alternatives assume that HI cost increases, relative to taxable payroll increases, are initially 2 percentage points less rapid and 2 percentage points more rapid, respectively, than the results under the intermediate assumptions. The assumed initial 2-percentage-point differentials decrease gradually until the year 2071, when HI cost increases (relative to taxable payroll) are assumed to be the same as under the intermediate assumptions.

Figure III.B3 shows the cost rates over a 75-year valuation period in order to present fully the future economic and demographic developments that one may reasonably expect to occur, such as the impact of the large increase in the number of people over age 65 that began to take place in 2011. Growth occurs in part because the ratio of workers to beneficiaries will decrease as persons born during the period between the end of World War II and the mid-1960s (known as the baby boom generation) reach eligibility age and begin to receive benefits.

Figure III.B4 shows the projected ratio of workers per HI beneficiary from 1980 to 2096. As figure III.B4 indicates, the ratio was about 4 workers per beneficiary from 1980 through 2008. It began to decline initially due to the recession but then declined further due to the retirement of the baby boom generation.

[37]Actual experience during these periods was similar on average to the high-cost economic and programmatic assumptions for the future.

Figure III.B4.—Workers per HI Beneficiary
[Based on intermediate assumptions]



While every beneficiary in 2021 had about 2.9 workers to pay for his or her HI benefit, in 2030 under the intermediate demographic assumptions there would be only about 2.5 workers for each beneficiary. This ratio would then continue to decline until there were only 2.2 workers per beneficiary in 2096. This reduction implies an increase in the HI cost rate of about 30 percent by 2096, relative to its current level, solely due to this demographic factor.[38]

While year-by-year comparisons of revenues and costs are necessary to measure the adequacy of HI financing, the financial status of the trust fund is often summarized, over a specific valuation period, by a single measure known as the *actuarial balance*. The actuarial balance of the HI trust fund is defined as the difference between the summarized income rate for the valuation period and the summarized cost rate for the same period.

The summarized income rates, cost rates, and actuarial balance are based upon the present values of future income, costs, and taxable payroll. The Trustees calculate the present values, as of the beginning of the valuation period, by discounting the future annual amounts of

[38]In addition to this factor, the projected increase in the HI cost rate reflects greater use of health care services as the beneficiary population ages and higher average costs per service due to medical price inflation and technological advances in care. The slower growth in Medicare payment rates to HI providers substantially offsets these increases.

income and outgo using the projected effective rates of interest credited to the HI trust fund for the first 10 years and transition to the ultimate interest rate assumption by year 15. They then determine the summarized income and cost rates over the projection period by dividing the present value of income and cost, respectively, by the present value of taxable payroll. The difference between the summarized income rate and cost rate over the long-range projection period (after an adjustment to take into account the fund balance at the valuation date and a target trust fund balance at the end of the valuation period) is the actuarial balance.

The summarized cost rate includes the cost of maintaining a trust fund balance at the end of the period equal to the following year's estimated costs. While a zero or positive actuarial balance implies that the end-of-period trust fund balance is at least as large as the target trust fund balance, there is no such implication for the trust fund balance at other times during the projection period.

Table III.B8 shows the actuarial balances based on the Trustees' three sets of economic and demographic assumptions, for the next 25, 50, and 75 years. Based on the intermediate set of assumptions, the summarized income rate for the entire 75-year period is 4.03 percent of taxable payroll and the summarized cost rate is 4.73 percent. As a result, the actuarial balance is −0.70 percent, and the HI trust fund fails to meet the Trustees' long-range test of close actuarial balance.[39]

One can interpret the actuarial balance as the percentage that could be added to the income rates and/or subtracted from the cost rates immediately and throughout the entire valuation period in order for the financing to support HI costs and provide for the targeted trust fund balance at the end of the projection period. The income rate increase according to this method is 0.70 percent of taxable payroll. However, if no such changes occurred until 2028, when the trust fund would be depleted, then the required increase would be 0.78 percent of taxable payroll under the intermediate assumptions.[40]

[39]This test is defined in section V.I.

[40]Actuarial balance could also be reached by reducing benefits by 15 percent every year immediately, or by making no change until 2028 and then reducing benefits by 16 percent.

Table III.B8.—HI Actuarial Balances under Three Sets of Assumptions

	Intermediate assumptions	Alternative	
		Low-Cost	High-Cost
Valuation periods:[1]			
25 years, 2022–2046:			
Summarized income rate	3.75	3.72	3.82
Summarized cost rate	4.51	3.39	6.16
Actuarial balance	−0.76	0.33	−2.34
50 years, 2022–2071:			
Summarized income rate	3.90	3.88	3.97
Summarized cost rate	4.67	2.93	7.72
Actuarial balance	−0.77	0.95	−3.75
75 years, 2022–2096:			
Summarized income rate	4.03	4.00	4.11
Summarized cost rate	4.73	2.73	8.41
Actuarial balance	−0.70	1.27	−4.30

[1]Income rates include beginning trust fund balances, and cost rates include the cost of attaining a trust fund balance at the end of the period equal to 100 percent of the following year's estimated expenditures.

Note: Totals do not necessarily equal the sums of rounded components.

The divergence in outcomes among the three sets of assumptions is apparent both in the estimated operations of the trust fund on a cash basis (as discussed in section III.B2) and in the 75-year summarized costs. Under the low-cost economic and demographic assumptions, the summarized cost rate for the 75-year valuation period is 2.73 percent of taxable payroll, the summarized income rate is 4.00 percent of taxable payroll, and the actuarial balance is 1.27 percent of taxable payroll; therefore, HI income rates would be adequate under the highly favorable conditions assumed in the low-cost alternative. Under the high-cost assumptions, the summarized cost rate for the 75-year projection period is 8.41 percent of taxable payroll, which is more than twice the summarized income rate of 4.11 percent of taxable payroll, resulting in an actuarial balance of −4.30 percent of taxable payroll.

As suggested earlier, past experience has indicated that economic and demographic conditions that are as financially adverse as those assumed under the high-cost alternative can, in fact, occur over many years. Readers should view all of the alternative sets of economic and demographic assumptions as plausible. The wide range of results under the three sets of assumptions is indicative of the uncertainty of HI's future cost and its sensitivity to future economic and demographic conditions. Accordingly, it is important to maintain an adequate balance in the HI trust fund as a reserve for contingencies and to promptly address financial imbalances through corrective legislation.

Table III.B9 shows the long-range actuarial balance under the intermediate projections with its component parts—the present values of tax income, expenditures, and asset requirement of the HI program over the next 75 years.

Table III.B9.—Components of 75-Year HI Actuarial Balance under Intermediate Assumptions (2022–2096)

Present value as of January 1, 2022 (in billions):	
a. Payroll tax income	$25,043
b. Taxation of benefits income	4,534
c. Fraud and abuse control receipts	155
d. Other Income	431
e. Total income (a + b + c + d)	30,163
f. Expenditures	35,257
g. Expenditures minus income (f − e)	5,094
h. Trust fund assets at start of period	177
i. Open-group unfunded obligation (g − h)	4,917
j. Ending target trust fund[1]	376
k. Present value of actuarial balance (e − f + h − j)	−5,293
l. Taxable payroll	752,667
Percent of taxable payroll:	
Actuarial balance (k ÷ l)	−0.70%

[1]The calculation of the actuarial balance includes the cost of accumulating a target trust fund balance equal to 100 percent of annual expenditures by the end of the period.

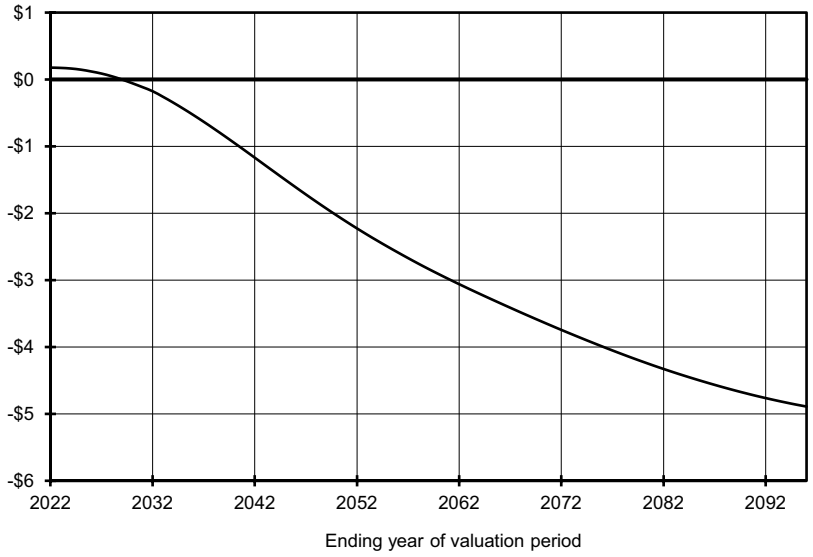
Note: Totals do not necessarily equal the sums of rounded components.

The present value of future expenditures less future tax income, decreased by the amount of HI trust fund assets on hand at the beginning of the projection, amounts to $4.9 trillion. This value is referred to as the 75-year *unfunded obligation* for the HI trust fund, and it is about the same as last year's value of $4.9 trillion. The actuarial balance is like the unfunded obligation except that (i) it is a measure of the degree to which the program is funded rather than unfunded and so is opposite in sign; (ii) it includes the target trust fund balance at the end of 75 years as a cost; and (iii) it is expressed as a percentage of taxable payroll. Specifically, the actuarial balance is −0.70 percent of taxable payroll and is calculated as the trust fund balance plus the present value of revenues less the present value of costs (−$4.9 trillion), less the present value of the target trust fund balance ($376 billion), all divided by the present value of future taxable payroll ($752.7 trillion).

Figure III.B5 shows the present values, as of January 1, 2022, of cumulative HI taxes less expenditures (plus the 2022 trust fund) through each of the next 75 years. The Trustees estimate these values under current-law expenditures and tax rates.

Figure III.B5.—Present Value of Cumulative HI Taxes Less Expenditures through Year Shown, Evaluated under Current-Law Tax Rates and Legislated Expenditures

[Present value as of January 1, 2022; in trillions]



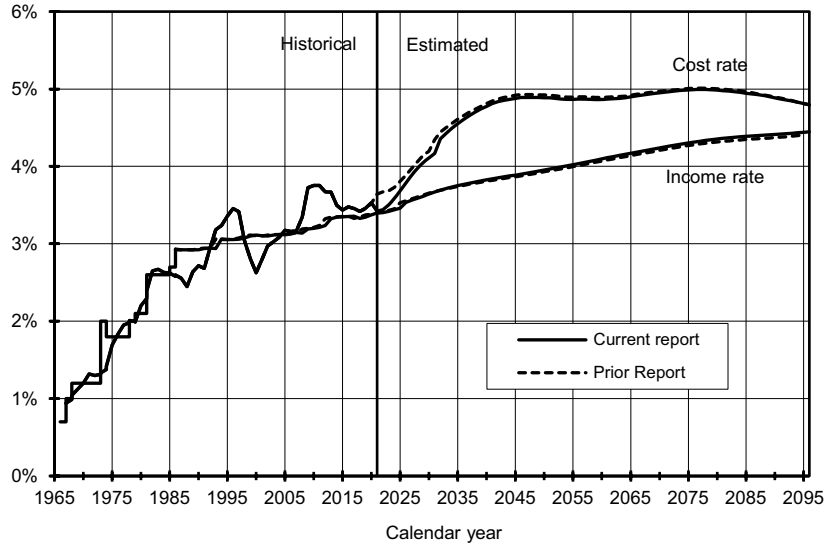
The cumulative annual balance of the trust fund at the beginning of 2022 is about $0.2 trillion. The cumulative present value steadily declines over the projection period due to the anticipated shortfall of tax revenues, relative to expenditures, in all years. The projected depletion date of the trust fund is 2028, at which time cumulative expenditures would have exceeded cumulative tax revenues by enough to equal the initial fund assets accumulated with interest. The continuing downward slope in the line thereafter further illustrates the difference between the HI expenditures projected under current law and the financing currently scheduled to support these expenditures. As noted previously, over the full 75-year period, the fund has a projected present value unfunded obligation of $4.9 trillion. This unfunded obligation indicates that if $4.9 trillion were added to the trust fund at the beginning of 2022, the program would meet the projected cost of expenditures over the next 75 years. More realistically, additional annual revenues and/or reductions in expenditures, with a present value totaling $4.9 trillion, would be necessary to reach financial balance (but with zero trust fund assets at the end of 2096).

The estimated unfunded obligation of $4.9 trillion and the closely associated present value of the actuarial deficit ($5.3 trillion) are useful indicators of the sizable financial burden facing the American

public. In other words, increases in revenues and/or reductions in benefit expenditures—equivalent to a lump-sum amount today of $5.3 trillion—would be necessary to bring the HI trust fund into long-range financial balance. At the same time, long-range measures expressed in dollar amounts can be difficult to interpret, even when calculated as present values, which are sensitive to the underlying discount rate assumptions. For this reason, the Board of Trustees has customarily emphasized relative measures, such as the income rate and cost rate comparisons shown earlier in this section, and comparisons to the present value of future taxable payroll or GDP.

Figure III.B6 compares the year-by-year HI cost and income rates for the current annual report with the corresponding projections from the 2021 report.

Figure III.B6.—Comparison of HI Cost and Income Rate Projections: Current versus Prior Year's Reports



As figure III.B6 indicates, the intermediate HI cost rate projections and the projected income rates in this year's report are similar to those in the 2021 report.

The Trustees' estimate of the 75-year HI actuarial balance under the intermediate assumptions, −0.70 percent of taxable payroll, is 0.07 percentage point more favorable than estimated in the 2021 annual report. The reasons for this change, which are listed in table III.B10, are explained below:

(1) Change in valuation period: Updating the valuation period from 2021–2095 to 2022–2096 results in a decrease to the actuarial balance of 0.01 percent of taxable payroll.
(2) Updating the projection base: Actual 2019 incurred HI expenditures, taxable payroll, and income from the taxation of Social Security benefits were about the same as previously estimated. Therefore, updating the projection base has a negligible impact on the actuarial balance.
(3) Private health plan assumptions: An improvement was made to the methodology for allocating projected total MA spending between Parts A and B, resulting in lower Part A spending. The net effect of this and other minor modifications is a 0.07-percent increase in the actuarial balance.
(4) Hospital utilization assumptions: Although there were no significant changes in hospital utilization assumptions in this year's report, there was larger growth in payments for certain categories of services that are reimbursed outside of the prospective payment system, including costs for medical education. The impact of these higher payments is a 0.03-percent decrease in the actuarial balance.
(5) Other provider utilization assumptions: Growth in spending for hospice care and administrative costs was higher than expected in 2021. This change results in a 0.02-percent decrease in the actuarial balance.
(6) Other economic and demographic assumptions: The net effect of several adjustments to the economic and demographic assumptions is a 0.06-percent increase in the actuarial balance. These adjustments lead to higher taxable payroll and income from taxation of Social Security benefits (increasing the actuarial balance by 0.15 percent), which are partially offset by higher payment rate update assumptions (decreasing the actuarial balance by 0.09 percent).

Table III.B10.—Change in the 75-Year Actuarial Balance since the 2021 Report

1. Actuarial balance, intermediate assumptions, 2021 report	−0.77%
2. Changes:	
a. Valuation period	−0.01
b. Base estimate	0.00
c. Private health plan assumptions	0.07
d. Hospital utilization assumptions	−0.03
e. Other provider utilization assumptions	−0.02
f. Other economic and demographic assumptions	0.06
Net effect, above changes	0.07
3. Actuarial balance, intermediate assumptions, 2022 report	−0.70

4. Long-Range Sensitivity Analysis

The low-cost and high-cost estimates discussed in previous sections demonstrate the effects of varying all of the principal assumptions simultaneously in order to portray a generally more optimistic or pessimistic future for the projected financial status of the HI trust fund. In contrast, this section presents estimates that illustrate the sensitivity of the long-range HI cost rate, income rate, and actuarial balance to changes in selected individual assumptions. In this sensitivity analysis, the intermediate set of assumptions is the reference point, and only one assumption at a time varies within that alternative. In each case, the Trustees assume that the provisions of current law remain unchanged throughout the 75-year projection period.

Each table that follows shows the effects of changing a particular assumption on the HI summarized income rates, summarized cost rates, and actuarial balances for 25-year, 50-year, and 75-year valuation periods. The discussion of the tables generally does not include the income rate, since it varies only slightly with changes in assumptions. The change in each of the actuarial balances is approximately equal to the change in the corresponding cost rate, but in the opposite direction. For example, a lower projected cost rate would result in an improvement or increase in the corresponding projected actuarial balance.

a. Real-Wage Differential

Table III.B11 shows the sensitivity of projected HI income rates, cost rates, and actuarial balances to the real-wage differential (the difference between the percent increase in the average wage in covered employment and the CPI). The ultimate real-wage differential will be 0.53 percentage point (high-cost alternative), 1.15 percentage points (intermediate projections), and 1.77 percentage points (low-cost alternative). In each case, the assumed ultimate annual increase in the CPI is 2.4 percent (as assumed for the intermediate projections), yielding ultimate percentage increases in nominal average annual wages in covered employment of 2.93, 3.55, and 4.17 percent under the three illustrations, respectively.

Projected HI cost rates are fairly sensitive to the assumed growth rates in real wages. For the 75-year period 2022–2096, the summarized cost rate decreases from 5.17 percent (for a real-wage differential of 0.53 percentage point) to 4.35 percent (for a differential of 1.77 percentage points). The HI actuarial balance over this period

shows a corresponding improvement for faster rates of growth in real wages.

Table III.B11—Estimated HI Income Rates, Cost Rates, and Actuarial Balances, Based on Intermediate Estimates with Various Real-Wage Assumptions

[As a percentage of taxable payroll]

	Ultimate percentage increase in wages−CPI[1]		
Valuation period	2.93−2.40	3.55−2.40	4.17−2.40
Summarized income rate:			
25-year: 2022–2046	3.77	3.75	3.76
50-year: 2022–2071	3.87	3.90	3.96
75-year: 2022–2096	3.95	4.03	4.12
Summarized cost rate:			
25-year: 2022–2046	4.70	4.51	4.40
50-year: 2022–2071	4.99	4.67	4.42
75-year: 2022–2096	5.17	4.73	4.35
Actuarial balance:			
25-year: 2022–2046	−0.93	−0.76	−0.64
50-year: 2022–2071	−1.12	−0.77	−0.46
75-year: 2022–2096	−1.22	−0.70	−0.23

[1]The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the CPI. The difference between the two values is the real-wage differential.

The sensitivity of the HI actuarial balance to different real-wage assumptions is significant, but not as substantial as one might intuitively expect. Higher real-wage differentials immediately increase both HI expenditures for health care and wages for all workers. Though there is a full effect on wages and payroll taxes, the effect on benefits is only partial, since not all health care costs are wage-related. The HI cost rate decreases with increasing real-wage differentials because the higher real-wage levels increase the taxable payroll to a greater extent than they increase HI benefits. In particular, each 0.5-percentage-point increase in the assumed real-wage differential increases the long-range HI actuarial balance, on average, by about 0.40 percent of taxable payroll.

b. Consumer Price Index

Table III.B12 shows the sensitivity of projected HI income rates, cost rates, and actuarial balances to the rate of increase for the CPI. The ultimate annual increase in the CPI will be 3.0 percent (low-cost alternative), 2.4 percent (intermediate projections), and 1.8 percent (high-cost alternative).[41] In each case, the assumed ultimate real-wage differential is 1.15 percent (as assumed for the intermediate projections), which yields ultimate percentage increases in average annual wages in covered employment of 4.15, 3.55, and 2.95 percent under the three illustrations.

Table III.B12.—Estimated HI Income Rates, Cost Rates, and Actuarial Balances, Based on Intermediate Estimates with Various CPI-Increase Assumptions

[As a percentage of taxable payroll]

	Ultimate percentage increase in wages−CPI[1]		
Valuation period	4.15−3.00	3.55−2.40	2.95−1.80
Summarized income rate:			
25-year: 2022–2046	3.81	3.75	3.72
50-year: 2022–2071	4.06	3.90	3.75
75-year: 2022–2096	4.19	4.03	3.80
Summarized cost rate:			
25-year: 2022–2046	4.49	4.51	4.54
50-year: 2022–2071	4.64	4.67	4.70
75-year: 2022–2096	4.71	4.73	4.76
Actuarial balance:			
25-year: 2022–2046	−0.68	−0.76	−0.83
50-year: 2022–2071	−0.59	−0.77	−0.95
75-year: 2022–2096	−0.52	−0.70	−0.96

[1]The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the CPI.

The variation in the rate of change assumed for the CPI has only a small impact on the actuarial balance, as the summarized income rates are slightly affected while the summarized cost rates are virtually unchanged.

Faster assumed growth in the CPI results in a somewhat larger HI income rate because the income thresholds for the taxation of Social Security benefits and for the additional 0.9-percent payroll tax rate are not indexed. Therefore, the share of Social Security benefits subject to income tax, as well as the share of earnings subject to the additional tax, increases over time. This impact accelerates under conditions of faster CPI growth. After the 10th year of the projection period, income tax brackets are assumed to rise with average wages, rather than with the C-CPI-U as specified in the Internal Revenue Code. As a result of this assumption, income for the taxation of Social Security benefits increases at a similar rate as, rather than significantly faster than,

[41]Prior to the 2015 report, the Trustees used the lower CPI growth rate for the low-cost alternative and the higher CPI growth rate for the high-cost alternative.

taxable payroll. In contrast, the cost rate remains about the same with greater assumed rates of increase in the CPI. HI cost rates are relatively insensitive to the assumed level of general price inflation because price inflation has about the same proportionate effect on taxable payroll of workers as it does on medical care costs.

In practice, differing rates of inflation could occur between the economy in general and the medical-care sector. Readers can judge the effect of such a difference from the sensitivity analysis shown in section III.B4d on health care cost factors.

c. Real-Interest Rate

Table III.B13 shows the sensitivity of projected HI income rates, cost rates, and actuarial balances to the annual real-interest rate for special public-debt obligations issuable to the trust fund. The ultimate annual real-interest rate will be 1.8 percent (high-cost alternative), 2.3 percent (intermediate projections), and 2.8 percent (low-cost alternative). In each case, the assumed ultimate annual increase in the CPI is 2.4 percent (as assumed for the intermediate projections), which results in ultimate annual yields of 4.2, 4.8, and 5.3 percent under the three illustrations.

Table III.B13.—Estimated HI Income Rates, Cost Rates, and Actuarial Balances, Based on Intermediate Estimates with Various Real-Interest Assumptions

[As a percentage of taxable payroll]

	Ultimate annual real-interest rate		
Valuation period	1.8 percent	2.3 percent	2.8 percent
Summarized income rate:			
25-year: 2022–2046	3.76	3.75	3.75
50-year: 2022–2071	3.91	3.90	3.89
75-year: 2022–2096	4.06	4.03	4.00
Summarized cost rate:			
25-year: 2022–2046	4.54	4.51	4.49
50-year: 2022–2071	4.71	4.67	4.64
75-year: 2022–2096	4.77	4.73	4.69
Actuarial balance:			
25-year: 2022–2046	−0.78	−0.76	−0.74
50-year: 2022–2071	−0.79	−0.77	−0.75
75-year: 2022–2096	−0.71	−0.70	−0.69

For all periods, the cost rate decreases slightly with increasing real-interest rates. Over 2022–2096, for example, the summarized HI cost rate would decline from 4.77 percent (for an ultimate real-interest rate of 1.8 percent) to 4.69 percent (for an ultimate real-interest rate of 2.8 percent). Accordingly, each 1.0-percentage-point increase in the assumed real-interest rate increases the long-range actuarial balance, on average, by about 0.02 percent of taxable payroll.

d. Health Care Cost Factors

Table III.B14 shows the sensitivity of projected HI income rates, cost rates, and actuarial balances to two variations on the relative annual growth rate in the aggregate cost of providing covered health care services to HI beneficiaries. For this sensitivity analysis, the ratio of costs to taxable payroll will grow 1 percentage point more slowly than the intermediate projections, the same as the intermediate projections, and 1 percentage point faster than the intermediate projections. In each case, the taxable payroll will be the same as assumed for the intermediate projections.[42]

As noted previously, factors such as wage and price increases may simultaneously affect HI tax income and the costs incurred by hospitals and other providers of medical care to HI beneficiaries. (Sections III.B4a and III.B4b evaluate the sensitivity of the trust fund's financial status to these factors.) Other factors, such as the utilization of services by beneficiaries or the relative complexity of the services provided, can have an impact on provider costs without affecting HI tax income. The sensitivity analysis shown in table III.B14 illustrates the financial effect of any combination of these factors that results in the ratio of cost to payroll taxes increasing by 1 percentage point faster or slower than the intermediate assumptions.

Table III.B14.—Estimated HI Income Rates, Cost Rates, and Actuarial Balances, Based on Intermediate Estimates with Various Health Care Cost Growth Rate Assumptions

[As a percentage of taxable payroll]

	Annual cost/payroll relative growth rate		
Valuation period	−1 percentage point	0 percentage point	+1 percentage point
Summarized income rate:			
25-year: 2022–2046	3.75	3.75	3.75
50-year: 2022–2071	3.90	3.90	3.91
75-year: 2022–2096	4.02	4.03	4.04
Summarized cost rate:			
25-year: 2022–2046	3.94	4.51	5.19
50-year: 2022–2071	3.65	4.67	6.08
75-year: 2022–2096	3.36	4.73	6.95
Actuarial balance:			
25-year: 2022–2046	−0.19	−0.76	−1.44
50-year: 2022–2071	0.24	−0.77	−2.17
75-year: 2022–2096	0.66	−0.70	−2.90

As illustrated in table III.B14, the financial status of the HI trust fund is extremely sensitive to the relative growth rates for health care service costs versus taxable payroll. For the 75-year period, the cost rate increases from 3.36 percent (for an annual cost/payroll growth

[42]These variations in HI cost growth rates are not equivalent to the high- and low-cost alternative assumptions, which use a different level and pattern of growth differentials and vary other assumptions in addition to the cost growth factors.

rate of 1 percentage point less than the intermediate assumptions) to 6.95 percent (for an annual cost/payroll growth rate of 1 percentage point more than the intermediate assumptions). Each 1.0-percentage-point increase in the assumed cost/payroll relative growth rate decreases the long-range actuarial balance, on average, by about 1.78 percent of taxable payroll.

C. PART B FINANCIAL STATUS

This section presents actual operations of the Part B account in the SMI trust fund in 2021 and Part B projections for the next 75 years. Section III.C1 discusses Part B financial results for 2021, and sections III.C2 and III.C3 discuss the short-range Part B projections and the long-range projections, respectively. The projections shown in sections III.C2 and III.C3 assume no changes will occur in the statutory provisions and regulations under which Part B now operates.

1. Financial Operations in Calendar Year 2021

Table III.C1 presents a statement of the revenue and expenditures of the Part B account of the SMI trust fund in calendar year 2021, and of its assets at the beginning and end of the year.

Table III.C1.—Statement of Operations of the Part B Account in the SMI Trust Fund during Calendar Year 2021

[In thousands]

Total assets of the Part B account in the trust fund, beginning of period		$133,283,058
Revenue:		
Premiums from enrollees:		
Enrollees aged 65 and over	$97,258,064	
Disabled enrollees under age 65	13,698,499	
Total premiums		110,956,563
Premiums collected from Medicare Advantage participants		368,709
Government contributions:		
Enrollees aged 65 and over	254,199,167	
Disabled enrollees under age 65	51,911,974	
Repayable transfer from Treasury[1]	7,853,783	
Federal match of repayable transfer from Treasury[2]	24,403,077	
Repayment amount[3]	−2,060,595	
Adjustment for exempted amounts[4]	−6,402,174	
Repayment of Medicare AAP program transfer[5]	−14,301,275	
Supporting physicians and other professionals[6]	3.000,000	
Union activity	951	
Total government contributions		318,604,908
Other		1,667
Interest on investments		2,662,847
Interfund interest receipts & payments[7]		−2,374
Annual fees—branded Rx manufacturers and importers		2,794,779
ACA Medicare shared savings program receipts		149,244
Total revenue		$435,536,343
Expenditures:		
Net Part B benefit payments[8]		$400,468,390
Administrative expenses:		
Transfer to Medicaid[9]	1,126,079	
Treasury administrative expenses	349	
Salaries and expenses, CMS[10]	2,159,664	
Salaries and expenses, Office of the Secretary, HHS	93,268	
Salaries and expenses, SSA	1,578,090	
Medicare Payment Advisory Commission	5,162	
Railroad Retirement administrative expenses	12,879	
Railroad Retirement administrative expenses, OIG	1,754	
Railroad Retirement administrative expenses, SMAC	21,954	
Assistant Secretary for Planning and Evaluation (IMPACT Act)[11]	2,872	
MACRA[12]	15,819	
Total administrative expenses		5,017,891
Total expenditures		$405,486,282
Net addition to the trust fund		30,050,062
Total assets of the Part B account in the trust fund, end of period		$163,333,120

[1]The Continuing Appropriations Act, 2021 and Other Extensions Act required a transfer of funds from the general fund to cover the premium income that was lost in 2021 as a result of the specification of the aged actuarial rate calculation.

[2]The transfer for the premium income lost in 2021 (footnote 1 transfer) is to be treated as premium income and matched by general revenue contributions.

[3]The transfer for the premium income lost in 2021 (footnote 1 transfer), plus the forgone income-related premium revenue resulting from this same legislation, is added to the remaining balance due from the 2016 transfer, and this total balance due is to be repaid over time by continuing the additional repayment amount of $3.00 that is added to the premium otherwise determined and that is collected and repaid to the general fund of the Treasury. The additional repayment premium amounts will continue until the balance due has been repaid.

[4]The additional premium repayment amounts (footnote 3 repayment amounts) are not to be matched by general revenue contributions; however, since CMS is not able to separate the additional repayment premium amounts from the standard premium amounts, the additional repayment premium amounts are matched. An adjustment for exempted amounts is therefore necessary to transfer these erroneous Federal matching amounts back to the general fund.

[5]Represents transfers from Part B to the general fund of the Treasury of amounts recovered from providers for repayment of AAP program payments, as required by the Continuing Appropriations Act, 2021 and Other Extensions Act. (Provider repayment amounts to Part B are described in footnote 8.)
[6]Represents the amount transferred from the general fund of the Treasury to Part B, as specified in the Consolidated Appropriations Act, 2021 to mitigate the financial effects of the legislated increase in the 2021 physician fee schedule update.
[7]Reflects interest adjustments on the reallocation of administrative expenses among the Medicare trust funds, the OASDI trust funds, and the general fund of the Treasury. Estimated payments are made from the trust funds and then are reconciled, with interest, the next year when the actual costs are known. A positive figure represents a transfer to the Part B account in the SMI trust fund from the other trust funds. A negative figure represents a transfer from the Part B account of the SMI trust fund to the other funds.
[8]Includes net repayments of $19.0 billion made through the AAP program: $0.05 billion in payments to providers from Part B and $19.05 billion in repayments from providers to Part B.
[9]Represents amount transferred from the Part B account in the SMI trust fund to Medicaid to pay the Part B premium for certain qualified individuals.
[10]Includes expenses of the Medicare Administrative Contractors.
[11]Reflects amount transferred from the Part B account of the SMI trust fund for a study to examine the impact of risk factors on quality measures, resource use, and other measures under the Medicare program, as required by section 2 of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act).
[12]Represents amounts transferred from the Part B account of the SMI trust fund for administration of provisions of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA).

Note: Totals do not necessarily equal the sums of rounded components.

The total assets of the account amounted to $133.3 billion on December 31, 2020. During calendar year 2021, total revenue amounted to $435.5 billion, and total expenditures were $405.5 billion. Total assets were $163.3 billion as of December 31, 2021. The asset level increased during 2021 by approximately $30.1 billion.

a. Revenues

The major sources of revenue for the Part B account are (i) contributions of the Federal Government that the law authorizes to be appropriated and transferred from the general fund of the Treasury and (ii) premiums paid by eligible persons who voluntarily enroll. Another source of revenue is the annual fees assessed on manufacturers and importers of brand-name prescription drugs.

Of the total Part B revenue in calendar year 2021, $111.0 billion represented premium payments by (or on behalf of) enrollees—an decrease of 0.2 percent over the amount of $111.2 billion for the preceding year.

Government contributions matched the premiums paid for fiscal years 1967 through 1973 dollar for dollar. Beginning July 1973, disabled persons who are under age 65 and who have met certain other conditions became eligible to enroll in Medicare, and the calculation of the premium-matching government contributions was changed. The amount of government contributions corresponding to premiums paid is determined by applying a matching rate to the amount of premiums

received.[43] By law, a matching rate is determined for each of two groups of Part B enrollees—one for those aged 65 and older and one for the disabled. The matching rate is equal to twice the monthly actuarial rate applicable to the particular group of enrollees, minus the standard monthly premium rate, divided by the standard monthly premium rate.

The Secretary of Health and Human Services (HHS) promulgates standard monthly premium rates and actuarial rates each year. Table III.C2 shows past monthly premium rates and actuarial rates together with the corresponding percentages of Part B costs covered by the premium rate. Estimated future premium amounts under the intermediate set of assumptions appear in tables V.E2 and V.E3.

[43]For 2016 through 2025, under the intermediate assumptions, the standard premium includes an additional amount ($3.00 through 2024 and $0.40 in 2025) to repay the balance due resulting from general revenue transfers in 2016 and 2021 to the Part B account of the SMI trust fund, in accordance with the Bipartisan Budget Act of 2015 and the Continuing Appropriations Act, 2021 and Other Extensions Act. This additional amount is not included in the determination of the matching rates and is not to be matched by general revenue contributions.

Table III.C2.—Standard Part B Monthly Premium Rates, Actuarial Rates, and Premium Rates as a Percentage of Part B Cost

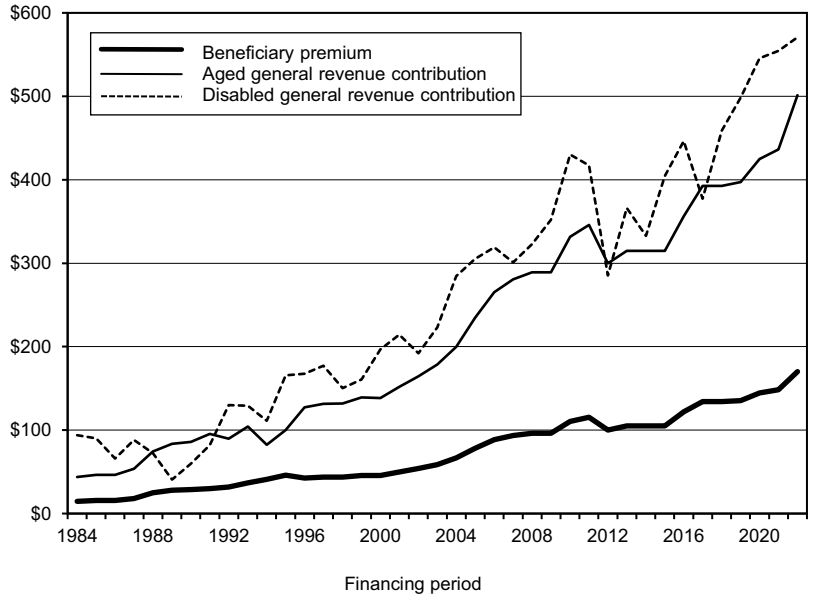
		Monthly actuarial rate		Premium rates as a percentage of Part B cost	
	Standard monthly premium rate[1]	Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled enrollees under age 65
July 1966–March 1968	$3.00	—	—	50.0%	—
April 1968–June 1970	4.00	—	—	50.0	—
12-month period ending June 30 of					
1975	6.70	$6.70	$18.00	50.0	18.6%
1980	8.70	13.40	25.00	32.5	17.4
Calendar year					
1985	15.50	31.00	52.70	25.0	14.7
1990	28.60	57.20	44.10	25.0	32.4
1991	29.90	62.60	56.00	23.9	26.7
1992	31.80	60.80	80.80	26.2	19.7
1993	36.60	70.50	82.90	26.0	22.1
1994	41.10	61.80	76.10	33.3	27.0
1995	46.10	73.10	105.80	31.5	21.8
1996	42.50	84.90	105.10	25.0	20.2
1997	43.80	87.60	110.40	25.0	19.8
1998	43.80	87.90	97.10	24.9	22.6
1999	45.50	92.30	103.00	24.6	22.1
2000	45.50	91.90	121.10	24.8	18.8
2001	50.00	101.00	132.20	24.8	18.9
2002	54.00	109.30	123.10	24.7	21.9
2003	58.70	118.70	141.00	24.7	20.8
2004	66.60	133.20	175.50	25.0	19.0
2005	78.20	156.40	191.80	25.0	20.4
2006	88.50	176.90	203.70	25.0	21.7
2007	93.50	187.00	197.30	25.0	23.7
2008	96.40	192.70	209.70	25.0	23.0
2009	96.40	192.70	224.20	25.0	21.5
2010	110.50	221.00	270.40	25.0	20.4
2011	115.40	230.70	266.30	25.0	21.7
2012	99.90	199.80	192.50	25.0	25.9
2013	104.90	209.80	235.50	25.0	22.3
2014	104.90	209.80	218.90	25.0	24.0
2015	104.90	209.80	254.80	25.0	20.6
2016	121.80	237.60	282.60	25.6	21.5
2017	134.00	261.90	254.20	25.6	26.4
2018	134.00	261.90	295.00	25.6	22.7
2019	135.50	264.90	315.40	25.6	21.5
2020	144.60	283.20	343.60	25.5	21.0
2021	148.50	291.00	349.90	25.5	21.2
2022	170.10	334.20	368.90	25.4	23.1

[1]The amount shown for each year represents the standard Part B premium paid by, or on behalf of, most Part B enrollees. It does not reflect other amounts that certain beneficiaries must pay, such as the income-related monthly adjustment amount for beneficiaries with high incomes and the premium surcharge for beneficiaries who enroll late. In addition, it does not reflect a reduction in premium for beneficiaries covered by the hold-harmless provision. As a result of this provision, most Part B beneficiaries had their 2010 and 2011 monthly premium held to the 2009 rate of $96.40, had their 2016 monthly premium held to the 2015 rate of $104.90, and had the increase in their 2017 monthly premium limited to about $4.00, on average. Section V.E describes these amounts in more detail.

Figure III.C1 is a graph of the monthly per capita financing rates in all financing periods after 1983 for enrollees aged 65 and over and for disabled individuals under age 65. The graph shows the portion of the financing contributed by the beneficiaries and by general revenues. As

indicated, general revenue financing is the largest income source for Part B.

Figure III.C1.—Part B Aged and Disabled Monthly Per Capita Trust Fund Income



Note: The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.

In calendar year 2021, contributions received from the general fund of the Treasury amounted to $318.6 billion, which accounted for 73.2 percent of total revenue. The increase in the 2021 Part B premium was dampened by the Continuing Appropriations Act, 2021 and Other Extensions Act. The legislation also required a transfer from the general fund of the Treasury to Part B to replace the premium income lost by the lower premium. This $7.9-billion transfer was specified to be treated as premium income and matched by a transfer from the general fund of the Treasury, which amounted to $24.4 billion. The Bipartisan Budget Act of 2015 and the Continuing Appropriations Act, 2021 and Other Extensions Act require that payments be made from the Part B account of the SMI trust fund to the general fund of the Treasury, and these amounts totaled $2.1 billion in 2021. Transfers amounting to $6.4 billion were made from the Part B account to the general fund of the Treasury in order to adjust for certain transfers made for exempted amounts.[44] In accordance with the Continuing Appropriations Act, 2021 and Other Extensions Act, $14.3 billion of the general revenue represents a transfer from the Part B account to the

[44]See footnote 4 of table III.C1.

general fund of the Treasury to partially repay the outstanding balance of the Accelerated and Advance Payments (AAP) Program. As specified in the Consolidated Appropriations Act, 2021, $3 billion was transferred from the general fund of the Treasury to Part B to help offset the cost of the 2021 increase in physician fee schedule payments. The balance of the general revenue consisted almost entirely of premium-matching contributions.

Another source of Part B revenue is interest received on investments held by the Part B account. A description of the investment procedures of the Part B account appears later in this section. In calendar year 2021, $2.7 billion of revenue was from interest on the investments of the account. One more source of Part B revenue is the annual fees assessed on manufacturers and importers of brand-name prescription drugs, which amounted to $2.8 billion in 2021.

b. Expenditures

The account pays expenditures for Part B benefit payments and administrative expenses. All expenses incurred by the Department of Health and Human Services, the Social Security Administration, and the Department of the Treasury in administering Part B are charged to the account. Such administrative duties include payment of benefits, fraud and abuse control activities, and experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services while maintaining the quality of these services.

In addition, Congress has authorized expenditures from the trust funds for construction, rental and lease, or purchase contracts of office buildings and related facilities for use in connection with the administration of Part B. The account expenditures include such costs. The net worth of facilities and other fixed capital assets, however, does not appear in the statement of Part B assets presented in this report, since the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and is not, therefore, pertinent in assessing the actuarial status of the funds.

Of total Part B expenditures, $400.5 billion represented net benefits paid from the account for health services.[45] Net benefits decreased 3.3 percent compared with the corresponding amount of $414.1 billion paid during the preceding calendar year. The change in net benefits

[45]Net benefits equal the total gross amounts initially paid from the trust fund during the year less recoveries of overpayments identified through fraud and abuse control activities.

paid reflects the AAP program repayments and the net change in both the number of beneficiaries and the price, volume, and intensity of services. Additional information on Part B benefits by type of service is available in section IV.B1.

The remaining $5.0 billion of expenditures was for administrative expenses and represented 1.2 percent of total Part B expenditures in 2021. Administrative expenses are shown on a net basis, after adjustments to the preliminary allocation of such costs among the Social Security and Medicare trust funds and the general fund of the Treasury.

c. Actual experience versus prior estimates

Table III.C3 compares the actual experience in calendar year 2021 with the estimates presented in the 2020 and 2021 annual reports. A number of factors can contribute to differences between estimates and subsequent actual experience. In particular, actual values for key economic and other variables can differ from assumed levels, and lawmakers may adopt legislative and regulatory changes after a report's preparation.

As shown in table III.C3, actual Part B benefit payments were somewhat lower than the estimates in the 2021 report, reflecting lower use of health care services during the pandemic. Actual premiums and government contributions were close to 2021 report estimates.

Compared to the estimates in the 2020 report, actual Part B benefit payments were somewhat lower due to lower use of health care services during the pandemic and repayments from providers under the AAP program. Actual premiums were lower than the 2020 report estimates, and government contributions were higher than estimated in the 2020 report, as the legislated financing methodology change was not known for the 2020 report.

Table III.C3.—Comparison of Actual and Estimated Operations of the Part B Account in the SMI Trust Fund, Calendar Year 2021

[Dollar amounts in millions]

Item	Actual amount	Comparison of actual experience with estimates for calendar year 2021 published in: 2021 report: Estimated amount[1]	2021 report: Actual as a percentage of estimate	2020 report: Estimated amount[1]	2020 report: Actual as a percentage of estimate
Premiums from enrollees	$110,957	$112,608	99%	$116,551	95%
Government contributions	318,605[2]	316,247	101	306,534	104
Benefit payments[3]	400,468[4]	414,679	97	430,226	93

[1]Under the intermediate assumptions.
[2]See footnotes 1–6 of table III.C1.
[3]Benefit payments include (i) additional premiums for Medicare Advantage plans that are deducted from beneficiaries' Social Security benefits and (ii) costs of Quality Improvement Organizations.
[4]See footnote 8 of table III.C1.

d. Assets

The Department of the Treasury invests the portion of the Part B account not needed to meet current expenditures for benefits and administration in interest-bearing obligations of the U.S. Government.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the account. The law requires that these special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month immediately preceding the date of such issue) for all marketable interest-bearing obligations of the United States forming a part of the public debt that are not due or callable until after 4 years from the end of that month. Since the inception of the SMI trust fund, the Department of the Treasury has always invested the assets in special public-debt obligations.[46] Table V.H10, presented in section V.H, shows the assets of the SMI trust fund (Parts B and D) at the end of fiscal years 2020 and 2021.

2. 10-Year Actuarial Estimates (2022–2031)

Section III.C2 provides detailed information concerning the short-range financial status of the Part B account, including projected annual income, outgo, differences between income and outgo, and trust fund balances. The projected future operations of the Part B account are based on the Trustees' economic and demographic assumptions, as detailed in the OASDI Trustees Report, as well as other assumptions unique to Part B. Section IV.B1 presents an explanation of the effects of these assumptions on the estimates in this report. The Trustees also

[46]The Department of the Treasury may also make investments in obligations guaranteed as to both principal and interest by the United States, including certain federally sponsored agency obligations.

assume that financing for future periods will be determined according to the statutory provisions described in section III.C1a, although Part B financing rates have been set only through December 31, 2022.

In 2022 the monthly Part B premium rate is $170.10, which is higher than the 2021 monthly premium of $148.50. The estimated monthly premium for 2023 is $170.10. This premium, paid by affected enrollees and Medicaid and matched by general revenue transfers, would maintain a contingency reserve at the level necessary to accommodate typical financial variation, plus the possibility of legislative action that would raise costs after the establishment of financing rates, plus the financial variation due to the COVID-19 pandemic. In addition, there is a new drug for the treatment of Alzheimer's disease that has the potential to significantly increase Part B costs. The 2022 Part B financing was set to accommodate this financial risk.

For determining an individual's monthly premium rate, there is a hold-harmless provision in the law that limits the dollar increase in the premium to the dollar increase in an individual's Social Security benefit. This provision applies to most beneficiaries who have their premiums deducted from their Social Security benefits, or roughly 70 percent of Part B enrollees.[47]

In 2016, the cost-of-living adjustment (COLA) for Social Security benefits was 0 percent, and premiums did not increase from the 2015 level for beneficiaries to whom the hold-harmless provision applies. Without the Bipartisan Budget Act of 2015 (BBA 2015), Part B premiums for other beneficiaries would have been raised substantially to offset premiums forgone as a result of the hold-harmless provision. However, BBA 2015 specified that the Part B premium for 2016 be determined as if the hold-harmless provision did not apply and that a transfer be made from the general fund of the Treasury to the Part B account of the SMI trust fund in the amount of the estimated forgone premiums (and that the transfer be treated as premiums for matching purposes).

BBA 2015 further requires that, starting in 2016, the Part B premium otherwise determined be increased by $3.00, which is to be collected and repaid to the general fund of the Treasury.

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[47]About 30 percent of Part B enrollees are not eligible for the hold-harmless provision. This group consists of new enrollees during the year, enrollees who do not receive Social Security benefit checks, enrollees with high incomes who are subject to the income-related premium adjustment, and dual Medicare-Medicaid beneficiaries (whose premiums are paid by State Medicaid programs).

Similarly, the Continuing Appropriations Act, 2021 and Other Extensions Act specified that the 2021 actuarial rate for enrollees aged 65 and older be determined as the sum of the 2020 actuarial rate for enrollees aged 65 and older and one-fourth of the difference between the 2020 actuarial rate and the preliminary 2021 actuarial rate (as determined by the Secretary of HHS) for such enrollees. The premium revenue lost by using the resulting lower premium (excluding the forgone income-related premium revenue) was replaced by a transfer of general revenue from the Treasury, which will be repaid over time by increasing the balance due and continuing the additional repayment premium amounts.

The additional repayment premium amounts will continue until the balance due (defined in BBA 2015 and the Continuing Appropriations Act, 2021 and Other Extensions Act as the sum of the two transfers to the Part B account from the general fund plus forgone income-related premiums) has been repaid.[48] The 2022 premium of $170.10 includes $3.00 for this purpose.

The initial balance due, which includes the amount transferred to the Part B account in 2016 and the estimated forgone income-related premiums, was $9.1 billion. The balance due on January 1, 2020 was $3.7 billion. In 2021, the balance due was increased by $8.8 billion, which consists of the amount transferred to the Part B account in 2021 plus the estimated forgone income-related premiums. The balance due on January 1, 2022 was $8.0 billion. The Trustees estimate that the full amount will be repaid by the end of December 2025.

The Medicare Access and CHIP Reauthorization Act of 2015 and the Bipartisan Budget Act of 2018 specified physician payment updates for every future year. The Consolidated Appropriations Act, 2021 and the Protecting Medicare and American Farmers from Sequester Cuts Act together specified that the 2021 physician payment update be 3.75 percent, that the 2022 physician payment update be −0.7 percent, and that future physician payments not take into account the 2021 and 2022 updates. The physician payment updates are −2.9 percent for 2023 and 0.0 percent for 2024 and 2025. Additional payments of $500 million per year for physicians in the merit-based incentive payment system and 5-percent annual bonuses for qualified providers in advanced alternative payment models (advanced APMs) are payable in 2019 through 2024. For 2026 and later, there will be two payment rates: for qualified providers paid through an advanced APM, payment

[48]In the final repayment year, the additional amount may be less than $3.00 in order to avoid overpayments.

rates will be increased by 0.75 percent each year, while payment rates for all other providers will be increased each year by 0.25 percent.

Projected Part B expenditures are further affected by the sequestration required by current law, which reduces benefit payments by the percentages listed below:

- 2 percent from April 1, 2013 through April 30, 2020;
- 1 percent from April 1, 2022 through June 30, 2022;
- 2 percent from July 1, 2022 through March 31, 2030;
- 2.25 percent from April 1, 2030 through September 30, 2030;
- 3 percent from October 1, 2030 through March 31, 2031; and
- 4 percent from April 1, 2031 through September 30, 2031.

Due to sequestration, non-salary administrative expenses are reduced by an estimated 5 to 7 percent from March 1, 2013 through September 30, 2031, excluding May 1, 2020 through March 31, 2022. (See section V.A for recent legislative changes affecting the sequestration of Medicare expenditures.)

Table III.C4 shows the estimated operations of the Part B account under the intermediate assumptions on a calendar-year basis through 2031.

Table III.C4.—Operations of the Part B Account in the SMI Trust Fund (Cash Basis) during Calendar Years 1970–2031

[In billions]

	Income				Expenditures			Account	
Calendar year	Premium income	General revenue[1]	Interest and other[2,3]	Total	Benefit payments[3,4]	Administrative expenses	Total	Net change	Balance at end of year[5]
Historical data:									
1970	$1.1	$1.1	$0.0	$2.2	$2.0	$0.2	$2.2	$0.0	$0.2
1975	1.9	2.6	0.1	4.7	4.3	0.5	4.7	−0.1	1.4
1980	3.0	7.5	0.4	10.9	10.6	0.6	11.2	−0.4	4.5
1985	5.6	18.3	1.2	25.1	22.9	0.9	23.9	1.2	10.9
1990	11.3	33.0	1.6	45.9	42.5	1.5	44.0	1.9	15.5
1995	19.7	39.0	1.6	60.3	65.0	1.6	66.6	−6.3	13.1
2000	20.6	65.9	3.4	89.9	88.9[6]	1.8	90.7	−0.8	44.0
2005	37.5	118.1	1.4	157.0	149.2	3.2	152.4	4.6	24.0
2010	52.0[7]	153.5[7]	3.3	208.8	209.7	3.2	212.9	−4.1	71.4
2015	69.4[7]	203.9[7]	5.7	279.0	275.8	3.1	279.0	0.1	68.2
2016	72.1[7]	235.6[7]	5.5	313.2	289.5	3.9	293.4	19.8	88.0
2017	81.5	217.3	6.8	305.6	308.6	5.0[8]	313.7	−8.1	79.9
2018	93.3	253.2	7.1	353.7	333.0	4.2	337.2	16.5	96.3
2019	99.4	268.2	5.9	373.6	365.7	4.6	370.3	3.3	99.6
2020	111.2[7]	336.0[7,9]	5.1	452.3	414.1[10]	4.5	418.6	33.7	133.3
2021	111.0[7]	318.6[7]	6.0	435.5	400.5[10]	5.0	405.5	30.1	163.3
Intermediate estimates:									
2022	135.0	323.2	6.4	464.6	448.3[10]	3.6	451.9	12.7	176.0
2023	145.8	368.1	6.9	520.8	506.6	4.4	510.9	9.9	186.0
2024	151.9	384.5	7.3	543.6	551.2	4.1	555.3	−11.7	174.3
2025	167.1	425.2	7.4	599.7	599.6	4.4	604.0	−4.3	170.0
2026	188.5[7]	473.3[7]	7.8	669.6	656.0	4.6	660.6	9.0	179.0
2027	206.2[7]	508.2[7]	8.6	723.0	711.7	4.8	716.5	6.5	185.5
2028	227.2	552.5	9.6	789.3	770.4	5.0	775.4	13.9	199.5
2029	248.4	594.8	10.8	854.0	835.1	5.2	840.3	13.6	213.1
2030	268.8	634.1	12.0	914.9	895.6	5.4	901.0	13.9	227.0
2031	292.3	680.4	13.5	986.2	958.7	5.6	964.3	21.9	248.9

[1]General fund matching payments, plus certain interest-adjustment items.

[2]Other income includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund and other miscellaneous income. In 2008, includes an adjustment of $0.8 billion for interest earned as a result of Part A hospice costs that were misallocated to the Part B trust fund account.

[3]See footnote 2 of table III.B4.

[4]Includes costs of Peer Review Organizations from 1983 through 2001 and costs of Quality Improvement Organizations beginning in 2002.

[5]The financial status of Part B depends on both the assets and the liabilities of the trust fund (see table III.C8).

[6]Benefit payments less monies transferred from the HI trust fund for home health agency costs.

[7]Section 708 of the Social Security Act modifies the provisions for the payment of Social Security benefits when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Payment of those benefits normally due January 3, 2010 actually occurred on December 31, 2009, payment of benefits normally due January 3, 2016 occurred on December 31, 2015, and payment of benefits normally due January 3, 2021 occurred on December 31, 2020. Consequently, the Part B premiums withheld from these benefits and the associated general revenue contributions were added to the Part B account on December 31, 2009 (about $13.8 billion), December 31, 2015 (about $7.9 billion), and December 31, 2020 (about $10.0 billion), respectively. Similarly, the payment date for those benefits normally due on January 3, 2027 will be December 31, 2026. Accordingly, an estimated $6.3 billion will be added to the Part B account on December 31, 2026.

[8]Reflects a larger-than-usual upward adjustment of $1.7 billion for prior-year allocations among Part A, Part B, and Part D.

[9]Includes a transfer of $37.8 billion from the general fund of the Treasury to Part B, which occurred in November of 2020 for the outstanding balance of the Medicare Accelerated and Advance Payments (AAP) Program, as required by the Continuing Appropriations Act, 2021 and Other Extensions Act. All future recoveries from providers will be transferred to the general fund of the Treasury.

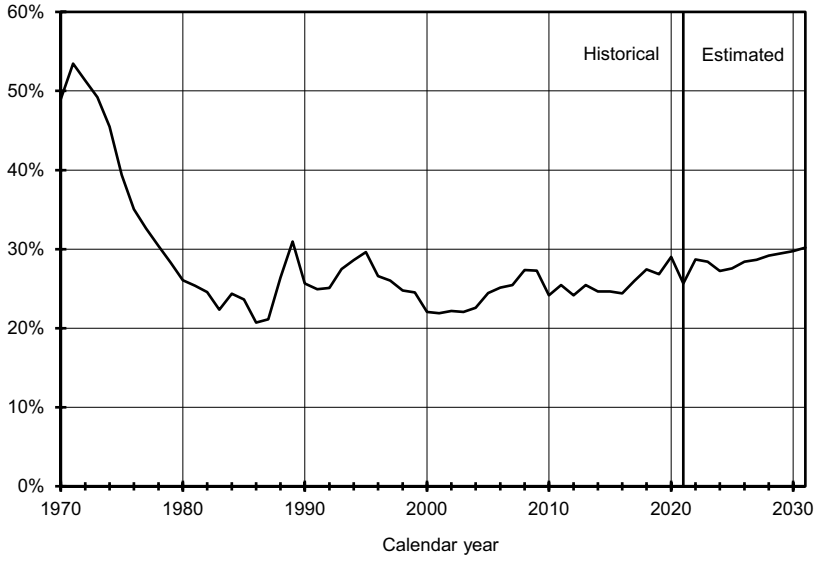
[10]Includes net payments of $37.0 billion made through the AAP program in calendar year 2020 and subsequent net repayments of $19.0 billion and $18.0 billion in calendar years 2021 and 2022, respectively.

Note: Totals do not necessarily equal the sums of rounded components.

As shown in table III.C4, the Part B account would increase by the end of 2022 to an estimated $177.0 billion. The financing for 2022 was set to accommodate the financial uncertainty from the COVID-19 pandemic and to maintain Part B assets at a fully sufficient level.

The statutory provisions governing Part B financing have changed over time. Under current law, the standard Part B premium is set at the level of about 25 percent of average expenditures for beneficiaries aged 65 and over. The Bipartisan Budget Act of 2015 and the Continuing Appropriations Act, 2021 and Other Extensions Act specify that the Part B premium otherwise estimated be increased by $3.00, starting with 2016, until the balance due (which is the sum of the general revenue amounts transferred in 2016 and 2021 plus the forgone income-related premium income) is repaid. In addition, Part B beneficiaries with high incomes pay a higher income-related premium. Figure III.C2 shows historical and projected ratios of premium income to Part B expenditures.

Figure III.C2.—Premium Income as a Percentage of Part B Expenditures



Beneficiary premiums are also affected by fees on the manufacturers and importers of brand-name prescription drugs that are allocated to the Part B account of the SMI trust fund. Because of these fees there is a reduction in the premium margin such that total revenues from premiums, matching general revenues, and the earmarked fees relating to brand-name prescription drugs will equal the appropriate level needed for program financing.

The amount and rate of growth of benefit payments have caused concern for many years. Table III.C5 shows payment amounts in the aggregate, on a per capita basis, and relative to the Gross Domestic Product (GDP). Rates of growth appear historically and for the next 10 years based on the intermediate assumptions.

Aggregate Part B benefit growth has averaged 6.7 percent annually over the past 5 years. During 2021, Part B benefits, including the effects of the accelerated and advance payments and repayments, decreased 3.3 percent on an aggregate basis and constituted 1.74 percent of GDP.

The Part B expenditures are affected by the sequestration of Medicare benefits required under current law. Projected Part B costs continue to increase faster than GDP, as indicated in table III.C5.

Table III.C5.—Growth in Part B Benefits (Cash Basis) through December 31, 2031

Calendar year	Aggregate benefits [billions]	Percent change	Per capita benefits	Percent change	Part B benefits as a percentage of GDP
Historical data:					
1970	$2.0	5.9%	$101	3.5%	0.18%
1975	4.3	28.8	180	24.6	0.25
1980	10.6	22.1	390	19.3	0.37
1985	22.9	16.7	768	14.5	0.53
1990	42.5	10.9	1,304	9.1	0.71
1995	65.0	10.8	1,823	9.2	0.85
2000	90.6[1]	11.4	2,425	10.5	0.88
2005	147.1	9.1	3,699	7.3	1.13
2010	209.7	3.6	4,779	1.3	1.39
2015	275.8	5.3	5,434	2.5	1.51
2016	289.5	5.0	5,557	2.3	1.55
2017	308.6	6.6	5,775	3.9	1.58
2018	333.0	7.9	6,091	5.5	1.62
2019	365.7	9.8	6,528	7.2	1.71
2020	414.1[2]	13.2	7,225	10.7	1.98
2021	400.5[2]	−3.3	6,860	−5.1	1.74
Intermediate estimates:					
2022	448.3[2]	11.9	7,544	10.0	1.80
2023	506.6	13.0	8,314	10.2	1.93
2024	551.2	8.8	8,806	5.9	2.01
2025	599.6	8.8	9,342	6.1	2.10
2026	656.0	9.4	9,972	6.7	2.21
2027	711.7	8.5	10,579	6.1	2.30
2028	770.4	8.2	11,211	6.0	2.39
2029	835.1	8.4	11,919	6.3	2.49
2030	895.6	7.2	12,563	5.4	2.56
2031	958.7	7.0	13,257	5.5	2.64

[1]See footnote 6 of table III.C4.
[2]See footnote 10 of table III.C4.

Note: Percentages are affected by economic cycles.

The Trustees have prepared the estimates shown throughout the report using the intermediate set of assumptions. They have also prepared estimates using two alternative sets of assumptions. Table III.C6 summarizes the estimated operations of the Part B

account for all three alternatives. Section IV.B1 presents in substantial detail the assumptions underlying the intermediate estimates, as well as the assumptions used in preparing estimates under the low-cost and high-cost alternatives.

Table III.C6.—Estimated Operations of the Part B Account in the SMI Trust Fund during Calendar Years 2021–2031, under Alternative Sets of Assumptions

[Dollar amounts in billions]

Calendar year	Premiums from enrollees	Other income[1]	Total income	Total expenditures	Balance in fund at end of year	Expenditures as a percentage of GDP
Intermediate:						
2021[2]	$111.0[3]	$324.6[3]	$435.5	$418.6[4]	$163.3	1.82%
2022	135.0	329.6	464.6	405.5[4]	222.5	1.63
2023	145.8	375.0	520.8	451.9	291.4	1.73
2024	151.9	391.8	543.6	510.9	324.1	1.87
2025	167.1	432.6	599.7	555.3	368.5	1.95
2026	188.5[3]	481.1[3]	669.6	604.0	434.1	2.03
2027	206.2[3]	516.8[3]	723.0	660.6	496.6	2.13
2028	227.2	562.2	789.3	716.5	569.4	2.22
2029	248.4	605.6	854.0	775.4	648.0	2.31
2030	268.8	646.1	914.9	840.3	722.5	2.41
2031	292.3	693.9	986.2	901.0	807.7	2.48
Low-cost:						
2021[2]	111.0[3]	324.6[3]	435.5	418.6[4]	163.3	1.82
2022	135.0	329.8	464.8	405.5[4]	222.6	1.61
2023	143.7	368.8	512.6	447.8	287.4	1.66
2024	149.4	385.8	535.1	506.6	315.9	1.77
2025	163.1	423.0	586.1	547.0	355.0	1.81
2026	181.3[3]	464.4[3]	645.7	590.5	410.2	1.85
2027	198.2[3]	497.7[3]	695.9	641.4	464.8	1.91
2028	217.0	538.2	755.2	690.8	529.2	1.95
2029	235.2	575.1	810.3	742.3	597.1	1.98
2030	252.7	609.3	862.0	798.7	660.4	2.02
2031	272.5	649.3	921.8	850.1	732.2	2.04
High-cost:						
2021[2]	111.0[3]	324.6[3]	435.5	418.6[4]	163.3	1.82
2022	135.0	329.6	464.5	405.5[4]	222.4	1.69
2023	143.3	364.5	507.8	443.1	287.1	1.82
2024	148.9	384.5	533.4	494.2	326.3	1.95
2025	166.3	429.7	596.0	544.7	377.7	2.08
2026	185.7[3]	475.8[3]	661.5	600.1	439.1	2.22
2027	209.8[3]	524.8[3]	734.6	664.0	509.7	2.38
2028	232.4	574.1	806.6	726.5	589.7	2.54
2029	256.3	623.2	879.5	791.7	677.5	2.69
2030	279.3	669.5	948.8	864.1	762.3	2.85
2031	305.9	723.7	1,029.6	933.1	858.8	3.00

[1]Other income contains government contributions, fees on manufacturers and importers of brand-name prescription drugs, and interest.
[2]Figures for 2021 represent actual experience.
[3]See footnote 7 of table III.C4.
[4]See footnote 10 of table III.C4.

Notes: 1. Totals do not necessarily equal the sums of rounded components.
2. Percentages are affected by economic cycles.

Because of the price assumptions for these alternative scenarios, the expenditures presented in these scenarios represent a narrow range of outcomes, and actual experience could easily fall outside of this range. For the low-cost scenario, the Trustees assume higher price inflation,

which leads to higher spending. Similarly, under the high-cost scenario, the Trustees assume lower price inflation, which leads to lower spending. These price inflation assumptions partially offset the effects of the other assumptions in the high-cost and low-cost scenarios, resulting in a narrow range of expenditures. Given the considerable variation in the factors affecting health care spending, actual Part B experience could easily fall outside of this range. Because the GDP assumptions in these scenarios are similarly affected by the price inflation assumptions, Part B expenditures as a percent of GDP provide better insight into the variability of spending than the nominal dollar amounts, as shown in table III.C6.

The alternative projections shown in table III.C6 illustrate two important aspects of the financial operations of the Part B account:

- Despite the differing assumptions underlying the three alternatives, the balance between Part B income and expenditures remains relatively stable. This result occurs because the Secretary of HHS annually reestablishes the premiums and general revenue contributions underlying Part B financing to cover each year's anticipated incurred benefit costs and other expenditures and then increases these amounts by a margin that reflects the uncertainty of the projection. Thus, Part B income automatically tracks Part B expenditures fairly closely, regardless of the specific economic and other conditions.

- As a result of the close matching of income and expenditures described above, projected account assets show similar, stable patterns of change under all three sets of assumptions.

Adequacy of Part B Financing Established for Calendar Year 2022

The traditional concept of financial adequacy, as it applies to Part B, is closely related to the concept as it applies to many private group insurance plans. Part B is somewhat similar to private yearly renewable term insurance, with financing established each year based on estimated costs for the year. For Part B, premium income paid by the enrollees and general revenues contributed by the Federal Government provide financing. As with private plans, the income during a 12-month period for which financing is being established should be sufficient to cover the costs of services expected to be rendered during that period (including associated administrative costs), even though payment for some of these services will not occur until after the period closes. The portion of income required to cover those benefits not paid until after the end of the year is added to the

account; thus assets in the account at any time should not be less than the costs of the benefits and the administrative expenses incurred but not yet paid.

Since the Secretary of HHS establishes the income per enrollee (premium plus government contribution) prospectively each year, it is subject to projection error. Additionally, legislation enacted after the financing has been established, but effective for the period for which financing has been set, may affect costs. Account assets, therefore, need to be maintained at a level that is adequate to cover not only the value of incurred-but-unpaid expenses but also a reasonable degree of variation between actual and projected costs (in case actual costs exceed projected).

The Trustees traditionally evaluate the actuarial status or financial adequacy of the Part B account over the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests are that (i) the assets and income for years for which financing has been established should be sufficient to meet the projected benefits and associated administrative expenses incurred for that period; and (ii) the assets should be sufficient to cover projected liabilities for benefits that have not yet been paid as of the end of the period. If Part B does not meet these adequacy tests, it can still continue to operate if the account remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that costs will be higher than assumed, assets should be sufficient to include contingency levels that cover a reasonable degree of variation between actual and projected costs.

As noted above, the tests of financial adequacy for Part B rely on the incurred experience of the account, including a liability for the costs of services performed in a particular year but not yet paid in that year. Table III.C7 shows the estimated transactions of the account on an incurred basis. Readers should view the incurred experience as an estimate, even for historical years.[49]

[49]Part B experience is more difficult to determine on an incurred basis than on a cash basis. For some services, reporting of payment occurs only on a cash basis, and it is necessary to infer the incurred experience from the cash payment information. Moreover, for recent time periods the tabulations of bills are incomplete due to normal processing time lags.

Table III.C7.—Estimated Part B Income and Expenditures (Incurred Basis) for Financing Periods through December 31, 2022

[In millions]

Financing period	Income				Expenditures			Net operations in year
	Premium income	General revenue	Interest and other	Total	Benefit payments	Adminis-trative expenses	Total	
Historical data:								
12-month period ending June 30,								
1970	$936	$936	$12	$1,884	$1,928	$213	$2,141	−$257
1975	1,887	2,396	105	4,388	3,957	438	4,395	−7
1980	2,823	6,627	421	9,871	9,840	645	10,485	−614
Calendar year								
1985	5,613	18,243	1,248	25,104	22,750	986	23,736	1,368
1990	11,320	33,035	1,558	45,913	42,577	1,541	44,118	1,795
1995	19,717	45,743	1,739	67,199	64,923	1,607	66,531	668
2000	20,555	65,898	3,450	89,903	91,059[1]	1,770	92,828	−2,925
2005	37,535	118,091	1,365	156,992	151,430	3,185	154,615	2,376
2010	55,580	163,660	3,281	222,520	212,093	3,153	215,245	7,275
2015	67,515	197,931	5,727	271,172	278,847	3,145	281,993	−10,821
2016	73,986	241,582	5,496	321,064	291,661	3,909	295,570	25,494
2017	81,522	217,253	6,796	305,571	308,747	5,014	313,761	−8,190
2018	93,312	253,237	7,147	353,697	335,963	4,203	340,166	13,531
2019	99,413	268,241	5,919	373,573	366,106	4,628	370,734	2,839
2020	108,746	328,446	5,148	442,340	379,508	4,541	384,050	58,290
2021	113,411	326,125	5,975	445,511	426,547	5,018	431,565	13,946
Intermediate estimates:								
2022	134,982	323,196	6,429	464,607	466,940	3,636	470,577	−5,970

[1]See footnote 6 of table III.C4.

Estimates of the liability amounts for benefits incurred but unpaid as of the end of each financing period, and of the administrative expenses related to processing these benefits, appear in table III.C8. In some years, account assets have not been as large as liabilities. Nonetheless, the fund has remained positive, which has allowed payment of all claims.

Table III.C8.—Summary of Estimated Part B Assets and Liabilities as of the End of the Financing Period, for Periods through December 31, 2022

[Dollar amounts in millions]

	Balance in trust fund	General revenue due but unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Liabilities[1]	Excess of assets over liabilities	Ratio[2]
Historical data:								
As of June 30,								
1970	$57	$15	$72	$567	—	$567	−$495	−0.21
1975	1,424	67	1,491	1,257	$14	1,271	—	0.04
1980	4,657	—	4,657	2,621	188	2,809	1,848	0.15
As of December 31,								
1985	10,924	—	10,924	3,142	−38	3,104	7,820	0.28
1990	15,482	—	15,482	4,060	20	4,080	11,402	0.24
1995	13,130	6,893[3]	20,023	4,298	−214	4,084	15,939	0.23
2000	44,027	—	44,027	8,715	−285	8,430	35,597	0.35
2005	24,008	—	24,008	13,556	—	13,556	10,452	0.06
2010	71,435	—	71,435	18,394	—	18,394	53,042	0.23
2015	68,157	—	68,157	24,510	—	24,510	43,647	0.15
2016	87,964	—	87,964	26,721	—	26,721	61,243	0.20
2017	79,882	—	79,882	26,747	—	26,747	53,134	0.16
2018	96,343	—	96,343	29,677	—	29,677	66,665	0.18
2019	99,602	—	99,602	30,074	—	30,074	69,528	0.18
2020	133,283	—	133,283	32,493	—	32,493	100,790	0.23
2021	163,333	—	163,333	39,638	—	39,638	123,695	0.26
Intermediate estimates:								
2022	176,047	—	176,047	40,252	—	40,252	135,795	0.26

[1]These amounts include only items incurred but not paid. They do not include the amounts that are to be paid back to the general fund of the Treasury over time or the AAP amounts paid to providers that are to be paid back to the trust fund over time.

[2]Ratio of the excess of assets over liabilities to the following year's total incurred expenditures.

[3]This amount includes both the principal of $6,736 million and the accumulated interest through December 31, 1995 for the shortfall in the fiscal year 1995 appropriation for government contributions. Normally, this transfer would have occurred on December 31, 1995, and the trust fund balance would have reflected it. However, due to absence of funding, there was a delay in the transfer of the principal and the appropriate interest until March 1, 1996.

The amount of assets minus liabilities, compared with the estimated incurred expenditures for the following calendar year, forms a relative measure of the Part B account's financial status. The last column in table III.C8 shows such ratios for past years and the estimated ratio at the end of 2022. Actuarial analysis has indicated that a ratio of roughly 15 to 20 percent is sufficient to protect against unforeseen contingencies, such as unusually large increases in Part B expenditures.

The Secretary of HHS established Part B financing through December 31, 2022. Estimated income exceeds estimated incurred expenditures in 2022, as shown in table III.C7. The excess of assets over liabilities increases by an estimated $12.1 billion by the end of December 2022, as indicated in table III.C8. This increase occurs because the 2022 Part B financing was set to accommodate the uncertainty associated with a new drug treatment for Alzheimer's disease, to accommodate the uncertainty associated with the

COVID-19 pandemic, and to maintain the contingency reserve at a fully adequate level.

Since the financing rates are set prospectively, variations between assumed cost increases and subsequent actual experience could affect the actuarial status of the Part B account. To test the status of the account under varying assumptions, the Trustees prepared a lower-growth-range projection and an upper-growth-range projection by varying the key assumptions for 2021 and 2022. These two alternative sets of assumptions provide a range of financial outcomes within which one might reasonably expect the actual experience of Part B to fall. The Trustees determined the values for the lower- and upper-growth-range assumptions from a statistical analysis of the historical variation in the respective increase factors.

The methods underlying this sensitivity analysis are fundamentally different from the methods underlying the low-cost and high-cost projections discussed previously in this section. This sensitivity analysis is based on stochastic modeling and is shown for the period for which the financing has been established (through 2022 for this report), whereas the low-cost and high-cost projections illustrate the financial impact of slower or faster growth trends throughout the entire short-range (10-year) projection period.

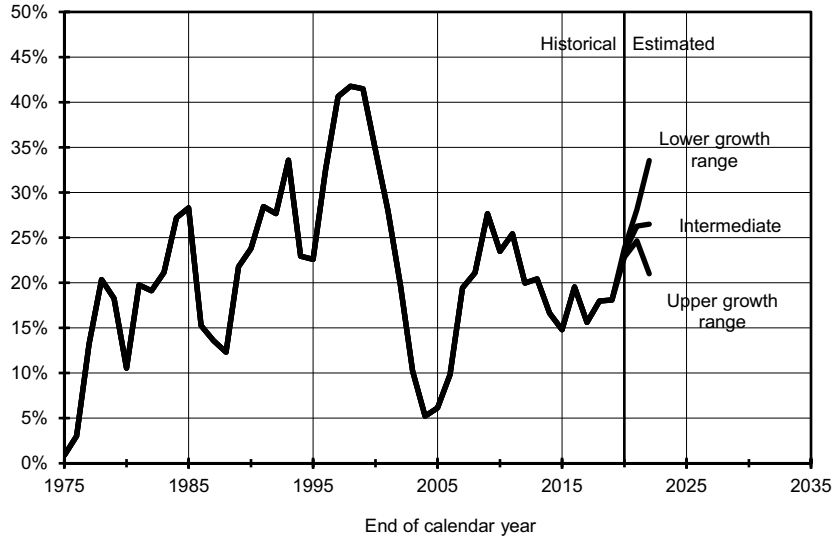
Table III.C9 indicates that, under the lower-growth-range scenario, account assets would exceed liabilities at the end of December 2022 by a margin equivalent to 33.5 percent of the following year's incurred expenditures. Under the upper-growth-range scenario, account assets would still exceed liabilities, but by a margin of 21.0 percent of incurred expenditures in 2022. Figure III.C3 shows the reserve ratio for historical years and for 2022 under the three cost-growth scenarios.

Table III.C9.—Actuarial Status of the Part B Account in the SMI Trust Fund under Three Cost Sensitivity Scenarios for Financing Periods through December 31, 2022

As of December 31,	2020	2021	2022
Intermediate scenario:			
Actuarial status (in millions)			
Assets	$133,283	$163,333	$176,047
Liabilities	32,493	39,638	40,252
Assets less liabilities	100,790	123,695	135,795
Ratio[1]	23.4%	26.3%	26.5%
Lower-range scenario:			
Actuarial status (in millions)			
Assets	$133,283	$163,333	$193,484
Liabilities	32,493	38,777	38,329
Assets less liabilities	100,790	124,556	155,155
Ratio[1]	23.8%	28.1%	33.5%
Upper-range scenario:			
Actuarial status (in millions)			
Assets	$133,283	$163,333	$160,140
Liabilities	32,493	40,645	42,003
Assets less liabilities	100,790	122,688	118,137
Ratio[1]	22.8%	24.6%	21.0%

[1]Ratio of assets less liabilities at the end of the year to the total incurred expenditures during the following year, expressed as a percent.

Figure III.C3.—Actuarial Status of the Part B Account in the SMI Trust Fund through Calendar Year 2022



Note: The Trustees measure the actuarial status of the Part B account in the SMI trust fund by the ratio of (i) assets minus liabilities at the end of the year to (ii) the following year's incurred expenditures.

Based on the test described above, the Trustees conclude that the financing established for the Part B account for calendar year 2022 is adequate to cover 2022 expected expenditures.

3. Long-Range Estimates

Section III.C2 presented the expected operations of the Part B account over the next 10 years. This section examines the long-range expenditures of the account under the intermediate assumptions. Due to its automatic financing provisions, the Trustees expect the Part B account to be adequately financed into the indefinite future and so have not conducted a long-range analysis using high-cost and low-cost assumptions.

Table III.C10 shows the estimated Part B incurred expenditures under the intermediate assumptions expressed as a percentage of GDP for selected years over the calendar-year period 2021–2096.[50] (The intermediate assumptions are discussed in sections II.C and IV.D.)

Table III.C10.—Part B Expenditures (Incurred Basis) as a Percentage of the Gross Domestic Product[1]

Calendar year	Part B expenditures as a percentage of GDP
2021	1.88%
2022	1.89
2023	1.96
2024	2.04
2025	2.13
2026	2.23
2027	2.32
2028	2.42
2029	2.51
2030	2.59
2031	2.67
2035	3.05
2040	3.29
2045	3.37
2050	3.39
2055	3.44
2060	3.51
2065	3.58
2070	3.62
2075	3.67
2080	3.68
2085	3.67
2090	3.64
2095	3.62
2096	3.62

[1]Expenditures are the sum of benefit payments and administrative expenses.

Note: Percentages are affected by economic cycles.

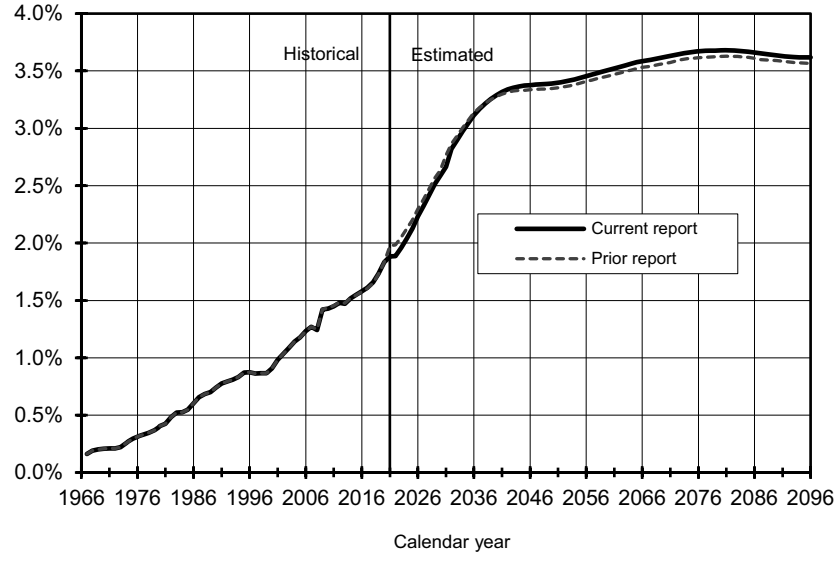
Under the intermediate assumptions, incurred Part B expenditures as a percentage of GDP increase from 1.88 percent in 2021 to 3.68 percent in 2080 before declining to 3.62 percent in 2096. (Part B expenditures

[50]These estimated incurred expenditures are for benefit payments and administrative expenses combined, unlike the values in table III.C5, which express only benefit payments on a cash basis as a percentage of GDP.

instead increase to 4.70 percent in 2096 under the illustrative alternative scenario.)

Figure III.C4 compares the year-by-year Part B expenditures as a percentage of GDP for the 2022 report with the projections from the 2021 report. Both reports show a projected leveling off of the share of Part B spending as a percentage of GDP due to legislated updates, including those for physician payments. The expenditures as a percentage of GDP in this year's report are slightly lower than last year's estimates in the near term due to somewhat higher GDP assumptions and are slightly higher than last year's estimates in the long term, with high projected spending growth for outpatient hospital services and for physician-administered drugs contributing to the difference.

Figure III.C4.—Comparison of Part B Projections as a Percentage of the Gross Domestic Product: Current versus Prior Year's Reports



Note: Percentages are affected by economic cycles.

D. PART D FINANCIAL STATUS

This section presents actual operations of the Part D account in the SMI trust fund in 2021 and Part D projections for the next 75 years. Section III.D1 discusses Part D financial results for 2021, and sections III.D2 and III.D3 discuss the short-range Part D projections and the long-range projections, respectively. The projections shown in sections III.D2 and III.D3 assume no changes will occur in the statutory provisions and regulations under which Part D currently operates.

1. Financial Operations in Calendar Year 2021

The total assets of the account amounted to approximately $10.0 billion on December 31, 2020. During calendar year 2021, total Part D expenditures were approximately $104.9 billion. General revenue was provided on an as-needed basis to cover the portion of expenditures that Medicare subsidies support. Total Part D receipts were $114.6 billion. As a result, total assets in the Part D account increased to $19.7 billion as of December 31, 2021.

Table III.D1 presents a statement of the revenue and expenditures of the Part D account of the SMI trust fund in calendar year 2021, and of its assets at the beginning and end of the calendar year.

Table III.D1—Statement of Operations of the Part D Account in the SMI Trust Fund during Calendar Year 2021
[In thousands]

Total assets of the Part D account in the trust fund, beginning of period		$10,014,014
Revenue:		
Premiums from enrollees:		
Premiums deducted from Social Security benefits	$5,185,715	
Premiums paid directly to plans[1]	11,765,564	
Total premiums		16,951,280
Government contributions:		
Prescription drug benefits	84,257,648	
Prescription drug administrative expenses	1,048,733	
Total government contributions		85,306,381
Payments from States		12,060,041
Interest on investments		59,122
DOJ/OIG/MA settlements[2]		250,858
Total revenue		$114,627,680
Expenditures:		
Part D benefit payments[1]		$104,417,532
Part D administrative expenses		531,415
Total expenditures		$104,948,947
Net addition to the trust fund		9,678,733
Total assets of the Part D account in the trust fund, end of period		$19,692,747

[1]Premiums paid directly to plans are not displayed on the Treasury statement and are estimated. These premiums have been added to the benefit payments reported on the Treasury statement to obtain an estimate of total Part D benefits. Direct data on such benefit amounts are not yet available.
[2]Reflects amounts transferred to the Part D account for settlements related to Department of Justice (DOJ) civil and criminal court cases, Office of the Inspector General (OIG) civil monetary penalties, and Medicare Advantage (MA) civil monetary penalties.

Note: Totals do not necessarily equal the sums of rounded components.

a. Revenues

The major sources of revenue for the Part D account are (i) contributions of the Federal Government authorized to be apportioned and transferred from the general fund of the Treasury; (ii) premiums paid by eligible persons who voluntarily enroll; and (iii) contributions from the States.

Of the total Part D revenue in 2021, $5.2 billion represented premium amounts withheld from Social Security benefits or other Federal benefit payments. Total premium payments, including those paid directly to Part D plans, amounted to an estimated $17.0 billion or 14.8 percent of total revenue.

In calendar year 2021, contributions received from the general fund of the Treasury amounted to $85.3 billion, which accounted for 74.4 percent of total revenue. The payments from the States were $12.1 billion.

Another source of Part D revenue is interest received on investments held by the Part D account. Since this account holds a very low amount

of assets, and only for brief periods of time, the interest on the investments of the account in calendar year 2021 was negligible. Finally, law enforcement and other settlements amounting to $251 million were attributable to the program and deposited into the Part D account.

b. Expenditures

Part D expenditures include both the costs of prescription drug benefits provided by Part D plans to enrollees and Medicare payments to retiree drug subsidy (RDS) plans on behalf of beneficiaries who obtain their primary drug coverage through such plans. Unlike Parts A and B of Medicare, the Part D account in the SMI trust fund does not directly support all Part D expenditures. In particular, enrollee premiums that are paid directly to Part D plans, and thus do not flow through the Part D account, finance a portion of these expenditures. However, these premium amounts are included in the Part D account operations (both income and expenditures) presented in this report. Total expenditures are characterized as either benefits (representing the gross cost of enrollees' prescription drug coverage plus RDS amounts) or Federal administrative expenses.

All expenses incurred by the Department of Health and Human Services, the Social Security Administration, and the Department of the Treasury in administering Part D are charged to the account. These administrative duties include making payments to Part D plans, fraud and abuse control activities, and experiments and demonstration projects designed to improve the quality, efficiency, and economy of health care services.

In addition, Congress has authorized expenditures from the trust funds for construction, rental and lease, or purchase contracts of office buildings and related facilities for use in connection with the administration of Part D. The account expenditures include such costs. However, the statement of Part D assets presented in this report does not carry the net worth of facilities and other fixed capital assets, because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and is not, therefore, pertinent in assessing the actuarial status of the funds.

Of the $104.9 billion in total Part D expenditures in 2021, $104.4 billion represented benefits, as defined above, and the remaining $0.5 billion reflected Federal administrative expenses. The Medicare direct premium subsidy payments and enrollee premiums implicitly cover administrative expenses incurred by Part D plans. The

2020 reconciliation payments, which typically would have been made by Medicare in November 2021, were postponed until January 2022 due to a deadline extension for plans to submit risk adjustment data. The postponed payments, which amounted to $8.4 billion and which were transferred from general revenue to the Part D account in December, resulted in total assets that were higher than usual as of December 31, 2021.

c. Actual experience versus prior estimates

Table III.D2 compares the actual experience in calendar year 2021 with the estimates presented in the 2020 and 2021 annual reports. A number of factors can contribute to differences between estimates and subsequent actual experience. In particular, actual values for key economic variables can differ from assumed levels, lawmakers may adopt legislative and regulatory changes after a report's preparation, and new, high-impact drugs can enter the market.

As shown in table III.D2, actual government contributions were higher than the estimates in the 2021 report for two main reasons: (i) the Trustees' projections did not reflect a policy change whereby the Part D trust fund would be expected to maintain a balance for reserving retrospective administrative expenses incurred by the Social Security Administration for its services on behalf of the Medicare program[51]; and (ii) the 2020 reconciliation amounts were higher than previously projected. Although actual government contributions were higher compared to the 2021 report, the benefit payments for calendar year 2021 were lower than projected mainly because, as mentioned previously, the reconciliation payments for calendar year 2020 were paid in January 2022 rather than in November 2021. Actual State transfers were higher than projected last year because the number of fully dual-eligible beneficiaries was higher than previously projected.

Compared to the estimates in the 2020 report, actual benefit payments for 2020 were significantly lower primarily because the reconciliation payments for calendar year 2020 were paid in January 2022. State transfers were lower than the 2020 report estimates largely because

[51]A policy was implemented to include a contingency reserve to account for variations in administrative costs. This contingency reserve consisted of roughly $1.8 billion at the end of calendar year 2021. However, due to the uncertainty regarding how these funds will be used, or if they will even be necessary, the Trustees' projections have not reflected this policy.

the legislation that temporarily increased the Federal medical assistance percentage (FMAP) was enacted after the 2020 report.

Table III.D2.—Comparison of Actual and Estimated Operations of the Part D Account in the SMI Trust Fund, Calendar Year 2021

[Dollar amounts in millions]

Item	Actual amount	Comparison of actual experience with estimates for calendar year 2021 published in: 2021 report: Estimated amount[1]	2021 report: Actual as a percentage of estimate	2020 report: Estimated amount[1]	2020 report: Actual as a percentage of estimate
Premiums from enrollees	$16,951	$17,081	99%	$17,116	99%
State transfers	12,060	11,302	107	13,402	90
Government contributions	85,306	80,493	106	86,512	99
Benefit payments	104,418	110,455	95	115,618	90

[1]Under the intermediate assumptions.

d. Assets

The Department of the Treasury invests the portion of the Part D account not needed to meet current expenditures for benefits and administration in interest-bearing obligations of the U.S. Government.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the account. The law requires that these special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market quotations as of the end of the calendar month immediately preceding the date of such issue) for all marketable interest-bearing obligations of the United States forming a part of the public debt that are not due or callable until after 4 years from the end of that month. Since the inception of the SMI trust fund, the Department of the Treasury has always invested the assets in special public-debt obligations.[52] Table V.H10, presented in section V.H, shows the assets of the SMI trust fund (Parts B and D) at the end of fiscal years 2020 and 2021.

As explained in section III.D2, the flexible apportionment of general revenues for Part D eliminates the need to maintain a contingency reserve. As a result, Part D assets are very low and are held only briefly in anticipation of immediate expenditures.

2. 10-Year Actuarial Estimates (2022–2031)

This section provides detailed information concerning the short-range financial status of the Part D account, including projected annual

[52]The Department of the Treasury may also make investments in obligations guaranteed for both principal and interest by the United States, including certain federally sponsored agency obligations.

income, outgo, differences between income and outgo, and trust fund balances. The projected future operations of the Part D account are based on the Trustees' economic and demographic assumptions, as detailed in the OASDI Trustees Report, as well as other assumptions unique to Part D. Section IV.B2 presents an explanation of the effects of the Trustees' intermediate assumptions and other assumptions unique to Part D on the estimates in this report.

Generally, the income to the Part D account includes the beneficiary premiums described previously and transfers from the general fund of the Treasury to cover each year's incurred benefit costs and other expenditures. The language that has been included in the Part D appropriation provides, without further Congressional action, resources for benefit payments under the Part D drug benefit program on an as-needed basis. The transfers from the Treasury reflect the direct premium subsidy payments, amounts of reinsurance payments, RDS amounts, low-income subsidies, net risk-sharing payments, administrative expenses, and advanced discount payments. This income requirement is reduced by the State transfers for the full-benefit dually eligible beneficiaries who were covered under Medicaid prior to the implementation of Part D.

Until 2015, actual cash transfers from the Treasury were made on the day the benefit payments to plans were due, typically the first business day of a month, causing the Part D account balance at the end of a month to include only a modest amount from the State transfers to the account after the benefit payments were made. Then in 2015 a policy was implemented to transfer amounts from the Treasury into the account 5 business days before the benefit payments to the plans, and therefore the Part D account now includes a more substantial balance at the end of most months.

The beneficiary premiums and direct subsidy rate are calculated based on the national average bid amounts and defined prior to each year's operations. The base beneficiary premium constitutes 25.5 percent of the expected total plan costs for basic Part D coverage. The actual premium a beneficiary pays is calculated as the difference between the plan bid and the national average bid, which is then applied to the base beneficiary premium. Beginning in 2011, beneficiaries with modified adjusted gross incomes exceeding a specified threshold pay income-related premiums in addition to the premiums charged by the plans in which the individuals have enrolled. The extra premiums are credited to the Part D trust fund account and reduce the financing amounts from the general fund.

The financing of the general fund is also affected by the brand-name manufacturer drug discounts. Starting in 2011, the drug manufacturers provide a 50-percent ingredient cost discount for brand-name drugs in the coverage gap that reduces beneficiary out-of-pocket expenses. Starting in 2019, the Bipartisan Budget Act of 2018 increases the brand-name drug discount in the coverage gap to 70 percent, with a corresponding decrease in plan benefits. Medicare Part D pays advanced discount payments prospectively to the non-employer Part D plans and will be reimbursed for these amounts once the plans receive the discounts from the drug manufacturers. Although the net cashflow for this arrangement is zero, the timing of the cashflow has an impact on the yearly financing amounts.

Expenditures from the account include the premiums withheld from beneficiaries' Social Security benefits and transferred to the private drug plans, the direct premium subsidy payments, reinsurance payments, RDS amounts, low-income subsidy payments, net risk-sharing payments, administrative expenses, and advanced discount payments. As noted previously, the Trustees supplement these expenditures to include the amount of enrollee premiums paid directly to Part D plans, thereby providing an estimate of total Part D benefit payments and other expenditures.

Part D expenditures on direct premium subsidy payments, RDS amounts, advanced discount payments, and administrative expenses are affected by the sequestration required by current law, which reduces benefit payments by the percentages listed below:

- 2 percent from April 1, 2013 through April 30, 2020;
- 1 percent from April 1, 2022 through June 30, 2022;
- 2 percent from July 1, 2022 through March 31, 2030;
- 2.25 percent from April 1, 2030 through September 30, 2030;
- 3 percent from October 1, 2030 through March 31, 2031; and
- 4 percent from April 1, 2031 through September 30, 2031.

Reinsurance, the low-income cost-sharing subsidy, and net risk-sharing payments are not affected by sequestration. (See section V.A for recent legislative changes affecting the sequestration of Medicare expenditures.)

Table III.D3 shows the estimated operations of the Part D account under the intermediate assumptions on a calendar-year basis through 2031.

Table III.D3.—Operations of the Part D Account in the SMI Trust Fund (Cash Basis) during Calendar Years 2004–2031

[In billions]

	Income					Expenditures			Account	
Calendar year	Premium income[1]	General revenue[2]	Transfers from States[3]	Interest and other	Total	Benefit payments[4]	Administrative expense	Total	Net change	Balance at end of year[5]
Historical data:										
2004	—	$0.4	—	—	$0.4	$0.4	—	$0.4	—	—
2005	—	1.1	—	—	1.1	1.1	—	1.1	—	—
2006	$3.5	39.2	$5.5	$0.0	48.2	47.1	$0.3	47.4	$0.8	$0.8
2007	4.1	38.8	6.9	0.0	49.7	48.8	0.9	49.7	0.0	0.8
2008	5.0	37.3	7.1	0.0	49.4	49.0	0.3	49.3	0.1	0.9
2009	6.3[6]	47.1	7.6	0.0	61.0	60.5	0.3	60.8	0.1	1.1
2010	6.5[6]	51.1	4.0	0.0	61.7	61.7	0.4	62.1	−0.4	0.7
2011	7.7	52.6	7.1	0.0	67.4	66.7	0.4	67.1	0.3	1.0
2012	8.3	50.1	8.4	0.0	66.9	66.5	0.4	66.9	0.0	1.0
2013	9.9	51.0	8.8	0.0	69.7	69.3	0.4	69.7	0.0	1.0
2014	11.4	58.1	8.7	0.0	78.2	77.7	0.4	78.1	0.1	1.1
2015	12.7[6]	68.4	8.9	0.0	90.0	89.4	0.3	89.8	0.3	1.3
2016	13.8[6]	82.4	10.0	0.0	106.2	99.5	0.5	99.9	6.3	7.6
2017	15.5	73.2	11.4	0.1	100.2	100.1	−0.1[7]	100.0	0.2	7.8
2018	15.9	67.8	11.7	0.1	95.4	94.7	0.5	95.2	0.2	8.0
2019	15.7	70.2	12.3	0.5	98.7	97.0	0.5	97.5	1.2	9.2
2020	15.8[6]	77.7	11.6	0.7	105.8	104.6	0.4	105.0	0.8	10.0
2021	17.0[6]	85.3	12.1	0.3	114.6	104.4	0.5	104.9	9.7	19.7
Intermediate estimates:										
2022	18.0	90.7	13.4	0.5	122.6	131.3	0.9	132.2	−9.7	10.0
2023	18.8	87.4	15.3	0.6	122.1	120.4	0.9	121.3	0.8	10.8
2024	20.6	93.5	18.2	0.6	133.1	131.4	1.0	132.4	0.7	11.5
2025	22.3	98.5	19.6	0.7	141.1	139.4	1.0	140.4	0.8	12.2
2026	24.3[6]	104.7	20.8	0.8	150.6	148.8	1.0	149.8	0.8	13.0
2027	25.7[6]	111.4	22.1	0.8	160.1	158.2	1.1	159.3	0.8	13.8
2028	27.8	117.7	23.6	0.9	170.0	168.0	1.1	169.1	0.9	14.7
2029	29.8	124.6	25.2	1.0	180.5	178.5	1.2	179.6	0.9	15.6
2030	32.0	131.4	26.8	1.0	191.3	189.2	1.2	190.4	0.9	16.5
2031	34.1	139.3	28.6	0.2	202.2	200.1	1.3	201.3	0.9	17.5

[1]Premiums include both amounts withheld from Social Security benefits or other Federal payments and those paid directly to Part D plans.

[2]Includes, net of transfers from States, all government transfers required to fund benefit payments, administrative expenses, and State expenses for making low-income eligibility determinations.

[3]Payments from States with respect to the Federal assumption of Medicaid responsibility for drug expenditures for full-benefit dually eligible individuals.

[4]Includes payments to Part D plans, payments to retiree drug subsidy plans, payments to States for making low-income eligibility determinations, Part D drug premiums collected from beneficiaries, and transfers to Medicare Advantage plans and private drug plans. Includes amounts for the Transitional Assistance program of $0.4, $1.0, and $0.1 billion in 2004–2006, respectively.

[5]As noted in section III.D2, a new policy was developed in 2015 under which amounts from the Treasury are transferred into the Part D account 5 business days before the benefit payments to the plans, rather than on the day the benefit payments are due—typically the first business day of a month—as had previously been the case. Accordingly, the Part D account includes a balance at the end of the previous year that is more substantial than it would have been prior to implementation of the new policy.

[6]Section 708 of the Social Security Act modifies the provisions for the payment of Social Security benefits when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Payment of those benefits normally due January 3, 2010 actually occurred on December 31, 2009, payment of benefits normally due January 3, 2016 occurred on December 31, 2015, and payment of benefits normally due January 3, 2021 occurred on December 31, 2020. Consequently, the Part D premiums withheld from these benefits were added to the Part D account on December 31, 2009 (about $0.2 billion), December 31, 2015 (about $0.2 billion), and December 31, 2020 (about $0.1 billion), respectively. Similarly, the expected payment date for those benefits normally due January 3, 2027 is December 31, 2026. Accordingly, an estimated $0.2 billion will be added to the Part D account on December 31, 2026.

[7]Reflects a larger-than-usual downward adjustment of $0.3 billion for prior-year allocations among Part A, Part B, and Part D.

Note: Totals do not necessarily equal the sums of rounded components.

Table III.D4 shows prescription drug payment amounts in the aggregate, on a per capita basis, and relative to the Gross Domestic Product (GDP). The benefit amounts are shown on a cash basis and reflect net reconciliation payments that are made to adjust for prior-year differences between prospective payments made to plans and actual prescription drug expenditures. The magnitude and timing of the reconciliation payments can cause a volatile pattern of annual growth rates. For example, the 2020 plan bid amounts were less than the actual costs experienced by the plans in 2021, resulting in year-end reconciliation payments of $8.4 billion from the Medicare program to plans. However, due to a deadline extension for plans to submit risk adjustment data, the risk score adjustments were paid in January 2022 rather than in November 2021, as normally would have been expected, and accordingly both the total and per capita benefits for 2021 decreased from 2020. This change in the timing of reconciliation payments, which is not expected to occur in future years, will, in turn, lead to substantial increases in both the total and per capita benefits for 2022.

Table III.D4.—Growth in Part D Benefits (Cash Basis) through December 31, 2031

Calendar year	Aggregate benefits [billions]	Percent change	Per capita benefits	Percent change	Part D benefits as a percentage of GDP
Historical data:					
2004	$0.4	—	$362	—	0.00%
2005	1.1	—	596	—	0.01
2006	47.1	—	1,708	—	0.34
2007	48.8	3.7%	1,556	−8.9%	0.34
2008	49.0	0.4	1,504	−3.3	0.33
2009	60.5	23.4	1,798	19.6	0.42
2010	61.7	2.0	1,775	−1.3	0.41
2011	66.7	8.1	1,868	5.3	0.43
2012	66.5	−0.4	1,776	−5.0	0.41
2013	69.3	4.2	1,772	−0.2	0.41
2014	77.7	12.1	1,919	8.3	0.44
2015	89.4	15.1	2,140	11.5	0.49
2016	99.5	11.2	2,302	7.6	0.53
2017	100.1	0.7	2,251	−2.2	0.51
2018	94.7	−5.4	2,068	−8.1	0.46
2019	97.0	2.5	2,057	−0.5	0.45
2020	104.6	7.7	2,148	4.4	0.50
2021	104.4	−0.1	2,091	−2.7	0.45
Intermediate estimates:					
2022	131.3	25.8	2,550	22.0	0.53
2023	120.4	−8.3	2,264	−11.2	0.46
2024	131.4	9.2	2,392	5.7	0.48
2025	139.4	6.0	2,464	3.0	0.49
2026	148.8	6.7	2,560	3.9	0.50
2027	158.2	6.3	2,661	3.9	0.51
2028	168.0	6.2	2,768	4.0	0.52
2029	178.5	6.2	2,884	4.2	0.53
2030	189.2	6.0	3,006	4.2	0.54
2031	200.1	5.8	3,136	4.3	0.55

Note: Percentages are affected by economic cycles.

Part D benefit payments have experienced an erratic growth pattern throughout the history of the program. Expenditures have been increasing substantially, reflecting not only rapid growth in enrollment but also multiple prescription drug cost and utilization trends that have varying effects on underlying costs. For example, while drug costs have been increasing more rapidly than other categories of medical spending, there has been a substantial increase in the proportion of prescriptions filled with low-cost generic drugs that has helped constrain cost growth and, at the same time, a significant increase in the cost of specialty drugs that has increased cost growth. Additionally, direct and indirect remuneration (DIR) has dramatically increased as a percentage of gross drug spending, a factor that has significantly slowed Part D spending growth.

In the future, the average per capita drug benefit growth rate is expected to exceed the rate of increase in other categories of medical spending. The faster projected aggregate benefit growth rate reflects three assumptions: that increases in the generic dispensing rate will likely slow, that increases in specialty drug cost growth will likely continue, and that the substantial DIR growth in recent years is expected to moderate. Over the next 10 years, aggregate benefits are projected to increase at 6.7 percent annually, on average, while the average per capita rate of growth is projected to be 4.1 percent.

Legislation and policy changes also contribute to the volatility of the annual growth rates. For example, the coverage gap gradually closed from 2012 through 2020, a factor that increased plan benefits and resulted in higher Part D expenditures and premiums. In addition, the policy to pay advanced reinsurance amounts to the employer/union-only group waiver plans, beginning in 2017, affects the timing of the reinsurance payments, which were previously provided exclusively through the reconciliation process.

The Trustees have also prepared estimates using two alternative sets of assumptions. Table III.D5 summarizes the estimated operations of the Part D account under the intermediate assumptions and under the two alternative sets of assumptions. Section IV.B2 presents the assumptions underlying the intermediate estimates in substantial detail, and it outlines the assumptions used in preparing estimates under the low-cost and high-cost alternatives.

Table III.D5.—Estimated Operations of the Part D Account in the SMI Trust Fund during Calendar Years 2021–2031, under Alternative Sets of Assumptions

[Dollar amounts in billions]

Calendar year	Premiums from enrollees	Other income[1]	Total income	Total expenditures	Balance in account at end of year	Expenditures as a percentage of GDP
Intermediate:						
2021[2]	$17.0[3]	$97.7	$114.6	$104.9	$19.7	0.46%
2022	18.0	104.6	122.6	132.2	10.0	0.53
2023	18.8	103.3	122.1	121.3	10.8	0.46
2024	20.6	112.4	133.1	132.4	11.5	0.48
2025	22.3	118.8	141.1	140.4	12.2	0.49
2026	24.3[3]	126.3	150.6	149.8	13.0	0.50
2027	25.7[3]	134.4	160.1	159.3	13.8	0.51
2028	27.8	142.2	170.0	169.1	14.7	0.53
2029	29.8	150.7	180.5	179.6	15.6	0.54
2030	32.0	159.3	191.3	190.4	16.5	0.55
2031	34.1	168.1	202.2	201.3	17.5	0.55
Low-cost:						
2021[2]	17.0[3]	97.7	114.6	104.9	19.7	0.46
2022	18.0	98.8	116.8	127.2	9.3	0.50
2023	16.9	88.8	105.6	105.2	9.7	0.39
2024	18.2	100.3	118.4	118.0	10.1	0.41
2025	19.5	104.4	123.9	123.4	10.7	0.41
2026	21.1[3]	109.1	130.2	129.7	11.2	0.41
2027	22.1[3]	114.0	136.1	135.6	11.7	0.40
2028	23.7	118.5	142.2	141.7	12.2	0.40
2029	25.3	123.3	148.6	148.0	12.8	0.40
2030	26.9	128.0	154.8	154.3	13.3	0.39
2031	28.5	132.6	161.0	160.5	13.9	0.39
High-cost:						
2021[2]	17.0[3]	97.7	114.6	104.9	19.7	0.46
2022	18.0	110.5	128.5	137.7	10.5	0.57
2023	20.1	112.5	132.6	131.4	11.7	0.54
2024	22.8	122.2	145.0	144.0	12.7	0.57
2025	25.1	131.8	156.9	155.8	13.8	0.59
2026	27.7[3]	143.3	171.0	169.8	14.9	0.63
2027	29.5[3]	155.8	185.4	184.1	16.1	0.66
2028	32.1	168.1	200.3	199.0	17.5	0.69
2029	34.8	181.7	216.5	215.1	18.9	0.73
2030	37.6	195.9	233.5	232.1	20.3	0.77
2031	40.5	211.0	251.5	250.0	21.9	0.80

[1]Other income contains Federal and State government contributions, interest, and settlement collections.
[2]Figures for 2021 represent actual experience.
[3]See footnote 6 of table III.D3.

Notes: 1. Totals do not necessarily equal the sums of rounded components.
2. Percentages are affected by economic cycles.

Because of the price assumptions for these alternative scenarios, the expenditures presented in these scenarios represent a narrow range of outcomes, and actual experience could easily fall outside of this range. For the low-cost scenario, the Trustees assume higher price inflation, which leads to higher spending. Similarly, under the high-cost scenario, the Trustees assume lower price inflation, which leads to lower spending. These price inflation assumptions partially offset the effects of the other assumptions in the high-cost and low-cost scenarios, resulting in a narrow range of expenditures. Given the considerable variation in the factors affecting health care spending, actual Part D experience could easily fall outside of this range. Because the GDP

assumptions in these scenarios are similarly affected by the price inflation assumptions, Part D expenditures as a percent of GDP provide better insight into the variability of spending than the nominal dollar amounts, as shown in table III.D5.

The alternative projections shown in table III.D5 illustrate two important aspects of the financial operations of the Part D account:

- Despite the differing assumptions underlying the three alternatives, the balance between Part D income and expenditures remains relatively stable. This result occurs because the premiums and general revenue contributions underlying the Part D financing are reestablished annually. Thus, Part D income automatically tracks Part D expenditures fairly closely, regardless of the specific economic and other conditions.

- As a result of the close matching of income and expenditures described above, together with anticipated continuing flexibility in the apportionment of general revenues, the need for a contingency reserve to handle unanticipated fluctuations is minimal.

Adequacy of Part D Financing Established for Calendar Year 2022

As noted previously, the Part D account in the SMI trust fund will be in financial balance indefinitely because the premiums paid by enrollees and the amounts apportioned from the general fund of the Treasury are determined each year so as to adequately finance Part D expenditures. Moreover, the appropriation for Part D general revenues has included an indefinite authority provision allowing for amounts to be transferred to the Part D account on an as-needed basis. This provision allows previously apportioned amounts to change without additional Congressional action if those amounts are later determined to be insufficient. Consequently, once an appropriation with this provision has been made, no deficit will occur in the Part D account, and no contingency fund will be necessary to cover deficits.[53]

As described in section III.C on the financial status of the Part B account, it is important to maintain an appropriate level of assets to cover the liability for claims that have been incurred but not yet reported or paid. In the case of Part D, however, most such claims are the responsibility of the prescription drug plans rather than the Part D program. Accordingly, the Part D account is generally not at risk for

[53]The indefinite authority applies to all Part D outlays other than Federal administrative expenses, which are specifically appropriated each year.

incurred-but-unreported claim amounts, and no asset reserve is necessary for this purpose.

Another potential Part D liability exists to the extent that Part D reinsurance payments and low-income cost-sharing subsidy payments are based on plan estimates.[54] Since actual Part D costs, as subsequently determined, will generally differ from plan bids, payment adjustments are made after the close of the year as needed to reconcile the accounts. When plan bids have been below actual costs, Medicare has made reconciliation payments to the plans from the following year's appropriated general revenues; thus, creation of a reserve for payment of such settlement amounts is not required.

For these reasons, the Trustees have concluded that maintenance of Part D account assets for contingency or liability purposes is unnecessary at this time. Accordingly, evaluation of the adequacy of Part D assets is also unnecessary, and the Part D account is considered to be in satisfactory financial condition for 2022 and all future years as a consequence of its basis for financing.

3. Long-Range Estimates

Section III.D2 presented the expected operations of the Part D account over the next 10 years. This section describes the long-range expenditures of the account under the intermediate assumptions. Due to its automatic financing provisions, the Trustees expect adequate financing of the Part D account into the indefinite future and so have not conducted a long-range analysis using high-cost and low-cost assumptions.

Table III.D6 shows the estimated Part D incurred expenditures under the intermediate assumptions expressed as a percentage of GDP, for selected years over the calendar-year period 2021–2096.[55]

[54]These estimates are subject to actuarial review by the CMS Office of the Actuary.

[55]These estimated incurred expenditures are for benefit payments and administrative expenses combined, unlike the values in table III.D4, which express only benefit payments on a cash basis as a percentage of GDP.

Table III.D6.—Part D Expenditures (Incurred Basis) as a Percentage of the Gross Domestic Product[1]

Calendar year	Part D expenditures as a percentage of GDP
2021	0.48%
2022	0.46
2023	0.47
2024	0.48
2025	0.49
2026	0.50
2027	0.51
2028	0.52
2029	0.53
2030	0.54
2031	0.55
2035	0.58
2040	0.60
2045	0.62
2050	0.64
2055	0.67
2060	0.70
2065	0.73
2070	0.75
2075	0.78
2080	0.80
2085	0.81
2090	0.82
2095	0.84
2096	0.84

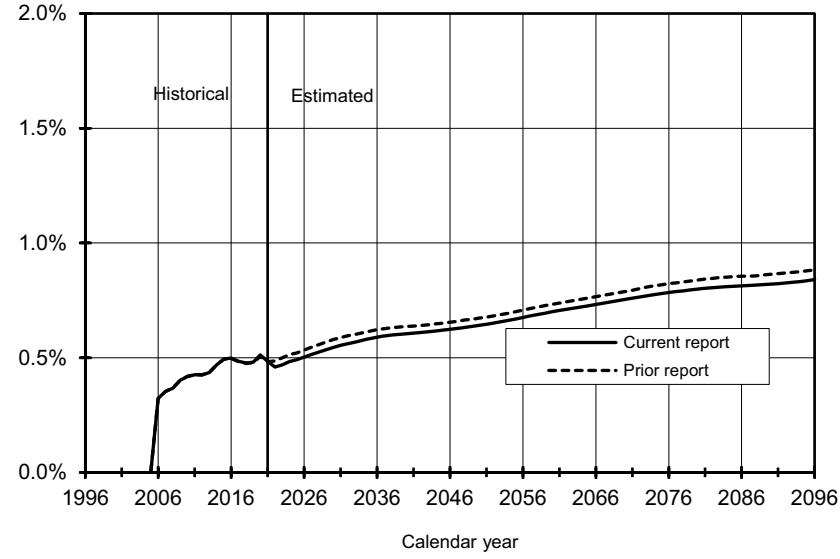
[1]Expenditures are the sum of benefit payments and administrative expenses.

Note: Percentages are affected by economic cycles.

The Trustees assume that, during the initial 25-year period, increases in Part D costs per enrollee will vary while gradually converging to the growth rates described in sections II.C and IV.D. Based on these assumptions and projected demographic changes, incurred Part D expenditures as a percentage of GDP would increase from 0.48 percent in 2021 to 0.84 percent in 2096.

Figure III.D1 compares the year-by-year Part D expenditures as a percentage of GDP for the current annual report with the corresponding projections from 2021. The expenditures as a percentage of GDP are slightly lower than last year's estimates due to (i) higher GDP assumptions and (ii) lower spending attributable to slower price growth and higher direct and indirect remuneration (DIR), which are partially offset by higher enrollment.

Figure III.D1.—Comparison of Part D Projections as a Percentage of the Gross Domestic Product: Current versus Prior Year's Reports



Note: Percentages are affected by economic cycles.

IV. ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE HOSPITAL INSURANCE AND SUPPLEMENTARY MEDICAL INSURANCE TRUST FUNDS

This section describes the basic methodology and assumptions used in the estimates for the HI and SMI trust funds under the intermediate assumptions and presents projections of HI and SMI costs under two alternative sets of assumptions.

The economic and demographic assumptions underlying the projections of HI and SMI costs shown in this report are consistent with those in the 2022 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds. That report describes these assumptions in more detail.

A. HOSPITAL INSURANCE

1. Cost Projection Methodology

The principal steps involved in projecting future HI costs are (i) establishing the present cost of services provided to beneficiaries, by type of service, to serve as a projection base; (ii) projecting increases in HI payments for inpatient hospital services; (iii) projecting increases in HI payments for skilled nursing, home health, and hospice services covered; (iv) projecting increases in payments to private health plans; and (v) projecting increases in administrative costs.

a. Projection Base

To establish a suitable base from which to project future HI costs, the incurred payments for services provided must be constructed for the most recent period for which a reliable determination can be made. Accordingly, payments to providers must be attributed to dates of service, rather than to payment dates; in addition, the nonrecurring effects of any changes in regulations, legislation, or administration, and of any items affecting only the timing and flow of payments to providers, must be eliminated. As a result, the rates of increase in the HI incurred costs differ from the increases in cash expenditures shown in the tables in section III.B.

For those expenses still reimbursed on a reasonable-cost basis, the costs for covered services are determined on the basis of provider cost reports. Due to the time required to obtain cost reports from providers, to verify these reports, and to perform audits (where appropriate), final settlements have lagged behind the original costs by as much as

several years for some providers. Additional complications arise from legislative, regulatory, and administrative changes, the effects of which cannot always be determined precisely.

The process of allocating the various types of HI payments made to the proper incurred period—using incomplete data and estimates of the impact of administrative actions—presents difficult problems, and the solutions to these problems can be only approximate. Under the circumstances, the best that one can expect is that the actual HI incurred cost for a recent period can be estimated within a few percent. This process increases the projection error directly by incorporating any error in estimating the base year into all future years.

b. Fee-for-Service Payments for Inpatient Hospital Costs

Payment for almost all inpatient hospital services for fee-for-service beneficiaries occurs under a prospective payment system. The law stipulates that the annual increase in the payment rate for each admission relate to a hospital input price index (also known as the hospital market basket), which measures the increase in prices for goods and services purchased by hospitals for use in providing care to hospital inpatients. For fiscal year 2022, the prospective payment rates have already been determined. For fiscal years 2023 and later, the statute mandates that the annual increase in the payment rate per admission equal the annual increase in the hospital input price index (for those hospitals submitting required quality measure data), minus a specified percentage. For this report, the Trustees assume that all hospitals will submit these data.

Increases in aggregate payments for inpatient hospital care covered under HI can be analyzed in five broad categories, presented in table IV.A1:

(1) Hospital input price index—the increase in prices for goods and services purchased by the hospital;

(2) Unit input intensity allowance—an amount added to or subtracted from the input price index (generally called for in legislation) to yield the prospective payment update factor;

(3) Volume of services—the increase in total output of units of service (as measured by covered HI hospital admissions);

(4) Case mix—the financial effect of changes in the average complexity of hospital admissions; and

(5) Other sources—a residual category reflecting all other factors affecting hospital cost increases (such as enacted legislative changes).

Table IV.A1 shows the estimated historical values of these principal components, as well as the projected trends used in the estimates. The impact of sequestration in April 1, 2013 through September 30, 2031, with the exception of May 1, 2020 through March 31, 2022 when it was suspended, is reflected in the table. Unless otherwise indicated, the following discussions apply to projections under the intermediate assumptions.

Table IV.A1.—Components of Historical and Projected Increases in HI Inpatient Hospital Payments[1]

Calendar year	Input price index	Unit input intensity allowance[2]	Volume of services: HI enrollment	Volume of services: Managed care shift effect	Volume of services: Admission incidence	Case mix	Other sources	HI inpatient hospital payments
Historical data:								
2012	2.9%	−1.0%	4.1%	−1.8%	−4.9%	0.7%	2.0%	1.7%
2013	2.6	−0.8	3.2	−2.2	−4.2	1.4	1.8	1.7
2014	2.6	−0.8	3.1	−2.5	−3.0	1.5	−0.7	0.1
2015	2.8	−0.7	2.7	−2.1	−0.8	0.5	−2.5	−0.2
2016	2.5	−0.8	2.7	−1.1	−1.9	3.1	−0.2	4.2
2017	2.7	−1.1	2.8	−2.2	−0.7	0.4	−1.0	0.8
2018	2.8	−1.4	2.3	−2.7	−2.0	1.8	0.4	1.1
2019	2.9	−1.3	2.5	−2.7	−2.7	1.0	1.4	1.1
2020	2.9	−0.3	2.2	−4.1	−14.6	3.8	7.5	−4.2
2021	2.5	−0.2	1.4	−5.6	0.3	2.9	−0.7	0.3
Intermediate estimates:								
2022	2.8	−0.6	1.9	−5.3	6.2	−1.0	0.4	4.2
2023	3.2	−0.5	2.5	−3.2	2.4	−1.0	0.2	3.4
2024	3.5	−0.6	2.6	−1.5	−0.4	0.5	0.3	4.4
2025	3.6	−0.6	2.4	−1.4	0.1	0.5	0.2	4.8
2026	3.4	−0.7	2.4	−1.3	0.4	0.5	0.2	4.9
2027	3.3	−0.8	2.2	−1.3	0.4	0.5	0.2	4.5
2028	3.3	−0.8	2.0	−1.2	0.1	0.5	0.2	4.2
2029	3.2	−0.9	1.9	−1.2	0.1	0.5	0.3	3.9
2030	3.3	−1.1	1.6	−1.2	0.2	0.5	−0.1	3.3
2031	3.3	−0.9	1.3	−1.2	0.4	0.5	−0.2	3.3

[1]Percent increase in year indicated over previous year, on an incurred basis.
[2]Reflects the allowances provided for in the prospective payment update factors. Also reflects (i) the downward adjustments to price updates based on the 10-year moving average of economy-wide productivity growth in 2012 and later and (ii) additional decreases in updates ranging from 0.1 percentage point to 0.75 percentage point from 2010 through 2019.

The input price index is a weighted average of the price proxies (prices of specific inputs) used in delivery of HI inpatient services. In the first 2 years of the projection period, the methodology used to determine the increases in the input price index is based on the methodology underlying the regulatory updates. Thereafter, the methodology utilizes least-squares regression models for each price proxy to project this index. The process begins by regressing the historical time series for each price proxy on one of three independent variables: average hourly compensation, GDP deflator, and CPI. The regression results

are then applied to the projected independent variables to produce projections for each detailed price proxy, which are weighted together to produce the aggregate input price index.

The unit input intensity allowance is generally a downward adjustment provided for by law in the prospective payment update factor; that is, it is the amount subtracted from the input price index to yield the update factor.[56] Beginning in fiscal year 2004, the law provides that increases in payments to prospective payment system hospitals for covered admissions will equal the increase in the hospital input price index for those hospitals that submit the required quality measure data. For other hospitals, the increase will be slightly smaller. For this report, the Trustees assume that all hospitals will submit these data. Beginning in fiscal year 2010, the law mandates amounts to be subtracted from the input price index, including the increase in economy-wide productivity in 2012 and later, and amounts ranging from 0.1 percentage point to 0.75 percentage point for 2011 through 2020. As a result of these adjustments, the unit input intensity allowance, as indicated in table IV.A1, is negative throughout the first 10-year projection period.

Increases in payments for inpatient hospital services also reflect growth in the number of inpatient hospital admissions covered under HI fee-for-service. As shown in table IV.A1, increases in admissions are attributable to growth in both HI enrollment and admission incidence (admissions per beneficiary).[57] A very large decrease in admissions occurred in 2020 due to the pandemic, and a number of these admissions are expected to return over the next few years. The historical and projected growth in enrollment reflects a more rapid increase in the population aged 65 and over than in the total population of the United States, as well as trends in the number of disabled beneficiaries and persons with end-stage renal disease. Growth in enrollment is expected to continue and to mirror the ongoing demographic shift into categories of the population eligible for HI

[56]The update factors are generally prescribed on a fiscal-year basis, while table IV.A1 is on a calendar-year basis. Calculations have therefore been performed to estimate the unit input intensity allowance on the basis of calendar years. The sum of the input price index and the unit input intensity allowance generally reflects the prescribed prospective payment update factor, but on a calendar-year, rather than a fiscal-year, basis.

[57]This factor has recently been negative and is projected to remain that way through 2028, reflecting the influx of beneficiaries aged 65 (and the resulting reduction in the average age of beneficiaries) due to the retirement of the baby boom generation. By the end of the projection period, the aging of this group is expected to increase the incidence of admissions.

benefits and reduced by an increasing proportion of beneficiaries enrolling in private health plans.

The choice of more beneficiaries to join private health plans has been an offsetting factor to the HI enrollment growth, as shown in the "Managed care shift effect" column of table IV.A1. In other words, greater enrollment in private health plans reduced the number of beneficiaries with fee-for-service Medicare coverage and thereby reduced hospital admissions paid through fee-for-service. Private Medicare health plan membership is projected to continue to grow for most of the projection period.

Since the beginning of the prospective payment system (PPS), inpatient hospital payments have varied based on the complexity of admissions. These variations are primarily due to (i) the changes in diagnosis-related group (DRG) coding as hospitals continue to adjust to the PPS and (ii) the trend toward treating less complicated (and thus less expensive) cases in outpatient settings, which results in an increase in the average prospective payment per admission.

The average complexity of hospital admissions (case mix) increased in fiscal year 2021, and it is expected to decrease in fiscal years 2022 and 2023 before increasing by 0.5 percent annually in fiscal years 2024 through 2031 as a result of an assumed continuation of the current trend toward treating less complicated cases in outpatient settings, ongoing changes in DRG coding, and the overall impact of new technology. The early years are affected by the COVID-19 pandemic.

Hospital payments are also affected by other factors, as reflected in the "Other sources" column of table IV.A1. For example, statutory budget neutrality adjustments offset costs from significant increases in case mix that occurred when the new Medicare severity diagnosis-related group (MS-DRG) system was introduced in 2008. Although the law limited the size of these adjustments in 2008 and 2009, it allows subsequent recovery of any extra payments that resulted. The "Other sources" column reflects all of these actual and anticipated effects and adjustments. In addition, one can attribute part of the increase from "other sources" to the increase in payments for certain costs, not included in the DRG payment, that are generally growing at a rate slower than the input price index. These other costs include capital, medical education (both direct and indirect), disproportionate share hospital (DSH) payments, and payments to hospitals not included in the PPS. A particularly important change affecting these costs is the reduction in Medicare DSH payments. This change reflects the major coverage expansions that began in 2014 and that continue to result in

significantly fewer uninsured hospital patients. In 2019, however, the elimination of the individual mandate increased the number of uninsured, resulting in an increase in this factor. The "Other sources" column also reflects the impact of the 20-percent add-on for COVID-19 admissions during the public health emergency.

Additional possible sources of changes in payments include (i) a shift to higher-cost or lower-cost admissions due to changes in the demographic characteristics of the covered population; (ii) changes in medical practice patterns; and (iii) adjustments in the relative payment levels for various DRGs, or addition/deletion of DRGs, in response to changes in technology.

The "Other sources" column reflects, as appropriate, the impact of certain enacted legislation, including the sequestration process. Also reflected in this column is the impact of the estimated bonus payments and penalties for hospitals due to the health information technology incentives.

The increases in the input price index (less any intensity allowance specified in the law), units of service, and other sources are compounded to calculate the total increase in payments for inpatient hospital services. The last column of table IV.A1 shows these overall increases.

c. Fee-for-Service Payments for Skilled Nursing Facility, Home Health Agency, and Hospice Services

To project fee-for-service payments for skilled nursing facilities (SNFs), a method similar to that for inpatient hospitals is used. First, the number of covered days is determined, and then the average reimbursement per day is calculated. Historically, the number of days of care covered in SNFs under HI has varied widely. This extremely volatile experience has resulted, in part, from legislative and regulatory changes and from judicial decisions affecting the scope of coverage. Since 2012, there have been significant decreases in the number of covered SNF days. The intermediate projections assume that changes in covered SNF days will continue to reflect the positive growth and aging of the population, but the underlying trend will be 0 percent in 2021 and beyond. The impacts of the pandemic are also incorporated in these projections, including the waiver of the 3-day prior-stay requirement during the public health emergency.

The methodology used to develop the market basket increases for SNFs is consistent with the methodology used to develop the hospital market

basket increases. These market basket increases are reduced by the increase in economy-wide productivity beginning in 2012. Cost per day also increases by a case mix increase. The implementation of a new RUG system caused a very large increase in case mix in 2011, and a reduction of about 12.6 percent was applied in 2012 to match payments from the prior system. Subsequently, case mix increases dropped from 2.0 percent in 2013 to 0.1 percent in 2019. In 2020, a new payment system was implemented, leading to an increase in case mix of 4.9 percent. For the projection, the case mix increases are assumed to gradually increase to a level of 1.5 percent annually by 2022. The required reduction in costs due to sequestration is also reflected in the projected expenditures. These assumed trends result in projected rates of increase in cost per day that are assumed to decline to a level slightly higher than increases in general earnings throughout the projection period.

Table IV.A2 shows the resulting increases in fee-for-service expenditures for SNF and other types of services. The sequestration impact is reflected in the table.

Table IV.A2.—Relationship between Increases in HI Expenditures and Increases in Taxable Payroll[1]

Calendar year	Inpatient hospital	Skilled nursing facility	Home health agency[2]	Hospice	Private plans	Weighted average	HI administrative costs[3]	HI expenditures[3]	HI taxable payroll	Growth rate differential[4]
Historical data:										
2012	1.7%	−9.5%	−1.4%	8.4%	8.9%	2.4%	7.9%	2.5%	4.9%	−2.2%
2013	1.7	1.6	0.0	−0.2	4.7	2.3	8.4	2.4	2.5	−0.1
2014	0.1	1.4	−1.1	0.0	−0.1	0.1	4.8	0.2	5.1	−4.7
2015	−0.2	1.9	4.3	5.2	8.1	2.8	20.8	3.1	5.0	−1.8
2016	4.2	−2.2	−1.0	6.0	7.2	4.3	−9.1	4.0	2.7	1.3
2017	0.8	−1.2	−0.5	6.5	10.6	3.8	4.2	3.9	4.6	−0.7
2018	1.1	−1.6	−0.5	7.2	9.3	3.8	4.4	3.8	4.9	−1.1
2019	1.1	−1.8	−2.1	8.3	15.3	6.0	3.0	5.9	4.6	1.3
2020	−4.2	5.2	−7.7	6.8	14.7	4.2	−18.2	3.8	1.8	1.9
2021	0.3	−2.8	−1.1	3.9	11.5	4.8	15.9	4.9	8.1	−2.9
Intermediate estimates:										
2022	4.2	−0.9	14.1	4.8	15.8	9.0	−1.4	8.8	8.3	0.5
2023	3.4	3.0	14.5	5.9	10.5	7.0	2.4	6.9	5.0	1.8
2024	4.4	6.3	8.5	7.4	9.1	7.0	5.4	7.0	4.5	2.4
2025	4.8	6.3	7.3	7.8	9.1	7.2	5.2	7.2	4.3	2.8
2026	4.9	6.5	7.2	7.9	8.8	7.2	5.1	7.1	4.2	2.8
2027	4.5	6.2	6.9	8.2	8.3	6.8	4.8	6.7	4.2	2.5
2028	4.2	6.0	6.6	8.5	7.8	6.4	4.6	6.4	4.0	2.3
2029	3.9	5.7	6.5	8.5	7.4	6.2	4.4	6.2	4.0	2.0
2030	3.3	4.8	5.5	8.1	6.5	5.4	4.1	5.4	3.9	1.4
2031	3.3	5.1	5.7	9.0	6.3	5.4	5.3	5.4	3.9	1.4

[1]Percent increase in year indicated over previous year.
[2]Includes the declining share of costs drawn from HI for coverage of certain home health services transferred from HI to SMI Part B.
[3]Includes costs of Quality Improvement Organizations.
[4]The ratio of the increase in HI costs to the increase in taxable payroll. This ratio is equivalent to the percent increase in the ratio of HI expenditures to taxable payroll (the cost rate).

A similar methodology is used to project home health agency (HHA) payments. For most historical years, HI experience with HHA payments had shown an upward trend, frequently with sharp increases in the number of visits from year to year. There were large decreases in utilization in 2012 followed by a rebound in 2013 through 2015. There were decreases again for 2016 through 2019, and then utilization dropped significantly in 2020 due to the pandemic. Beginning in 2021 and throughout the rest of the short-range projection period, utilization increases are assumed to be equal to the growth and aging of the population plus 1 percent annually, plus an additional factor to include the impact of COVID-19 (as utilization rebounds from the very low levels that occurred during the pandemic).

Reimbursement per episode of care[58] is assumed to increase at a slightly higher rate than increases in general earnings, but adjustments to reflect statutory limits on HHA reimbursement per episode are included where appropriate. As with other services, a least-squares regression model was used to develop market basket increases, which are reduced by the increase in economy-wide productivity beginning in 2015. Costs also increase by a case mix increase factor. Case mix increases have been modest, decreasing in 2011 and 2012 before rebounding in 2013 through 2020. Beginning in 2021, case mix increases are projected to grow at a rate of 1.5 percent annually. CMS adjusted HHA payment levels from 2008 through 2013 to gradually offset the financial effect of the unduly high mix of services in the first and subsequent years. HHA payment rates were rebased starting in 2014, and an estimated 14-percent reduction in payments was phased in over a 4-year period. Projected HHA costs reflect these regulatory adjustments. Table IV.A2 shows the resulting increases in fee-for-service expenditures for HHA services.

HI covers certain hospice care for terminally ill beneficiaries. Hospice payments were originally very small relative to total HI benefit payments, but they have grown rapidly in most years and now substantially exceed the level of HI home health expenditures. This growth rate is composed of two factors: (i) the price update, which is a function of the hospital market basket with an adjustment for economy-wide productivity, and (ii) a residual, which includes all other factors. This residual grew at a rate of about 5 percent annually from 2008 through 2013, became negative in 2014, and rebounded in 2015 through 2019. In 2020 and 2021, the pandemic resulted in lower growth in the residual. For 2022 and the remainder of the short-range

[58]Under the HHA prospective payment system, Medicare payments are made for each episode of care, rather than for each individual home health visit.

projection period, the residual is expected to increase at the 2008–2013 rate. Estimates for hospice benefit payment increases are based on mandated daily payment rates and annual payment caps, and these estimates assume a deceleration in the growth in the number of covered days.

d. Private Health Plan Costs

HI payments to private health plans have generally increased significantly from the time that such plans began to participate in the Medicare program in the 1970s. Most of the growth in expenditures has been attributable to the increasing numbers of beneficiaries who have enrolled in these plans. Section IV.C of this report contains a description of the private health plan assumptions and methodology.

e. Administrative Expenses

Historically, the cost of administering the HI trust fund has remained relatively small in comparison with benefit amounts. The ratio of administrative expenses to benefit payments has generally fallen within the range of 1 to 3 percent. The short-range projection of administrative cost is based on estimates of workloads and approved budgets for Medicare Administrative Contractors and CMS. In addition, due to sequestration, the administrative costs reflect an estimated 5- to 7-percent reduction for the period April 1, 2013 through September 30, 2031, with the exception of May 1, 2020 through March 31, 2022 when it was suspended. In the long range, administrative cost increases are based on assumed increases in workloads, primarily due to growth and aging of the population, and on assumed unit cost increases equal to the increases in average annual covered wages.

2. Summary of Aggregate Reimbursement Amounts on an Incurred Basis under the Intermediate Assumptions

Table IV.A3 shows aggregate historical and projected reimbursement amounts by type of service on an incurred basis under the intermediate assumptions. The sequestration impact is reflected in the table.

Table IV.A3.—Aggregate Part A Reimbursement Amounts on an Incurred Basis
[In millions]

Calendar year	Inpatient hospital	Skilled nursing facility	Home health agency	Hospice	Total FFS	Private health plans	Total Part A
Historical data:							
2012	$137,541	$28,162	$6,816	$15,168	$187,688	$70,454	$258,142
2013	139,791	28,603	6,813	15,131	190,337	73,739	264,076
2014	139,726	28,994	6,735	15,125	190,580	73,651	264,231
2015	139,424	29,556	7,027	15,918	191,926	79,628	271,553
2016	145,234	28,894	6,956	16,873	197,957	85,334	283,291
2017	146,345	28,540	6,918	17,971	199,774	94,341	294,116
2018	147,786	28,082	6,880	19,269	202,017	103,085	305,102
2019	149,798	27,586	6,738	20,868	204,989	118,858	323,847
2020	142,097	29,033	6,216	22,290	199,635	136,327	335,962
2021	142,314	28,219	6,149	23,149	199,832	152,010	351,842
Intermediate estimates:							
2022	148,204	27,966	7,018	24,271	207,458	175,975	383,433
2023	153,273	28,810	8,034	25,709	215,825	194,377	410,202
2024	160,028	30,615	8,718	27,614	226,974	212,073	439,047
2025	167,797	32,541	9,358	29,777	239,473	231,285	470,757
2026	176,048	34,672	10,033	32,125	252,877	251,734	504,611
2027	183,945	36,819	10,725	34,766	266,254	272,626	538,879
2028	191,586	39,010	11,437	37,720	279,753	293,879	573,631
2029	199,078	41,227	12,176	40,912	293,393	315,716	609,109
2030	205,562	43,223	12,850	44,228	305,864	336,122	641,986
2031	212,267	45,428	13,579	48,214	319,488	357,378	676,866

3. Financing Analysis Methodology

Because payroll taxes are the primary basis for financing the HI trust fund, HI costs can be compared on a year-by-year basis with the taxable payroll in order to analyze costs and evaluate the financing.

a. Taxable Payroll

Taxable payroll increases occur as a result of increases in both average covered earnings and the number of covered workers. The taxable payroll projection used in this report is based on the same economic assumptions used in the 2022 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds (OASDI). Table IV.A2 shows the projected increases in taxable payroll for this report, under the intermediate assumptions.

b. Relationship between HI Costs and Taxable Payroll

The most meaningful measure of HI cost increases, with regard to the financing of the system, is the relationship between cost increases and taxable payroll increases. If costs increase more rapidly than taxable payroll, either income rates must be increased or costs reduced (or some combination thereof) to finance the system in the future. Table IV.A4 shows the projected increases in HI costs relative to

taxable payroll over the 10-year projection period. For the intermediate assumption, these relative increases start at 0.5 percent per year in 2022, increase to 2.8 percent in 2025 and to 2.0 percent in 2029, and decrease to 1.4 percent in 2030 and 2031 due to the sequestration reductions. The result of these relative growth rates is a steady increase in the year-by-year ratios of HI expenditures to taxable payroll, as shown in table IV.A4. The sequestration impact is reflected in the table.

Table IV.A4.—Summary of HI Alternative Projections

	Changes in the relationship between expenditures and payroll[1]				
Calendar year	HI expenditures[2,3]	Taxable payroll	Ratio of expenditures to payroll	HI effective interest rate[4]	Nominal interest rate[4]
Intermediate estimates:					
2022	8.8%	8.3%	0.5%	2.031%	1.833%
2023	6.9	5.0	1.8	2.067	2.271
2024	7.0	4.5	2.4	2.198	2.865
2025	7.2	4.3	2.8	2.304	3.333
2026	7.1	4.2	2.8	2.348	3.719
2027	6.7	4.2	2.5	2.356	4.052
2028	6.4	4.0	2.3	4.295	4.313
2029	6.2	4.0	2.0	4.551	4.510
2030	5.4	3.9	1.4	4.678	4.625
2031	5.4	3.9	1.4	4.806	4.688
Low-cost:					
2022	6.9	9.1	−2.0	2.165	2.438
2023	5.3	7.4	−1.9	2.500	3.448
2024	6.5	6.0	0.5	2.858	3.906
2025	6.5	5.6	0.8	3.184	4.385
2026	6.4	5.6	0.8	3.559	4.781
2027	6.1	5.5	0.5	3.925	5.135
2028	5.7	5.4	0.3	4.280	5.396
2029	5.5	5.4	0.1	4.631	5.594
2030	4.7	5.3	−0.6	4.937	5.740
2031	4.8	5.3	−0.5	5.170	5.802
High-cost:					
2022	9.4	4.4	4.8	1.965	1.115
2023	6.3	0.5	5.7	1.947	1.177
2024	7.7	4.2	3.3	2.086	2.156
2025	8.7	3.8	4.7	2.642	2.646
2026	8.4	3.5	4.7	3.022	2.938
2027	7.7	3.1	4.5	3.149	3.125
2028	7.1	2.7	4.3	3.276	3.240
2029	6.8	2.7	4.0	3.403	3.427
2030	6.0	2.6	3.3	3.658	3.604
2031	6.0	2.6	3.4	3.658	3.604

[1]Percent increase for the year indicated over the previous year.
[2]On an incurred basis.
[3]Includes hospital, SNF, HHA, private health plan, and hospice expenditures; administrative costs; and costs of Quality Improvement Organizations.
[4]The Trustees calculate present values by discounting the future annual amounts of income and outgo using the projected effective rates of interest credited to the HI trust fund for the first 10 years and grade to the ultimate nominal interest rate assumption by year 15. The ultimate nominal interest rates for the intermediate, low-cost, and high-cost projections are 4.7, 5.8, and 3.6 percent, respectively.

4. Projections under Alternative Assumptions

Projected HI expenditures under current law are subject to considerable uncertainty. To illustrate this uncertainty, HI costs have been projected under three alternative sets of assumptions.

Under the low-cost alternative over the 10-year projection period, increases in HI expenditures relative to increases in taxable payroll follow a pattern similar to that for the intermediate assumption, but at a somewhat lower rate; annually, the rate for expenditures in relation to taxable payroll becomes 2.0 percent less by 2022, increases to 0.8 percent more by 2025, decreases to 0.1 percent in 2029, and decreases to 0.5 percent less in 2031 due to the sequestration reductions. Under the high-cost alternative, the ratio of expenditures to payroll increases from 4.8 percent in 2022 to 5.7 percent in 2023 and then decreases to 4.0 percent in 2029 before becoming 3.4 percent in 2031 due to the sequestration reductions, as shown in table IV.A4.

Beyond the first 25-year projection period, HI costs under the intermediate assumptions are based on the assumption that average per beneficiary expenditures (excluding demographic impacts) will increase at the baseline rates determined by the economic model described in sections II.C and IV.D less the economy-wide productivity adjustments. This rate is assumed to be about 0.1 percentage point faster than the increase in the Gross Domestic Product (GDP) per capita in 2045 but would decelerate to 0.3 percentage point slower than GDP per capita by 2096. HI expenditures, which were 3.4 percent of taxable payroll in 2021, increase to 4.9 percent by 2046 and remain at roughly 4.8 percent until 2096 under the intermediate assumptions. Accordingly, if all of the projection assumptions were realized over time, the HI income rates (4.03 percent of taxable payroll summarized over 75 years) would be inadequate to support the HI cost.

For the HI low-cost and high-cost projections, Medicare expenditures are determined by changing the assumption for the ratio of aggregate costs to taxable payroll (the cost rate). These changes are intended to provide an indication of how Medicare expenditures could vary in the future as a result of different economic, demographic, and health care trends. During the first 25-year projection period, the low-cost and high-cost alternatives contain assumptions that result in HI costs increasing, relative to taxable payroll increases, approximately 2 percentage points less rapidly and 2 percentage points more rapidly, respectively, than the results under the intermediate assumptions. Costs beyond the first 25-year projection period assume that the 2-percentage-point differential gradually decreases until 2071, when

HI cost increases relative to taxable payroll are approximately the same as under the intermediate assumptions.

Assumptions regarding income to the HI trust fund—including payroll taxes, income from the taxation of benefits, interest, and other income items—and assumptions regarding administrative costs are consistent with those underlying the OASDI report.

B. SUPPLEMENTARY MEDICAL INSURANCE

SMI consists of Part B and, since 2004, Part D. The benefits provided by each part are quite different. The actuarial methodologies used to produce the estimates for each part reflect these differences and thus appear in separate sections (IV.B1 and IV.B2).

1. Part B

a. Cost Projection Methodology

Estimates under the intermediate assumptions are calculated separately for each category of enrollee and for each type of service. The estimates are prepared by establishing the allowed charges or costs incurred per enrollee for a recent year (to serve as a projection base) and then projecting these charges through the estimation period. The per enrollee charges are then converted to reimbursement amounts by subtracting the per enrollee values of the deductible and coinsurance. Aggregate reimbursement amounts are calculated by multiplying the per enrollee reimbursement amounts by the projected enrollment. In order to estimate cash expenditures, an allowance is made for the delay between receipt of, and payment for, the service.

(1) Projection Base

To establish a suitable base from which to project the future Part B costs, the incurred payments for services provided must be constructed for the most recent period for which a reliable determination can be made. Accordingly, payments to providers must be attributed to dates of service, rather than to payment dates; in addition, the nonrecurring effects of any changes in regulations, legislation, or administration, and of any items affecting only the timing and flow of payments to providers, must be eliminated. As a result, the rates of increase in the Part B incurred cost differ from the increases in cash expenditures. As a check on the validity of the projection base, incurred reimbursement amounts are compared with cash expenditures.

(a) Practitioner Services

Private contractors acting for the Centers for Medicare & Medicaid Services (CMS) pay reimbursement amounts for services billed by practitioners, including physician services, durable medical equipment (DME), laboratory tests performed in physician offices and independent laboratories, and other services (such as physician-administered drugs, free-standing ambulatory surgical center facility services, ambulance services, and supplies). These Medicare Administrative Contractors (MACs) use CMS guidelines to determine whether Part B covers billed services, establish the allowed charges for covered services, and transmit to CMS a record of the allowed charges, the applicable deductible and coinsurance, and the amount reimbursed after reduction for coinsurance and the deductible.

(b) Institutional Services

The same MACs also pay reimbursement amounts for institutional services covered under Part B. These include outpatient hospital services, home health agency services, laboratory services performed in hospital outpatient departments, and such services as renal dialysis performed in free-standing dialysis facilities, services in outpatient rehabilitation facilities, and services in rural health clinics.

Separate payment systems exist for almost all the Part B institutional services. For these systems, the MACs determine whether Part B covers billed services, establish the allowed payment for covered services, and send to CMS a record of the allowed payment, the applicable deductible and coinsurance, and the amount reimbursed after reduction for coinsurance and the deductible.

For those services still reimbursed on a reasonable-cost basis, the costs for covered services are determined on the basis of provider cost reports. Reimbursement for these services occurs in two stages. First, bills are submitted by providers to the MACs, and interim payments are made on the basis of these bills. The second stage takes place at the close of a provider's accounting period, when a cost report is submitted and lump-sum payments or recoveries are made to correct for the difference between interim payments and final settlement amounts for providing covered services (net of coinsurance and deductible amounts). Tabulations of the bills are prepared by date of service, and the lump-sum settlements, which are reported only on a cash basis, are adjusted (using approximations) to allocate them to the time of service.

(c) Private Health Plan Services

Private health plans with contracts to provide Part B services to Medicare beneficiaries are reimbursed directly by CMS on either a reasonable-cost or capitation basis. Section IV.C of this report contains a description of the assumptions and methodology used to estimate payments to private plans.

(2) Projected Fee-for-Service Payments for Aged Enrollees and Disabled Enrollees without End-Stage Renal Disease (ESRD)

Part B enrollees with ESRD have per enrollee costs that are substantially higher and quite different in nature from those of most other beneficiaries. Accordingly, the analysis in this section excludes their Part B costs. Those costs, as well as costs associated with beneficiaries enrolled in private health plans, are discussed later in this section.

(a) Practitioner Services

i. Physician Services

Medicare payments for physician services are based on a fee schedule, which reflects the relative level of resources required for each service. The fee schedule amount is equal to the product of the procedure's relative value, a conversion factor, and a geographic adjustment factor. Payments are based on the lower of the actual charge and the fee schedule amount.

The physician fee schedule updates are specified by law for every future year. Prior to enactment of the Consolidated Appropriations Act, 2021 and the Protecting Medicare and American Farmers from Sequester Cuts Act, the update for 2021 through 2025 was statutorily set at 0 percent. Together these laws put in place a 3.75-percent update for 2021, an update of −0.7 percent for 2022, and an update of −2.91 percent for 2023. For 2024 and 2025, the updates continue to be 0 percent. Starting in 2026, the annual update for qualified physicians in advanced alternative payment models (advanced APMs) will be 0.75 percent, and, for all other physicians, the update each year will be 0.25 percent.

Per capita physician charges have also changed each year as a result of a number of other factors besides fee increases, including more physician visits and related services per enrollee, the demographic changes of the Medicare population, greater use of specialists and more expensive techniques, and certain administrative actions.

Table IV.B1 shows increases in total allowed charges per fee-for-service enrollee for the physician fee schedule and practitioner services. The sequestration of Medicare benefits in April 1, 2013 through September 30, 2031, with the exception of May 1, 2020 through March 31, 2022 when it was suspended, does not affect allowed charges and therefore is not reflected in table IV.B1; rather, that impact is included in table IV.B2.

Table IV.B1.—Increases in Total Allowed Charges per Fee-for-Service Enrollee for Practitioner Services

[In percent]

Calendar year	Physician fee schedule	DME	Lab	Physician-administered drugs	Other
Aged:					
2012	−0.4%	0.7%	6.6%	2.0%	5.9%
2013	0.1	−10.3	0.4	7.2	−2.2
2014	1.0	−14.5	6.7	5.8	−0.1
2015	−0.7	5.7	−2.7	14.2	0.8
2016	−0.7	−7.5	−5.7	9.1	−0.4
2017	1.2	−5.6	3.9	6.7	4.3
2018	1.6	17.8[1]	11.3[2,3]	12.1	2.2
2019	4.1[4]	7.3	4.6	11.2	2.4
2020	−11.3	2.4	8.6	4.2	−0.4
2021	17.8	2.9	16.6	11.9	4.9
2022	3.1	8.4	−2.2	16.6	4.6
2023	0.5	6.3	2.2	7.1	4.4
2024	2.3	5.8	1.5	9.2	3.9
2025	1.5	5.4	5.0	7.3	4.0
2026	3.3	5.3	24.2	7.6	4.0
2027	3.2	5.0	5.1	7.8	4.2
2028	2.9	4.8	5.1	7.7	4.0
2029	2.9	4.8	12.8	7.9	4.0
2030	3.0	4.8	5.2	8.1	4.3
2031	3.1	4.7	5.3	8.2	4.0
Disabled (excluding ESRD):					
2012	0.7	1.0	24.3	2.4	2.1
2013	1.1	−9.5	10.1	0.7	1.3
2014	2.1	−11.3	12.6	6.7	1.8
2015	−0.6	6.0	5.6	8.4	4.8
2016	−0.7	−6.3	−23.0	10.4	0.0
2017	−0.8	0.5	−2.1	4.0	8.6
2018	1.8	15.9[1]	6.3[2,3]	10.4	4.3
2019	3.1[4]	3.0	8.1	9.2	3.3
2020	−8.6	−0.8	−7.2	9.1	8.4
2021	14.0	1.9	17.7	17.2	2.7
2022	4.1	9.7	−1.3	17.5	6.3
2023	0.5	6.3	1.9	7.1	4.6
2024	1.7	5.2	0.9	8.6	3.4
2025	1.8	5.7	5.3	7.5	4.3
2026	3.3	5.4	24.2	7.6	4.0
2027	3.1	5.1	5.0	7.6	3.9
2028	2.8	4.9	5.0	7.7	3.9
2029	3.0	5.1	13.0	8.0	4.1
2030	2.6	4.6	4.8	7.7	3.6
2031	2.9	4.7	5.1	8.0	3.8

[1]Reflects a significant increase in the utilization of certain orthotic braces beginning in 2018. This allegedly fraudulent utilization was stopped early in 2019.

[2]Beginning in 2018, payments under the laboratory fee schedule no longer include an adjustment for economy-wide productivity. Instead, payments reflect a survey of private sector lab payments and are updated every 3 years.

[3]Reflects a significant increase in the utilization of genetic cancer testing services in 2018 and 2019. This allegedly fraudulent utilization was stopped late in 2019.
[4]For 2019–2024, qualified physicians in an advanced APM will receive an incentive payment amounting to 5 percent of their Medicare payments for the year. For those same years, a total of $500 million is available for additional payment adjustment under the merit-based incentive payment system (MIPS) for certain high-performing physicians.

Based on the increases in table IV.B1, and incorporating the sequestration of Medicare expenditures, table IV.B2 shows the estimates of the average incurred reimbursement for practitioner services per fee-for-service enrollee.

Table IV.B2.—Incurred Reimbursement Amounts per Fee-for-Service Enrollee for Practitioner Services

Calendar year	Fee-for-service enrollment [millions]	Physician fee schedule	DME	Lab	Physician-administered drugs	Other
Aged:						
2012	26.900	$2,155.27	$223.55	$149.67	$301.96	$284.67
2013	27.108	2,124.63	197.49	147.92	319.07	274.10
2014	27.224	2,145.78	168.75	157.11	336.93	272.64
2015	27.441	2,123.67	178.52	152.86	389.74	275.57
2016	27.987	2,090.92	164.46	144.10	423.17	274.26
2017	28.057	2,103.28	155.13	149.78	450.72	286.28
2018	28.103	2,137.63	183.36	166.82	505.30	292.40
2019	28.197	2,244.50	196.72	174.47	561.09	298.78
2020	27.836	2,011.20	203.92	189.50	592.11	302.24
2021	26.963	2,401.63	210.90	222.00	664.67	318.40
2022	26.103	2,432.08	225.16	217.78	765.17	328.21
2023	26.061	2,428.47	237.94	220.67	815.40	340.71
2024	26.462	2,485.99	251.84	223.94	891.65	354.03
2025	26.924	2,510.53	265.18	235.24	956.56	367.89
2026	27.399	2,586.75	279.05	292.17	1,028.84	382.21
2027	27.805	2,663.71	292.77	307.11	1,108.88	397.88
2028	28.186	2,736.40	306.64	322.69	1,195.15	413.45
2029	28.528	2,811.82	321.23	364.15	1,289.71	429.70
2030	28.776	2,879.04	335.39	381.56	1,388.59	446.31
2031	28.919	2,951.64	349.75	400.01	1,498.37	462.46
Disabled (excluding ESRD):						
2012	5.779	1,770.01	366.28	200.28	278.87	259.45
2013	5.790	1,763.81	326.89	217.17	276.38	258.59
2014	5.732	1,821.85	289.30	243.29	294.65	261.94
2015	5.610	1,804.37	306.87	256.88	320.48	274.57
2016	5.504	1,775.41	286.33	197.72	353.72	274.42
2017	5.362	1,747.90	287.76	193.54	367.25	302.65
2018	5.029	1,778.13	333.49	205.61	404.32	315.10
2019	4.668	1,846.52	343.03	222.53	440.46	324.57
2020	4.203	1,708.10	344.51	206.62	485.75	360.26
2021	3.699	1,976.06	351.94	244.23	575.18	375.03
2022	3.133	2,020.33	371.61	242.02	667.41	393.11
2023	2.848	2,018.73	392.84	244.57	710.44	408.60
2024	2.733	2,055.26	413.60	246.70	772.27	422.51
2025	2.555	2,080.47	436.86	259.79	830.33	440.43
2026	2.382	2,144.18	460.10	322.73	893.39	457.92
2027	2.227	2,204.42	483.09	338.71	961.54	475.42
2028	2.079	2,262.82	506.67	355.66	1,035.66	493.69
2029	1.940	2,327.80	532.26	401.72	1,118.90	513.75
2030	1.846	2,375.83	554.75	419.50	1,201.04	530.17
2031	1.774	2,432.80	578.68	438.69	1,292.80	548.82

Starting in 2019, qualified physicians who are part of an advanced APM receive payments that are different from those received by other physicians. For 2019 through 2024, qualified physicians in an advanced APM will receive an annual incentive payment equal to 5 percent of their Medicare payments. Most physicians who are not qualified physicians in an advanced APM will instead be under the merit-based incentive payment system (MIPS) and will receive a payment adjustment according to their performance. The performance adjustment ranges from −9 percent to 0 percent in 2022, and it could range from −9 percent to 27 percent for 2023 and later. For 2020 through 2024, MIPS physicians could receive an additional payment adjustment for high performance. For 2022, the largest additional payment adjustment for a physician is 1.86 percent. For 2023 and 2024, it could be as much as 10 percent. The total of all additional payment adjustments made to MIPS physicians in a year must not exceed $500 million. For 2026 and later, qualified physicians in an advanced APM will receive an update of 0.75 percent while other physicians will receive a 0.25-percent update. Based on these payment mechanisms, the existing demonstration and payment models, and the requirements for becoming an advanced APM qualified physician, the Trustees assume that physician participation in advanced APMs will grow from 13.5 percent of spending in 2020 to 100 percent by 2065.

ii. Durable Medical Equipment (DME), Laboratory, Physician-Administered Drugs, and Other Practitioner Services

Unique fee schedules or reimbursement mechanisms have been established not only for physician services but also for virtually all other non-physician practitioner services. Table IV.B1 shows the increases in the allowed charges per fee-for-service enrollee for DME, laboratory services, and other services. As noted previously, allowed charges are not affected by the sequestration of Medicare expenditures. Based on the increases in table IV.B1, table IV.B2 shows the corresponding estimates of the average incurred reimbursement amounts for these services per fee-for-service enrollee; these amounts are affected by the sequestration.

Prior to 2011, DME items and laboratory services were updated by increases in the CPI, together with any applicable legislated limits on payment updates. Beginning in 2011, these items and services were updated by the increase in the CPI minus the increase in the 10-year moving average of economy-wide productivity.

Actuarial Methodology

A competitive-bidding program was implemented in 2011 to determine Medicare payment for a certain portion of DME items, and as a result this portion is no longer statutorily updated by the CPI or affected by the annual productivity adjustments. Round 1 of the competitive-bidding program was implemented on January 1, 2011 in nine metropolitan statistical areas (MSAs), and it lowered total DME spending by less than 2 percent. Round 2, which included both an expansion to 91 additional MSAs and the implementation of a national mail-order program for diabetic supplies, was effective on July 1, 2013 and lowered total DME spending by about 20 percent. The spending was lowered by an additional 4 percent by January 1, 2017, when national pricing for these services was fully implemented. CPI growth is used as a proxy for the updates for these items in the projections. The non-competitive-bidding portion of DME items continues to be updated by the increase in the CPI minus the increase in economy-wide productivity.

Beginning in 2018, Medicare payments for laboratory services are linked to private payment rates, and consequently these services are no longer updated by the CPI minus the productivity adjustments.[59] For laboratory services, as is the case with DME services, growth in the CPI is used as a proxy for updating the private payment rates, a process that occurs roughly every 3 years.

For DME and laboratory services, spending growth from 2018 to 2019 was driven by volume increases for orthotic braces and genetic cancer testing. The majority of the increase in spending is thought to have been for fraudulent services billed through various telemarketing schemes. In response to the high utilization growth, CMS took administrative actions against the providers and medical professionals involved in the alleged fraud. As a result, spending for these services decreased during the second half of 2019. COVID-19 tests have been a significant source of laboratory services costs during the pandemic.

Medicare pays average sales price plus 6 percent for most physician-administered drugs. Most of the COVID-19 vaccine costs (excluding the cost of administering the vaccine) are included in the physician-administered drug category.

Per capita charges for these expenditure categories have also grown as a result of other factors, including increased number of items and services provided, demographic change, more expensive items and

[59]Under the Protecting Access to Medicare Act of 2014, these changes were to be effective in 2017; however, CMS delayed implementation until 2018. These changes also apply to outpatient hospital laboratory services.

services, and certain administrative actions. This expenditure growth is projected based on recent past trends in growth per enrollee.

(b) Institutional Services

Over the years, legislation has established new payment systems for virtually all Part B institutional services, including a fee schedule for tests performed in laboratories in hospital outpatient departments. A prospective payment system (PPS) was implemented on August 1, 2000 for services performed in the outpatient department of a hospital. Similarly, a PPS for home health agency services was implemented on October 1, 2000. Table IV.B3 shows the historical and projected increases in charges and costs per fee-for-service enrollee for institutional services, excluding the impact of sequestration.

Table IV.B3.—Increases in Costs per Fee-for-Service Enrollee for Institutional Services

[In percent]

Calendar year	Outpatient hospital	Home health agency	Outpatient lab	Other
Aged:				
2012	7.2%	−3.7%	3.9%	5.4%
2013	7.2	−1.3	−0.8	−0.9
2014	12.6[1]	−0.5	−29.1[1]	4.5
2015	7.4	1.2	2.3	5.0
2016	5.2	−0.9	3.0	2.4
2017	7.4	−1.9	1.1	4.7
2018	8.4	1.5	−1.0[2]	7.5
2019	5.4	0.7	−3.5	5.7
2020	−6.3	−2.2	10.7	−5.3
2021	20.1	3.1	10.6	8.5
2022	13.4	18.8	−5.6	8.4
2023	8.9	15.4	−1.5	2.6
2024	8.3	7.4	−0.4	4.3
2025	8.2	6.1	3.0	8.8
2026	8.0	6.0	14.1	5.0
2027	7.8	5.9	2.9	5.1
2028	7.7	5.7	2.9	5.1
2029	7.6	5.6	7.5	5.1
2030	7.6	5.0	3.0	5.0
2031	7.8	5.4	3.1	5.1
Disabled (excluding ESRD):				
2012	7.4	−3.5	4.3	8.4
2013	6.5	−1.4	−1.9	1.6
2014	14.8[1]	−1.3	−36.0[1]	7.4
2015	7.0	−1.5	0.2	9.1
2016	4.8	−3.5	3.1	6.0
2017	4.8	−3.4	−1.7	6.6
2018	7.2	3.2	1.1[2]	7.4
2019	4.3	1.4	−1.8	9.8
2020	−8.1	10.7	9.7	−2.2
2021	14.0	5.4	13.8	12.2
2022	15.1	23.8	−4.7	13.6
2023	9.2	16.8	−1.7	4.2
2024	7.9	7.4	−1.0	4.9
2025	8.6	7.6	3.3	7.0
2026	8.3	7.2	14.2	5.7
2027	7.9	6.7	2.9	5.6
2028	8.0	6.6	3.0	5.7
2029	8.0	6.8	7.7	5.8
2030	7.6	5.4	2.8	5.4
2031	8.0	5.7	3.1	5.7

[1]Effective January 1, 2014, a large portion of outpatient laboratory services were bundled into the outpatient prospective payment system.
[2]See footnote 2 of table IV.B1.

Based on the increases in table IV.B3, table IV.B4 shows the estimates of the incurred reimbursement for the various institutional services per fee-for-service enrollee. Each of these expenditure categories is projected on the basis of recent trends in growth per enrollee, along with applicable legislated limits on payment updates. The sequestration impact is reflected in the table.

Table IV.B4.—Incurred Reimbursement Amounts per Fee-for-Service Enrollee for Institutional Services

Calendar year	Fee-for-service enrollment [millions]	Outpatient hospital	Home health agency	Outpatient lab	Other
Aged:					
2012	26.900	$971.82	$358.97	$116.30	$439.20
2013	27.108	1,034.14	354.28	113.61	426.74
2014	27.224	1,178.90[1]	352.51	80.18[1]	442.89
2015	27.441	1,283.37	356.66	82.05	463.90
2016	27.987	1,350.88	353.53	84.54	471.41
2017	28.057	1,460.01	346.88	85.45	490.89
2018	28.103	1,584.72	352.13	84.58	527.30
2019	28.197	1,682.75	354.52	81.63	555.64
2020	27.836	1,612.98	346.59	91.69	533.24
2021	26.963	1,962.85	357.31	101.96	578.84
2022	26.103	2,197.70	424.62	95.09	616.47
2023	26.061	2,380.17	490.17	92.94	626.42
2024	26.462	2,582.54	526.55	92.56	652.37
2025	26.924	2,797.05	558.72	95.31	711.67
2026	27.399	3,025.44	592.05	108.78	746.30
2027	27.805	3,263.75	626.86	111.96	783.52
2028	28.186	3,520.95	662.62	115.20	822.71
2029	28.528	3,792.25	699.96	123.79	863.72
2030	28.776	4,070.25	734.63	127.06	902.93
2031	28.919	4,376.93	774.48	130.41	944.22
Disabled (excluding ESRD):					
2012	5.779	1,157.92	271.78	141.83	286.49
2013	5.790	1,224.96	268.11	137.03	284.41
2014	5.732	1,416.76[1]	264.54	87.30[1]	304.06
2015	5.610	1,534.11	260.58	87.45	332.32
2016	5.504	1,621.39	251.39	90.13	349.59
2017	5.362	1,711.26	242.94	88.61	372.52
2018	5.029	1,839.64	250.70	89.61	399.49
2019	4.668	1,923.82	254.19	88.00	439.42
2020	4.203	1,817.98	281.44	97.98	437.43
2021	3.699	2,096.99	296.51	112.10	495.35
2022	3.133	2,391.44	367.16	105.60	555.35
2023	2.848	2,597.81	428.79	102.91	574.35
2024	2.733	2,808.08	460.63	101.92	602.25
2025	2.555	3,053.41	495.45	105.26	644.46
2026	2.382	3,310.17	530.92	120.20	680.72
2027	2.227	3,577.64	566.42	123.72	718.46
2028	2.079	3,870.10	603.59	127.42	758.86
2029	1.940	4,186.85	644.51	137.22	802.65
2030	1.846	4,494.28	679.29	140.53	842.48
2031	1.774	4,844.87	717.89	144.13	886.38

[1]See footnote 1 of table IV.B3.

(3) Projected Fee-for-Service Payments for Persons with End-Stage Renal Disease (ESRD)

Most persons with ESRD are eligible to enroll for Part B coverage. For analytical purposes, this section includes two groups of enrollees: (i) those who qualify for Medicare due to ESRD alone and (ii) those who qualify not only because they have ESRD but also because they are disabled. Enrollees in this latter group, who are eligible as Disability Insurance beneficiaries, are included in this section because their per enrollee costs are both higher and different in nature from those of

most other disabled persons. Specifically, most of the Part B reimbursements for both groups are related to kidney transplants and renal dialysis.

The estimates under the intermediate assumptions reflect the payment mechanism for reimbursing ESRD services. Payment for dialysis services occurs through a bundled payment system, which began in 2011. The bundled payment rate is updated annually by an annual ESRD market basket less the increase in economy-wide productivity. Starting in 2021, eligible individuals with ESRD may enroll in a Medicare private health plan to obtain their Part A and Part B coverage. Table IV.B5 shows the historical and projected enrollment and costs for Part B benefits. The sequestration impact is reflected in the table.

Table IV.B5.—Fee-for-Service Enrollment and Incurred Reimbursement for Beneficiaries under Age 65 with End-Stage Renal Disease[1]

	Average enrollment [thousands]		Reimbursement [millions]	
Calendar year	Disabled	Non-disabled	Disabled	Non-disabled
2012	146	63	$6,096	$2,093
2013	142	69	5,966	2,302
2014	133	80	5,818	2,536
2015	125	87	5,548	2,702
2016	130	82	5,792	2,561
2017	130	81	5,851	2,548
2018	129	82	6,351	2,748
2019	126	83	6,387	2,812
2020	120	82	6,054	2,763
2021	97	66	5,192	2,530
2022	79	61	4,409	2,376
2023	74	59	4,235	2,359
2024	72	57	4,256	2,396
2025	69	56	4,657	2,695
2026	67	55	4,690	2,763
2027	65	54	4,744	2,830
2028	63	54	4,799	2,903
2029	62	53	4,864	2,985
2030	61	53	4,943	3,053
2031	60	52	5,056	3,130

[1]The historical enrollment and reimbursement amounts for 2011 and later were revised to reflect a correction to the methodology used to categorize beneficiaries with ESRD in the Medicare claim systems. This revision results in an inconsistency with the amounts prior to 2011.

(4) Projected Payments for Persons with Immunosuppressive Drug Coverage Only

The Consolidated Appropriations Act, 2021 specifies that, beginning in 2023, Part B will provide coverage of immunosuppressive drug costs for individuals who previously were covered by Medicare Part B due to having permanent kidney failure and who received a kidney transplant that functioned for 3 years, resulting in a loss of Part B coverage. These individuals will pay a premium that is 15 percent of twice the aged actuarial rate instead of the standard Part B premium (which is

25 percent of twice the aged actuarial rate plus a repayment amount, if applicable). Transfers from the general fund of the Treasury will be made to Part B to make up the difference between the immunosuppressive drug premium and the standard Part B premium. (These transfers will be treated as premium income for general revenue matching purposes.) In 2023, an estimated 2,000 immunosuppressive drug coverage enrollees are estimated to have roughly $5 million in Part B benefits.

(5) Private Health Plan Costs

Part B payments to private health plans have generally increased significantly from the time that such plans began to participate in the Medicare program in the 1970s. Most of the growth in expenditures has been due to the increasing numbers of beneficiaries who have enrolled in these plans. Section IV.C of this report contains a description of the assumptions and methodology for the private health plans that provide coverage of Part B services for certain enrollees.

(6) Administrative Expenses

The ratio of Part B administrative expenses to total expenditures was 1.2 percent in 2021. Projections of administrative costs are based on estimates of changes in average annual wages, fee-for-service enrollment, and an estimated 5- to 7-percent reduction in expenditures due to sequestration for the period April 1, 2013 through September 30, 2031, with the exception of May 1, 2020 through March 31, 2022 when it was suspended.

b. Summary of Aggregate Reimbursement Amounts on an Incurred Basis under the Intermediate Assumptions

Table IV.B6 shows aggregate historical and projected reimbursement amounts by type of service on an incurred basis under the intermediate assumptions.

Table IV.B6.—Aggregate Part B Reimbursement Amounts on an Incurred Basis

[In millions]

	Practitioner						Institutional							
Calendar year	Physician fee schedule	DME	Lab	Physician-administered drugs	Other	Total	Hospital	Lab	Home health agency	Other	Total	Total FFS	Private health plans	Total Part B
Historical data:														
2012	$69,941	$8,290	$5,234	$9,911	$9,523	$102,900	$33,650	$4,031	$11,360	$18,140	$67,182	$170,081	$66,114	$236,195
2013	69,536	7,382	5,315	10,417	9,296	101,945	35,964	3,953	11,288	17,984	69,189	171,134	73,386	244,521
2014	70,639	6,371	5,722	11,026	9,280	103,038	41,087	2,728	11,243	18,639	73,697	176,735	85,639	262,374
2015	70,150	6,744	5,686	12,658	9,412	104,650	44,712	2,789	11,375	19,384	78,260	182,910	95,079	277,989
2016	70,032	6,298	5,167	13,951	9,483	104,931	47,644	2,911	11,396	20,024	81,976	186,907	103,616	290,523
2017	70,061	6,016	5,290	14,782	9,964	106,113	51,126	2,923	11,149	20,694	85,892	192,005	114,967	306,971
2018	70,688	6,965	5,791	16,425	10,126	109,994	54,818	2,882	11,271	22,334	91,305	201,299	132,934	334,233
2019	73,604	7,292	6,047	18,077	10,279	115,298	57,443	2,767	11,297	23,264	94,771	210,069	154,498	364,567
2020	64,773	7,268	6,258	18,729	10,278	107,304	53,490	3,025	10,957	21,935	89,408	196,712	180,673	377,386
2021	73,636	7,108	7,001	20,239	10,274	118,258	61,661	3,223	10,837	21,722	97,444	215,702	208,946	424,648
Intermediate estimates:														
2022	71,160	7,148	6,535	22,249	10,061	117,153	65,763	2,860	12,343	21,563	102,528	219,681	243,821	463,502
2023	70,313	7,426	6,537	23,461	10,302	118,038	70,358	2,759	14,115	21,548	108,779	226,817	278,731	505,548
2024	72,670	7,904	6,688	25,904	10,785	123,951	76,992	2,770	15,316	22,491	117,570	241,520	308,806	550,326
2025	74,155	8,367	7,087	28,083	11,294	128,986	84,134	2,877	16,436	25,049	128,496	257,482	341,345	598,827
2026	77,233	8,856	8,882	30,534	11,829	137,335	91,856	3,314	17,617	26,315	139,103	276,437	378,875	655,312
2027	80,233	9,333	9,405	33,201	12,392	144,564	99,848	3,436	18,825	27,656	149,766	294,330	416,318	710,648
2028	83,101	9,816	9,949	36,080	12,955	151,901	108,482	3,560	20,070	29,066	161,177	313,078	456,067	769,144
2029	86,011	10,320	11,295	39,218	13,535	160,379	117,569	3,848	21,361	30,529	173,307	333,686	500,113	833,799
2030	88,524	10,802	11,885	42,445	14,107	167,762	126,750	3,967	22,540	31,900	185,157	352,919	540,537	893,456
2031	90,983	11,272	12,481	45,912	14,639	175,288	136,581	4,079	23,822	33,296	197,777	373,064	585,252	958,316

The estimated Medicare costs for the COVID-19 vaccines and their administration are included in the "Physician-administered drugs" category, the "Hospital" category, and "Physician fee schedule" category of tables IV.B2 and IV.B6. Based on the Trustees' assessment of statements from pharmaceutical companies, historical price patterns, and statements from market analysts, the 2022 price of the vaccine is estimated to be approximately $60, and the 2022 cost for the vaccine administration is estimated to be $40.

Roughly 57 percent of the Medicare population is expected to receive the COVID-19 vaccine in 2022. The annual vaccination rate is expected to decrease somewhat over time, reflecting both the possibility that immunity will last longer than a year and the possibility that the prevalence or the seriousness of COVID-19 will decrease. On average, those vaccinated are estimated to receive 1.3 doses in 2022. The number of doses per persons receiving a vaccine in a year is estimated to decrease over time to 1.1 due to the expectations that single-dose vaccines may become more likely and that only one dose will be required for a booster shot. It should be noted that there is an unusually large degree of uncertainty with this estimate and that the projection could change significantly as more information becomes available.

c. Projections under Alternative Assumptions

Projections of Part B cash expenditures under the low-cost and high-cost alternatives were developed by modifying the growth rates estimated under the intermediate assumptions. Beginning in calendar year 2022, the low-cost and high-cost alternatives contain assumptions that result in benefits increasing, relative to the Gross Domestic Product (GDP), 2 percent less rapidly and 2 percent more rapidly, respectively, than the results under the intermediate assumptions. Administrative expenses under the low-cost and high-cost alternatives are projected on the basis of their respective wage series growth.

2. Part D

Part D is a voluntary Medicare prescription drug benefit that offers beneficiaries a choice of private drug insurance plans. Low-income beneficiaries can receive additional assistance on the cost sharing and premiums. Each year drug plan sponsors submit bids that include estimated total plan costs, reinsurance payments, and low-income cost-sharing subsidies for the coming year. Upon approval of these bids, a national average bid amount is calculated, and the result is used to determine the base beneficiary premium. The individual plan premium

is calculated as the difference between the plan bid and the national average bid, which is then applied to the base beneficiary premium.

Each drug plan receives monthly risk-adjusted direct subsidies, prospective reinsurance payments, and prospective low-income cost-sharing subsidies from Medicare, as well as premiums from the beneficiaries and premium subsidies from Medicare on behalf of low-income enrollees. At the end of the year, the prospective reinsurance and low-income cost-sharing subsidy payments are reconciled to match the plan's actual experience. During the annual reconciliation process, if actual experience differs from the plan's bid beyond specified risk corridors, Medicare shares in the plan's gain or loss.

Expenditures for this voluntary prescription drug benefit were determined by combining estimated Part D enrollment with projections of per capita spending. Estimates of Part D spending categories for 2021 were used as the base experience and were supplemented with information included in Part D plan 2022 bids. In addition, Medicare pays special subsidies on behalf of beneficiaries retaining primary drug coverage through retiree drug subsidy (RDS) plans.

General revenues primarily finance the various Medicare drug subsidies. Since Medicaid is no longer the primary payer of drug costs for full-benefit dually eligible beneficiaries, States are subject to a contribution requirement and must pay the Part D account in the SMI trust fund a portion of their estimated forgone drug costs for this population. From 2006 through 2015, the percentage of estimated costs paid by States was phased down from 90 percent to 75 percent.

Beneficiaries can choose to have their drug insurance premiums withheld from their Social Security benefits and then forwarded to the drug plans on their behalf.[60] In 2021, around 22 percent of the non-low-income enrollees in Part D drug plans exercised this option.

a. Participation Rates

All individuals entitled to Medicare Part A or enrolled in Part B are eligible to enroll in the voluntary prescription drug benefit.

[60]The Part D income-related premium adjustment amount for each beneficiary is deposited into the Part D account.

(1) Employer-Sponsored Plans

There are two ways that employer-sponsored plans can benefit from the Part D program. One way is the retiree drug subsidy (RDS), in which, for qualifying employer-sponsored plans, Medicare subsidizes a portion of their qualifying retiree drug expenses. As a result of tax deduction changes, RDS program participation has declined significantly since 2012 and is assumed to decline further over the next several years. The Trustees expect that most of the retirees losing drug coverage through RDS plans will participate in other Part D plans.

The other way that an employer-sponsored plan can benefit from Part D is to enroll in an employer/union-only group waiver plan (EGWP) by either wrapping around an existing Part D plan or becoming a prescription drug plan itself. The subsidies for these types of arrangements are generally calculated in the same way as for other Part D plans. The Trustees expect that such plans will offer additional benefits beyond the standard Part D benefit package. From 2012 through 2014, EGWP enrollment increased significantly coinciding with the decrease in RDS coverage. Since 2014, steady participation increases in EGWPs have returned, but, due to some plan terminations, the participation rate is slightly lower than for the total Part D program. The vast majority of the enrollment increases have occurred in Medicare Advantage Prescription Drug Plans (MA-PDs). MA-PD EGWP enrollment has grown from approximately 1.8 million in 2014 to a projected 3.0 million in 2022; for Prescription Drug Plans (PDPs), on the other hand, the number of enrollees has decreased from approximately 4.7 million to a projected 4.3 million over the same timeframe. Future EGWP enrollment is projected to increase more slowly than overall enrollment through 2025, primarily due to the assumption that some plan terminations will continue. Beyond 2025, the Trustees assume that EGWP participation will increase at a rate similar to that for overall Part D enrollment.

(2) Low-Income Subsidy

Qualifying low-income beneficiaries can receive various degrees of additional Part D subsidies based on their resource levels to help finance premium and cost-sharing payments. Since 2016, low-income subsidy enrollment in MA-PDs has increased while enrollment in PDPs has declined. This pattern is primarily due to continued and substantial growth in the number of enrollees in Medicare Advantage Special Needs Plans (SNPs). Overall, the number of low-income enrollees constitutes a projected 27 percent of total Part D beneficiaries

in 2022 and is assumed to grow at the same rate as that for Medicare beneficiaries who are enrolled in Part B.

(3) Other Part D Beneficiaries

Medicare beneficiaries not covered by employer-sponsored plans and not qualified for the low-income subsidy have the option to enroll in a Part D plan. Once enrolled, they pay for premiums and any applicable deductible, coinsurance, and/or copayment. In 2022, a projected 68 percent of non-employer and non-low-income Medicare beneficiaries[61] have opted to enroll in a Part D plan. Based on recent experience, the participation rate for non-employer and non-low-income beneficiaries is projected to gradually grow to 72 percent throughout the short-range projection period.

(4) MA-PD versus PDP Beneficiaries

Enrollment in MA-PDs has been increasing more rapidly than in PDPs every year except 2013. In 2011, MA-PD beneficiaries accounted for 36.7 percent of the enrollment in Part D plans. This ratio grew to 50.6 percent in 2021 and is projected to increase to 53.7 percent in 2022 before reaching 61.2 percent by 2031.

Table IV.B7 provides a summary of the estimated average enrollment in Part D, by category.

[61]A significant portion of the remaining eligible beneficiaries who do not participate in Part D plans receive creditable coverage through another source (such as the Federal Employees Health Benefits Program, TRICARE for Life, the Department of Veterans Affairs, and the Indian Health Service).

Table IV.B7.—Part D Enrollment

[In millions]

Calendar year	Retiree drug subsidy[1]	EGWP	Low-income subsidy: Medicaid full-benefit dual eligible	Low-income subsidy: Other, with full subsidy	Low-income subsidy: Other, with partial subsidy	Low-income subsidy: Total	All others	Total	MA-PD share of Part D[2]
Historical data:									
2012	5.6	3.6	6.9	3.7	0.3	11.0	17.2	37.4	37.5
2013	3.3	5.9	7.2	4.0	0.3	11.5	18.4	39.1	36.5
2014	2.7	6.5	7.4	4.1	0.3	11.8	19.5	40.5	38.0
2015	2.3	6.5	7.6	4.2	0.3	12.1	20.9	41.8	39.1
2016	1.9	6.6	7.8	4.3	0.3	12.4	22.2	43.2	39.8
2017	1.7	6.7	8.0	4.4	0.3	12.7	23.4	44.5	41.0
2018	1.5	6.9	8.1	4.5	0.3	12.9	24.5	45.8	42.3
2019	1.3	7.0	8.2	4.6	0.3	13.1	25.7	47.2	44.3
2020	1.2	7.1	8.2	4.7	0.3	13.2	27.2	48.7	47.0
2021	1.0	7.3	8.2	4.7	0.3	13.2	28.4	49.9	50.6
Intermediate estimates:									
2022	1.0	7.4	8.7	4.9	0.2	13.8	29.3	51.5	53.7
2023	1.0	7.5	8.9	5.0	0.2	14.2	30.6	53.2	55.8
2024	0.9	7.6	9.2	5.1	0.2	14.5	31.9	54.9	56.5
2025	0.9	7.7	9.4	5.3	0.2	14.9	33.1	56.6	57.3
2026	0.9	7.8	9.7	5.4	0.2	15.3	34.1	58.1	57.9
2027	0.9	8.0	9.9	5.5	0.2	15.6	34.9	59.5	58.6
2028	1.0	8.2	10.1	5.6	0.3	16.0	35.6	60.7	59.3
2029	1.0	8.3	10.3	5.7	0.3	16.3	36.3	61.9	59.9
2030	1.0	8.5	10.5	5.8	0.3	16.6	36.9	62.9	60.6
2031	1.0	8.6	10.6	5.9	0.3	16.8	37.4	63.8	61.2

[1]Excludes Federal Government and military retirees covered by either the Federal Employees Health Benefit Program or the TRICARE for Life program. Such programs qualify for the retiree drug subsidy, but the subsidy will not be paid since it would amount to the Federal Government subsidizing itself.
[2]This calculation does not include retiree drug subsidy beneficiaries but does include EGWP, low-income subsidy, and all other beneficiaries.

b. Cost Projection Methodology on an Incurred Basis

(1) Drug Benefit Categories

Projected drug expenses are allocated to the beneficiary premium, direct subsidy, and reinsurance subsidy by the Part D premium formula based on the benefit formula specifications. Meanwhile, the additional premium and cost-sharing subsidies are projected for low-income beneficiaries.

The statute specifies that the base beneficiary premium is equal to 25.5 percent of the sum of the national average monthly bid amount and the estimated catastrophic reinsurance. The average premium amount per enrollee is estimated using the base beneficiary premium with an adjustment to reflect enrollees' tendency to select plans with below-average premium costs. Moreover, Part D collects income-related premiums for individuals whose modified adjusted gross income exceeds a specified threshold. The amount of the income-related premium depends upon the individual's income level. Before 2019, the extra premium amount was the difference between 35, 50,

65, or 80 percent and 25.5 percent applied to the national average monthly bid amount adjusted for reinsurance. Starting in 2019, the Bipartisan Budget Act of 2018 requires a portion of the beneficiaries currently in the 80-percent group to pay the difference between 85 percent and 25.5 percent.

(2) Projections

The projections are based in part on actual Part D spending data through 2021. These data include amounts for total prescription drug costs, costs above the catastrophic threshold, plan payments, and low-income cost-sharing payments.

The estimates under the intermediate assumptions are calculated by establishing the total prescription drug costs for 2021 and then projecting these costs with both Part D expenditure and enrollment growth rates through the estimation period. The growth rate assumptions for Part D costs are based on a Part D-specific short-term trend model and the national health expenditure (NHE) growth rate assumptions.[62] This short-term model provides the 2022 and 2023 drug-specific and therapeutic-class-specific growth rate projections. A transition factor is applied for 2024 and 2025 to converge to the NHE projected growth rates in 2026, which are then used for the remainder of the short-range projection period. The growth in expensive specialty drugs has been a major factor driving the gross drug trend rates, which in turn have resulted in fast-growing reinsurance in recent years. Therefore, the trend rates for the catastrophic portion of the Part D benefits are also assumed to generally grow slightly more rapidly than the overall growth rates. Table IV.B8 shows the historical and projected Part D per capita growth rates along with the NHE trends.

To determine the estimated benefits for Part D, the total per capita drug benefits are adjusted for two key factors: (i) the projected total amount of direct and indirect remuneration and (ii) the administrative costs that plans are projected to incur related to plan operations and profits. Table IV.B8 displays these key factors affecting Part D expenditure estimates.

[62]Based on Recommendation II-28 of the 2010–2011 Medicare Technical Review Panel. The NHE growth rate assumptions are based on an NHE projections article published in March 2022 (*Health Affairs,* vol. 41, no. 4).

Table IV.B8.—Key Factors for Part D Expenditure Estimates[1]

Calendar year	National health expenditure (NHE) drug trend[2]	Part D per capita cost trend	Direct and indirect remuneration (DIR)[3]	Plan administrative expenses and profits[4]
Historical data:				
2012	−0.5%	−1.8%	11.7%	12.1%
2013	0.2	2.6	12.9	12.2
2014	11.2	10.9	14.3	11.9
2015	6.6	8.3	18.3	11.7
2016	−0.4	1.9	19.9	11.4
2017	0.2	2.2	21.9	10.3
2018	3.3	4.9	25.0	10.7
2019	4.6	5.2	26.5	9.3
2020	3.2	4.7	27.0	9.2
Intermediate estimates:				
2021	4.6	5.4	28.9	8.0
2022	5.7	5.4	31.5	7.5
2023	4.7	4.6	32.5	7.6
2024	4.4	4.4	32.7	7.6
2025	4.7	3.4	33.0	7.6
2026	4.6	4.3[5]	33.2	7.6
2027	4.8	4.5	33.5	7.7
2028	4.9	4.7	33.7	7.7
2029	5.0	4.8	34.0	7.7
2030	5.0	4.9	34.3	7.6
2031	5.0	5.0	34.5	7.6

[1]These factors do not reflect the impact of the sequestration for 2013–2031.
[2]On March 28, 2022, the CMS Office of the Actuary published the NHE projections through calendar year 2030; for 2031, the drug trend is the same as was used in 2030.
[3]Expressed as a percentage of total drug costs.
[4]Expressed as a percentage of total net plan benefit payments, which include plan benefits and administrative expenses with profits and which are reduced by DIR.
[5]Certain drugs to treat beneficiaries with ESRD will be transferred from Part D to Part B in 2025.

(3) Direct and Indirect Remuneration

Direct and indirect remuneration (DIR) primarily consists of drug manufacturer rebates and pharmacy rebates that PDPs and MA-PDs negotiate.[63] The average projected DIR from plan bids, which EGWPs are not required to submit, has increased substantially in recent years. Plans have continued to increase their projected DIR significantly for years 2021 and 2022 even though actual DIR for 2020 was noticeably lower than the plans estimated in their corresponding bid submissions for plan year 2020. Primarily based on the 2020 results and the 2022 plan bids, the Trustees expect actual DIR to have been lower than the assumed level in plan bids for 2021 and to be marginally lower than the 2022 plan bids in 2022. Utilizing the most recent historical data, the Trustees project modest increases to future DIR from the 2022 level throughout the projection period. This upward revision to projected

[63]The safe harbor protection for manufacturer rebates was eliminated in a final rule released in November of 2020. This final rule imposed a January 1, 2022 effective date; however, the implementation date was delayed until January 1, 2023. Subsequently, a moratorium on implementation of this rule was imposed until January 1, 2026, as required by the Infrastructure Investment and Jobs Act. Since the likelihood of this rule taking effect is highly uncertain, the impact is not reflected in the Part D projections.

DIR is a major reason for decreases in overall Part D spending when compared to the 2021 Trustees Report. Projected DIR is shown in table IV.B8.[64]

(4) Administrative Expenses

Administrative costs and profit margins are estimated from the 2022 plan bids. Administrative expenses are projected to grow at the same rate as wages, while profit margins are projected to grow at the same rate as per capita benefits. Beginning in 2014, the law assessed an annual insurer fee on health insurance plans, which was subsequently suspended in 2017 and 2019 before being terminated in 2021. For 2023 and beyond, the Trustees project that the level of administrative expenses as a percentage of benefits will be stable. This is the case because the projected higher DIR would reduce the growth rates for net drug expenses even though gross drug expenses are projected to increase more rapidly than wages.

(5) Incurred Per Capita Reimbursements

Table IV.B9 shows estimated enrollments and average per capita reimbursements for beneficiaries in private plans, low-income beneficiaries, and beneficiaries in RDS plans. The direct subsidy and retiree drug subsidy are affected by the sequestration of Medicare benefit expenditures, which applies from April 1, 2013 through September 30, 2031, with the exception of May 1, 2020 through March 31, 2022 when it was suspended. Under the sequestration, Medicare administrative expenses are reduced by an estimated 5 to 7 percent for the period April 1, 2013 through September 30, 2031, with the exception of May 1, 2020 through March 31, 2022 when it was suspended.

[64]These are average DIR percentages across all prescription drugs—including for EGWP plans, which do not submit bids. Generic drugs, which represent about 88 percent of all Part D drugs dispensed and 19 percent of drug spending in 2020, typically carry little to no rebates, while many brand-name prescription drugs carry substantial rebates.

Table IV.B9.—Incurred Reimbursement Amounts per Enrollee for Part D Expenditures

	Private plans (PDPs and MA-PDs)							
	All beneficiaries				Low-income subsidy		Retiree drug subsidy	
Calendar year	Enrollment (millions)	Direct subsidy	Reinsur-ance	Risk sharing and other	Enrollment (millions)	Subsidy amount	Enrollment (millions)	Subsidy amount
Historical data:								
2012	31.8	$654	$486	−$35	11.0	$2,045	5.6	$536
2013	35.8	567	535	−20	11.5	2,023	3.3	514
2014	37.8	492	718	−1	11.8	2,052	2.7	505
2015	39.5	485	841	−28	12.1	2,112	2.3	502
2016	41.2	441	861	−27	12.4	2,126	1.9	505
2017	42.8	352	878	−11	12.7	2,156	1.7	492
2018	44.3	305	917	−1	12.9	2,203	1.5	486
2019	45.8	247	1,007	10	13.1	2,271	1.3	500
2020	47.5	199	1,021	31	13.2	2,505	1.2	515
2021	48.9	122	1,071	38	13.2	2,654	1.0	533
Intermediate estimates:								
2022	50.5	51	1,085	32	13.8	2,799	1.0	552
2023	52.2	106	1,140	7	14.2	2,855	1.0	557
2024	54.0	105	1,203	7	14.5	2,937	0.9	567
2025	55.7	105	1,253	6	14.9	2,994	0.9	571
2026	57.2	104	1,311	6	15.3	3,090	0.9	586
2027	58.5	107	1,364	6	15.6	3,215	0.9	606
2028	59.8	108	1,422	6	16.0	3,348	1.0	629
2029	60.9	109	1,486	6	16.3	3,491	1.0	653
2030	61.9	109	1,554	6	16.6	3,643	1.0	676
2031	62.8	109	1,627	5	16.8	3,804	1.0	701

(6) Incurred Aggregate Reimbursements

Table IV.B10 shows the projected incurred aggregate reimbursements to plans and employers by type of payment.

Table IV.B10.—Aggregate Part D Reimbursement Amounts on an Incurred Basis

[In billions]

Calendar year	Premiums[1]	Direct subsidy	Reinsurance	Low-income subsidy	Retiree drug subsidy	Risk sharing and other[2]	Total
Historical data:							
2012	$7.8	$20.8	$15.5	$22.5	$3.0	−$1.1	$68.5
2013	9.3	20.3	19.2	23.2	1.7	−0.7	72.9
2014	10.5	18.6	27.2	24.3	1.3	−0.1	81.8
2015	11.5	19.2	33.2	25.6	1.1	−1.1	89.6
2016	12.7	18.2	35.5	26.4	1.0	−1.1	92.7
2017	14.0	15.1	37.6	27.3	0.8	−0.5	94.4
2018	14.2	13.5	40.6	28.5	0.7	0.0	97.4
2019	13.8	11.3	46.1	29.7	0.7	0.5	102.1
2020	13.6	9.4	48.5	33.0	0.6	1.5	106.6
2021	14.9	5.9	52.4	35.1	0.6	1.9	110.8
Intermediate estimates:							
2022	15.4	2.6	54.8	38.6	0.6	1.6	113.6
2023	15.6	5.5	59.5	40.4	0.5	0.4	122.0
2024	17.0	5.7	65.0	42.7	0.5	0.4	131.3
2025	18.2	5.8	69.8	44.7	0.5	0.4	139.3
2026	19.4	6.0	75.0	47.2	0.5	0.4	148.5
2027	20.6	6.2	79.8	50.3	0.6	0.4	157.9
2028	21.9	6.5	85.0	53.5	0.6	0.4	167.8
2029	23.2	6.6	90.5	56.8	0.6	0.4	178.2
2030	24.6	6.8	96.3	60.4	0.7	0.3	189.0
2031	26.0	6.9	102.2	63.9	0.7	0.3	200.0

[1]Total premiums paid to Part D plans by enrollees (directly, or indirectly through premium withholding from Social Security benefits).

[2]Positive amounts represent net loss-sharing payments to plans, and negative amounts are net gain-sharing receipts from plans. Other payments are one-time in nature. The amount in 2010 includes the $250 rebate to the beneficiaries spending more than the initial coverage limit.

d. Projections under Alternative Assumptions

Part D expenditures for the low-cost and high-cost alternatives were developed by modifying the estimates under the intermediate assumptions. Separate modifications were applied to the assumptions for the 2021 base projection and to the assumptions for projected years 2022–2031.

The 2021 base modifications include the following adjustments, since final data for 2021 will not be available until later in 2022:

- ±2 percent to account for the uncertainty of the completeness of the actual spending in 2021. The high-cost scenario increases the spending by 2 percent, and the low-cost scenario decreases the spending by 2 percent.

- ±2 percent for the average rebate that drug plans negotiate. The high-cost scenario decreases the average rebate by 2 percent, and the low-cost scenario increases the average rebate by 2 percent.

For the projections beyond 2021, the per capita drug costs for the high-cost and low-cost scenarios are increased, relative to GDP, 2 percent more rapidly and 2 percent less rapidly, respectively, than under the

intermediate assumptions. The 2-percent base-year modification to rebate percentage is also maintained throughout the short-range projection period. In addition, for RDS participation, participation in the low-income subsidies, and the participation rate for Part D-eligible individuals who do not qualify for the low-income subsidy or receive coverage through employer-sponsored plans, assumptions vary in the alternative scenarios. Table IV.B11 compares these varying assumptions.

Table IV.B11.—Part D Assumptions under Alternative Scenarios for Calendar Years 2021–2031

		Alternatives	
Calendar year	Intermediate assumptions	Low-cost	High-cost
Participation of retiree drug subsidy beneficiaries as a percentage of Part D enrollees			
2021	2.1%	2.1%	2.1%
2022	2.0	2.0	2.0
2023	1.8	2.0	1.3
2024	1.7	2.0	0.6
2025	1.6	2.0	—
2026	1.6	2.0	—
2027	1.6	2.0	—
2028	1.6	2.0	—
2029	1.6	2.0	—
2030	1.6	2.0	—
2031	1.6	2.0	—
Participation of low-income beneficiaries as a percentage of Part D enrollees			
2021	26.5	26.5	26.5
2022	26.8	26.8	26.8
2023	26.6	26.6	26.7
2024	26.5	26.4	26.6
2025	26.4	25.8	27.0
2026	26.3	25.3	27.5
2027	26.3	24.8	28.0
2028	26.3	24.3	28.5
2029	26.3	23.9	29.1
2030	26.3	23.5	29.6
2031	26.3	23.0	30.2
Part D participation rate of the non-employer and non-low-income Part D-eligible individuals			
2021	67.2	67.2	67.2
2022	68.4	68.4	68.4
2023	69.5	67.5	71.5
2024	70.4	66.4	74.4
2025	71.1	67.1	75.1
2026	71.5	67.5	75.5
2027	71.6	67.6	75.6
2028	71.7	67.7	75.7
2029	71.8	67.8	75.8
2030	71.8	67.8	75.8
2031	71.9	67.9	75.9

C. PRIVATE HEALTH PLANS

Dating back to the 1970s, some Medicare beneficiaries have chosen to receive their coverage for Part A and Part B services through private health plans. Over time, numerous changes have been made to these plans that have increased or decreased the attractiveness of private plan coverage.

The foundation of the current program was established in 2003, when most of the private plans were renamed as Medicare Advantage (MA) plans and all private health insurance coverage options available through Medicare were formally designated as Part C.[65] Since then, there has been a continuous increase in the prevalence of MA enrollment.

Beginning in 2006, payments are based on competitive bids and their relationship to corresponding benchmarks, which are based on an annually developed ratebook. Also, rebates were introduced and are used to provide additional benefits not covered under Medicare, reduce cost sharing, and/or reduce Part B or Part D premiums. From 2006 through 2011, rebates were calculated as 75 percent of the difference, if any, between the benchmark and the bid.

In addition to the plan types that already existed, regional preferred provider organizations (RPPOs) and special needs plans (SNPs) were established in 2006. Unlike other MA plans, which define their own service areas, RPPOs operate in pre-defined service areas referred to as regions and have special rules for capitation payment benchmarks, and they received special incentives.

SNPs are products designed for, and marketed to, these special population groups: Medicaid dual-eligible beneficiaries, individuals with specialized chronic conditions, and institutionalized beneficiaries. The statutory authority for SNPs, which had been extended several times previously, was permanently extended under the Bipartisan Budget Act of 2018.

Beginning in 2012, the MA county-level benchmarks are based on a multiple of estimated fee-for-service costs in the county. The factor applied for a given county is based on the ranking of its fee-for-service cost relative to that for other counties. The 25 percent, or quartile, of

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[65]Of Medicare beneficiaries enrolled in private plans, about 97 percent are in MA plans. The remainder are in certain holdover plans reimbursed on a cost basis rather than through capitation payments, in Program of All-Inclusive Care for the Elderly (PACE) plans, or in Medicare-Medicaid Plans (MMPs).

counties with the highest fee-for-service costs have a factor of 95 percent of county fee-for-service costs; the second quartile, 100 percent; the third quartile, 107.5 percent; and the lowest quartile, 115 percent. Prior to 2012, most county benchmarks were in the range of 100 to 140 percent of local fee-for-service costs.

Plans are eligible to receive specified increases to their benchmark based on their quality rating scores. The statutory provisions call for a bonus of 5 percent for plans with at least a 4-star rating. The bonuses are doubled for health plans in a qualifying county, defined as a county in which (i) per capita spending in original Medicare is lower than average; (ii) 25 percent or more of eligible[66] beneficiaries were enrolled in Medicare Advantage as of December 2009; and (iii) the benchmark rate in 2004 was based on the minimum amount applicable to an urban area. There are special bonus provisions for newly established and low-enrollment plans. Additionally, the phased-in benchmarks, including bonuses, are capped at the pre-2012 benchmark level.

The share of the excess of benchmarks over bids, which is paid to the plan sponsors as rebates, varies based on quality. The highest quality plans (4.5 stars or higher) receive a 70-percent rebate, plans with a quality rating of at least 3.5 stars and less than 4.5 stars receive a 65-percent rebate, and plans with a rating of less than 3.5 stars receive a 50-percent rebate.

Beginning in 2014, private insurers were required to pay an assessment, or fee, based on their revenues from the prior year. There was a 1-year moratorium on the annual fee in 2017 and again in 2019. The fee was in place for calendar year 2020, with the assessment on MA sponsors expected to represent approximately 1.4 percent of plan revenues. The Further Consolidated Appropriations Act, 2020 permanently repealed the annual fee for calendar year 2021 and future years.

It is important to note that Medicare coverage provided through private health plans does not have separate financing or an associated trust fund. Rather, the Part A and Part B trust funds are the source for payments to such private health plans.

[66]Beneficiaries are eligible for the MA program if they are entitled to coverage in Medicare Part A and enrolled in Medicare Part B.

1. Participation Rates

a. Background

To account for the distinct benefit, enrollment, and payment characteristics of private health plans, enrollment and spending trends for such plans are analyzed at the product level:

- Local coordinated care plans (LCCPs), which include health maintenance organizations (HMOs), HMOs with a point-of-service option, and local preferred provider organizations (PPOs).
- Private fee-for-service (PFFS) plans.
- Regional PPO (RPPO) plans.
- Special needs plans (SNPs).
- Other products, which include cost plans, Program of All-Inclusive Care for the Elderly (PACE) plans, and Medicare-Medicaid plans (MMPs) under the capitated model.

All types of coverage except for those represented in the "Other" category are Medicare Advantage plans. Also, the values represented in each category include enrollment not only in plans available to all beneficiaries residing in the plan's service area, but also in plans available only to members of employer or union groups.

b. Historical

Table IV.C1 shows historical and projected private health plan enrollment by type of plan. From 2012 through 2021, private plan enrollment grew by 14.0 million or 103 percent, compared to growth in the overall Medicare population of 25 percent for the same period.

PFFS enrollment dropped 89 percent during these years primarily due to plan reaction to new statutory provider network requirements beginning in 2011. Most of the enrollees in terminating PFFS plans transferred to LCCP or RPPO plans.

The 2021 enrollment includes 5.0 million beneficiaries with coverage through employer/union-only group waiver plans (EGWPs), the majority of whom are in LCCPs. Beginning in 2017, the bidding requirements for these types of plans have been waived, and payments to these EGWPs, including RPPOs, are based on individual market bids.

Table IV.C1.—Private Health Plan Enrollment[1]

[In thousands]

Calendar year	Local CCP HMO	Local CCP PPO	Regional PPO	PFFS	SNP	Other	Total private health plan	Total Medicare	Ratio of private health plan to total Medicare
2012	7,396	2,852	835	526	1,497	483	13,588	50,874	26.7%
2013	8,045	3,167	949	388	1,768	527	14,843	52,504	28.3
2014	8,555	3,698	1,040	303	1,990	657	16,243	54,115	30.0
2015	9,122	4,034	1,018	256	2,085	978	17,493	55,589	31.5
2016	9,630	4,157	1,085	231	2,230	1,058	18,392	57,073	32.2
2017	10,051	4,943	1,085	184	2,420	1,133	19,816	58,683	33.8
2018	10,645	5,696	1,003	148	2,729	1,115	21,336	60,020	35.5
2019	11,325	6,880	866	111	3,064	701	22,947	61,534	37.3
2020	12,158	7,892	747	81	3,496	697	25,071	62,895	39.9
2021	12,807	9,281	626	57	4,077	704	27,552	63,762	43.2
2022	13,202	10,481	501	44	5,062	723	30,014	65,003	46.2[2]
2023	13,670	11,411	473	39	5,837	449	31,880	66,602	47.9
2024	14,243	11,986	450	35	6,209	330	33,254	68,355	48.6
2025	14,822	12,482	428	32	6,462	339	34,566	70,033	49.4
2026	15,400	12,963	408	29	6,716	348	35,865	71,719	50.0
2027	15,960	13,420	388	26	6,964	357	37,116	73,275	50.7
2028	16,505	13,852	369	23	7,206	366	38,321	74,763	51.3
2029	17,029	14,254	351	21	7,441	373	39,470	76,156	51.8
2030	17,522	14,622	335	19	7,663	380	40,541	77,399	52.4
2031	17,967	14,940	318	17	7,865	387	41,495	78,407	52.9

[1]Most private plan enrollees are eligible for Medicare Part A and enrolled in Medicare Part B. Some enrollees have coverage for only Medicare Part B. For example, in 2020 the Part B-only private plan enrollment consisted of 29,000 in local CCPs and 72,000 in the "Other" coverage category.
[2]This table presents the ratio of private health plan to total Medicare enrollment. The ratio of private health plan enrollees to Medicare beneficiaries with both Part A and Part B coverage in 2022 is 50.8 percent.

c. Projected

The Medicare Advantage (MA) enrollment projection model groups counties by common characteristics and models each of these groups using 2015 through 2021 base data, as follows:

- One group for Puerto Rico.
- Five groups for urban counties as defined by the fiscal year 2015 core-based statistical area (CBSA) designation. The quintiles are sorted based on 2015 penetration rates and grouped with an approximately equal number of MA-eligible beneficiaries in each cohort.
- Five groups for rural counties as defined by the fiscal year 2015 CBSA designation. The quintiles are sorted based on 2015 penetration rates and grouped with an approximately equal number of MA-eligible beneficiaries in each cohort.

The private health plan enrollment projections are based on three cohorts of beneficiaries: (i) dual-eligible beneficiaries, (ii) beneficiaries with employer-sponsored coverage, and (iii) all others, including individual-market enrollees.

Actuarial Methodology

Private plan enrollment for the individual market is projected by calculating the penetration growth rates for individual plans in years 2015 through 2021 for each category described above and extrapolating those results through 2031. These growth rates are applied to the enrollment distribution for each county's specific 2021 plan type (for example, LCCP, PFFS, and RPPO) and are adjusted to reflect applicable legislative changes to the program, as described in more detail below.

Two categories of MA enrollees—those with employer coverage and those who are dually eligible—are modeled at the national level. Historically, EGWP and dual-eligible enrollment has had much larger enrollment variation from year to year while individual-market enrollment has trended at a more consistent level. Because of the fluctuations in enrollment, the cohort method does not work as well for the employer-sponsored and dual-eligible populations.

The private Medicare health plan enrollment projections for the 2022 Trustees Report are higher than those in the 2021 report. As shown in table IV.C1, the share of Medicare enrollees in private health plans is projected to increase from 43.2 percent in 2021 to 52.9 percent in 2031. The increases that are expected in private plan penetration rates for 2022 through 2031 are partly due to higher relative rebates that are used to lower premiums and expand benefits.

SNP enrollment is expected to grow by 24 percent in 2022 after increasing by 17 percent in 2021. In 2023 and later years, the enrollment growth rate for these plans is expected to slow, ranging from 15 percent in 2023 to 3 percent in 2031.

For LCCP-HMOs, enrollment is expected to increase by 3 percent in 2022 following growth of 5 percent in 2021. For LCCP-PPOs, enrollment is expected to increase by 13 percent in 2022 after growth of 18 percent in 2021.

The "Other" category is expected to fluctuate over the next several years due to enrollment in the MMP capitated model and enrollment in cost plans. The MMP capitated model represents health plans that are capitated by CMS and States to provide comprehensive and coordinated care for Medicare-Medicaid enrollees. After the introduction of MMPs in October 2013, enrollment grew nationally from approximately 3,400 enrollees in a single State to over 422,000 enrollees across nine States in October 2021. The remaining contracts are set to expire in 2022 and 2023. It is assumed that once the contracts expire, the majority of MMP enrollees will remain in the

MA program by switching to SNPs. Meanwhile, the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) amended the cost plan competition requirements specified in section 1876(h)(5)(C) of the Social Security Act. The amended competition requirements provide that CMS not renew cost plans in service areas where two or more competing local or regional MA coordinated care plans meet enrollment requirements over the course of the entire prior contract year. Under MACRA, cost plans were permitted to transition to the MA program until the beginning of calendar year 2019.

Enrollment in the "Other" category increased by 49 percent in 2015 because of the influx of MMP enrollment. For 2016 through 2018, enrollment in this category increased by 14 percent before decreasing by 37 percent in 2019 due to the reduction in the number of cost plans required by MACRA. During the period 2020 through 2024, enrollment in the "Other" category is expected to decrease by 53 percent as a result of the expiration of the MMP contracts; for most years in 2025 and later, it is expected to grow more steadily at a rate of 2 to 3 percent.

2. Cost Projection Methodology

a. Background

Benchmarks form the foundation for payments to Medicare Advantage (MA) plans. Along with geographic, demographic, and risk characteristics of plan enrollees, these values determine the monthly prospective payments made to private health plans. MA benchmarks vary substantially by county. Benchmarks range between 95 and 115 percent of county-level fee-for-service costs, plus applicable quality bonuses.

For individual non-RPPO plans, a plan's benchmark is an average of the statutory capitation ratebook values, weighted by projected plan enrollment in each county in the plan's service area. For RPPOs, the benchmark is a blend of the weighted ratebook values for all Medicare-eligible beneficiaries in the region and an enrollment-weighted average of RPPO bids for the region. The weight applied to the bid component to calculate the blended benchmark is the national MA participation rate.

Plans submit bids equal to their projected per enrollee cost of providing the standard Medicare Part A and Part B benefits. Plans with bids below the benchmark apply the rebate share of the *savings* to aid plan enrollees through coverage of Part A and Part B cost sharing, coverage of additional non-drug benefits, and/or reduction in the Part B or

Part D premium. The rebate percentage is based on the quality rating of the health plan and ranges from 50 to 70 percent. Beneficiaries choosing plans with bids above the benchmark must pay for both the full amount of the difference between the bid and the benchmark and the projected cost of the plans' supplemental benefits.

Medicare capitation payments to an MA plan are a product of the standardized plan bid, which is equal to the bid divided by the plan's projected risk score, and the actual enrollee risk score, which is based on demographic characteristics and medical diagnosis data. The risk score for a given enrollee may be adjusted retrospectively since CMS receives diagnosis data after the payment date.

Rebate payments are based on the projected risk profile of the plan and are not adjusted based on subsequent actual risk scores.

b. Incurred Basis

Private health plan expenditures are forecast on an incurred basis by coverage type. The bid-based expenditures for each quarter are a product of the average enrollment and the projected average per capita bid. Similarly, the rebate expenditures are a product of enrollment and projected average rebates.

Annual per capita benchmarks, bids, and rebates were determined on an incurred basis for calendar years 2007–2021 for each coverage category. These amounts include adjustments processed after the payment due date for retroactive enrollment and risk score updates.

Benchmark growth for 2012 through 2017 was significantly lower than it was before 2012 because of the phase-in of the fee-for-service-based ratebook beginning in 2012, which resulted in lower benchmark rates in most areas. Benchmark growth for years 2022 and later is estimated to be slightly higher than the growth rate of beneficiaries enrolled in Medicare fee-for-service due in part to quality bonus payments that are projected to increase slightly for 2022 and later years and changes in risk scores that are projected to grow faster for the MA population.

Private health plan expenditures are affected by the sequestration required by current law, which will reduce benefit payments by specified percentages through September 2031.

c. Cash Basis

Cash MA expenditures are largely identical to incurred amounts, since both arise primarily from the monthly capitation payments to plans.

Small cash payment adjustments are developed from incurred spending by accounting for the payment lag that results from CMS' receipt of post-payment diagnosis data, retroactive enrollment notifications, and corrections in enrollees' demographic characteristics.

Table IV.C2 shows Medicare private plan expenditures on an incurred and cash basis. The incurred payments are reported separately for the bid-related and rebate expenditures. As noted, most payments to plans are made as they are incurred, and cash and incurred amounts are generally the same.

Table IV.C2.—Medicare Payments to Private Health Plans, by Trust Fund
[Dollar amounts in billions]

Calendar year	Incurred basis[1]			Part A as a percentage of total[2]	Cash basis
	Bid	Rebate	Total		
2012	$124.8	$11.8	$136.6	51.6%	$136.2
2013	134.5	12.5	147.0	50.1	145.6
2014	147.2	12.0	159.2	46.3	159.6
2015	161.9	12.7	174.6	45.6	172.3
2016	174.5	14.4	188.9	45.2	188.6
2017	193.6	15.7	209.3	45.1	209.6
2018	217.9	18.1	236.0	43.7	232.7
2019	250.4	23.0	273.4	43.5	273.8
2020	288.3	28.7	317.0	43.0	317.1
2021	324.8	36.1	360.9	42.1	349.9
2022	372.9	46.9	419.8	41.9	417.9
2023	413.8	59.3	473.1	41.1	471.4
2024	454.5	66.4	520.9	40.7	519.4
2025	498.5	74.1	572.6	40.4	571.0
2026	547.5	83.1	630.6	39.9	628.8
2027	596.6	92.3	688.9	39.6	687.1
2028	647.9	102.1	750.0	39.2	748.0
2029	702.8	113.0	815.8	38.7	813.8
2030	753.7	122.9	876.6	38.3	874.7
2031	809.0	133.7	942.7	37.9	940.6

[1]The bid category includes all expenditures for non-Medicare Advantage coverage.
[2]The remaining percentage is paid from the Part B account of the SMI trust fund.

d. Incurred Expenditures per Enrollee

Table IV.C3 shows estimated incurred per enrollee expenditures for beneficiaries enrolled in private health plans. It combines the values for expenditures from the Part A and Part B trust funds.

Table IV.C3.—Incurred Expenditures per Private Health Plan Enrollee[1]

Calendar year	Local CCP HMO	Local CCP PPO	Regional PPO	PFFS	SNP	Other	Total
Bid-based expenditures[2]							
2012	$9,162	$8,517	$7,925	$8,551	$12,944	$4,945	$9,210
2013	8,868	8,533	8,121	8,936	12,728	5,063	9,089
2014	8,731	8,604	8,511	9,282	12,649	6,171	9,083
2015	8,818	8,833	8,446	9,554	12,953	8,210	9,274
2016	8,901	9,276	9,034	10,261	13,171	8,399	9,504
2017	9,104	9,630	9,011	10,797	13,686	8,725	9,788
2018	9,457	10,030	9,473	11,141	14,366	9,049	10,234
2019	10,032	10,368	10,007	12,130	15,231	13,172	10,930
2020	10,480	10,827	10,603	13,095	16,271	14,510	11,518
2021	10,641	10,968	10,676	13,150	16,912	15,515	11,807
2022	11,043	11,338	11,179	13,737	17,903	16,646	12,442
2023	11,559	11,817	11,775	14,511	18,559	15,687	12,997
2024	12,178	12,458	12,493	15,457	19,510	14,751	13,683
2025	12,846	13,148	13,294	16,540	20,599	15,647	14,443
2026	13,589	13,931	14,170	17,738	21,769	16,636	15,286
2027	14,301	14,685	15,026	18,941	22,888	17,583	16,095
2028	15,031	15,459	15,916	20,223	24,036	18,560	16,926
2029	15,824	16,297	16,886	21,649	25,281	19,620	17,828
2030	16,513	17,023	17,765	23,007	26,364	20,561	18,612
2031	17,310	17,856	18,770	24,579	27,620	21,668	19,517
Rebate expenditures[2]							
2012	$1,157	$358	$510	$355	$1,084	$0	$871
2013	1,124	289	456	255	1,119	0	842
2014	1,020	282	352	210	897	0	739
2015	1,049	212	298	217	954	0	731
2016	1,123	290	310	199	925	0	788
2017	1,120	281	403	194	1,083	0	796
2018	1,184	324	421	176	1,184	0	851
2019	1,327	445	535	198	1,449	0	1,005
2020	1,507	546	585	189	1,616	0	1,148
2021	1,695	679	749	372	1,877	0	1,314
2022	1,966	871	994	653	2,231	0	1,565
2023	2,265	1,050	1,215	877	2,702	0	1,863
2024	2,417	1,127	1,308	958	2,886	0	2,001
2025	2,583	1,209	1,412	1,049	3,105	0	2,145
2026	2,779	1,307	1,535	1,158	3,379	0	2,319
2027	2,975	1,406	1,656	1,266	3,636	0	2,490
2028	3,176	1,509	1,782	1,377	3,901	0	2,668
2029	3,399	1,624	1,921	1,501	4,206	0	2,867
2030	3,590	1,723	2,036	1,601	4,464	0	3,037
2031	3,804	1,833	2,162	1,706	4,738	0	3,226
Total expenditures[2]							
2012	$10,318	$8,875	$8,436	$8,906	$14,027	$4,945	$10,082
2013	9,991	8,821	8,577	9,190	13,846	5,063	9,930
2014	9,751	8,886	8,863	9,492	13,546	6,171	9,823
2015	9,866	9,046	8,743	9,771	13,908	8,210	10,005
2016	10,024	9,567	9,343	10,460	14,096	8,399	10,291
2017	10,224	9,911	9,415	10,991	14,769	8,725	10,584
2018	10,641	10,354	9,894	11,317	15,550	9,049	11,085
2019	11,360	10,813	10,542	12,328	16,680	13,172	11,935
2020	11,987	11,372	11,188	13,284	17,887	14,510	12,666
2021	12,336	11,648	11,424	13,522	18,789	15,515	13,121
2022	13,009	12,209	12,173	14,390	20,135	16,646	14,006
2023	13,823	12,867	12,990	15,388	21,260	15,687	14,860
2024	14,595	13,586	13,801	16,415	22,396	14,751	15,684
2025	15,428	14,357	14,706	17,589	23,704	15,647	16,588
2026	16,368	15,239	15,705	18,895	25,148	16,636	17,605
2027	17,275	16,091	16,683	20,207	26,524	17,583	18,585
2028	18,208	16,968	17,698	21,600	27,937	18,560	19,594

Calendar year	Local CCP HMO	Local CCP PPO	Regional PPO	PFFS	SNP	Other	Total
2029	19,224	17,921	18,807	23,149	29,487	19,620	20,695
2030	20,103	18,746	19,801	24,608	30,828	20,561	21,650
2031	21,115	19,689	20,932	26,285	32,358	21,668	22,743

[1]Values represent the sum of per capita expenditures for Part A and Part B.
[2]The bid category includes all expenditures for non-Medicare Advantage coverage.

Average Medicare payments per private plan enrollee vary by geographic location of the plan, plan efficiency, and average reported health status of plan enrollees. LCCPs and SNPs tend to be located in urban areas where prevailing health care costs tend to be above average. Conversely, PFFS plans and RPPOs generally reflect a more rural enrollment. These factors complicate meaningful comparisons of average per capita costs by plan category.

Per capita bids are expected to increase by 5.4 percent in 2022. For years 2023 through 2031, the per capita bid trend is expected to be equal to the average of growth in per capita Medicare fee-for-service expenditures and benchmark growth. After 2031, average Medicare payments to private plans per enrollee are assumed to follow the aggregate growth trends of the HI and SMI Part B per capita benefits, as described in section IV.D of this report.

Annual increases in per capita rebates are projected to be in the mid to high single digits for years 2024 through 2031 due to assumed increases in quality bonus payments and increases in benchmarks.

D. LONG-RANGE MEDICARE COST GROWTH ASSUMPTIONS

Sections IV.A, IV.B, and IV.C have described the detailed assumptions and methodology underlying the projected expenditures for HI (Part A), SMI (Parts B and D), and private health plans (Part C) during 2022 through 2031. These projections are made for individual categories of Medicare-covered services, such as inpatient hospital care and physician services.

As the projection horizon lengthens, it becomes increasingly difficult to anticipate changes in the delivery of health care, the development of new medical technologies, and other factors that will affect future health care cost increases. Accordingly, rather than extending the detailed projections by individual type of service for all future years, the Trustees use a more aggregated basis for setting cost growth assumptions in the long range. Such increases also reflect the substantial uncertainty associated with payments that are specified through statute, which may present challenges for the Medicare program.

Beginning with the 2013 report, the Trustees used the statutory price updates and the volume and intensity assumptions from the "factors contributing to growth" model to derive the year-by-year Medicare cost growth assumptions for the last 50 years of the projection period.[67] The Trustees assume that the productivity reductions to Medicare payment rate updates will reduce volume and intensity growth by 0.1 percent below the factors model projection.[68]

The output and key assumptions of the factors model that are used in this year's report are similar to those used in the 2021 report. In subsequent reports, the Trustees will determine if additional historical data warrant a re-evaluation of these assumptions and a re-estimation of the factors model output. The remainder of section IV.D discusses the factors model and its role in the Medicare projections. Section V.C

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[67]This assumed increase in the average expenditures per beneficiary excludes the impacts of the aging of the population, changes in the sex composition of the Medicare population, and changes in the distribution of the Medicare population on the basis of proximity to death, as the Trustees estimated these factors separately. For convenience, the increase in Medicare expenditures per beneficiary, before consideration of demographic impacts, is referred to as the Medicare cost growth rate.

[68]The Trustees' methodology is consistent with Finding III-2 and Recommendation III-3 of the 2010–2011 Medicare Technical Review Panel and with Finding 3-2 of the 2016–2017 Medicare Technical Review Panel. The Panels' final reports are available at http://aspe.hhs.gov/health/reports/2013/MedicareTech/TechnicalPanelReport2010-2011.pdf and at https://aspe.hhs.gov/system/files/pdf/257821/MedicareTechPanelFinalReport2017.pdf.

explains the methods used to derive the long-range cost growth assumptions underlying the illustrative alternative projection.

1. Long-Range Growth Assumptions for the Overall Health Sector

The first step to estimate the long-range Medicare trends is to determine the long-range assumptions affecting the overall health sector. The Trustees use the factors model to determine the year-by-year growth rates for the overall health sector over the last 50 years of the projection. Based on the factors model, the Trustees assume that the long-range per capita overall health spending growth is GDP plus 0.7 percent (or 4.3 percent) for 2046, gradually declining to GDP plus 0.4 percent by 2096 (or 4.1 percent).[69] The per capita increase in overall health care costs is due to the combined effects of general inflation, medical-specific *excess* price inflation (above general price growth), and changes in the utilization of services per person and the intensity or average complexity per service. The Trustees assume that beginning in 2046 (i) general price inflation will remain constant at 2.05 percent per year, as measured by the GDP deflator; (ii) excess medical price inflation will remain constant at 0.75 percent per year; and (iii) the annual increase in the volume and intensity of services per person will decline gradually from approximately 1.5 percent in 2046 to 1.3 percent in 2096 based on the key economic assumptions and elasticity estimates from the factors model, as described below.

Excess medical price inflation for the overall health sector is assumed to grow at 0.75 percent annually from 2046 through 2096. This assumption is roughly equivalent to the difference between the growth in the personal health care deflator over the past three decades and the growth in the GDP deflator over this same period.[70] Combining this assumption with the ultimate assumed growth rate of 2.05 percent per year in the GDP deflator yields the Trustees' estimate of the long-range rate of medical price growth of 2.8 percent annually. Using the relationship between medical price growth and resource-based health

[69]These growth rate assumptions are described relative to the per capita increase in GDP and characterized simply as GDP plus X percent.

[70]Information on the personal health care deflator is available at http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html.

sector productivity growth[71] allows for the determination of medical input price growth.[72] For resource-based health sector productivity, the Trustees assume that the rate of growth will be equivalent to published research[73] of 0.4 percent per year. Hence, the Trustees' estimate of the long-range rate of growth of medical input prices is 3.2 percent.

As stated earlier, the factors model is based on economic research that separates health spending growth into its major drivers—income growth, relative medical price inflation, insurance coverage, and a residual that primarily reflects the impact of technological development.[74] The factors model provides the ability to model the expected behavioral effects associated with a continuing increase in the share of national income devoted to consumption of health care services. In particular, this approach is based on historically estimated income and price elasticities and uses measurable key variables, providing a foundation for developing the long-range growth assumptions.[75]

In the factors model, the sensitivity of health cost growth to each of the three factors must be estimated. Each sensitivity is measured as an elasticity, which is the percentage change in cost growth that is caused by a 1-percent change in a factor. The first elasticity, the income-technology elasticity, reflects the increase in demand for health care and new medical technologies in response to growth in income. The second elasticity, the relative medical price elasticity, reflects the sensitivity of consumers and purchasers in consuming health care to

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[71]Resource-based productivity is defined as the real value of provider goods and services divided by the real value of the resources (inputs) used to produce the goods and services, whereas price changes are measured across constant products—that is, defined health services with a constant mix of inputs. Resource-based productivity is used for this decomposition, rather than outcomes-based productivity (which incorporates the estimated value of improvements in health resulting from the services), because Medicare and most other payers reimburse providers based on their resource use.

[72]A third factor, provider profit margins, is assumed to remain constant over the long range.

[73]Information on updated estimates of hospital productivity is available at https://www.cms.gov/files/document/productivity-memo.pdf; Fisher, Charles. "Multifactor Productivity in Physicians' Offices: An Exploratory Analysis." *Health Care Financing Review,* 29, no. 2 (2007): 15–32.

[74]Smith, Sheila, Newhouse, Joseph P., and Freeland, Mark S. "Income, Insurance, and Technology: Why Does Health Spending Outpace Economic Growth?" *Health Affairs,* 28, no. 5 (2009): 1276–1284.

[75]Additional information on the "factors contributing to growth" model is available in a memorandum by the CMS Office of the Actuary titled "A Conceptual View of the Long-Term Projection Methods for Medicare and Aggregate National Health Expenditures," available at https://www.cms.gov/files/document/conceptual-view-long-term-projection-methods-medicare-and-aggregate-national-health-expenditures.pdf.

changes in excess medical price inflation. The final key elasticity is the insurance elasticity, which reflects the change in demand for medical care as the level of insurance coverage changes.

For the income-technology elasticity, the Trustees developed a time-trend-based method for projecting the elasticity that reflects the historical declining trend, produces results consistent with the elasticity implied by the most recent short-range national health expenditure (NHE) projections, and converges to 1.0 within a range of roughly 75 to 150 years. In the resulting projection, the income-technology elasticity is 1.24 in the 25th year of the projection period (2046) and declines at a slowing pace to 1.07 in the 75th year of the period (2096). This methodology results in an income-technology elasticity that reaches 1.0 in 2125. These are the same elasticity assumptions that were used for 2046 and 2096 in the 2021 report.

For the medical price elasticity, the Trustees assume a rising sensitivity of demand for health care to changes in relative medical price as the share of income devoted to health care rises. The medical price elasticity is determined for a given year by subtracting an income effect from a pure substitution effect. The income effect is determined by multiplying the share of income devoted to health care in that year by the estimated yearly income-technology elasticity. The substitution effect is assumed to be equal to −0.2 and represents the change in demand in response to a change in the relative price of health care holding utility constant. For the 2022 report, the Trustees project the price elasticity to be −0.50 for the 25th year of the projection (2046) and assume that it will follow a non-linear path until it reaches −0.56 in the 75th year of the projection (2096). Based on the RAND Health Insurance Experiment, the insurance elasticity was estimated at −0.2 and was assumed to be unchanged over the long range.[76]

Two additional assumptions are required to complete the factors model determination. First, relative medical price inflation must be estimated over the long-range projection period. As discussed previously, the Trustees assume a relative medical price growth rate of 0.75 percent per year. Second, insurance coverage is assumed to be unchanged over the long range in order to maintain consistency with

[76]Newhouse, Joseph P., and the Insurance Experiment Group. *Free for All? Lessons from the RAND Health Insurance Experiment*. Cambridge: Harvard University Press, 1993. The coefficient of this elasticity is negative because the level of insurance coverage is measured using individuals' cost-sharing requirements (such as deductibles and coinsurance).

the concept of a Medicare projection in which the Medicare benefit package is not altered.

2. Long-Range Growth Assumptions for Medicare

The Trustees have assumed since 2001 that it is reasonable to expect over the long range that the drivers of health spending will be similar for the overall health sector and for the Medicare program. This view was affirmed by the 2010–2011 Medicare Technical Review Panel, which recommended use of the same long-range assumptions for the increase in the volume and intensity of health care services for the total health sector and for Medicare. Therefore, the overall health sector long-range cost growth assumptions for volume and intensity are used as the starting point for developing the Medicare-specific assumptions.

Medicare payment rates for most non-physician provider categories are updated annually by the increase in providers' input prices for the market basket of employee wages and benefits, facility costs, medical supplies, energy and utility costs, professional liability insurance, and other inputs needed to produce the health care goods and services. These updates are then reduced by the 10-year moving average increase in economy-wide productivity, which the Trustees assume will be 1.0 percent per year over the long range. The Trustees assume that the full market basket increase would be approximately 3.2 percent annually, or about 0.4 percent greater than the net price increase of 2.8 percent per year described above for the total health sector. The different statutory provisions for updating payment rates require the development of separate long-range Medicare cost growth assumptions for four categories of health care provider services:

(i) *All HI, and some SMI Part B, services that are updated annually by provider input price increases less the increase in economy-wide productivity.*

The annual increase in Medicare payment rates for these services is reduced by the 10-year moving average increase in economy-wide productivity. These gains are estimated to be 1.0 percent per year over the long-range projection period. Combined with an assumed market basket increase of 3.2 percent, the statutory price update for these services is 2.2 percent per year over the long range. The initial projected increase in the volume and intensity of these Medicare services is assumed to be equivalent to the average projected growth in the volume and intensity of services for the overall health sector. The Trustees believe that the use of a common baseline rate of volume and intensity growth across all

Medicare services is reasonable, as there would be only a small likelihood that one part of the health sector could continue to grow indefinitely at significantly faster rates of growth than do other parts.

Additionally, the Trustees assume that the growth in Medicare payment rates will reduce the volume and intensity growth of these services by 0.1 percent per year relative to the assumption from the factors model. The Trustees' assumption is based on the work of the 2010–2011 and 2016–2017 Medicare Technical Review Panels, both of which concluded that there would likely be a small net negative impact on volume and intensity growth due to reduced incentives to develop new technologies, provider exits, and the impact of greater bundling of services for payment purposes.[77,78] For new technology that leads to new services, Medicare would pay lower fees than would otherwise be the case, and providers would be less likely to adopt new services and innovations, thereby lowering the demand for, and intensity of, the medical care provided. Regarding provider exits, as fee-for-service fees declined relative to those assumed for private health insurance plans, facilities of marginal profitability would likely exit the Medicare market, reducing capacity and volume. This change could also cause a more bifurcated health system in which only providers that could operate profitably under Medicare would offer services to Medicare beneficiaries, with a tendency to provide only the more basic services not associated with new medical technologies. Finally, the innovations being tested for the Medicare program, such as bundled payments or accountable care organizations, could reduce incentives to adopt new cost-increasing technologies and increase incentives to adopt new cost-decreasing technologies for those participating in these programs and/or could contribute to greater efforts to avoid services of limited or no value within the service bundle.

Reflecting all of these considerations, the year-by-year long-range cost growth rate assumption for these HI and SMI Part B services starts at 3.6 percent in 2046, or GDP plus 0 percent, and gradually declines to 3.4 percent by 2096, or GDP minus 0.3 percent.

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[77]See Recommendation III-3 of the 2010–2011 Medicare Technical Review Panel and Finding 3-2 of the 2016–2017 Medicare Technical Review Panel.

[78]Other factors, such as reduced beneficiary cost-sharing requirements, would tend to increase the volume and intensity of services. The assumption of −0.1 percent reflects the Technical Panel's assessment that the overall impact would be a small net decrease in volume and intensity growth.

(ii) *Physician services*

Payment rate updates are 0.75 percent per year for those qualified physicians assumed to be participating in advanced alternative payment models (advanced APMs) and 0.25 percent for those assumed to be participating in the merit-based incentive payment system (MIPS) in the long range. The year-by-year cost growth rates for physician payments are assumed to decline from 3.2 percent in 2046, or GDP minus 0.4 percent, to 2.8 percent in 2096, or GDP minus 0.9 percent.

(iii) *Certain SMI Part B services that are updated annually by the CPI increase less the increase in productivity.*

Such services include durable medical equipment (DME) that is not subject to competitive bidding,[79] care at ambulatory surgical centers, ambulance services, and medical supplies, which are updated by the CPI and reduced by the 10-year moving average increase in economy-wide productivity. For these services, the Trustees initially assume that the rate of per beneficiary volume and intensity growth is equivalent to that derived for the overall health sector using the factors model. This volume and intensity growth is assumed to be reduced by 0.1 percent per year, as described above. The volume and intensity assumption is combined with the long-range CPI assumption (2.4 percent) minus the productivity factor (1.0 percent) to produce a long-range growth assumption for these SMI Part B services. The corresponding year-by-year cost growth rates gradually decline from 2.8 percent in 2046, or GDP minus 0.8 percent, to 2.6 percent in 2096, or GDP minus 1.1 percent.

(iv) *All other Medicare services, for which payments are established based on market processes, such as prescription drugs provided through Part D and the remaining Part B services.*

The Trustees assume that per beneficiary outlays for these other Part B services, which constitute about 36 percent of total Part B expenditures in 2031, and for all Part D services grow at the same rate as the overall health sector as determined from the factors model. The services are assumed to grow similarly because their payment updates are determined by market forces, such as the competitive-bidding process for Medicare Part D. The year-by-year cost growth rates gradually decline from 4.3 percent in 2046,

[79]The portion of DME that is subject to competitive bidding is included with all other Medicare services since the price is determined by a competitive bidding process.

or GDP plus 0.7 percent, to 4.1 percent by 2096, or GDP plus 0.4 percent.

In addition, these long-range cost growth rates must be modified to reflect demographic impacts. Beginning with the 2020 report, these impacts reflect the changing distribution of Medicare enrollment by age, sex, and the beneficiary's proximity to death, which is referred to as a time-to-death (TTD) adjustment. The TTD adjustment reflects the fact that the closer an individual is to death, the higher his or her health care spending is. Thus, as mortality rates improve and a smaller portion of the Medicare population is likely to die at any given age, the effect of individuals getting older and spending more on health care is offset somewhat.[80]

After combining the rates of growth from the four long-range assumptions, the weighted average cost growth rate for Part B is 3.8 percent, or GDP plus 0.2 percent in 2046, declining to 3.7 percent, or GDP plus 0 percent by 2096. When Parts A, B, and D are combined, the weighted average cost growth rate is 3.8 percent in 2046, or GDP plus 0.2 percent, declining to 3.7 percent, or GDP plus 0 percent by 2096.

As in the past, the Trustees have established detailed growth rate assumptions for the initial 10 years of the projection period by individual type of service (for example, inpatient hospital care and physician services), reflecting recent trends and the impact of all applicable statutory provisions. For each of Parts A, B, and D, the assumed growth rates for years 11 through 25 of the projection period are set by interpolating between the rate at the end of the short-range period and the rate at the start of the final 50 years of the long-range period described above. The 2016–2017 Medicare Technical Review Panel concluded that both the current length of the transition period and the current approach to the transition are reasonable, and they recommended that the Trustees continue to use the same approach to transitions between short-range and long-range projections for both HI and SMI.[81]

[80]More information on the TTD adjustment is available at https://www.cms.gov/files/document/incorporation-time-death-medicare-demographic-assumptions.pdf.

[81]See Findings 6-2 and 6-3 and Recommendation 6-1.

V. APPENDICES

A. MEDICARE AMENDMENTS SINCE THE 2021 REPORT

Since the 2021 annual report was transmitted to Congress on August 31, 2021, and prior to this report's preparation, five laws were enacted that have an effect on the Medicare trust funds. The more important provisions, from an actuarial standpoint, are described, in brief, in the following paragraphs. Certain provisions with a relatively minor financial impact, but which are important from a policy perspective, are briefly described as well.

1. The Extending Government Funding and Delivering Emergency Assistance Act (Public Law 117-43, enacted on September 30, 2021) included one provision that affects the HI and SMI programs.

- The funding amount of $165 million previously provided to the Medicare Improvement Fund for services furnished during and after fiscal year 2021, as discussed under Public Law 116-260 in last year's report, is decreased to $69 million. This fund is intended to be available for improvements to the original fee-for-service program under Parts A and B, and funding is provided from the HI and SMI trust funds in such proportion as deemed appropriate by the Secretary of Health and Human Services (HHS).

2. The Infrastructure Investment and Jobs Act (Public Law 117-58, enacted on November 15, 2021) included provisions that affect the HI and SMI programs.

Provision Affecting All Parts of Medicare

- The sequestration process that is in place should Congress fail to address the budget deficit by certain deadlines is extended by 1 year, through fiscal year 2031 (which, for sequestration purposes, covers April 1, 2031 through March 31, 2032). The benefit payment reductions for fiscal year 2030 (covering April 1, 2030 through March 31, 2031) are changed to a uniform 2 percent (instead of 2 percent for the first 5.5 months, 4 percent for the next 6 months, and 0 percent for the final 0.5 months), and the benefit payment reductions for fiscal year 2031 (covering April 1, 2031 through March 31, 2032) are 4 percent for first 6 months and 0 percent for the final 6 months.

Provision Affecting Part B of SMI

- Manufacturers of certain single-dose container or single-use package drugs payable under Part B are required to provide refunds to Medicare for discarded portions of these drugs for each calendar quarter beginning on or after January 1, 2023. CMS is to send each manufacturer a quarterly report showing the number of units (if any) that were discarded and the total amount due, which is to be the number of discarded units multiplied by 90 percent of the allowed charge per unit. (This percentage may be reduced through the regulation process for drugs with unique circumstances.) Civil monetary penalties are to be imposed for noncompliance. This provision applies to single-source drugs, biologicals, and biosimilar biological products that are separately payable under Part B, with the following exceptions: (i) radiopharmaceuticals and imaging agents, (ii) drugs that require filtration prior to administration such that the drug is discarded after the filtration process, and (iii) drugs that have been covered under Part B for fewer than 18 months.

Provision Affecting Part D of SMI

- A moratorium is imposed on the implementation of a final rule that was promulgated by the HHS Office of Inspector General and published on November 30, 2020. This rule would amend the safe harbors as they apply to drug rebates paid to Part D plans either directly or through their pharmacy benefit managers (PBMs). Under this rule, such rebates would be protected only when passed through to the dispensing pharmacy (to reduce out-of-pocket costs for beneficiaries), which would be a major change from current typical practice. The original effective date for implementation of the final rule was January 1, 2022. Pursuant to court orders resulting from a lawsuit brought by the PBM industry, the date had been delayed until January 1, 2023; this provision extends the delay until January 1, 2026.

3. An Act making further continuing appropriations for the fiscal year ending September 30, 2022, and for other purposes (Public Law 117-70, enacted on December 3, 2021) included one provision that affects the HI and SMI programs.

- The funding amount of $69 million previously provided to the Medicare Improvement Fund for services furnished during and after fiscal year 2021, as discussed under Public Law 117-43, is decreased to $56 million.

4. The Protecting Medicare and American Farmers from Sequester Cuts Act (Public Law 117-71, enacted on December 10, 2021) included provisions that affect the HI and SMI programs.

Provisions Affecting All Parts of Medicare

- The temporary exemption from sequestration for the Medicare program from May 1, 2020 through December 31, 2021 (as described in last year's report) is extended through March 31, 2022, and the benefit payment reduction for April 1, 2022 through June 30, 2022 is changed to 1 percent (from 2 percent). In addition, the benefit payment reductions for fiscal year 2030 (covering April 1, 2030 through March 31, 2031) are changed to 2.25 percent for the first 6 months and 3 percent for the second 6 months (from a uniform 2 percent for the entire period). (The benefit payment reductions for fiscal year 2031, covering April 1, 2031 through March 31, 2032, remain the same as described under Public Law 117-58.)

- The funding amount of $56 million previously provided to the Medicare Improvement Fund for services furnished during and after fiscal year 2021, as discussed under Public Law 117-70, is increased to $101 million.

Provisions Affecting Part B of SMI

- In the formula used for determining Medicare physician payment rates under the physician fee schedule for services furnished during calendar year 2022, the conversion factor is increased by 3 percent over the amount that it would have been in the absence of this provision's enactment. (This increase is not subject to the budget neutrality requirements that typically apply.)

- Implementation of the Medicare Radiation Oncology Model is delayed until January 1, 2023 at the earliest (from January 1, 2022 at the earliest).

- For the market-based system used to update the Medicare clinical laboratory fee schedule, laboratories are exempted for another year from the requirement that they report private payer rates. The next data reporting period is now the first quarter of 2023 (instead of the first quarter of 2022). Also, during the phase-in period for this system, the caps in place to limit reductions in fee schedule payments from year to year are changed to 0 percent for 2021–2022 and 15 percent for 2023–2025 (as opposed to the previous statutory parameters of 0 percent for 2021 and 15 percent for 2022–2024). That is, tests furnished under the fee schedule during 2021–2022 are to be paid at the same rates as under the 2020 fee schedule, and payments may not be reduced by more than 15 percent for services provided during 2023–2025.

5. The Further Additional Extending Government Funding Act (Public Law 117-86, enacted on February 18, 2022) included one provision that affects the HI and SMI programs.

- The funding amount of $101 million previously provided to the Medicare Improvement Fund for services furnished during and after fiscal year 2021, as discussed under Public Law 117-71, is decreased to $99 million.

B. TOTAL MEDICARE FINANCIAL PROJECTIONS

Medicare is the nation's second largest social insurance program, exceeded only by Social Security (OASDI). Although Medicare's two components—Hospital Insurance (HI) and Supplementary Medical Insurance (SMI)—are very different from each other in many key respects, it is important to consider the overall cost of Medicare and its financing. By reviewing Medicare's total expenditures, readers can assess the financial obligation created by the program. Similarly, the sources and relative magnitudes of HI and SMI revenues are an important policy matter.

The issues of Medicare's total cost to society and the means of financing that cost are different from the question of the financial status of the Medicare trust funds. The latter focuses on whether a specific trust fund's income and expenditures are in balance. The separate HI and SMI financial projections prepared for this purpose, however, can be usefully combined for the broader purposes outlined above. To that end, this section presents information on combined HI and SMI costs and revenues. Sections III.B, III.C, and III.D of this report present detailed assessments of the financial status of the HI trust fund and the Part B and Part D accounts of the SMI trust fund, respectively.

1. 10-Year Actuarial Estimates (2022–2031)

Table V.B1 shows past and projected Medicare income, expenditures, and trust fund assets in dollar amounts for calendar years,[82] with projections shown under the intermediate set of assumptions for the short-range projection period 2022 through 2031.

[82]The table shows amounts on a *cash* basis, reflecting actual expenditures made during the year, even if the payments were for services performed in an earlier year. Similarly, income figures represent amounts actually received during the year, even if incurred in an earlier year.

Table V.B1.—Total Medicare Income, Expenditures, and Trust Fund Assets during Calendar Years 1970–2031

[In billions]

Calendar year	Total income	Total expenditures	Net change in assets	Assets at end of year
Historical data:				
1970	$8.2	$7.5	$0.7	$3.4
1975	17.7	16.3	1.3	12.0
1980	37.0	36.8	0.1	18.3
1985	76.5	72.3	4.2	31.4
1990	126.3	111.0	15.3	114.4
1995	175.3	184.2	−8.9	143.4
2000	257.1	221.8	35.3	221.5
2005	357.5	336.4	21.0	309.8
2010	486.1[1]	522.9	−36.8	344.0
2015	644.4[1]	647.6	−3.2	263.2
2016	710.2[1]	678.7	31.5	294.7
2017	705.1	710.2	−5.0	289.6
2018	755.7	740.6	15.1	304.7
2019	794.7	796.1	−1.4	303.3
2020	899.9[1,2]	925.8[3]	−25.9	277.4
2021	887.6[1]	839.3[3]	48.3	325.7
Intermediate estimates:				
2022	973.2	940.4[3]	32.8	358.5
2023	1,055.5	1,047.9	7.7	366.2
2024	1,106.9	1,132.3	−25.4	340.8
2025	1,191.4	1,221.0	−29.7	311.1
2026	1,295.3[1]	1,321.1	−25.8	285.3
2027	1,383.5[1]	1,421.2	−37.6	247.7
2028	1,483.1	1,525.2	−42.1	205.6
2029	1,582.4	1,636.6	−54.2	151.4
2030	1,676.6	1,741.9	−65.3	86.1
2031	1,782.1	1,849.3	−67.2	18.9

[1]Section 708 of the Social Security Act modifies the provisions for the payment of Social Security benefits when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Payment of those benefits normally due January 3, 2010 actually occurred on December 31, 2009, payment of benefits normally due January 3, 2016 occurred on December 31, 2015, and payment of benefits normally due January 3, 2021 occurred on December 31, 2020. Consequently, the Part B and Part D premiums withheld from these benefits and the associated Part B general revenue contributions were added to the Part B or Part D account, as appropriate, on December 31, 2009 (about $14.8 billion for Part B and about $0.2 billion for Part D), December 31, 2015 (about $7.5 billion for Part B and about $0.1 billion for Part D), and December 31, 2020 (about $10.0 billion for Part B and about $0.1 billion for Part D), respectively. Similarly, the payment date for those benefits normally due January 3, 2027 will be on December 31, 2026. Accordingly, an estimated $6.3 billion will be added to the Part B account, and an estimated $0.1 billion will be added to the Part D account, on December 31, 2026.

[2]See footnote 9 of table III.C4.

[3]Includes net payments of $100.5 billion made through the Medicare Accelerated and Advance Payments Program in calendar year 2020 and subsequent net repayments of $48.1 billion and $52.4 billion in calendar years 2021 and 2022, respectively.

Note: Totals do not necessarily equal the sums of rounded components.

As indicated in table V.B1, Medicare expenditures have increased rapidly during most of the program's history. From 1985 through 2021, expenditures grew at an average annual rate of 7.0 percent, and they are projected to increase at an average annual rate of 8.2 percent from 2022 through 2031.

Through most of Medicare's history, trust fund income has kept pace with increases in expenditures.[83] For this year's report, the Trustees estimate that, from 2022 through 2031, total Medicare income will increase at an average annual rate of 7.2 percent, which is slightly lower than the growth in expenditures.

The Department of the Treasury has invested past excesses of income over expenditures in U.S. Treasury securities, with total trust fund assets accumulating to $325.7 billion at the end of calendar year 2021. Combined assets fluctuated over the recent historical period for various reasons, including transfers from the general fund of the Treasury required by enacted legislation. The change in assets continues to fluctuate slightly over the remainder of the short-range projection period due to the timing of premium collections, as described in footnote 1 of table V.B1, and the return of HI deficits.[84]

2. 75-Year Actuarial Estimates (2022–2096)

Table V.B2 shows past and projected Medicare expenditures expressed as a percentage of GDP.[85] This percentage provides a relative measure of the size of the Medicare program compared to the general economy and represents the portion of the nation's total resources dedicated each year to providing health care services to beneficiaries through Medicare. Expenditures represented 0.7 percent of GDP in 1970 and had grown to 2.6 percent of GDP by 2005, reflecting rapid increases in the factors affecting health care cost growth. Starting in 2006, Medicare provided subsidized access to prescription drug coverage through Part D, which caused most of the increase in Medicare expenditures to 3.0 percent of GDP in the first year. The Trustees project much more moderate continuing growth in the long range, partially as a result of the lower price updates under current law, with total Medicare expenditures projected to reach about 6.5 percent of GDP by 2096.

Part of the projected increase is attributable to the prescription drug benefit in Medicare. When it was fully implemented in 2006, Part D

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[83]This balance resulted from periodic increases in HI payroll tax rates and other HI financing, from annual increases in SMI premium and general revenue financing rates (to cover the following year's estimated expenditures), and from frequent legislation designed to slow the rate of growth in expenditures.

[84]See sections III.B, III.C, and III.D regarding the asset projections for HI and Part B and Part D of SMI, separately.

[85]In contrast to the expenditure amounts shown in table V.B1, table V.B2 shows historical and projected expenditures on an incurred basis. Incurred amounts relate to the expenditures for services performed in a given year, even if payment for those expenditures occurs in a later year.

represented 11 percent of incurred Medicare expenditures; this share increased to 12 percent in 2021 and will account for 13 percent of Medicare expenditures by the end of the projection period.

The projections shown in table V.B2 for total Medicare as a share of GDP are similar to those in the 2021 report primarily because lower projections for Part D are mostly offset by slightly higher projections for Part B. The details of these changes are described in sections III.B, III.C, and III.D.

Table V.B2.—HI and SMI Incurred Expenditures as a Percentage of the Gross Domestic Product

	HI	SMI		
Calendar year	Part A	Part B	Part D	Total
Historical data:				
1970	0.51%	0.21%	—	0.71%
1975	0.69	0.29	—	0.98
1980	0.91	0.40	—	1.31
1985	1.11	0.55	—	1.66
1990	1.12	0.74	—	1.86
1995	1.55	0.87	—	2.42
2000	1.28	0.91	—	2.19
2005	1.44	1.18	0.01%	2.62
2010	1.63	1.43	0.42	3.48
2015	1.53	1.55	0.49	3.57
2016	1.55	1.58	0.50	3.63
2017	1.54	1.61	0.48	3.64
2018	1.52	1.66	0.48	3.65
2019	1.54	1.73	0.48	3.76
2020	1.64	1.83	0.51	3.98
2021	1.56	1.88	0.48	3.93
Intermediate estimates:				
2022	1.57	1.89	0.46	3.91
2023	1.60	1.96	0.47	4.02
2024	1.63	2.04	0.48	4.16
2025	1.68	2.13	0.49	4.30
2026	1.73	2.23	0.50	4.46
2027	1.77	2.32	0.51	4.61
2028	1.81	2.42	0.52	4.75
2029	1.85	2.51	0.53	4.89
2030	1.87	2.59	0.54	5.00
2031	1.89	2.67	0.55	5.11
2035	2.05	3.05	0.58	5.68
2040	2.13	3.29	0.60	6.03
2045	2.16	3.37	0.62	6.15
2050	2.14	3.39	0.64	6.17
2055	2.12	3.44	0.67	6.22
2060	2.10	3.51	0.70	6.31
2065	2.11	3.58	0.73	6.41
2070	2.12	3.62	0.75	6.49
2075	2.12	3.67	0.78	6.57
2080	2.11	3.68	0.80	6.59
2085	2.08	3.67	0.81	6.56
2090	2.05	3.64	0.82	6.50
2095	2.01	3.62	0.84	6.46
2096	2.00	3.62	0.84	6.46

Note: Percentages are affected by economic cycles.

The 75-year projection period fully allows for the presentation of anticipated future developments, such as the impact of a large increase in enrollees from 2010 through 2031. This increase in the number of beneficiaries will occur because the relatively large number of persons born during the period between the end of World War II and the mid-1960s (known as the baby boom generation) will reach eligibility age and begin to receive benefits. Moreover, as this generation ages, these individuals will experience greater health care utilization and costs, thereby adding further to growth in program expenditures. Table V.B3 shows past and projected enrollment in the Medicare program.

As indicated in table V.B3, over the last 35 years the total number of Medicare beneficiaries approximately doubled, and the Trustees expect the total to increase by 42 percent over approximately the next 35 years. During this same historical period, the number of covered workers also increased rapidly (by about 46.5 percent), but the Trustees project this number to increase much more slowly (about 12 percent) over the next 35 years. This demographic shift and its implications for Medicare costs, relative to workers' earnings or to the GDP, are fairly well known.

The enrollment data also show that the number of Medicare beneficiaries enrolled in private health plans under Part C has increased substantially in recent years. (Section IV.C of this report describes the changes in enrollment growth since 2005.) By 2021, about 43 percent of eligible Medicare beneficiaries were enrolled in private Part C health plans. The Trustees expect modest increases in private plan penetration rates between 2022 and 2031, with the estimated proportion of beneficiaries in such plans ultimately stabilizing at about 53 percent.

Table V.B3.—Medicare Enrollment

[In thousands]

Calendar year	HI	SMI			
	Part A	Part B	Part D	Private health plans[1]	Total[2]
Historical data:					
1970	20,104	19,496	—	—	20,398
1975	24,481	23,744	—	—	24,864
1980	28,002	27,278	—	—	28,433
1985	30,621	29,869	—	1,271	31,081
1990	33,747	32,567	—	2,017	34,251
1995	37,175	35,641	—	3,467	37,594
2000	39,257	37,335	—	6,856	39,688
2005	42,233	39,752	1,841	5,794	42,606
2010	47,365	43,882	34,772	11,693	47,720
2015	55,246	50,756	41,786	17,493	55,589
2016	56,729	52,094	43,198	18,392	57,073
2017	58,344	53,446	44,476	19,816	58,683
2018	59,677	54,679	45,791	21,336	60,020
2019	61,186	56,020	47,171	22,947	61,534
2020	62,533	57,311	48,672	25,071	62,895
2021	63,389	58,377	49,945	27,552	63,762
Intermediate estimates:					
2022	64,616	59,419	51,501	30,014	65,003
2023	66,200	60,931	53,174	31,880	66,602
2024	67,937	62,595	54,939	33,254	68,355
2025	69,600	64,186	56,572	34,566	70,033
2026	71,271	65,784	58,114	35,865	71,719
2027	72,813	67,282	59,464	37,116	73,275
2028	74,288	68,718	60,710	38,321	74,763
2029	75,668	70,066	61,881	39,470	76,156
2030	76,899	71,289	62,932	40,541	77,399
2031	77,898	72,311	63,792	41,495	78,407
2035	81,171	75,684	66,767	44,177	81,714
2040	83,322	77,926	68,745	45,399	83,888
2045	84,632	79,222	69,888	46,174	85,211
2050	86,558	80,960	71,422	[3]	87,154
2055	89,213	83,392	73,567	[3]	89,822
2060	92,483	86,457	76,271	[3]	93,118
2065	95,513	89,427	78,891	[3]	96,169
2070	98,757	92,561	81,656	[3]	99,438
2075	102,189	95,830	84,540	[3]	102,898
2080	104,280	97,990	86,445	[3]	105,006
2085	105,553	99,338	87,634	[3]	106,289
2090	106,601	100,416	88,585	[3]	107,339
2095	108,875	102,527	90,448	[3]	109,627
2096	109,476	103,103	90,956	[3]	110,232

[1]Of Medicare beneficiaries enrolled in private plans, about 97 percent are in Medicare Advantage plans or Part C. The remainder are in certain holdover plans reimbursed on a cost basis rather than through capitation payments, in Program of All-Inclusive Care for the Elderly (PACE) plans, or in Medicare-Medicaid Plans (MMPs).

[2]Number of beneficiaries with HI and/or SMI coverage.

[3]The Trustees do not explicitly project enrollment in private health plans beyond 2045.

Table V.B4 shows the past and projected amounts of Medicare revenues as a percentage of total non-interest Medicare income, under the intermediate assumptions. The table excludes interest income, which would not be a significant part of program financing in the long range.

Table V.B4.—Medicare Sources of Income as a Percentage of Total Non-Interest Income

Calendar year	Payroll taxes	Tax on benefits	Premiums[1]	Brand-name drug fees	State transfers	General revenue[2]
Historical data:						
1970	61.8%	—	13.7%	—	—	24.6%
1980	68.0	—	8.6	—	—	23.4
1990	62.2	—	9.8	—	—	27.9
2000	59.8	3.6%	9.1	—	—	27.6
2010	38.9	2.9	13.3	—	0.9%	44.0
2015	38.1	3.2	13.6	0.5%	1.4	43.2
2016	36.3	3.3	12.8	0.4	1.4	45.7
2017	37.7	3.5	14.6	0.6	1.6	42.0
2018	36.0	3.2	15.2	0.5	1.6	43.4
2019	36.4	3.0	15.3	0.4	1.6	43.4
2020	34.0	3.0	14.8	0.3	1.3	46.6
2021	34.4	2.8	15.1	0.3	1.4	46.1
Intermediate estimates:						
2030	29.2	4.4	18.5	0.2	1.6	46.0
2040	25.1	4.6	20.1	0.1	1.5	48.6
2050	24.8	4.7	20.2	0.1	1.6	48.7
2060	24.3	4.7	20.3	0.0	1.7	49.0
2070	24.0	4.7	20.4	0.0	1.7	49.1
2080	23.9	4.7	20.4	0.0	1.8	49.2
2090	24.2	4.6	20.3	0.0	1.8	49.0
2096	24.4	4.5	20.3	0.0	1.9	49.0

[1]Includes premium revenue from HI and both accounts in the SMI trust fund.
[2]Includes Part B repayment amounts in 2016–2025.

Note: Row sums may not exactly equal 100 percent due to rounding.

General revenues (primarily those for SMI) represented 46 percent of total non-interest income to the Medicare program in 2021 and have constituted the largest share of Medicare financing since 2009. HI payroll taxes were the next largest source of overall financing at 34 percent. Beneficiary premiums (again, primarily for SMI) were third, at 15 percent. Projected HI tax revenues fall short of projected HI expenditures in all future years. In contrast, SMI premium and general revenues will keep pace with SMI expenditure growth, and State payments[86] (on behalf of Medicare beneficiaries who also qualify for full Medicaid benefits) will grow with Part D expenditures. General revenue transfers to the Part B account increased significantly in 2016, as required by the Bipartisan Budget Act of 2015 to compensate for premium revenue that was not received in 2016 due to the hold-harmless provision. They increased again in 2020 and 2021, as required by the Continuing Appropriations Act, 2021 and Other Extensions Act to account for the outstanding balance of the Accelerated and Advance Payments (AAP) Program in 2020 and to compensate for premium revenue that was not received in 2021 due to the legislated specification of the aged actuarial rate calculation. Another source of Part B financing, from fees on manufacturers and

[86]State payments to Part D amounted to 90 percent of their projected forgone Medicaid prescription drug costs in 2006, and this percentage phased down over a 10-year period to 75 percent in 2015.

importers of brand-name prescription drugs, increased from $2.5 billion in 2011 to $4.1 billion in 2018 but then decreased to $2.8 billion for 2019 and later. In the absence of legislation, HI tax income would represent a declining portion of total Medicare revenues. In 2028, for example, the projected year of depletion of the HI trust fund, currently scheduled HI payroll taxes would represent about 31 percent of total non-interest Medicare income. General revenues and beneficiary premiums would equal about 46 and 18 percent, respectively.

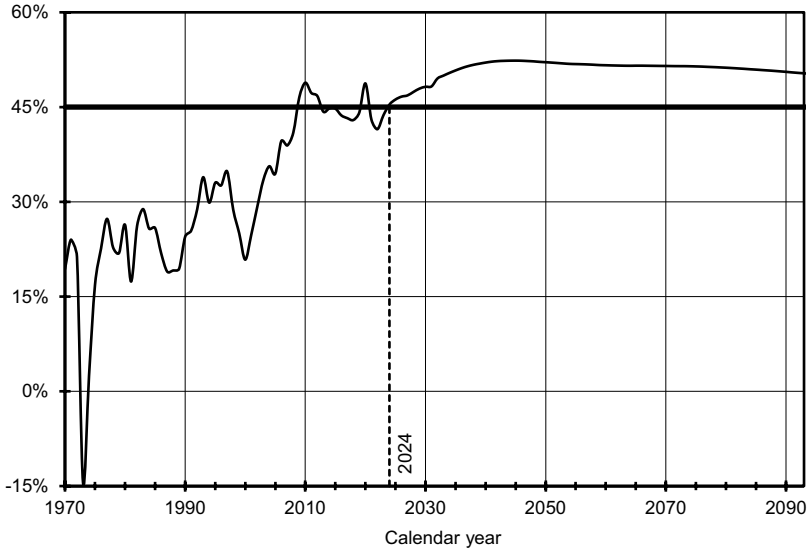
The law requires an expanded analysis of the combined expenditures and dedicated revenues of the HI and SMI trust funds. In particular, the law requires a determination as to whether the difference between total Medicare outlays and its dedicated financing sources is projected to exceed 45 percent of total outlays within the next 7 fiscal years (2022–2028). Dedicated Medicare financing sources include HI payroll taxes; income from taxation of Social Security benefits; State transfers for the prescription drug benefit; premiums paid under Parts A, B, and D; fees on brand-name prescription drugs paid to Part B; and any gifts received by the Medicare trust funds. The test uses expenditures adjusted to avoid temporary distortions arising from the payment of Medicare Advantage and Part D capitation amounts in September when the normal October payment date is a Saturday or Sunday.

The Trustees made determinations of excess general revenue Medicare funding in each of the reports for 2006 through 2013 and in the 2017 through 2021 reports. Two consecutive such determinations trigger a Medicare funding warning. The 2007 through 2013 reports, and the 2018 through 2021 reports, thus prompted Medicare funding warnings. The law specifies that in response to such findings the President must submit to Congress, within 15 days after the date of the Budget submission for the succeeding year, proposed legislation to respond to the warning. The law also requires Congress to consider the legislation proposed in response to Medicare funding warnings on an expedited basis. To date, elected officials have not enacted legislation responding to these funding warnings.

Figure V.B1 displays, on a calendar-year basis, the historical and projected ratio of the difference between total Medicare outlays and dedicated financing sources to total Medicare outlays. As indicated, this ratio exceeded 45 percent at the end of calendar years 2009 through 2012 and in calendar year 2020, and it is expected to again exceed that level at the end of calendar year 2024, the third year of the projection. Therefore, the Board of Trustees is issuing a determination of excess general revenue Medicare funding in this report. Since this is

the sixth consecutive such finding, a Medicare funding warning is again triggered.

Figure V.B1.—Projected Difference between Total Medicare Outlays and Dedicated Financing Sources, as a Percentage of Total Outlays



As figure V.B1 also indicates, the Board projects that the difference between outlays and dedicated funding sources will reach almost 52 percent of outlays by 2046 and will decline to 50 percent by the end of the 75-year period. This difference between outlays and dedicated funding sources, which the law refers to as general revenue Medicare funding, includes the following:

- Financing specified portions of SMI Part B and SMI Part D expenditures;
- Reimbursing the HI trust fund for the costs of certain uninsured beneficiaries;
- Paying interest on invested assets of the trust funds;
- Redeeming the special Treasury securities held as assets by the trust funds; and
- Financing the imbalance between HI expenditures and dedicated revenues after HI asset depletion.

Current law provides for the first four of these items. However, for the fifth—coverage of the HI shortfall—there is no provision under current law.

The law also requires a comparison of projected growth in the difference between outlays and dedicated revenues with other health spending growth rates. Table V.B5 contains this comparison.

Table V.B5.—Comparative Growth Rates of Medicare, Private Health Insurance, National Health Expenditures, and GDP

	Average annual growth in:				
Calendar year	Incurred outlays minus dedicated revenues	Incurred Medicare outlays	GDP	National health expenditures[1]	Private health insurance[1]
2016	1.2%	4.3%	2.7%	5.6%	5.9%
2017	3.2	4.5	4.2	4.6	5.9
2018	7.2	5.8	5.4	4.3	5.0
2019	9.7	7.2	4.1	4.7	5.6
2020	−0.2	3.7	−2.2	4.6	3.7
2021	18.7	8.5	10.0	5.2	5.2
2022	0.2	8.0	8.5	5.1	4.0
2023	8.9	8.0	5.0	5.7	4.9
2024	11.9	7.9	4.5	5.6	5.0
2025	9.7	7.8	4.3	5.5	5.0
2026	9.2	8.2	4.1	5.7	5.0
2027	7.9	7.5	4.1	5.8	5.0
2028	8.5	7.3	4.1	5.6	5.0
2029	8.5	7.3	4.1	5.6	4.9
2030	6.9	6.3	4.1	5.3	4.9
2031	6.8	6.4	4.1	5.3	4.9
2032–2046	5.9	5.3	4.0	5.0	—
2047–2071	4.2	4.3	4.1	4.7	—
2072–2096	4.0	4.1	4.1	4.6	—

[1]Based on a national health expenditure (NHE) projections article published in March 2022 (*Health Affairs*, vol. 41, no. 4). Data through 2019 are considered historical, and years after 2030 were determined based on the methods described in section IV.D. The findings presented in this article, along with the paper outlining its methodology, are available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.

The gap between outlays and dedicated revenues slowed after 2010 as Medicare spending decelerated and as cost-reducing provisions began taking effect. The COVID-19 pandemic had a significant effect on expenditures in 2020, but the impact on dedicated funding sources is delayed because program financing, which includes Part A payroll tax income and the Part B and Part D premiums, is set prospectively and is not able to be changed. This phenomenon, along with the assumed path of the pandemic through 2028, results in the growth patterns shown in table V.B5. Beginning in 2023, the gap between outlays and dedicated revenues will increase faster than outlays in many years through 2046 since the dedicated sources of income to the HI trust fund will generally cover a decreasing percentage of HI outlays.

In addition to projected Medicare outlay growth, table V.B5 shows projected growth in GDP, total national health expenditures in the

U.S., and private health insurance expenditures. The Trustees expect each of the health expenditure categories to continue the longstanding trend of increasing more rapidly than GDP in most years. Private health insurance expenditures equal the total premiums earned by private health insurers, including benefits incurred and the net cost of insurance. The net cost of insurance includes administrative costs, additions to reserves, rate credits and dividends, premium taxes, and profits or losses.

Several factors affect comparisons between aggregate Medicare and private health insurance cost growth:

- The number of Medicare beneficiaries is currently increasing by about 3 percent per year, and this growth rate will continue as more of the post-World War II baby boom generation reaches eligibility age. The number of individuals with private health insurance is estimated to increase at slower rates than the growth in the number of Medicare beneficiaries.

- Certain current-law provisions, such as the limitation on maximum out-of-pocket costs in 2014 and later, will also affect the average actuarial value of private health insurance benefits.

- The use of health care services differs significantly between Medicare beneficiaries (who are generally over 65) and individuals with private health insurance (who are predominantly below age 65). The former group, for example, has a higher incidence of hospitalization, skilled nursing care, and home health care. For the latter group, physician services represent a greater proportion of their total health care needs. Different cost growth trends by type of service will affect overall growth rates and reflect the distribution of services for each category of people.

- There is some overlap between people with Medicare and those with private health insurance. For example, many Medicare beneficiaries have supplemental health insurance coverage through private Medigap insurance policies or employer-sponsored retiree health benefits, and private health insurance includes both of these categories. About 10 million Medicare beneficiaries receive supplemental coverage through the Medicaid program; neither the growth rates for Medicare nor those for private health insurance reflect the Medicaid costs for these dual beneficiaries.

A number of research studies have attempted to control for some or all of these differences in comparing growth trends. Over long historical

periods, average, demographically adjusted, per capita growth rates for common benefits have been somewhat lower for Medicare than for private health insurance. For shorter periods, however, the rates of growth have often diverged substantially, and the differential has been negative in some years and positive in others. More information on past and projected national and private health expenditures, and on comparisons to Medicare growth rates, is available in the sources cited in table V.B5.

C. ILLUSTRATIVE ALTERNATIVE PROJECTIONS

The Social Security Act requires the Trustees to evaluate the financial status of the Medicare trust funds. To comply with this mandate, the Trustees must assess whether the financing provided under current law is adequate to cover the benefit payments and other expenditures required under current law. Accordingly, the estimates shown in this report are based on all of the current statutory requirements, including (i) the reductions in payment updates by the increase in economy-wide productivity for most non-physician provider categories; (ii) the physician payment updates specified by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) for all future years; and (iii) the expiration in 2025 of the 5-percent bonuses for qualified physicians in advanced alternative payment models (advanced APMs) and of the $500-million payments for physicians in the merit-based incentive payment system (MIPS).

As discussed in the Introduction, there is substantial uncertainty regarding the adequacy of future Medicare payment rates under current law. This section illustrates the higher Medicare outlays that would result if certain statutory Medicare payment provisions were not fully implemented in all future years. The assumptions that underlie the illustrative alternative and that transition from current law to the illustrative scenario are consistent with recommendations from the 2016–2017 Medicare Technical Review Panel.[87]

For all Part A services and some other (non-physician) Part B services, payment updates will be reduced in all future years by the increase in economy-wide productivity.[88] By the end of the long-range projection period, payment rates for affected providers would be about 51 percent lower than their level in the absence of these reductions. In 2018, the Medicare payment rates for inpatient hospital services declined to about 60 percent of those paid by private health insurance.[89] If future improvements in productivity were to remain similar to what providers have achieved in the recent past (about 0.4 percent annually), then Medicare payment levels for inpatient hospital services at the end of the long-range projection period would be less than 35 percent of the

[87]The 2016–2017 Medicare Technical Review Panel concluded that the ultimate assumptions underlying the illustrative alternative were reasonable (Finding 2-3) and recommended that they be implemented over a later time frame (Recommendation 2-4). These assumptions have been implemented since the 2018 report.

[88]In addition to the productivity adjustments, Medicare payments to providers will be affected by the sequestration of outlays in April 2013 through September 2031.

[89]See https://www.aha.org/system/files/media/file/2020/10/TrendwatchChartbook-2020-Appendix.pdf. Private payer hospital payments are roughly 45 percent above costs while Medicare hospital payments are roughly 13 percent below costs.

corresponding level paid by private health insurance. This comparison assumes that private payer rate increases would continue to be set through the same negotiation process used to date, independent of the Medicare reductions or other health system changes. Specifically, private payer rates would grow by 2.8 percent per year, or the increase in the price of inputs to the provision of health care (3.2 percent) less the assumed growth in hospital productivity (0.4 percent). By comparison, Medicare payment rates would grow by 2.2 percent per year, or 3.2 percent less the assumed growth in economy-wide productivity (1.0 percent).

Simulations that take into account the lower Medicare payment rates, other payment provisions, sequestration, changes to Medicare and Medicaid disproportionate share hospital payments, and coverage expansions collectively suggest a deterioration of facility margins for hospitals, skilled nursing facilities, and home health agencies, particularly over the long run. From 2020 through 2027, the simulations suggest that up to 3 percent more hospitals would experience negative total facility margins and that approximately 5 percent more would experience negative Medicare margins. Other factors, such as efforts to improve efficiency in lower-performing hospitals, could mitigate some of the impact of the payment provisions under current law, though there is a wide range of uncertainty regarding these types of behavioral changes. By 2040, simulations suggest that roughly one-third of hospitals and up to 50 percent of skilled nursing facilities and home health agencies would have negative total facility margins, raising the possibility of access and quality-of-care issues for Medicare beneficiaries. A memorandum on these provider margin simulations is available on the CMS website.[90]

Over time, unless providers could alter their use of inputs to reduce their cost per service correspondingly, Medicare's payments for health services would fall increasingly below providers' costs. Providers could not sustain continuing negative margins and would have to withdraw from serving Medicare beneficiaries or (if total facility margins remained positive) shift substantial portions of Medicare costs to their non-Medicare, non-Medicaid payers. Under such circumstances, lawmakers might feel substantial pressure to override the productivity adjustments, much as they did to prevent reductions in physician payment rates while the sustainable growth rate (SGR) system was in effect.

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[90]See https://www.cms.gov/files/document/simulations-affordable-care-act-medicare-payment-update-provisions-part-provider-financial-margins.pdf.

While the physician payment system put in place by MACRA avoided the significant short-range physician payment issues resulting from the SGR system approach, it nevertheless raises important long-range concerns that will almost certainly need to be addressed by future legislation. In particular, additional updates totaling $500 million per year and 5-percent annual bonuses are scheduled to expire in 2025, resulting in a payment reduction for most physicians. In addition, the law specifies the physician payment updates for all years in the future, and these updates do not vary based on underlying economic conditions, nor are they expected to keep pace with the average rate of physician cost increases. The specified rate updates could be an issue in years when levels of inflation are high and would be problematic when the cumulative gap between the price updates and physician costs becomes large. The Trustees previously estimated that physician payment rates under current law will be lower than they would have been under the SGR formula by 2048 and will be about 30 percent lower by the end of the projection period. Absent a change in the delivery system or level of update by subsequent legislation, the Trustees expect access to Medicare-participating physicians to become a significant issue in the long term.

In view of these issues, it is important to note that the actual future costs for Medicare may exceed the projections shown in this report, possibly by substantial amounts. Use of an alternative projection can illustrate the potential magnitude of this difference.

It is conceivable that health care providers could improve their productivity, reduce wasteful expenditures, and take other steps to keep their cost growth within the bounds imposed by the Medicare price limitations. For such efforts to be successful in the long range, however, providers would have to generate and sustain unprecedented levels of productivity gains—a very challenging and uncertain prospect.

A transformation of health care in the U.S., affecting both the means of delivery and the method of paying for care, is also a possibility. Private health insurance and Medicare are taking important steps in this direction by initiating programs of research into innovative payment and service delivery models, such as accountable care organizations, patient-centered medical homes, improvement in care coordination for individuals with multiple chronic health conditions, better coordination of post-acute care, payment bundling, pay for performance, and assistance for individuals in making informed health choices. Such changes have the potential to reduce health care costs and cost growth rates and could, as a result, help lower health care

spending to levels compatible with the lower price updates payable under current law.

The ability of new delivery and payment methods to lower cost growth rates is uncertain at this time. Preliminary indications are that some of these delivery reforms have had modest levels of success in lowering costs. It is too early to tell if these reductions in spending will continue or if they will grow to the magnitude needed to align with the statutory Medicare price updates. Given these uncertainties, it will be important for policymakers to monitor the adequacy of Medicare payment rates over time to ensure beneficiary access to high-quality care.

To help illustrate and quantify the potential magnitude of the cost understatement, a set of illustrative Medicare projections has been prepared under a hypothetical alternative.[91] The 2016–2017 Medicare Technical Review Panel recommended that the Trustees continue to prepare such a projection and that, under this illustrative alternative, Medicare spending reflect less than full implementation of the payment updates to providers specified under current law.[92]

There are multiple ways in which the law could be changed if these provider updates prove unsustainable. The illustrative scenario presented in this report is just one possibility among many that demonstrates the degree to which the current-law projections may be understated. While a particular set of illustrative alternative update assumptions for specific years is used, the transition from current law to the illustrative alternative ultimate assumptions over time is intended to reflect an increasing likelihood of modifications to current law rather than a specific forecast of when current law will cease to be fully implemented. Figure V.C1 compares the illustrative alternative projection with the projections under current law.

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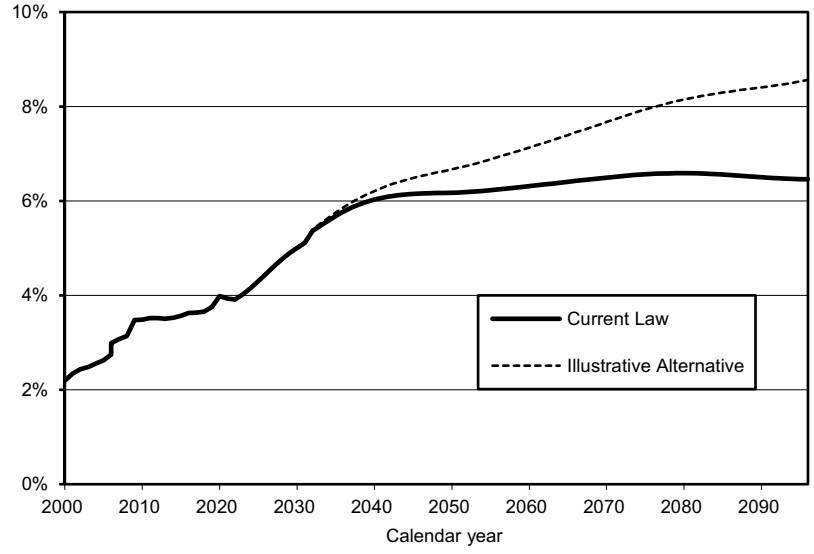
[91]The 2010–2011 Medicare Technical Review Panel supported the continued use of illustrative alternative projections for this purpose (Recommendation IV-3). In addition, the Panel recommended a graphical comparison of the current-law and alternative projections within the Medicare annual report, highlighting the potential effects of both the SGR system and productivity adjustments (Recommendation IV-4). The Panel's report, *Review of Assumptions and Methods of the Medicare Trustees' Financial Projections,* can be found at http://aspe.hhs.gov/health/reports/2013/MedicareTech/TechnicalPanelReport2010-2011.pdf. The text summarizes the specific assumptions chosen by the Trustees for the illustrative alternative projections.

[92]See Recommendation 2-3 of the 2016–2017 Medicare Technical Review Panel report, available at https://aspe.hhs.gov/system/files/pdf/257821/MedicareTechPanelFinalReport2017.pdf.

Figure V.C1.—Medicare Expenditures as a Percentage of the Gross Domestic Product under Current Law and Illustrative Alternative Projections



Note: Percentages are affected by economic cycles.

The top curve in figure V.C1 shows the cost levels under the illustrative alternative. This scenario illustrates the impact that would occur if the payment updates that are affected by the productivity adjustments transition from current law to the payment updates assumed for private health plans over the period 2028–2042.[93] It also reflects physician payment updates that transition from current law to the increase in the Medicare Economic Index over the same period. Finally, the scenario assumes the continuation of the 5-percent bonuses for qualified physicians in advanced alternative payment models (advanced APMs) and of the $500-million payments for physicians in the merit-based incentive payment system (MIPS), which are set to expire in 2025. Under this alternative, the average long-range per beneficiary growth rate for all Medicare services would be similar to the long-range growth rate assumed for the overall health sector.

Under the illustrative alternative scenario, Medicare costs as a percentage of GDP continue to increase rapidly throughout the projection period, reaching 6.5 percent of GDP in 2046 and 8.6 percent in 2096—considerably higher than under current law (6.2 percent of GDP in 2046 and 6.5 percent of GDP in 2096).

[93]Section IV.D of this report describes the price component of health care cost increases for the overall health sector.

D. AVERAGE MEDICARE EXPENDITURES PER BENEFICIARY

Table V.D1 shows historical average per beneficiary expenditures for HI and SMI, as well as projected costs for calendar years 2022 through 2031 under the intermediate assumptions. Starting with the 2014 report, this section presents per beneficiary expenditures based on when the service is performed rather than when payment for the service is made.

For both HI and SMI Part B, costs increased very rapidly in the early years, in part because the availability of Medicare coverage enabled many beneficiaries to obtain the full range of health services they needed. The rapid inflation of the 1970s and early 1980s also contributed to rapid Medicare expenditure increases, and the cost-based reimbursement mechanisms in place provided relatively little incentive for efficiency in the provision of health care. Growth in average HI expenditures moderated dramatically following the introduction of the inpatient hospital prospective payment system in fiscal year 1984, but it accelerated again in the late 1980s and early 1990s due to rapid growth in skilled nursing and home health expenditures. During this same period, SMI Part B average costs generally continued to increase at relatively fast rates but slowed somewhat in the early 1990s with the implementation of physician fee reform legislation.

Expenditure growth moderated again during the late 1990s due to the effects of further legislation and efforts to control fraud and abuse. In addition, historically low levels of general and medical inflation helped reduce Medicare payment updates. The growth rates rebounded from 2001 through 2005 and then moderated somewhat for the remainder of the decade.

For 2010 through 2015, HI and Part B of SMI experienced the lowest 5-year per beneficiary growth rates in the program's history. This slow growth, which continued in 2016 and 2017 (and in 2018 for HI), was driven in part by legislated update reductions, low provider payment updates caused by the economic recession, and adjustments for documentation and coding that did not reflect changes in real case mix. In addition, increased enrollment resulting from eligibility of the baby boom generation has decreased the average age of Medicare beneficiaries, thereby reducing per beneficiary costs. The growth rates also reflect the impact of the sequestration process, which is required under current law and reduces Medicare expenditures by 2 percent per year beginning April 1, 2013, with the exception of May 1, 2020

through March 31, 2022 when it was suspended. Finally, growth in the volume and intensity of the services delivered has also been relatively low, highlighted by reductions in the number of hospital admissions over this period.

Although SMI Part D began in 2004, full prescription drug coverage did not start until 2006. Accordingly, this discussion includes only the per beneficiary expenditures for 2006 and later. Spending growth occurred in 2011 but was negative in 2012 due to the patent expiration of certain high-cost drugs. The large amount of growth in 2014 and 2015 was due to utilization of the new, expensive specialty drugs used to treat hepatitis C. Lower utilization of these drugs contributed to the decline in average spending growth in 2016. In 2017, larger rebates caused average per beneficiary costs to drop, but growth in spending rebounded in 2018 and 2019. It slowed again in 2020 because the plan bids assumed higher direct and indirect remuneration and slow reinsurance growth. The COVID-19 pandemic had a notable impact on Part A and Part B benefit spending growth in 2020 as non-COVID care was significantly reduced, in particular for elective services. The Trustees assume that some of this reduced and deferred care will return in 2021 and 2022.

Table V.D1.—HI and SMI Average Incurred per Beneficiary Costs

Calendar year	Average per beneficiary costs				Average percent change[1]			
		SMI				SMI		
	HI	Part B	Part D	Total	HI	Part B	Part D	Total
Historical data:								
1970	$270	$115	—	$385	13.8%	13.8%	—	13.8%
1975	472	205	—	677	11.8	12.3	—	12.0
1980	929	423	—	1,352	14.5	15.6	—	14.8
1985	1,579	795	—	2,373	11.2	13.4	—	11.9
1990	1,979	1,355	—	3,334	4.6	11.3	—	7.0
1995	3,194	1,867	—	5,061	10.0	6.6	—	8.7
2000	3,348	2,496	—	5,844	0.9	6.0	—	2.9
2005	4,439	3,839	—	8,278	5.8	9.0	—	7.2
2010	5,193	4,901	$1,808	11,902	3.2	5.0	—	7.5
2015	5,028	5,556	2,153	12,737	−0.6	2.5	3.6%	1.4
2016	5,095	5,674	2,156	12,925	1.3	2.1	0.2	1.5
2017	5,145	5,870	2,120	13,134	1.0	3.5	−1.7	1.6
2018	5,220	6,219	2,139	13,578	1.5	6.0	0.9	3.4
2019	5,393	6,615	2,175	14,183	3.3	6.4	1.7	4.5
2020	5,475	6,686	2,198	14,359	1.5	1.1	1.0	1.2
2021	5,667	7,414	2,228	15,309	3.5	10.9	1.4	6.6
Intermediate estimates:								
2022	6,049	7,920	2,224	16,192	10.5	18.5	1.2	12.8
2023	6,312	8,419	2,311	17,042	4.4	6.3	3.9	5.2
2024	6,581	8,911	2,407	17,899	4.3	5.9	4.1	5.0
2025	6,885	9,452	2,481	18,818	4.6	6.1	3.1	5.1
2026	7,204	10,087	2,574	19,864	4.6	6.7	3.7	5.6
2027	7,527	10,692	2,673	20,893	4.5	6.0	3.9	5.2
2028	7,851	11,327	2,782	21,960	4.3	5.9	4.1	5.1
2029	8,182	12,040	2,899	23,120	4.2	6.3	4.2	5.3
2030	8,483	12,676	3,023	24,183	3.7	5.3	4.3	4.6
2031	8,829	13,399	3,154	25,383	4.1	5.7	4.4	5.0

[1]Percent changes for 1970 represent the average annual increases from 1967 (the first full year of trust fund operations) through 1970. Similarly, percent changes shown for 1975, 1980, 1985, 1990, 1995, 2000, 2005, and 2010 represent the average annual increase over the 5-year period ending in the indicated year.

On average, annual increases in per beneficiary costs have been greater for SMI Part B than for HI during the previous five decades—by approximately 1.0 percent, 4.5 percent, 1.0 percent, 2.5 percent, and 2.6 percent per year in the 1970s, 1980s, 1990s, 2000s, and 2010s, respectively. The HI increase remains lower than the SMI Part B increase over the next 10 years due to lower utilization growth of HI services.

Note that the rapid growth rates in the 1970s and 1980s are not expected to recur for either HI or SMI Part B due to more moderate inflation rates and the conversion of Medicare's remaining cost-based reimbursement mechanisms to prospective payment systems. In addition, the reduction in Medicare price updates for most categories of providers that affected the growth rates over the last several years will continue to reduce growth rates throughout the projection period.

E. MEDICARE COST-SHARING AND PREMIUM AMOUNTS

HI beneficiaries who use covered services may be subject to deductible and coinsurance requirements. A beneficiary is responsible for an inpatient hospital deductible amount, which is deducted from the amount payable by the HI trust fund to the hospital, for inpatient hospital services furnished in a spell of illness. When a beneficiary receives such services for more than 60 days during a spell of illness, he or she is responsible for a coinsurance amount equal to one-fourth of the inpatient hospital deductible for each of days 61–90 in the hospital. After 90 days in a spell of illness, each individual has 60 lifetime reserve days of coverage, for which the coinsurance amount is equal to one-half of the inpatient hospital deductible. A beneficiary is responsible for a coinsurance amount equal to one-eighth of the inpatient hospital deductible for each of days 21–100 of skilled nursing facility services furnished during a spell of illness. No cost sharing is required for home health or hospice services.

Most persons aged 65 and older and many disabled individuals under age 65 are insured for HI benefits without payment of any premium. The Social Security Act provides that certain aged and disabled persons who are not insured may voluntarily enroll, subject to the payment of a monthly premium. In addition, since 1994, voluntary enrollees may qualify for a reduced premium if they have at least 30 quarters of covered employment.

Table V.E1 shows the historical levels of the HI deductible, coinsurance amounts, and premiums, as well as projected values for future years based on the intermediate set of assumptions used in estimating the operations of the trust funds. The values listed in the table for future years are estimates, and the actual amounts are likely to be somewhat different as experience emerges.

Table V.E1.—HI Cost-Sharing and Premium Amounts

Year	Inpatient hospital deductible[1]	Inpatient daily coinsurance[1]		SNF daily coinsurance[1]	Monthly premium	
		Days 61–90	Lifetime reserve days		Standard[2]	Reduced[1]
Historical data:						
1970	$52	$13	$26	$6.50	—	—
1975	92	23	46	11.50	$40	—
1980	180	45	90	22.50	78	—
1985	400	100	200	50.00	174	—
1990	592	148	296	74.00	175	—
1995	716	179	358	89.50	261	$183
2000	776	194	388	97.00	301	166
2005	912	228	456	114.00	375	206
2006	952	238	476	119.00	393	216
2007	992	248	496	124.00	410	226
2008	1,024	256	512	128.00	423	233
2009	1,068	267	534	133.50	443	244
2010	1,100	275	550	137.50	461	254
2015	1,260	315	630	157.50	407	224
2016	1,288	322	644	161.00	411	226
2017	1,316	329	658	164.50	413	227
2018	1,340	335	670	167.50	422	232
2019	1,364	341	682	170.50	437	240
2020	1,408	352	704	176.00	458	252
2021	1,484	371	742	185.50	471	259
2022	1,556	389	778	194.50	499	274
Intermediate estimates:						
2023	1,584	396	792	198.00	508	279
2024	1,612	403	806	201.50	530	292
2025	1,668	417	834	208.50	555	305
2026	1,720	430	860	215.00	581	320
2027	1,772	443	886	221.50	608	334
2028	1,824	456	912	228.00	634	349
2029	1,876	469	938	234.50	661	364
2030	1,928	482	964	241.00	686	377
2031	1,984	496	992	248.00	714	393

[1]Amounts shown are effective for calendar years.
[2]Amounts shown for 1970–1980 are for the 12-month periods ending June 30; amounts shown for 1985 and later are for calendar years.

The *Federal Register* notice[94] announcing the HI deductible and coinsurance amounts for 2022 included an estimate of the aggregate cost to HI beneficiaries for the changes in the deductible and coinsurance amounts from 2021 to 2022. At the time of the notice's publication, it was estimated that in 2022 there would be 6.43 million inpatient deductibles paid at $1,556 each, 1.44 million inpatient days subject to coinsurance at $389 per day (for hospital days 61 through 90), 0.72 million lifetime reserve days subject to coinsurance at $778 per day, and 28.63 million extended care days subject to coinsurance at $194.50 per day. Similarly, it was estimated that in 2021 there would be 6.11 million deductibles paid at $1,484 each, 1.37 million days subject to coinsurance at $371 per day (for hospital days 61 through 90), 0.69 million lifetime reserve days subject to coinsurance at $742 per day, and 29.69 million extended care days subject to coinsurance at $185.50 per day. The total increase in cost to

[94]See https://www.govinfo.gov/content/pkg/FR-2021-11-17/pdf/2021-25051.pdf.

beneficiaries was estimated to be $1.1 billion due to (i) the increase in the inpatient deductible and coinsurance amounts and (ii) the increase in the number of deductibles and daily coinsurance amounts paid.

Table V.E2 displays the SMI cost-sharing and premium amounts for Parts B and D. The projected values for future years are based on the intermediate set of assumptions used in estimating the operations of the Part B and Part D accounts. As a result, these values are estimates, and the actual amounts are likely to be somewhat different as experience emerges. The Part B premiums for 2010 and 2011 also reflect significant additional increases designed to offset the loss of revenues attributable to the hold-harmless provision, as described later in this appendix. Similarly, the 2017 premium was increased due to loss of revenues from the very low Social Security cost-of-living adjustment and the hold-harmless provision.

Table V.E2.—SMI Cost-Sharing and Premium Amounts

	Part B		Part D			
Calendar year	Standard monthly premium[1]	Annual deductible[2]	Base beneficiary premium	Deductible	Initial benefit limit	Catastrophic threshold
Historical data:						
1970	$4.00	$50	—	—	—	—
1975	6.70	60	—	—	—	—
1980	8.70	60	—	—	—	—
1985	15.50	75	—	—	—	—
1990	28.60	75	—	—	—	—
1995	46.10	100	—	—	—	—
2000	45.50	100	—	—	—	—
2005	78.20	110	—	—	—	—
2006	88.50	124	$32.20	$250	$2,250	$3,600
2007	93.50	131	27.35	265	2,400	3,850
2008	96.40	135	27.93	275	2,510	4,050
2009	96.40	135	30.36	295	2,700	4,350
2010	110.50	155	31.94	310	2,830	4,550
2015	104.90	147	33.13	320	2,960	4,700
2016	121.80	166	34.10	360	3,310	4,850
2017	134.00	183	35.63	400	3,700	4,950
2018	134.00	183	35.02	405	3,750	5,000
2019	135.50	185	33.19	415	3,820	5,100
2020	144.60	198	32.74	435	4,020	6,350
2021	148.50	203	33.06	445	4,130	6,550
2022	170.10	233	33.37	480	4,430	7,050
Intermediate estimates:						
2023	170.10	233	32.90	505[3]	4,660[3]	7,400[3]
2024	175.30	240	34.42	530	4,890	7,750
2025	186.10	259	35.57	555	5,110	8,100
2026	201.00	280	36.91	575	5,310	8,400
2027	216.60	302	38.21	600	5,520	8,750
2028	229.50	320	39.61	625	5,770	9,150
2029	243.40	339	41.13	655	6,040	9,600
2030	256.20	357	42.75	685	6,330	10,050
2031	272.10	379	44.46	720	6,640	10,550

[1]Amounts shown for 1970–1980 are for the 12-month periods ending June 30; amounts shown for 1985 and later are for calendar years.
[2]The Part B deductible was fixed by statute through 2005 and is to be indexed by average per beneficiary Part B expenditures thereafter.
[3]These amounts have already been finalized.

The Part B monthly premiums displayed in table V.E2 are the standard premium rates paid by most Part B enrollees. However, there are three provisions that alter the premium rate for certain Part B enrollees. First, there is a premium surcharge for those beneficiaries who enroll after their initial enrollment period.

Second, beginning in 2007, there is a higher income-related premium for those individuals whose modified adjusted gross income exceeds a specified threshold. Table V.E3 displays, for 2007 through 2031, the income-related premium adjustment amounts, the number of beneficiaries affected, and the aggregate additional premium amounts collected, based on the intermediate set of assumptions. In 2021, approximately 4.8 million beneficiaries paid a Part B income-related premium.

Table V.E3.—Part B Income-Related Premium Information

Calendar year	Income-related monthly adjustment amount[1]					Beneficiaries affected (millions)	Aggregate premiums[2] (billions)
	35%	50%	65%	80%	85%		
Historical data:							
2007	$12.30	$30.90	$49.40	$67.90	—	1.7	$0.7
2008	25.80	64.50	103.30	142.00	—	2.0	1.8
2009	38.50	96.30	154.10	211.90	—	2.2	2.9
2010	44.20	110.50	176.80	243.10	—	1.9	2.7
2011	46.10	115.30	184.50	253.70	—	1.6	2.3
2012	40.00	99.90	159.80	219.80	—	1.9	2.4
2013	42.00	104.90	167.80	230.80	—	2.2	2.9
2014	42.00	104.90	167.80	230.80	—	2.6	3.4
2015	42.00	104.90	167.80	230.80	—	2.9	3.8
2016	48.70	121.80	194.90	268.00	—	3.3	5.2
2017	53.50	133.90	214.30	294.60	—	3.5	6.0
2018	53.50	133.90	214.30	294.60	—	3.7	7.0
2019	54.10	135.40	216.70	297.90	$325.00	4.3	8.4
2020	57.80	144.60	231.40	318.10	347.00	4.7	10.0
2021	59.40	148.50	237.60	326.70	356.40	4.8	10.5
2022	68.00	170.10	272.20	374.20	408.20	5.3	13.9
Intermediate estimates:							
2023	68.00	170.10	272.20	374.20	408.20	6.8	17.8
2024	70.00	175.10	280.20	385.30	420.30	7.6	20.2
2025	74.30	185.90	297.50	409.00	446.10	8.3	23.7
2026	80.30	200.90	321.50	442.00	482.20	9.1	28.0
2027	86.60	216.60	346.60	476.50	519.80	9.9	33.1
2028	91.70	229.40	367.10	504.70	550.60	10.8	37.9
2029	97.30	243.30	389.30	535.30	584.00	11.7	43.7
2030	102.50	256.20	409.90	563.60	614.90	12.6	49.6
2031	108.80	272.10	435.40	598.70	653.10	13.5	56.2

[1]Amount is based on the applicable percentage of program cost represented by the premium and also reflects the impact of the 3-year transition in 2007 and 2008. The Bipartisan Budget Act of 2018 created an additional premium level for 2019 and later.
[2]Represents the total amount paid by affected beneficiaries in excess of the Part B standard premium.

In 2022 the initial threshold is $91,000 for an individual tax return and $182,000 for a joint return. The thresholds were not indexed to inflation in the years 2011 through 2019 but are indexed thereafter. Individuals exceeding the threshold will pay premiums covering 35, 50, 65, 80, or, beginning in 2019, 85 percent of the average program cost

for aged beneficiaries, depending on their income level, compared to the standard premium covering 25 percent. Effective in 2018, the Medicare Access and CHIP Reauthorization Act of 2015 lowered certain income thresholds used for determining the income-related monthly adjustment amounts to be paid by beneficiaries, resulting in a greater number of beneficiaries paying the higher amounts. In addition, beginning in 2020, the legislation adjusted the methodology used to index the thresholds, and accordingly more beneficiaries will be subject to the income-related premiums. The Bipartisan Budget Act of 2018 (BBA 2018) established an additional premium level beginning in 2019 for individuals with incomes at or above $500,000 (and couples with incomes at or above $750,000), and they will pay a premium covering 85 percent of the average program cost. These new thresholds will not be indexed until 2028 and later.

Third, Part B premiums may also vary from the standard rate because a hold-harmless provision can lower the premium rate for individuals who have their premiums deducted from their Social Security benefits. On an individual basis, this provision limits the dollar increase in the Part B premium to the dollar increase in the individual's Social Security benefit. As a result, the person affected pays a lower Part B premium, and the net amount of the individual's Social Security benefit does not decrease despite the greater increase in the premium.

Most services under Part B are subject to an annual deductible and coinsurance. The annual deductible was set by statute through 2005. Thereafter, it increases with the increase in the Part B aged actuarial rate to approximate the growth in per capita Part B expenditures.[95] After meeting the deductible, the beneficiary pays an amount equal to the product of the coinsurance percentage and the remaining allowed charges. The coinsurance percentage is 20 percent for most services. However, since the coinsurance payment for a service paid under the outpatient hospital prospective payment system is capped at the inpatient hospital deductible amount, the average coinsurance percentage for these services was about 18 percent in 2018 and is expected to gradually decline in the projection period. For those services not subject to the deductible or coinsurance (clinical laboratory

[95]The current mechanism to index the Part B deductible has technical computational issues mainly due to the timing of the calculation. The Part B deductible for any given year is indexed by the increase in the monthly aged actuarial rate for that same year, which represents estimated monthly per capita expenditures. However, these expenditures are dependent on the Part B deductible, which is not known until the actuarial rate is determined. The result is circularity in the modeling process.

tests, home health agency services, and most preventive care services), the beneficiary pays nothing.

The Part D average premiums displayed in table V.E2 are the estimated base beneficiary premiums. Starting in 2009, the national average plan bid is based on the enrollment-weighted average. The actual premium that a beneficiary pays varies according to the plan in which the beneficiary enrolls. The average paid premium has always been lower than the base beneficiary premium; the average paid premium was $31.70 in 2021 and is projected to be $32.32 in 2022. Since beneficiaries may switch plans each year once the premium rates become known, the Trustees assume that the estimated average premium rate paid by beneficiaries will continue to be somewhat less than the base beneficiary premium in future years.

Similar to Part B, there are two provisions that affect the premium rate for certain Part D beneficiaries. First, there is a Part D late enrollment penalty for those beneficiaries enrolling after their initial enrollment period. Second, starting in 2011, individuals whose modified adjusted gross income exceeds the same thresholds applicable to the Part B premium pay an income-related premium in addition to the premium charged by the plan in which the individual enrolled. The amount of the income-related premium adjustment is dependent on the individual's income level, and the extra premium amount is the difference between 35, 50, 65, 80, or 85 percent and 25.5 percent, applied to the National Average Monthly Bid Amount adjusted for reinsurance. In addition, the changes to the income ranges and threshold methodology that were previously described for Part B also apply to Part D. Table V.E4 displays, for 2011 through 2031, the Part D income-related premium adjustment amounts, the number of beneficiaries affected, and the aggregate additional premium amounts collected, based on the intermediate set of assumptions. In December 2021, approximately 4.1 million beneficiaries paid a Part D income-related premium.

Table V.E4.—Part D Income-Related Premium Information

Calendar year	Income-related monthly adjustment amount[1]					Beneficiaries affected (millions)	Aggregate premiums[2] (billions)
	35%	50%	65%	80%	85%		
Historical data:							
2011	$12.00	$31.10	$50.10	$69.10	—	0.9	$0.3
2012	11.60	29.90	48.10	66.40	—	1.1	0.4
2013	11.60	29.90	48.30	66.60	—	1.5	0.5
2014	12.10	31.10	50.20	69.30	—	1.8	0.7
2015	12.30	31.80	51.30	70.80	—	2.1	0.9
2016	12.70	32.80	52.80	72.90	—	2.5	1.0
2017	13.30	34.20	55.20	76.20	—	2.7	1.2
2018	13.00	33.60	54.20	74.80	—	2.9	1.4
2019	12.40	31.90	51.40	70.90	$77.40	3.4	1.6
2020	12.20	31.50	50.70	70.00	76.40	3.8	1.8
2021	12.30	31.80	51.20	70.70	77.10	3.9	1.8
2022	12.40	32.10	51.70	71.30	77.90	4.5	2.2
Intermediate estimates:							
2023	12.30	31.60	51.00	70.30	76.80	5.8	2.8
2024	12.80	33.10	53.30	73.60	80.30	6.5	3.2
2025	13.30	34.20	55.10	76.00	83.00	7.1	3.7
2026	13.80	35.50	57.20	78.90	86.10	7.8	4.3
2027	14.20	36.70	59.20	81.70	89.20	8.5	4.7
2028	14.80	38.10	61.40	84.70	92.40	9.3	5.4
2029	15.30	39.50	63.70	87.90	96.00	10.0	6.1
2030	15.90	41.10	66.20	91.40	99.70	10.8	6.8
2031	16.60	42.70	68.90	95.00	103.70	11.6	7.6

[1]Amount is based on the applicable percentage of program cost represented by the premium. The Bipartisan Budget Act of 2018 created an additional premium level for 2019 and later.
[2]Represents the total amount paid by affected beneficiaries in excess of the Part D plan premium.

In addition, there are Part D premium and cost-sharing subsidies for those beneficiaries with incomes less than 150 percent of the Federal poverty level and with assets, including burial expenses, in 2022 that amount to less than $15,510 for an individual and $30,950 for a couple. The asset thresholds are indexed in subsequent years by the Consumer Price Index (CPI-U). Under the current statutory adjustment formula, the asset figures for 2022 increase for both an individual and a couple as a result of increases in the CPI-U.

Under standard Part D coverage, there is an initial deductible. After meeting the deductible, the beneficiary pays 25 percent of the remaining costs up to the initial benefit limit. Beyond this limit, prior to 2011, the beneficiary paid all the drug costs until his or her total out-of-pocket expenditures reached the catastrophic threshold. (This total includes the deductible and coinsurance payments for expenses up to the initial benefit limit.) The coverage gap was to be gradually closed beginning in 2011 until 2020, and then BBA 2018 required the coverage gap for brand-name drugs to close 1 year earlier, in 2019. Starting in 2020, for all drugs, beneficiaries pay 25 percent of the costs between the deductible and the catastrophic threshold under the standard coverage. In 2022, after reaching the catastrophic threshold, the beneficiary pays the greater of (i) 5 percent of the drug cost or (ii) $3.95 for generic or preferred multiple-source drugs or $9.85 for

preferred single-source drugs. The latter copayment amounts from 2022 are indexed annually by per enrollee Part D average costs. Beneficiaries qualifying for the Part D low-income subsidy pay substantially reduced premium and cost-sharing amounts. Many Part D plans offer alternative coverage that differs from the standard coverage described above. The majority of beneficiaries have not enrolled in the standard benefit design but rather in plans with low or no deductibles, flat copayments for covered drugs, and, in some cases, partial coverage in the coverage gap.

F. MEDICARE AND SOCIAL SECURITY TRUST FUNDS AND THE FEDERAL BUDGET

One can view the financial operations of Medicare and Social Security in the context of the programs' trust funds or in the context of the overall Federal budget. The financial status of the trust funds differs fundamentally from the impact of these programs on the budget, and people often misunderstand the relationship between these two perspectives. Each perspective is appropriate and important for its intended purpose; this appendix attempts to clarify their roles and relationship.

By law, the annual reports of the Medicare and Social Security Boards of Trustees to Congress include a statement of the financial status of the programs' trust funds—that is, whether these funds have sufficient revenues and assets to enable the payment of benefits and administrative expenses. This trust fund perspective is important because the existence of trust fund assets provides the statutory authority to make such payments without the need for an appropriation from Congress. Under current law, Medicare and Social Security benefits can be paid only if the relevant trust fund has sufficient income or assets.

The trust fund perspective does not encompass the interrelationship between the Medicare and Social Security trust funds and the overall Federal budget. The budget is a comprehensive display of all Federal activities, whether financed through trust funds or from the general fund of the Treasury. This broader focus may appropriately be termed the budget perspective or government-wide perspective and is officially presented in the *Budget of the United States Government*[96] and in the *Financial Report of the United States Government*.[97]

Payroll taxes, income taxes on Social Security benefits, Medicare premiums, and special State payments to Medicare finance the majority of Medicare and Social Security costs. In addition to these earmarked receipts from workers, employers, beneficiaries, and States, and interest payments on their accumulated assets, the trust funds (principally the SMI trust fund) rely on Federal general fund revenues for some of their financing. The financial status of a trust fund appropriately considers all sources of financing provided for that fund, including the availability of trust fund assets that Medicare or Social Security can use to meet program expenditures. From a budget

[96]https://www.whitehouse.gov/wp-content/uploads/2022/03/budget_fy2023.pdf
[97]https://www.fiscal.treasury.gov/files/reports-statements/financial-report/2021/fr-02-17-2022-(final).pdf

perspective, however, general fund transfers represent a draw on other Federal resources for which there is no earmarked source of revenue from the public. For this appendix, interest payments to the trust funds and asset redemptions, both of which occur due to the postponed use of earmarked revenues, are classified as draws on other Federal resources, since they require payments from the Treasury general fund. The budget perspective does not reflect that publicly held debt and interest payments to the public are both lower because the trust funds hold some of the debt.

At the beginning of the Medicare program, general fund and interest payments were relatively small. These amounts have been increasing, and the expected future growth of Medicare and Social Security will make their interaction with the Federal budget increasingly important. As the difference between earmarked and total trust fund revenues grows, the financial operations of Social Security and Medicare can appear markedly different depending on which of the two perspectives one uses.[98]

Illustration with Actual Data for 2021

Table V.F1 illustrates the trust fund and budget perspectives using actual data on Federal financial operations for fiscal year (FY) 2021. The first three columns show revenues and expenditures for HI, SMI, and OASDI, respectively, and the fourth ("Combined") column is the sum of these three columns. The sixth ("Total") column shows total revenues and expenditures for the total Federal budget, and the fifth ("Other") column presents all other Federal programs (including the general fund account of the Treasury) and is calculated as the difference between the amounts in the "Total" column and the amounts in the "Combined" column. The table shows earmarked revenues from the public separately from revenues from other government accounts (general revenue transfers and interest credits). Note that the transfers and interest credits received by the trust funds are the key differences between the two perspectives.

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[98]A more complete treatment of this topic appears in a May 2009 Treasury report titled "Social Security and Medicare Trust Funds and the Federal Budget" at https://home.treasury.gov/system/files/226/ep_budget_trust_fund_perspectives_2009.pdf. Additional information is available in a *Health Care Financing Review* article titled "Medicare Financial Status, Budget Impact, and Sustainability: Which Concept Is Which?" at http://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HealthCareFinancingReview/Downloads/05-06Winpg127.pdf and in a *Social Security Bulletin* article titled "Social Security Trust Fund Cash Flows and Reserves" at https://www.ssa.gov/policy/docs/ssb/v75n1/v75n1p1.html.

Table V.F1.—Annual Revenues and Expenditures for Medicare and Social Security Trust Funds and the Total Federal Budget, Fiscal Year 2021[1]

[In billions]

Revenue and expenditures categories	Trust funds				Other	Total
	HI	SMI	OASDI	Combined		
Revenues from public:						
Payroll and benefit taxes	$324.1	—	$1,007.1	$1,331.2	—	$1,331.2
Premiums[2]	5.7	$129.9	—	135.6	—	135.6
Other taxes, fees, and payments[3]	—	14.6	—	14.6	$2,565.6	2,580.2
Total	329.9	144.5	1,007.1	1,481.5	2,565.6	4,047.1
Total expenditures to public[4]	331.9	511.0	1,134.8	1,977.7	4,844.7	6,822.4
Net Results for Budget Perspective	**−2.1**	**−366.5**	**−127.6**	**−496.2**	**−2,279.1**	**−2,775.3**
Revenues from other government accounts:						
Transfers	1.4	448.2	0.0	449.6	n/a	n/a
Interest credits	2.4	2.1	73.3	77.8	n/a	n/a
Total	3.9	450.3	73.3	527.4	n/a	n/a
Net Results for Trust Fund Perspective	**1.8**	**83.8**	**−54.4**	**31.2**	**n/a**	**n/a**

[1]The "Total" column presents revenues and expenditures for the total Federal budget in fiscal year 2021. The total revenue and outlay amounts can be found in Historical Table 1.1 of the FY 2023 President's Budget, and the figure $2,775.3 billion is the difference between these amounts and represents the estimated total Federal budget deficit for fiscal year 2021. Amounts reported for the "Trust funds" columns represent actual operations based on information in the Monthly Treasury Statement and are presented throughout the Trustees Reports. "Other" amounts are calculated as the difference between the amounts in the "Total" column and the amounts in the "Combined" column under "Trust funds."

[2]Includes Part D premiums paid directly to plans, which are not displayed on Treasury statements and are estimated.

[3]Includes Part D State transfers.

[4]The OASDI figure includes $5.0 billion transferred to the Railroad Retirement Board.

Notes: 1. For comparison, HI taxable payroll, OASDI taxable payroll, and GDP were $9,688 billion, $7,705 billion, and $20,937 billion, respectively, in 2021.
2. Totals do not necessarily equal the sums of rounded components.
3. n/a indicates not applicable.

The trust fund perspective reflects both categories of revenues for each trust fund. For HI, revenues from the public plus transfers/credits from other government accounts were $1.8 billion more than total expenditures in FY 2021, as shown at the bottom of the first column.[99] For the SMI trust fund, the statutory revenues from beneficiary premiums, State transfers, general revenue transfers, and interest earnings collectively were $83.8 billion more than expenditures in FY 2021. Note that it is appropriate to view the general revenue transfers from other government accounts as financial resources from the trust fund perspective since they are available to help meet trust fund outlays. For OASDI, total trust fund revenues from all sources

[99]The Department of the Treasury invests surplus revenues from the public over expenditures to the public in special Treasury securities, which thereby represent a loan from the trust funds to the general fund of the Federal Government. These loans reduce the amount that the general fund has to borrow from the public to finance a deficit (or likewise increase the amount of debt paid off if there is a surplus). Interest is credited to the trust funds while the securities are being held. Trust fund securities can be redeemed at any time if needed to help meet program expenditures.

(including $73.3 billion in interest payments and $0.0 billion in general fund reimbursements) were $54.4 billion less than expenditures.

From the government-wide or budget perspective, only earmarked revenues received from the public—principally taxes on payroll and benefits, plus premiums—and expenditures made to the public are important for the final balance.[100] For HI, the difference between such revenues ($329.9 billion) and total expenditures made to the public ($331.9 billion) was $2.1 billion in FY 2021, indicating that HI had a negative effect on the overall budget in FY 2021. For SMI, beneficiary premiums, fees on brand-name prescription drugs to Part B, and State payments to Part D of Medicare were the only sources of revenues from the public in FY 2021 and represented only about 28 percent of total expenditures. The remaining $366.5 billion in FY 2021 outlays represented a substantial net draw on the Federal budget in that year.[101] For OASDI, the difference between revenues from the public ($1,007.1 billion) and total expenditures ($1,134.8 billion) was $127.6 billion, indicating that OASDI also had a negative effect on the overall budget last year if the effects of past trust fund cash flows on interest payments from the Federal Government to the public are not taken into account.

Thus, from the trust fund perspective, HI and SMI both had an annual surplus in FY 2021, and OASDI had a deficit. From the budget perspective, HI, SMI, and OASDI each required a net draw on the budget. HI, SMI, and OASDI collectively had a trust fund surplus of $31.2 billion in FY 2021 and a net draw of $496.2 billion on the budget.

It is important to recognize that each viewpoint is appropriate for its intended purpose but that one perspective cannot be used to answer questions related to the other. In the case of SMI, the trust fund will always be in balance and there will always be a net draw on the Federal budget. In the case of HI, trust fund surpluses in a given year may occur with either a positive or negative direct impact on the budget for that year. Conversely, a positive or negative budget impact from HI offers minimal insight into whether its trust fund has sufficient total revenues and assets to permit payment of benefits.

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[100]For this purpose, the public includes State governments since they are outside of the Federal Government.

[101]Three types of trust fund transactions constituted this net budget obligation: $448.2 billion was drawn in the form of general revenue transfers, and another $2.1 billion in interest payments, while $83.8 billion was transferred to the general fund from the trust fund through the redemption of special-issue Treasury securities in an amount equal to the trust fund surplus for the year.

The next section illustrates the magnitude of the long-range difference between projected expenditures and revenues for Medicare and Social Security from both the trust fund and budget perspectives.

Future Obligations of the Trust Funds and the Budget

Table V.F2 collects from the Medicare and OASDI Trustees Reports the present values of projected future revenues and expenditures over the next 75 years. For HI and OASDI, tax revenues from the public are projected to fall short of statutory expenditures by $5.1 trillion and $23.3 trillion, respectively, in present value terms.[102]

Table V.F2.—Present Values of Projected Revenue and Cost Components of 75-Year Open-Group Obligations for HI, SMI, and OASDI
[In trillions, as of January 1, 2022]

Revenue and expenditure categories	HI	SMI	OASDI	Combined
Revenues from public:				
Payroll and benefit taxes	$29.7	—	$84.2	$113.9
Premiums	0.4	$19.0	—	19.5
Other taxes and fees[1]	—	1.7	—	1.7
Total	30.2	20.7	84.2	135.1
Total expenditures to public	35.3	68.2	107.5	211.0
Net Results for Budget Perspective	**−5.1**	**−47.5**	**−23.3**	**−75.9**
Revenues from other government accounts:				
Transfers	0.0	47.4	0.0	47.4
Interest credits	n/a	n/a	n/a	n/a
Total	0.0	47.4	0.0	47.4
Trust fund assets on January 1, 2022	0.2	0.2	2.9	3.2
Net Results for Trust Fund Perspective	**−4.9**	**0.1**	**−20.4**	**−25.3**

[1]Includes Part B revenues from fees on manufacturers and importers of brand-name prescription drugs and Part D State transfers.

Notes: 1. For comparison, the present values of HI taxable payroll, OASDI taxable payroll, and GDP are $752.7 trillion, $631.6 trillion, and $1,724.4 trillion, respectively, over the next 75 years. This present value of GDP is calculated using HI-specific interest discount factors and differs slightly from the corresponding amount shown in the OASDI Trustees Report.
2. Medicare present values are calculated using HI-specific discount factors, while OASDI amounts use OASDI-specific discount factors.
3. Totals do not necessarily equal the sums of rounded components.
4. n/a indicates not applicable.
5. 0.0 indicates an amount of less than $50 billion.

From the budget perspective, these are the additional amounts that would be necessary in order to pay HI and OASDI benefits and other costs at the level scheduled over the next 75 years. From the trust fund perspective, the amounts needed are smaller by the value of the accumulated assets in the respective trust funds—$0.2 trillion for HI and $2.9 trillion for OASDI—that could be drawn down to cover a part

[102]Interest income is not a factor in this table, as dollar amounts are in present value terms.

of the projected shortfall in tax revenues. Three points about this comparison in table V.F2 are important to note:

- The trust fund and budget perspectives differ in the treatment of the starting trust fund assets. Those accumulated reserves are credited to the trust fund programs under the trust fund perspective but are not under the budget perspective.

- The amounts shown in table V.F2 assume payment of full scheduled benefits, which is not permissible under current law after trust fund depletion. For both the budget and trust fund perspectives, the 75-year HI and OASDI deficits reflect the financial imbalance after trust fund depletion. By law, however, once assets are depleted, expenditures cannot be made except to the extent covered by ongoing tax receipts and other trust fund income.

- In practice, the long-range HI and OASDI deficits would likely be addressed by future legislation to reduce expenditures, increase payroll or other earmarked tax revenues, or some combination of such measures. For Medicare, in particular, lawmakers have frequently enacted legislation to slow the growth of expenditures.

The situation for SMI is somewhat different. SMI expenditures for Part B and Part D are projected to exceed premium and other dedicated revenues by $47.5 trillion. To keep the SMI trust fund solvent for the next 75 years will require general fund transfers of this amount, and these transfers represent a formal budget requirement. From the trust fund perspective, the present value of projected total premiums and general revenues is about equal to the present value of future expenditures.

From the 75-year budget perspective, the present value of the additional resources that would be necessary to meet projected expenditures, for the three programs combined, is $75.9 trillion.[103] To put this very large figure in perspective, it would represent 4.4 percent of the present value of projected GDP over the same period ($1,724 trillion). The components of the $75.9-trillion total are as follows:

[103]As noted previously, the long-range HI and OASDI financial imbalances could instead be partially addressed by expenditure reductions, thereby reducing the need for additional revenues. Similarly, SMI expenditure reductions would reduce the need for general fund transfers.

Unfunded Medicare and OASDI obligations (trust fund perspective)[104]	$25.3 trillion	(1.5% of GDP)
HI, SMI, and OASDI asset redemptions	3.2 trillion	(0.2% of GDP)
SMI general revenue financing	47.4 trillion	(2.7% of GDP)

These resource needs would be in addition to the payroll taxes, benefit taxes, and premium payments. As noted, the asset redemptions and SMI general revenue transfers represent formal budget commitments, but no provision exists for covering the HI and OASDI trust fund deficits once assets are depleted.

As discussed throughout this report, the Medicare projections shown here could be substantially understated as a result of other potentially unsustainable elements of current law. Although this issue does not affect the nature of the budget and trust fund perspectives described in this appendix, it is important to note that actual long-range present values for HI expenditures and SMI expenditures and revenues could exceed the amounts shown in table V.F2 by a substantial margin.

[104]Additional revenues and/or expenditure reductions totaling $25.3 trillion, together with $3.2 trillion in asset redemptions, would cover the projected financial imbalance but would leave the HI and OASDI trust funds depleted at the end of the 75-year period. The long-range actuarial deficits for HI and OASDI include a cost factor to allow for a normal level of fund assets. See section III.B3 in this report, and section IV.B4 in the OASDI Trustees Report, for the numerical relationship between the actuarial deficit and the unfunded obligations of each program.

G. INFINITE HORIZON PROJECTIONS

Consistent with the practice of previous reports, this report focuses on the 75-year period 2022–2096 for the evaluation of the long-range financial status of the Medicare program. The estimates are for the open-group population—all persons, some of whom are not yet born, who will participate during the period as either taxpayers or beneficiaries, or both—and consist of payments from, and on behalf of, employees now in the workforce, as well as those who will enter the workforce over the next 75 years.

Experts have noted that limiting the projections to 75 years understates the magnitude of the long-range unfunded obligations because summary measures (such as the actuarial balance and *open-group unfunded obligations*) reflect the full amount of taxes paid by the next two or three generations of workers, but not the full amount of their benefits. One approach to addressing the limitations of 75-year summary measures is to extend the projection horizon indefinitely, so that the overall results reflect the projected costs and revenues after the first 75 years.[105] Such extended projections can also help indicate whether the financial imbalance would be improving or continuing to worsen beyond the normal 75-year period.

Table V.G1 presents estimates of HI unfunded obligations that extend to the infinite horizon. The extension assumes that the HI program and the demographic and economic trends used for the 75-year projection continue indefinitely except that average HI expenditures per beneficiary increase at the same rate as GDP per capita less the productivity adjustments after 2096. If the slower HI price updates under current law were able to continue indefinitely, then the HI financial imbalance would actually improve beyond the 75-year period.[106] Specifically, under these assumptions, extending the calculations beyond 2096 *subtracts* $17.6 trillion in unfunded obligations from the amount estimated through 2096. Over the infinite horizon, the HI program thus has a projected surplus of $12.7 trillion.

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[105]The calculation of present values, in effect, applies successively less weight to future amounts over time, through the process of interest discounting. For example, the weights associated with the 25th, 75th, and 200th years of the projection would be about 37.7 percent, 3.8 percent, and 0.01218 percent, respectively, of the weight for the first year. In this way, it is possible to calculate a finite summary measure for an infinite projection period.

[106]It is important to note that the actual future costs for Medicare may exceed the projections shown in this report, possibly by substantial amounts. See section V.C for details on the illustrative alternative projections.

Table V.G1.—Unfunded HI Obligations from Program Inception through the Infinite Horizon

[Present values as of January 1, 2022; dollar amounts in trillions]

	Present value	As a percentage of: HI taxable payroll	GDP
Unfunded obligations through the infinite horizon[1]	−$12.70	−0.7%	−0.3%
Unfunded obligations from program inception through 2096[1]	4.92	0.7	0.3

[1]Present value of future expenditures less income, reduced by the amount of trust fund assets at the beginning of the period.

Notes: 1. The present values of future HI taxable payroll for 2022–2096 and for 2022 through the infinite horizon are $752.7 trillion and $1,710.4 trillion, respectively.
2. The present values of GDP for 2022–2096 and for 2022 through the infinite horizon are $1,724.4 trillion and $4,500.5 trillion, respectively. (These present values differ slightly from the corresponding amounts shown in the OASDI Trustees Report due to the use of HI-specific interest discount factors.)

It is possible to separate the projected HI unfunded obligation over the infinite horizon into the portions associated with current participants versus future participants. The first line of table V.G2 shows the present value of future expenditures less future taxes for current participants, including both beneficiaries and covered workers. Subtracting the current value of the HI trust fund (the accumulated value of past HI taxes less outlays) results in a closed-group unfunded obligation of $14.5 trillion. In contrast, the projected difference between taxes and expenditures for future participants is a surplus of $27.2 trillion.

The year-by-year HI deficits described in section III.B have shown that HI taxes will not be adequate to finance the program on a pay-as-you-go basis (whereby payroll taxes from today's workers provide benefits to today's beneficiaries).[107] The unfunded obligations shown in table V.G2 for current participants further indicate that their HI taxes are not adequate to cover their own future costs when they become eligible for HI benefits—and that this situation has also occurred for workers in the past. For future workers, however, the compounding effects of the lower HI price updates would, if they were able to continue indefinitely, lower costs to the point that scheduled HI taxes would be more than sufficient. In practice, lawmakers could address the projected aggregate HI deficits by raising additional revenue or reducing benefits (or some combination of these actions). The impact of such changes on the unfunded obligation amounts for current versus future participants would depend on the specific policies selected.

[107]As noted previously, the HI trust fund also receives small amounts of income in the form of income taxes on OASDI benefits, interest, and general revenue reimbursements for certain uninsured beneficiaries.

Table V.G2.—Unfunded HI Obligations for Current and Future Program Participants through the Infinite Horizon

[Present values as of January 1, 2022; dollar amounts in trillions]

	Present value	As a percentage of: HI taxable payroll	GDP
Future expenditures less income for current participants	$14.7	0.9%	0.3%
Less current trust fund (income minus expenditures to date for past and current participants)	0.2	0.0	0.0
Equals unfunded obligations for past and current participants[1]	14.5	0.8	0.3
Plus expenditures less income for future participants for the infinite horizon	−27.2	−1.6	−0.6
Equals unfunded obligations for all participants for the infinite future	−12.7	−0.7	−0.3

[1]This concept is also referred to as the closed-group unfunded obligation.

Notes: 1. The estimated present value of future HI taxable payroll for 2022 through the infinite horizon is $1,710.4 trillion.
2. The estimated present value of GDP for 2022 through the infinite horizon is $4,500.5 trillion. See note 2 in table V.G1.
3. Totals do not necessarily equal the sums of rounded components.

Tables V.G3 and V.G4 show the infinite horizon estimates for Part B. The extension assumes that the demographic and economic trends used for the 75-year projection continue indefinitely and that the productivity adjustments to payment updates for some providers remain unchanged. To simplify and stabilize the modeling for the infinite horizon, the Trustees project that average Part B expenditures per beneficiary will increase at about the same rate as GDP per capita minus 0.3 percentage point in every year, reflecting the mix of costs by provider category after 2096 and the payment rate updates applicable to each category.

Table V.G3 shows an estimated present value of Part B expenditures through the infinite horizon of $140.0 trillion, of which $56.6 trillion would occur during the first 75 years. Because such amounts, calculated over extremely long horizons, can be difficult to interpret, they are also shown as percentages of the present value of future GDP. So expressed, the corresponding figures are 3.1 percent and 3.3 percent, respectively. The table also indicates that beneficiary premiums will finance approximately 30 percent of expenditures for each time period and that fees related to brand-name prescription drugs will finance about 0.1 percent. General revenues pay for the remaining 70 percent.

Table V.G3.—Unfunded Part B Obligations from Program Inception through the Infinite Horizon

[Present values as of January 1, 2022; dollar amounts in trillions]

	Present value	As a percentage of GDP
Unfunded obligations through the infinite horizon[1]	$0.0	0.0%
Expenditures	140.0	3.1
Income	140.0	3.1
Beneficiary premiums	42.5	0.9
General revenue contributions	97.4	2.2
Fees related to brand-name prescription drugs	0.1	0.0
Unfunded obligations from program inception through 2096[1]	0.0	0.0
Expenditures	56.6	3.3
Income	56.6	3.3
Beneficiary premiums	17.1	1.0
General revenue contributions	39.5	2.3
Fees related to brand-name prescription drugs	0.1	0.0

[1]Present value of future expenditures less income, reduced by the amount of trust fund assets at the beginning of the period.

Notes: 1. The present values of GDP for 2022–2096 and for 2022 through the infinite horizon are $1,724.4 trillion and $4,500.5 trillion, respectively. See note 2 of table V.G1.
2. Totals do not necessarily equal the sums of rounded components.

Table V.G4 shows corresponding present values separately for current versus future beneficiaries. As indicated, about 33 percent of the projected total, infinite-horizon cost is attributable to current beneficiaries, with the remaining 67 percent attributable to beneficiaries becoming eligible for Part B benefits after January 1, 2022.

Table V.G4.—Unfunded Part B Obligations for Current and Future Program Participants through the Infinite Horizon
[Present values as of January 1, 2022; dollar amounts in trillions]

	Present value	As a percentage of GDP
Future expenditures less income for current participants	−$0.1	0.0%
Expenditures	46.4	1.0
Income	46.5	1.0
Beneficiary premiums	14.1	0.3
General revenue contributions	32.3	0.7
Fees related to brand-name prescription drugs	0.0	0.0
Less current trust fund (Income minus expenditures to date for past and current participants)	0.2	0.0
Equals unfunded obligations for past and current participants[1]	−0.2	0.0
Expenditures	46.3	1.0
Income	46.3	1.0
Beneficiary premiums	13.9	0.3
General revenue contributions	32.2	0.7
Fees related to brand-name prescription drugs	−0.1	0.0
Plus expenditures less income for future participants for the infinite horizon	0.1	0.0
Expenditures	93.6	2.1
Income	93.5	2.1
Beneficiary premiums	28.4	0.6
General revenue contributions	65.1	1.4
Fees related to brand-name prescription drugs	0.1	0.0
Equals unfunded obligations for all participants for the infinite future	−0.2	0.0
Expenditures	139.9	3.1
Income	139.9	3.1
Beneficiary premiums	42.3	0.9
General revenue contributions	97.3	2.2
Fees related to brand-name prescription drugs	−0.1	0.0

[1]This concept is also referred to as the closed-group unfunded obligation.

Notes: 1. The estimated present value of GDP for 2022 through the infinite horizon is $4,500.5 trillion. See note 2 of table V.G1.
2 Totals do not necessarily equal the sums of rounded components.

Tables V.G5 and V.G6 present revenue and expenditure estimates for Part D that extend to the infinite horizon. The extension assumes that the demographic and economic trends used for the 75-year projection continue indefinitely except that average Part D expenditures per beneficiary would increase at the same rate as GDP per capita after 2096.

Table V.G5 shows an estimated present value of Part D expenditures through the infinite horizon of $39.7 trillion, of which $11.6 trillion would occur during the first 75 years. To put the estimates in perspective, they are also shown as percentages of the present value of future GDP. Expressed in this way, the corresponding figures are 0.9 percent and 0.7 percent of GDP, respectively. The table also indicates that, for each time period, beneficiary premiums would finance approximately 17 percent of expenditures and State transfers would finance 14 percent, with general revenues paying for the remaining 69 percent.

Table V.G5.—Unfunded Part D Obligations from Program Inception through the Infinite Horizon

[Present values as of January 1, 2022; dollar amounts in trillions]

	Present value	As a percentage of GDP
Unfunded obligations through the infinite horizon[1]	$0.0	0.0%
Expenditures	39.7	0.9
Income	39.7	0.9
Beneficiary premiums	6.8	0.2
State transfers	5.6	0.1
General revenue contributions	27.3	0.6
Unfunded obligations from program inception through 2096[1]	0.0	0.0
Expenditures	11.6	0.7
Income	11.6	0.7
Beneficiary premiums	2.0	0.1
State transfers	1.6	0.1
General revenue contributions	8.0	0.5

[1]Present value of future expenditures less income, reduced by the amount of trust fund assets at the beginning of the period.

Notes: 1. The present values of GDP for 2022–2096 and for 2022 through the infinite horizon are $1,724.4 trillion and $4,500.5 trillion, respectively. See note 2 of table V.G1.
2 Totals do not necessarily equal the sums of rounded components.

Table V.G6 shows corresponding projections separately for current versus future beneficiaries. As indicated, about 21 percent of the projected total, infinite-horizon cost is attributable to current beneficiaries, with the remaining 79 percent attributable to beneficiaries becoming eligible for Part D benefits after January 1, 2022.

Table V.G6.—Unfunded Part D Obligations for Current and Future Program Participants through the Infinite Horizon

[Present values as of January 1, 2022; dollar amounts in trillions]

	Present value	As a percentage of GDP
Future expenditures less income for current participants	$0.0	0.0%
Expenditures	8.5	0.2
Income	8.5	0.2
Beneficiary premiums	1.5	0.0
State transfers	1.2	0.0
General revenue contributions	5.9	0.1
Less current trust fund (Income minus expenditures to date for past and current participants)	0.0	0.0
Equals unfunded obligations for past and current participants[1]	0.0	0.0
Expenditures	8.5	0.2
Income	8.5	0.2
Beneficiary premiums	1.4	0.0
State transfers	1.2	0.0
General revenue contributions	5.9	0.1
Plus expenditures less income for future participants for the infinite horizon	0.0	0.0
Expenditures	31.2	0.7
Income	31.2	0.7
Beneficiary premiums	5.3	0.1
State transfers	4.4	0.1
General revenue contributions	21.5	0.5
Equals unfunded obligations for all participants for the infinite future	0.0	0.0
Expenditures	39.7	0.9
Income	39.7	0.9
Beneficiary premiums	6.7	0.1
State transfers	5.6	0.1
General revenue contributions	27.3	0.6

[1]This concept is also referred to as the closed-group unfunded obligation.

Notes: 1. The estimated present value of GDP for 2022 through the infinite horizon is $4,500.5 trillion. See note 2 of table V.G1.
2. Totals do not necessarily equal the sums of rounded components.

H. FISCAL YEAR HISTORICAL DATA AND PROJECTIONS THROUGH 2031

Tables V.H1, V.H2, and V.H3 present detailed operations of the HI trust fund, along with Part B and Part D of the SMI trust fund, for fiscal year 2021. These tables are similar to the calendar-year operation tables displayed in sections III.B, III.C, and III.D.

Table V.H1.—Statement of Operations of the HI Trust Fund during Fiscal Year 2021
[In thousands]

Total assets of the trust fund, beginning of period	$134,296,193
Revenue:	
Payroll taxes	$299,146,511
Income from taxation of OASDI benefits	24,975,000
Interest on investments	2,437,245
Premiums collected from voluntary participants	4,140,611
Premiums collected from Medicare Advantage participants	292,526
ACA Medicare shared savings program receipts	79,303
Transfer from Railroad Retirement account	551,800
Reimbursement, transitional uninsured coverage	95,000
Interfund interest receipts, CMS	1,159
Interfund interest payments to OASDI[1]	−607
Interest on reimbursements, Railroad Retirement	16,362
Other	1,176
Reimbursement, union activity	549
General fund transfer, program management	904,000
Fraud and abuse control receipts:	
Criminal fines	67,453
Civil monetary penalties	69,317
Civil penalties and damages, Department of Justice	370,019
Asset forfeitures, Department of Justice	134,783
3% administrative expense reimbursement, Department of Justice	15,292
General fund appropriation fraud and abuse, FBI	148,039
General fund transfer, discretionary	298,511
Total revenue	$333,744,049
Expenditures:	
Net benefit payments[2]	$326,812,471
Administrative expenses:	
Treasury administrative expenses	114,156
Salaries and expenses, SSA[3]	1,124,296
Salaries and expenses, CMS[4]	1,564,303
Salaries and expenses, Office of the Secretary, HHS	93,268
Medicare Payment Advisory Commission	7,743
Medicare Access Children's Health Insurance Program (CHIP)	284
Assistant Secretary for Planning and Evaluation (IMPACT Act)[5]	2,872
Fraud and abuse control expenses:	
HHS Medicare integrity program	780,407
HHS Office of Inspector General	366,945
Department of Justice	41,604
FBI	207,889
HCFAC Discretionary, CMS	617,644
HCFAC Other HHS Discretionary, CMS	75,307
HCFAC Department of Justice Discretionary, CMS	71,760
HCFAC Office of Inspector General Discretionary, CMS	57,082
Total administrative expenses	5,125,561
Total expenditures	$331,938,032
Net addition to the trust fund	1,806,017
Total assets of the trust fund, end of period	$136,102,210

[1]Reflects interest adjustments on the reallocation of administrative expenses among the Medicare trust funds, the OASDI trust funds, and the general fund of the Treasury. Estimated payments are made from the trust funds and then are reconciled, with interest, the next year when the actual costs are known. A positive figure represents a transfer to the HI trust fund from the other trust funds. A negative figure represents a transfer from the HI trust fund to the other funds.
[2]Includes net repayments of $22.2 billion made through the Medicare Accelerated and Advance Payments Program: $0.4 billion in payments to providers and $22.6 billion in repayments.
[3]For facilities, goods, and services provided by SSA.
[4]Includes expenses of the Medicare Administrative Contractors.
[5]Reflects amount transferred from the HI trust fund for a study to examine the impact of risk factors on quality measures, resource use, and other measures under the Medicare program, as required by section 2 of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act).

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H2.—Statement of Operations of the Part B Account in the SMI Trust Fund during Fiscal Year 2021

[In thousands]

Total assets of the Part B account in the trust fund, beginning of period		$82,185,459
Revenue:		
Premiums from enrollees:		
Enrollees aged 65 and over	$98,508,471	
Disabled enrollees under age 65	13,861,618	
Total premiums		112,370,088
Premiums collected from Medicare Advantage participants		398,785
Government contributions:		
Enrollees aged 65 and over	257,293,649	
Disabled enrollees under age 65	52,643,350	
Repayable transfer from Treasury[1]	7,853,783	
Federal match of repayable transfer from Treasury[2]	24,403,077	
Repayment amount[3]	−2,047,387	
Adjustment for exempted amounts[4]	−6,367,231	
Transfer to cover the outstanding balance of the Medicare Accelerated and Advance Payments (AAP) Program[5]	37,843,290	
Repayment of AAP program transfer[6]	−8,491,343	
Supporting physicians and other professionals[7]	3,000,000	
Union activity	765	
Total government contributions		366,131,953
Other		763
Interest on investments		2,055,142
Interfund interest receipts & payments[8]		−2,374
Annual fees—branded Rx manufacturers and importers		2,790,456
ACA Medicare shared savings program receipts		111,888
Total revenue		$483,856,701
Expenditures:		
Net Part B benefit payments[9]		$396,092,337
Administrative expenses:		
Transfer to Medicaid[10]	1,126,079	
Treasury administrative expenses	359	
Salaries and expenses, CMS[11]	1,976,773	
Salaries and expenses, Office of the Secretary, HHS	93,268	
Salaries and expenses, SSA	1,568,935	
Medicare Payment Advisory Commission	5,162	
Railroad Retirement administrative expenses	12,657	
Railroad Retirement administrative expenses, OIG	1,742	
Railroad Retirement administrative expenses, SMAC	19,102	
Assistant Secretary for Planning and Evaluation (IMPACT Act)[12]	2,872	
MACRA[13]	13,336	
Total administrative expenses		4,820,285
Total expenditures		$400,912,622
Net addition to the trust fund		82,944,079
Total assets of the Part B account in the trust fund, end of period		$165,129,538

[1]The Continuing Appropriations Act, 2021 and Other Extensions Act required a transfer of funds from the general fund to cover the premium income that was lost in 2021 as a result of the specification of the aged actuarial rate calculation.
[2]The transfer for the premium income lost in 2021 (footnote 1 transfer) is to be treated as premium income and matched by general revenue contributions.
[3]The transfer for the premium income lost in 2021 (footnote 1 transfer), plus the forgone income-related premium revenue resulting from this same legislation, is added to the remaining balance due from the 2016 transfer, and this total balance due is to be repaid over time by continuing the additional repayment amount of $3.00 that is added to the premium otherwise determined and that is collected and repaid to the general fund of the Treasury. The additional repayment premium amounts will continue until the balance due has been repaid.
[4]The additional premium repayment amounts (footnote 3 repayment amounts) are not to be matched by general revenue contributions; however, since CMS is not able to separate the additional repayment premium amounts from the standard premium amounts, the additional repayment premium amounts are matched. An adjustment for exempted amounts is therefore necessary to transfer these erroneous Federal matching amounts back to the general fund.
[5]Represents the amount transferred from the general fund of the Treasury to Part B to cover the outstanding balance of the AAP program, as required by the Continuing Appropriations Act, 2021 and Other Extensions Act. All future recoveries from providers will be transferred to the general fund of the Treasury.
[6]Represents transfers from Part B to the general fund of the Treasury of amounts recovered from providers for repayment of AAP program payments (footnote 5 transfer). (Provider repayment amounts to Part B are described in footnote 9.)
[7]Represents the amount transferred from the general fund of the Treasury to Part B, as specified in the Consolidated Appropriations Act, 2021 to mitigate the financial effects of the legislated increase in the 2021 physician fee schedule update.
[8]Reflects interest adjustments on the reallocation of administrative expenses among the Medicare trust funds, the OASDI trust funds, and the general fund of the Treasury. Estimated payments are made from the trust funds and then are reconciled, with interest, the next year when the actual costs are known. A positive figure represents a transfer to the Part B account of the SMI trust fund from the other trust funds. A negative figure represents a transfer from the Part B account in the SMI trust fund to the other funds.
[9]Includes net repayments of $14.6 billion made through the Medicare Accelerated and Advance Payments Program: $0.2 billion in payments to providers and $14.8 billion in repayments.
[10]Represents amount transferred from the Part B account in the SMI trust fund to Medicaid to pay the Part B premium for certain qualified individuals.
[11]Includes expenses of the Medicare Administrative Contractors.
[12]Reflects amount transferred from the Part B account of the SMI trust fund for a study to examine the impact of risk factors on quality measures, resource use, and other measures under the Medicare program, as required by section 2 of the Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act).
[13]Represents amounts transferred from the Part B account of the SMI trust fund for administration of provisions of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA).

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H3—Statement of Operations of the Part D Account in the SMI Trust Fund during Fiscal Year 2021

[In thousands]

Total assets of the Part D account in the trust fund, beginning of period		$7,807,280
Revenue:		
Premiums from enrollees		
Premiums deducted from Social Security benefits	$5,336,463	
Premiums paid directly to plans[1]	11,409,717	
Total premiums		16,746,181
Government contributions:		
Prescription drug benefits	81,180,676	
Prescription drug administrative expenses	882,000	
Total government contributions		82,062,676
Payments from States		11,858,606
Interest on investments		45,662
DOJ/OIG/MA settlements[2]		267,312
Total revenue		$110,980,437
Expenditures:		
Part D benefit payments[1]		$109,585,755
Part D administrative expenses		524,315
Total expenditures		$110,110,069
Net addition to the trust fund		870,367
Total assets of the Part D account in the trust fund, end of period		$8,677,647

[1]Premiums paid directly to plans are not displayed on Treasury statements and are estimated. These premiums have been added to the benefit payments reported on the Treasury statement to obtain an estimate of total Part D benefits. Direct data on such benefit amounts are not yet available.
[2]Reflects amounts transferred to the Part D account for settlements related to Department of Justice (DOJ) civil and criminal court cases, Office of the Inspector General (OIG) civil monetary penalties, and Medicare Advantage (MA) civil monetary penalties.

Note: Totals do not necessarily equal the sums of rounded components.

Tables V.H4, V.H5, V.H6, V.H7, and V.H8 present estimates of the fiscal-year operations of total Medicare, the HI trust fund, the SMI trust fund, the Part B account in the SMI trust fund, and the Part D account in the SMI trust fund, respectively. These tables correspond to the calendar-year trust fund operation tables shown in section V.B and in section III.

Table V.H4.—Total Medicare Income, Expenditures, and Trust Fund Assets during Fiscal Years 1970–2031

[In billions]

Fiscal year	Total income	Total expenditures	Net change in assets	Assets at end of year
Historical data:				
1970	$7.5	$7.1	$0.3	$2.7
1975	16.9	14.8	2.1	11.3
1980	35.7	35.0	0.7	19.0
1985	75.5	71.4	4.1	31.9
1990	125.7	109.7	16.0	110.2
1995	173.0	180.1	−7.1	143.4
2000	248.9	219.3	29.6	214.0
2005	349.4	336.9	12.5	294.6
2010	500.7	521.2	−20.5	350.9
2015	629.9	638.1	−8.3	265.3
2016	687.7	694.5	−6.8	258.6
2017	721.0	707.4	13.6	272.1
2018	744.4	711.3	33.1	305.3
2019	782.8	782.1	0.7	306.0
2020	833.7	915.4[1]	−81.7	224.3
2021	928.6[2]	843.0[1]	85.6	309.9
Intermediate estimates:				
2022	951.1	940.5[1]	10.6	320.5
2023	1,042.5	1,043.0	−0.5	320.0
2024	1,094.4	1,063.6	30.8	350.8
2025	1,170.9	1,200.1	−29.3	321.6
2026	1,266.5	1,296.6	−30.1	291.5
2027	1,366.1	1,397.0	−31.0	260.5
2028	1,461.0	1,571.1	−110.1	150.5
2029	1,560.9	1,538.7	22.2	172.7
2030	1,655.3	1,718.6	−63.3	109.4
2031	1,757.3	1,813.0	−55.7	53.7

[1]Includes net payments of $103.9 billion made through the Medicare Accelerated and Advance Payments Program in fiscal year 2020 and subsequent net repayments of $36.8 billion and $67.1 billion in fiscal years 2021 and 2022, respectively.
[2]See footnote 9 of table III.C4.

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H5.—Operations of the HI Trust Fund during Fiscal Years 1970–2031

[In billions]

	Income								Expenditures			Trust fund	
Fiscal year[1]	Payroll taxes	Income from taxation of benefits	Railroad Retirement account transfers	Reimbursement for uninsured persons	Premiums from voluntary enrollees	Payments for military wage credits	Interest and other[2,3]	Total	Benefit payments[3,4]	Administrative expenses[5]	Total	Net change	Balance at end of year
Historical data:													
1970	$4.8	—	$0.1	$0.6	—	$0.0	$0.1	$5.6	$4.8	$0.1	$5.0	$0.7	$2.7
1975	11.3	—	0.1	0.5	$0.0	0.0	0.6	12.6	10.4	0.3	10.6	2.0	9.9
1980	23.2	—	0.2	0.7	0.0	0.1	1.1	25.4	23.8	0.5	24.3	1.1	14.5
1985	46.5	—	0.4	0.8	0.0	0.1	3.2	50.9	47.8	0.8	48.7	4.1[6]	21.3
1990	70.7	—	0.4	0.4	0.1	0.1	7.9	79.6	65.9	0.8	66.7	12.9	95.6
1995	98.1	$3.9	0.4	0.5	1.0	0.1	11.0	114.8	113.6	1.3	114.9	0.0	129.5
2000	137.7	8.8	0.5	0.5	1.4	0.0	10.8	159.7	127.9[7]	2.4	130.3	29.4	168.1
2005	169.0	8.8	0.4	0.3	2.3	0.0	16.2	196.9	181.3	2.9	184.1	12.8	277.7
2010	183.6	13.8	0.5	−0.1	3.3	0.0	16.9	218.0	245.6	3.3	249.0	−31.0	278.9
2015	237.7	20.2	0.6	0.2	3.3	0.0	10.4	272.4	273.2	5.5	278.7	−6.4	195.9
2016	250.5	23.0	0.7	0.2	3.2	0.0	9.6	287.1	285.6	5.1	290.6	−3.5	192.4
2017	259.7	24.2	0.6	0.1	3.5	0.0	10.3	298.5	290.3	3.0[8]	293.3	5.3	197.6
2018	264.6	24.2	0.6	0.1	3.5	0.0	9.8	302.8	292.1	5.1	297.2	5.7	203.3
2019	281.4	23.8	0.6	0.1	3.8	0.0	9.5	319.3	318.4	5.4	323.7	−4.5	198.8
2020	295.9	26.9	0.6	0.1	4.0	0.0	8.6	336.1	395.8[9]	4.8	400.6	−64.5	134.3
2021	299.1	25.0	0.6	0.1	4.1	0.0	4.8	333.7	326.8[9]	5.1	331.9	1.8	136.1
Intermediate estimates:													
2022	338.0	32.7	0.5	0.1	4.7	0.0	5.3	381.2	348.6[9]	5.2	353.8	27.4	163.5
2023	360.3	34.9	0.5	0.1	5.0	0.0	5.9	406.5	405.4	5.3	410.7	−4.2	159.3
2024	375.8	38.2	0.6	0.0	5.2	0.0	6.3	426.2	416.4	5.5	422.0	4.2	163.5
2025	391.6	41.8	0.6	0.0	5.6	0.0	6.3	446.0	463.1	5.8	468.9	−23.0	140.5
2026	409.0	49.2	0.6	0.0	6.0	0.0	6.0	470.8	496.3	6.1	502.4	−31.6	108.9
2027	425.7	57.2	0.6	0.0	6.3	0.0	5.3	495.3	530.5	6.4	537.0	−41.7	67.2
2028[10]	446.4	62.5	0.6	0.0	6.7	0.0	4.5	520.8	588.6	6.7	595.3	−74.5	−7.3
2029[10]	463.8	68.0	0.6	0.0	7.1	0.0	3.5	543.0	577.8	7.0	584.8	−41.8	−49.0
2030[10]	482.8	74.0	0.7	0.0	7.5	0.0	1.7	566.8	635.7	7.3	643.0	−76.3	−125.3
2031[10]	501.9	80.6	0.7	0.0	8.0	0.0	−1.6	589.5	664.3	7.7	671.9	−82.5	−207.8

[1]Fiscal years 1970 and 1975 consist of the 12 months ending on June 30 of each year; fiscal years 1980 and later consist of the 12 months ending on September 30 of each year.
[2]Other income includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund, receipts from the fraud and abuse control program, and a small amount of miscellaneous income.
[3]See footnote 2 of table III.B4.
[4]Includes costs of Peer Review Organizations from 1983 through 2001 (beginning with the implementation of the prospective payment system on October 1, 1983) and costs of Quality Improvement Organizations beginning in 2002.
[5]Includes costs of experiments and demonstration projects. Beginning in 1997, includes fraud and abuse control expenses.
[6]Includes repayment of loan principal, from the OASI trust fund, of $1.8 billion.
[7]For 1998 through 2003, includes monies transferred to the SMI trust fund for home health agency costs.
[8]Reflects a larger-than-usual downward adjustment of $1.8 billion for prior-year allocations among Part A, Part B, and Part D.
[9]Includes net payments of $65.5 billion made through the Medicare Accelerated and Advance Payments Program in fiscal year 2020 and subsequent net repayments of $22.2 billion and $43.3 billion in fiscal years 2021 and 2022, respectively.
[10]Estimates for 2028 and later are hypothetical since the HI trust fund would be depleted in those years.

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H6.—Operations of the SMI Trust Fund (Cash Basis) during Fiscal Years 1970–2031

[In billions]

	Income					Expenditures			Trust fund	
Fiscal year[1]	Premium income	General revenue[2]	Transfers from States	Interest and other[3,4]	Total	Benefit payments[4,5]	Adminis-trative expense	Total	Net change	Balance at end of year[6]
Historical data:										
1970	$0.9	$0.9	—	$0.0	$1.9	$2.0	$0.2	$2.2	−$0.3	$0.1
1975	1.9	2.3	—	0.1	4.3	3.8	0.4	4.2	0.2	1.4
1980	2.9	6.9	—	0.4	10.3	10.1	0.6	10.7	−0.5	4.5
1985	5.5	17.9	—	1.2	24.6	21.8	0.9	22.7	1.8	10.6
1990	11.5[7]	33.2	—	1.4[7]	46.1[7]	41.5	1.5[7]	43.0[7]	3.1[7]	14.5[7]
1995	19.2	37.0	—	1.9	58.2	63.5	1.7	65.2	−7.0	13.9
2000	20.5	65.6	—	3.2	89.2	87.2[8]	1.8	89.0	0.2	45.9
2005	35.9	115.2	—	1.4	152.5	149.8	2.9	152.7	−0.2	16.9
2010	61.4	213.7	$4.5	3.2	282.7	268.7	3.5	272.2	10.5	72.0
2015	79.4	263.5	8.8	5.9	357.5	355.8	3.6	359.4	−1.9	69.4
2016	86.1	299.5	9.8	5.3	400.6	399.5	4.4	403.9	−3.3	66.2
2017	94.8	309.6	11.1	6.9	422.4	409.3	4.9[9]	414.1	8.3	74.5
2018	106.2	316.7	11.7	7.0	441.6	409.4	4.7	414.1	27.5	102.0
2019	113.5	331.8	12.2	6.1	463.6	453.5	4.9	458.4	5.2	107.2
2020	122.0	357.5	11.7	6.4	497.6	509.6[10]	5.2	514.8	−17.2	90.0
2021	129.1	448.2[11]	11.9	5.7	594.8	505.7[10]	5.3	511.0	83.8	173.8
Intermediate estimates:										
2022	147.6	402.5	13.0	6.8	569.9	582.1[10]	4.6	586.7	−16.8	157.0
2023	161.7	452.5	14.4	7.4	636.0	627.6	4.7	632.3	3.7	160.7
2024	170.5	472.0	17.9	7.8	668.2	636.6	5.0	641.6	26.6	187.3
2025	185.2	512.4	19.2	8.1	724.9	725.9	5.3	731.2	−6.3	181.0
2026	205.4	561.3	20.5	8.5	795.7	788.6	5.5	794.2	1.5	182.6
2027	228.1	611.6	21.8	9.2	870.8	854.2	5.8	860.0	10.8	193.3
2028	249.7	657.0	23.2	10.3	940.2	969.7	6.1	975.8	−35.6	157.8
2029	272.4	709.2	24.8	11.5	1,017.9	947.6	6.3	953.9	64.0	221.7
2030	295.1	754.2	26.4	12.8	1,088.6	1,069.0	6.6	1,075.5	13.0	234.7
2031	320.0	806.1	28.1	13.6	1,167.8	1,134.3	6.8	1,141.1	26.7	261.5

[1]Fiscal years 1970 and 1975 consist of the 12 months ending on June 30 of each year; fiscal years 1980 and later consist of the 12 months ending on September 30 of each year.

[2]Includes Part B general fund matching payments, Part D subsidy costs, and certain interest-adjustment items.

[3]Other income includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund and other miscellaneous income. In 2008, includes an adjustment of $0.8 billion for interest inadvertently earned as a result of Part A hospice costs that were misallocated to the Part B trust fund account.

[4]See footnote 2 of table III.B4.

[5]See footnote 3 of table III.B4.

[6]The financial status of SMI depends on both the assets and the liabilities of the trust fund (see table III.C8).

[7]Includes the impact of the Medicare Catastrophic Coverage Act of 1988.

[8]Benefit payments less monies transferred from the HI trust fund for home health agency costs.

[9]Reflects a larger-than-usual upward adjustment of $1.4 billion for prior-year allocations among Part A, Part B, and Part D.

[10]Includes net Part B payments of $38.4 billion made through the Medicare Accelerated and Advance Payments Program in fiscal year 2020 and subsequent net repayments of $14.6 billion and $23.7 billion in fiscal years 2021 and 2022, respectively.

[11]See footnote 9 of table III.C4.

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H7.—Operations of the Part B Account in the SMI Trust Fund (Cash Basis) during Fiscal Years 1970–2031

[In billions]

	Income				Expenditures			Account	
Fiscal year[1]	Premium income	General revenue[2]	Interest and other[3,4]	Total	Benefit payments[4,5]	Administrative expense	Total	Net change	Balance at end of year[6]
Historical data:									
1970	$0.9	$0.9	$0.0	$1.9	$2.0	$0.2	$2.2	−$0.3	$0.1
1975	1.9	2.3	0.1	4.3	3.8	0.4	4.2	0.2	1.4
1980	2.9	6.9	0.4	10.3	10.1	0.6	10.7	−0.5	4.5
1985	5.5	17.9	1.2	24.6	21.8	0.9	22.7	1.8	10.6
1990	11.5[7]	33.2	1.4[7]	46.1[7]	41.5	1.5[7]	43.0[7]	3.1[7]	14.5[7]
1995	19.2	37.0	1.9	58.2	63.5	1.7	65.2	−7.0	13.9
2000	20.5	65.6	3.2	89.2	87.2[8]	1.8	89.0	0.2	45.9
2005	35.9	114.0	1.4	151.3	148.6	2.9	151.5	−0.2	16.9
2010	54.8	161.1	3.2	219.0	205.1	3.3	208.4	10.7	71.3
2015	67.1	195.8	5.8	268.8	272.0	3.2	275.2	−6.4	63.9
2016	72.5	223.1	5.3	300.8	295.1	4.0	299.1	1.7	65.6
2017	79.7	231.0	6.9	317.5	304.1	5.0[9]	309.1	8.5	74.1
2018	90.4	244.3	6.9	341.7	316.8	4.2	321.0	20.7	94.8
2019	97.8	263.9	5.7	367.4	358.2	4.4	362.6	4.7	99.5
2020	106.3	285.2	5.9	397.3	409.9[10]	4.8	414.6	−17.3	82.2
2021	112.4	366.1[11]	5.4	483.9	396.1[10]	4.8	400.9	82.9	165.1
Intermediate estimates:									
2022	129.9	311.6	6.3	447.8	452.2[10]	3.7	455.9	−8.1	157.0
2023	143.1	357.9	6.8	507.8	500.3	3.8	504.1	3.7	160.7
2024	150.4	380.4	7.2	537.9	518.0	4.1	522.1	15.8	176.5
2025	163.3	415.0	7.4	585.7	588.3	4.3	592.6	−6.9	169.6
2026	181.8	457.9	7.7	647.4	642.1	4.5	646.6	0.8	170.4
2027	202.7	501.8	8.4	712.8	698.1	4.7	702.9	10.0	180.3
2028	222.4	542.6	9.4	774.3	791.9	4.9	796.9	−22.6	157.8
2029	243.1	584.2	10.5	837.8	783.4	5.2	788.6	49.3	207.0
2030	263.7	624.2	11.7	899.7	882.2	5.4	887.6	12.1	219.1
2031	286.4	668.8	13.1	968.4	936.9	5.6	942.5	25.8	245.0

[1]Fiscal years 1970 and 1975 consist of the 12 months ending on June 30 of each year; fiscal years 1980 and later consist of the 12 months ending on September 30 of each year.

[2]General fund matching payments, plus certain interest-adjustment items.

[3]Other income includes recoveries of amounts reimbursed from the trust fund that are not obligations of the trust fund and other miscellaneous income. In 2008, includes an adjustment of $0.8 billion for interest earned as a result of Part A hospice costs that were misallocated to the Part B trust fund account.

[4]See footnote 2 of table III.B4.

[5]See footnote 3 of table III.B4.

[6]The financial status of Part B depends on both the assets and the liabilities of the trust fund (see table III.C8).

[7]Includes the impact of the Medicare Catastrophic Coverage Act of 1988.

[8]Benefit payments less monies transferred from the HI trust fund for home health agency costs.

[9]Reflects a larger-than-usual upward adjustment of $1.7 billion for prior-year allocations among Part A, Part B, and Part D.

[10]See footnote 10 of table V.H6.

[11]See footnote 9 of table III.C4.

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H8.—Operations of the Part D Account in the SMI Trust Fund (Cash Basis) during Fiscal Years 2004–2031

[In billions]

	Income					Expenditures			Account	
Fiscal year	Premium income	General revenue[1]	Transfers from States[2]	Interest and other	Total	Benefit payments[3]	Administrative expense	Total	Net change	Balance at end of year[4]
Historical data:										
2004	—	$0.2	—	—	$0.2	$0.2	—	$0.2	—	—
2005	—	1.2	—	—	1.2	1.2	—	1.2	—	—
2006	$2.6	28.3	$3.6	$0.0	34.6	33.7	$0.2	33.9	$0.7	$0.7
2007	3.9	41.4	7.0	0.0	52.3	51.4	1.0	52.4	−0.1	0.6
2008	4.8	35.5	7.0	0.0	47.4	46.8	0.4	47.2	0.2	0.8
2009	5.8	43.5	7.5	0.0	56.9	56.6	0.2	56.8	0.0	0.9
2010	6.6	52.6	4.5	0.0	63.7	63.6	0.3	63.8	−0.2	0.7
2011	7.5	56.3	6.5	0.0	70.4	70.6	0.4	71.0	−0.7	0.0
2012	8.2	45.3	8.3	0.0	61.8	60.6	0.4	61.0	0.8	0.8
2013	9.5	50.3	8.7	0.0	68.5	68.0	0.4	68.3	0.1	1.0
2014	11.0	52.9	8.7	0.0	72.7	72.2	0.4	72.6	0.1	1.1
2015	12.3	67.6	8.8	0.0	88.7	83.8	0.4	84.2	4.5	5.6
2016	13.6	76.4	9.8	0.0	99.8	104.4	0.4	104.8	−5.0	0.6
2017	15.1	78.7	11.1	0.1	104.9	105.2	−0.1[5]	105.1	−0.2	0.4
2018	15.8	72.4	11.7	0.1	99.9	92.6	0.5	93.1	6.8	7.2
2019	15.8	67.9	12.2	0.4	96.2	95.3	0.5	95.7	0.5	7.7
2020	15.7	72.3	11.7	0.6	100.3	99.8	0.4	100.2	0.1	7.8
2021	16.7	82.1	11.9	0.3	111.0	109.6	0.5	110.1	0.9	8.7
Intermediate estimates:										
2022	17.8	90.9	13.0	0.5	122.1	129.9	0.9	130.8	−8.7	0.0
2023	18.6	94.6	14.4	0.6	128.2	127.3	0.9	128.2	0.0	0.0
2024	20.2	91.6	17.9	0.6	130.3	118.6	1.0	119.5	10.8	10.8
2025	21.9	97.4	19.2	0.7	139.2	137.6	1.0	138.6	0.7	11.5
2026	23.7	103.4	20.5	0.8	148.3	146.5	1.0	147.5	0.8	12.2
2027	25.5	109.9	21.8	0.8	158.0	156.1	1.1	157.2	0.8	13.0
2028	27.3	114.5	23.2	0.9	165.9	177.8	1.1	178.9	−13.0	0.0
2029	29.3	125.0	24.8	1.0	180.1	164.2	1.2	165.3	14.7	14.7
2030	31.4	130.0	26.4	1.0	188.9	186.8	1.2	188.0	0.9	15.6
2031	33.6	137.3	28.1	0.4	199.5	197.3	1.2	198.5	0.9	16.5

[1]Includes, net of transfers from States, all government transfers required to fund benefit payments, administrative expenses, and State expenses for making low-income eligibility determinations.

[2]Payments from States with respect to the Federal assumption of Medicaid responsibility for drug expenditures for full-benefit dually eligible individuals.

[3]Includes payments to Part D plans, payments to retiree drug subsidy plans, payments to States for making low-income eligibility determinations, Part D drug premiums collected from beneficiaries, and transfers to Medicare Advantage plans and private drug plans. Includes amounts for the Transitional Assistance program of $0.2, $1.1, and $0.2 billion in 2004–2006, respectively.

[4]As noted in section III.D2, a new policy was developed in 2015 under which amounts from the Treasury are transferred into the Part D account 5 business days before the benefit payments to the plans, rather than on the day the benefit payments are due—typically the first business day of a month—as had previously been the case. Accordingly, for any year in which October 1 does not occur on a weekend, the Part D account includes a balance at the end of the previous fiscal year that is more substantial than it would have been prior to implementation of the new policy.

[5]Reflects a larger-than-usual downward adjustment of $0.3 billion for prior-year allocations among Part A, Part B, and Part D.

Note: Totals do not necessarily equal the sums of rounded components.

Table V.H9 shows the total assets of the HI trust fund and their distribution by interest rate and maturity date at the end of fiscal years 2020 and 2021. The assets at the end of fiscal year 2021 totaled $136.1 billion: $136.2 billion in the form of U.S. Government obligations and an undisbursed balance of −$0.1 billion.

Table V.H9.—Assets of the HI Trust Fund, by Type, at the End of Fiscal Years 2020 and 2021[1]

	September 30, 2020	September 30, 2021
Investments in public-debt obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
0.750 percent, 2021	$25,333,295,000.00	——
1.375 percent, 2022	——	$20,456,569,000.00
1.500 percent, 2022	——	4,476,456,000.00
Bonds:		
0.750 percent, 2022	13,658,640,000.00	——
1.500 percent, 2023	——	16,491,861,000.00
1.875 percent, 2025–2026	23,379,464,000.00	23,379,464,000.00
2.000 percent, 2025	8,357,018,000.00	8,357,018,000.00
2.250 percent, 2026–2029	45,482,280,000.00	45,482,280,000.00
2.875 percent, 2027–2028	17,524,027,000.00	17,524,027,000.00
Total investments	$133,734,724,000.00	$136,167,675,000.00
Undisbursed balance[2]	561,468,584.22	−65,465,191,30
Total assets	$134,296,192,584.22	$136,102,209,808.70

[1]Certificates of indebtedness and bonds are carried at par value, which is the same as book value.
[2]Negative figures represent an extension of credit against securities to be redeemed within the following few days.

The effective annual rate of interest earned by the assets of the HI trust fund during the 12 months ending on December 31, 2021 was 2.0 percent. Interest on special issues is paid semiannually on June 30 and December 31. The interest rate on public-debt obligations issued for purchase by the trust fund in June 2021 was 1.5 percent, payable semiannually.

Table V.H10 shows a comparison of the total assets of the SMI trust fund, Parts B and D combined, and their distribution at the end of fiscal years 2020 and 2021. At the end of 2021, assets totaled $173.8 billion: $170.7 billion in the form of U.S. Government obligations and an undisbursed balance of $3.1 billion.

Table V.H10.—Assets of the SMI Trust Fund, by Type, at the End of Fiscal Years 2020 and 2021[1]

	September 30, 2020	September 30, 2021
Investments in public-debt obligations sold only to the trust funds (special issues):		
Certificates of indebtedness:		
0.625 percent, 2021	$121,460,000.00	——
0.750 percent, 2021	24,971,566,000.00	——
1.375 percent, 2022	——	$23,780,936,000.00
1.500 percent, 2022	——	2,047,769,000.00
Bonds:		
0.750 percent, 2023	154,355,000.00	——
0.750 percent, 2024	1,450,155,000.00	1,387,558,000.00
1.500 percent, 2024–2036	——	82,681,373,000.00
1.875 percent, 2029–2031	13,543,136,000.00	13,543,136,000.00
2.250 percent, 2026–2034	32,660,243,000.00	32,660,243,000.00
2.500 percent, 2026	5,305,162,000.00	5,305,162,000.00
2.875 percent, 2025–2033	9,270,982,000.00	9,270,982,000.00
Total investments	$87,477,059,000.00	$170,677,159,000.00
Undisbursed balance	2,515,680,154.13	3,130,026,316.35
Total assets	$89,992,739,154.13	$173,807,185,316.35

[1]Certificates of indebtedness and bonds are carried at par value, which is the same as book value.

The effective annual rate of interest earned by the assets of the SMI trust fund for the 12 months ending on December 31, 2021 was 1.6 percent. Interest on special issues is paid semiannually on June 30 and December 31. The interest rate on special issues purchased by the account in June 2021 was 1.5 percent, payable semiannually.

I. GLOSSARY

Accelerated and Advance Payments (AAP) Program. A Medicare loan program that allows the Centers for Medicare & Medicaid Services (CMS) to make accelerated payments to Part A and Part B providers, and advance payments to Part B suppliers, when there is a disruption in claims submission and/or claims processing. CMS can also offer these payments in circumstances such as national emergencies or natural disasters in order to accelerate cash flow to the affected health care providers and suppliers.

Accountable care organizations (ACOs). Groups of clinicians, hospitals, and other health care providers that choose to come together to deliver coordinated, high-quality care to the Medicare patients they serve.

Actuarial balance. The difference between the summarized income rate and the summarized cost rate over a given valuation period.

Actuarial deficit. A negative actuarial balance.

Actuarial rates. One-half of the Part B expected monthly benefit and administrative costs for each aged enrollee adjusted for interest earned on the Part B account assets attributable to aged enrollees and a contingency margin (for the aged actuarial rate), and one-half of the expected monthly benefit and administrative costs for each disabled enrollee adjusted for interest earned on the Part B account assets attributable to disabled enrollees and a contingency margin (for the disabled actuarial rate), for the duration the rate is in effect.

Actuarial status. A measure of the adequacy of the financing as determined by the difference between assets and liabilities at the end of the periods for which financing was established.

Administrative expenses. Expenses incurred by the Department of Health and Human Services and the Department of the Treasury in administering HI and SMI and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses, which are paid from the HI and SMI trust funds, include expenditures for contractors to determine costs of, and make payments to, providers, as well as salaries and expenses of CMS.

Advanced alternative payment model (advanced APM). An APM that meets certain standards for risk-bearing, use of health information technology, and quality.

Aged enrollee. An individual, aged 65 or over, who is enrolled in HI or SMI.

Allowed charge. Individual charge determined by a Medicare Administrative Contractor for a covered Part B medical service or supply.

Alternative payment model (APM). A program or model (except for a health care innovation award model) implemented by the Center for Medicare and Medicaid Innovation at CMS; a demonstration under the Health Care Quality Demonstration Program; an ACO model participating in the Medicare shared savings program; or a Medicare demonstration required by law.

Annual out-of-pocket threshold. The amount of out-of-pocket expenses that must be paid for prescription drugs before significantly reduced Part D beneficiary cost sharing is effective. Amounts paid by a third-party insurer are not included in testing this threshold, but amounts paid by State or Federal assistance programs are included.

Assets. Treasury notes and bonds guaranteed by the Federal Government, and cash held by the trust funds for investment purposes.

Assumptions. Values relating to future trends in certain key factors that affect the balance in the trust funds. Demographic assumptions include fertility, mortality, net immigration, marriage, divorce, retirement patterns, disability incidence and termination rates, and changes in the labor force. Economic assumptions include unemployment, average earnings, inflation, interest rates, and productivity. Three sets of economic assumptions are presented in the Trustees Report:

(1) The low-cost alternative, with relatively rapid economic growth, low inflation, and favorable (from the standpoint of program financing) demographic conditions;
(2) The intermediate assumptions, which represent the Trustees' best estimates of likely future economic and demographic conditions; and
(3) The high-cost alternative, with slow economic growth, more rapid inflation, and financially disadvantageous demographic conditions.

See also *Hospital assumptions*.

Average market yield. A computation that is made on all marketable interest-bearing obligations of the United States. It is computed on the

basis of market quotations as of the end of the calendar month immediately preceding the date of such issue.

Baby boom. The period from the end of World War II through the mid-1960s marked by unusually high birth rates.

Base estimate. The updated estimate of the most recent historical year.

Beneficiary. A person enrolled in HI or SMI. See also *Aged enrollee* and *Disabled enrollee*.

Benefit payments. The amounts disbursed for covered services after the deductible and coinsurance amounts have been deducted.

Benefit period. An alternate name for spell of illness.

Board of Trustees. A Board established by the Social Security Act to oversee the financial operations of the Federal Hospital Insurance Trust Fund and the Federal Supplementary Medical Insurance Trust Fund. The Board comprises six members, four of whom serve automatically by virtue of their positions in the Federal Government: the Secretary of the Treasury, who is the Managing Trustee; the Secretary of Labor; the Secretary of Health and Human Services; and the Commissioner of Social Security. Two other members are public representatives whom the President appoints and the Senate confirms. These positions are currently vacant. The Administrator of CMS serves as Secretary of the Board of Trustees.

Bond. A certificate of ownership of a specified portion of a debt due by the Federal Government to holders, bearing a fixed rate of interest.

Callable. Subject to redemption upon notice, as is a bond.

Case mix index. A relative weight that captures the average complexity of certain Medicare services.

Cash basis. The costs of the service when payment was made rather than when the service was performed.

Certificate of indebtedness. A short-term certificate of ownership (12 months or less) of a specified portion of a debt due by the Federal Government to individual holders, bearing a fixed rate of interest.

Closed-group population. Includes all persons currently participating in the program as either taxpayers or beneficiaries, or both. See also *Open-group population*.

Coinsurance. Portion of the costs for covered services paid by the beneficiary after meeting the annual deductible. See also *Hospital coinsurance* and *SNF coinsurance*.

Consumer Price Index (CPI). A measure of the average change in prices over time in a fixed group of goods and services. In this report, references to the CPI relate to the CPI for Urban Wage Earners and Clerical Workers (CPI-W), except for those cases in which the CPI for All Urban Consumers—all items (CPI-U) is indicated.

Contingency. Funds included in the SMI Part B trust fund account to serve as a cushion in case actual expenditures are higher than those projected at the time financing was established. Since the financing is set prospectively, actual experience may be different from the estimates used in setting the financing.

Contingency margin. An amount included in the actuarial rates to provide for changes in the contingency level in the SMI Part B trust fund account. Positive margins increase the contingency level, and negative margins decrease it.

Contribution base. See *Maximum tax base*.

Contributions. See *Payroll taxes*.

Cost rate. The ratio of HI cost (or outgo or expenditures) on an incurred basis during a given year to the taxable payroll for the year.

Covered earnings. Earnings in employment covered by HI.

Covered employment. All employment and self-employment creditable for Social Security purposes. Almost every kind of employment and self-employment is covered under HI. In a few employment situations—for example, religious orders under a vow of poverty, foreign affiliates of American employers, or State and local governments—coverage must be elected by the employer. However, effective July 1991, coverage is mandatory for State and local employees who are not participating in a public employee retirement system. All new State and local employees have been covered since April 1986. In a few situations—for instance, ministers or self-employed members of certain religious groups—workers can opt out of coverage. Covered employment for HI includes all Federal employees

(whereas covered employment for OASDI includes some, but not all, Federal employees).

Covered Part D drugs. Prescription drugs covered under the Medicaid program plus insulin-related supplies and smoking cessation agents. Drugs covered in Parts A and B of Medicare will continue to be covered there, rather than in Part D.

Covered services. Services for which HI or SMI pays, as defined and limited by statute. Covered HI services are provided by hospitals (inpatient care), skilled nursing facilities, home health agencies, and hospices. Covered SMI Part B services include most physician services, care in outpatient departments of hospitals, diagnostic tests, durable medical equipment, ambulance services, and other health services that are not covered by HI. See *Covered Part D drugs* for SMI Part D.

Covered worker. A person who has earnings creditable for Social Security purposes on the basis of services for wages in covered employment and/or on the basis of income from covered self-employment. The number of HI covered workers is slightly larger than the number of OASDI covered workers because of different coverage status for Federal employment. See *Covered employment*.

Creditable prescription drug coverage. Prescription drug coverage that meets or exceeds the actuarial value of Part D coverage provided through a group health plan or otherwise.

Dedicated financing sources. The sum of HI payroll taxes, HI share of income taxes on Social Security benefits, Part D State transfers, Part B drug fees, and beneficiary premiums. This amount is used in the test of excess general revenue Medicare funding.

Deductible. The annual amount payable by the beneficiary for covered services before Medicare makes reimbursement. See also *Inpatient hospital deductible*.

Deemed wage credit. See *Non-contributory or deemed wage credits*.

Demographic assumptions. See *Assumptions*.

Diagnosis-related groups (DRGs). A classification system that groups patients according to diagnosis, type of treatment, age, and other relevant criteria. Under the inpatient hospital prospective payment system, hospitals are paid a set fee for treating patients in a single DRG category, regardless of the actual cost of care for the individual.

Direct and indirect remuneration (DIR). Payments primarily consisting of drug manufacturer rebates and pharmacy rebates that Part D plans negotiate.

Direct subsidy. The amount paid to the prescription drug plans representing the difference between the plan's risk-adjusted bid and the beneficiary premium for basic coverage.

Disability. For Social Security purposes, the inability to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or to last for a continuous period of not less than 12 months. Special rules apply for workers aged 55 or older whose disability is based on blindness. The law generally requires that a person be disabled continuously for 5 months before he or she can qualify for a disabled-worker cash benefit. An additional 24 months is necessary to qualify for benefits under Medicare.

Disability Insurance (DI). See *Old-Age, Survivors, and Disability Insurance (OASDI).*

Disabled enrollee. An individual under age 65 who has been entitled to disability benefits under Title II of the Social Security Act or the Railroad Retirement system for at least 2 years and who is enrolled in HI or SMI.

Disproportionate share hospital (DSH). A hospital that serves a significantly disproportionate number of low-income patients and receives payments from Medicare to cover the costs of providing care to uninsured patients.

DRG Coding. The DRG categories used by hospitals on discharge billing. See also *Diagnosis-related groups (DRGs).*

Dual beneficiary. An individual who is eligible for both Medicare and Medicaid.

Durable medical equipment (DME). Items such as iron lungs, oxygen tents, hospital beds, wheelchairs, and seat lift mechanisms that are used in the patient's home and are either purchased or rented.

Earnings. Unless otherwise qualified, all wages from employment and net earnings from self-employment, whether or not taxable or covered.

Economic assumptions. See *Assumptions*.

Economy-wide private nonfarm business total factor productivity. A measure of real output per combined unit of labor and capital, reflecting the contributions of all factors of production for the private nonfarm business sector of the economy.

End-stage renal disease (ESRD). Permanent kidney failure.

Excess general revenue Medicare funding. A determination that occurs when the difference between outlays and dedicated funding sources exceeds or is projected to exceed 45 percent of outlays.

Extended care services. In the context of this report, an alternate name for skilled nursing facility services.

Federal Insurance Contributions Act (FICA). Provision authorizing taxes on the wages of employed persons to provide for OASDI and HI. The tax is paid in equal amounts by covered workers and their employers.

Financial interchange. Provisions of the Railroad Retirement Act providing for transfers between the trust funds and the Social Security Equivalent Benefit Account of the Railroad Retirement program in order to place each trust fund in the same position as if railroad employment had always been covered under Social Security.

Fiscal year. The accounting year of the U.S. Government. Since 1976, each fiscal year has begun October 1 of the prior calendar year and ended the following September 30. For example, fiscal year 2022 began October 1, 2021 and will end September 30, 2022.

Fixed capital assets. The net worth of facilities and other resources.

Frequency distribution. An exhaustive list of possible outcomes for a variable, and the associated probability of each outcome. The sum of the probabilities of all possible outcomes from a frequency distribution is 100 percent.

General fund of the Treasury. Funds held by the U.S. Treasury, other than revenue collected for a specific trust fund (such as HI or SMI) and maintained in a separate account for that purpose. The majority of this fund is derived from individual and business income taxes.

General revenue. Income to the HI and SMI trust funds from the general fund of the Treasury. Only a very small percentage of total HI trust fund income each year is attributable to general revenue.

Gross Domestic Product (GDP). The total dollar value of all goods and services produced in a year in the United States, regardless of who supplies the labor or property.

High-cost alternative. See *Assumptions*.

Hold-harmless provision. A provision limiting the dollar increase in the Part B premium to the dollar increase in an individual's Social Security benefit. As a result, the person affected pays a lower Part B premium, and the net amount of the individual's Social Security benefit does not decrease despite the greater increase in the premium.

Home health agency (HHA). A public agency or private organization that is primarily engaged in providing the following services in the home: skilled nursing services, other therapeutic services (such as physical, occupational, or speech therapy), and home health aide services.

Hospice. A provider of care for the terminally ill; delivered services generally include home health care, nursing care, physician services, medical supplies, and short-term inpatient hospital care.

Hospital assumptions. These include differentials between hospital labor and non-labor indices compared with general economy labor and non-labor indices; rates of admission incidence; the trend toward treating less complicated cases in outpatient settings; and continued improvement in DRG coding.

Hospital coinsurance. For the 61st through 90th day of hospitalization in a benefit period, a daily amount for which the beneficiary is responsible, equal to one-fourth of the inpatient hospital deductible; for lifetime reserve days, a daily amount for which the beneficiary is responsible, equal to one-half of the inpatient hospital deductible (see *Lifetime reserve days*).

Hospital input price index. An alternate name for hospital market basket.

Hospital Insurance (HI). The Medicare trust fund that covers specified inpatient hospital services, posthospital skilled nursing care, home health services, and hospice care for aged and disabled individuals who meet the eligibility requirements. Also known as Medicare Part A.

Hospital market basket. The cost of the mix of goods and services (including personnel costs but excluding nonoperating costs)

comprising routine, ancillary, and special care unit inpatient hospital services.

Income rate. The ratio of HI income (including payroll taxes, income from taxation of Social Security benefits, premiums, general revenue transfers for uninsured beneficiaries, and monies from fraud and abuse control activities, but excluding interest income) to taxable payroll for the year.

Incurred basis. The costs based on when the service was performed rather than when the payment was made.

Infinite horizon. The period extending into the indefinite future.

Independent laboratory. A free-standing clinical laboratory meeting conditions for participation in the Medicare program.

Initial coverage limit. The amount up to which the coinsurance applies under the standard prescription drug benefit.

Inpatient hospital deductible. An amount of money that is deducted from the amount payable by Medicare Part A for inpatient hospital services furnished to a beneficiary during a spell of illness.

Inpatient hospital services. These services include bed and board, nursing services, diagnostic or therapeutic services, and medical or surgical services.

Interest. A payment for the use of money during a specified period.

Intermediate assumptions. See *Assumptions*.

Late enrollment penalty. Additional beneficiary premium amounts for those who either do not enroll in Part D at the first opportunity or fail to maintain other creditable coverage for more than 63 days.

Lifetime reserve days. Under HI, each beneficiary has 60 lifetime reserve days that he or she may opt to use when regular inpatient hospital benefits are exhausted. The beneficiary pays one-half of the inpatient hospital deductible for each lifetime reserve day used.

Long range. The next 75 years.

Low-cost alternative. See *Assumptions*.

Low-income beneficiaries. Individuals meeting income and assets tests who are eligible for prescription drug coverage subsidies to help finance premiums and out-of-pocket payments.

Managed care. See *Private Health Plans*.

Market basket. See *Hospital market basket*.

Maximum tax base. Annual dollar amount above which earnings in employment covered under HI are not taxable. In 1994, the maximum tax base was eliminated under HI.

Maximum taxable amount of annual earnings. See *Maximum tax base*.

Medicare. A nationwide, federally administered health insurance program authorized in 1965 under Title XVIII of the Social Security Act to cover the cost of hospitalization, medical care, and some related services for most people aged 65 and over. In 1972, lawmakers extended coverage to people receiving Social Security Disability Insurance payments for 2 years and people with end-stage renal disease. (For beneficiaries whose primary or secondary diagnosis is Amyotrophic Lateral Sclerosis, the 2-year waiting period is waived.) In 2010, people exposed to environmental health hazards within areas under a corresponding emergency declaration became Medicare-eligible. In 2006, prescription drug coverage was added as well. Medicare consists of two separate but coordinated trust funds: Hospital Insurance (HI, or Part A) and Supplementary Medical Insurance (SMI). The SMI trust fund comprises two separate accounts: the Part B account and the Part D account. Almost all persons who are aged 65 and over or disabled and who are entitled to HI are eligible to enroll in Part B and Part D on a voluntary basis by paying monthly premiums.

Medicare Administrative Contractor (MAC). A private health care insurer that processes Part A and Part B medical claims or DME claims for fee-for-service beneficiaries.

Medicare Advantage (formerly called Medicare+Choice). An expanded set of options, established in 2006, for the delivery of health care under Medicare. Most Medicare beneficiaries can choose to receive benefits through the original fee-for-service program or through one of the following Medicare Advantage plans: (i) coordinated care plans (such as health maintenance organizations, provider-sponsored organizations, and preferred provider organizations); (ii) medical

savings account (MSA)/high-deductible plans; (iii) private fee-for-service plans; or (iv) special needs plans.

Medicare Advantage Prescription Drug Plan (MA-PD). Prescription drug coverage provided by Medicare Advantage plans.

Medicare Advantage ratebook. A set of statutory capitation payment rates, by county, originally used directly to establish payments to private health insurance plans contracting with Medicare. Under current law, the ratebook amounts are used as benchmarks, against which plan costs are compared in the calculation of plan payments.

Medicare Economic Index (MEI). An index often used in the calculation of the increases in the prevailing charge levels that help to determine allowed charges for physician services. In 1992 and later, this index is considered in connection with the update factor for the physician fee schedule.

Medicare funding warning. A warning triggered when a determination of excess general revenue Medicare funding has occurred in 2 consecutive years. Such a warning requires the President to submit to Congress, within 15 days after the date of the Budget submission for the succeeding year, proposed legislation to respond to the warning. The law also requires Congress to consider the legislation proposed in response to Medicare funding warnings on an expedited basis. See also *Excess general revenue Medicare funding*.

Medicare Payment Advisory Commission (MedPAC). A commission established by Congress in 1997 to replace the Prospective Payment Assessment Commission and the Physician Payment Review Commission. MedPAC is directed to provide the Congress with advice and recommendations on policies affecting the Medicare program.

Medicare Prescription Drug Account. The separate account within the SMI trust fund to manage revenues and expenditures of the Part D drug benefit.

Medicare severity diagnosis-related groups (MS-DRGs). A refinement of the diagnosis-related group classification system that groups patients according to diagnosis, type of treatment, age, and other relevant criteria. Under the inpatient hospital prospective payment system, hospitals are paid a set fee for treating patients in a single MS-DRG category, regardless of the actual cost of care for the individual.

Merit-based incentive payment system (MIPS). A system for adjusting payments under the Medicare physician fee schedule to non-advanced APM providers based on metrics assessing provider quality, resource use, meaningful use of electronic health records, and clinical practice improvement activities.

Military service wage credits. Credits recognizing that military personnel receive other cash payments and wages in kind (such as food and shelter) in addition to their basic pay. Noncontributory wage credits of $160 were provided for each month of active military service from September 16, 1940 through December 31, 1956. For years after 1956, the basic pay of military personnel is covered under the Social Security program on a contributory basis. In addition to contributory credits for basic pay, noncontributory wage credits of $300 were granted for each calendar quarter in which a person received pay for military service from January 1957 through December 1977. Deemed wage credits of $100 were granted for each $300 of military wages, up to a maximum of $1,200 per calendar year, from January 1978 through December 2001. See also *Quinquennial military service determinations and adjustments*.

National average monthly bid. The weighted average of all Part D drug bids including all of the bids from Prescription Drug Plans (PDPs) and the drug portion of bids from MA-PDs.

Noncontributory or deemed wage credits. Wages and wages in kind that were not subject to the HI tax but are deemed as having been. Deemed wage credits exist for the purposes of (i) determining HI eligibility for individuals who might not be eligible for HI coverage without payment of a premium were it not for the deemed wage credits and (ii) calculating reimbursement due the HI trust fund from the general fund of the Treasury. The first purpose applies in the case of providing coverage to persons during the transitional periods when HI began and when it was expanded to cover Federal employees; both purposes apply in the cases of military service wage credits and deemed wage credits granted for the internment of persons of Japanese ancestry during World War II.

Old-Age, Survivors, and Disability Insurance (OASDI). The Social Security programs that pay for (i) monthly cash benefits to retired-worker (old-age) beneficiaries, their spouses and children, and survivors of deceased insured workers (OASI); and (ii) monthly cash benefits to disabled-worker beneficiaries and their spouses and children, and for providing rehabilitation services to the disabled (DI).

Open-group population. Includes all persons who will ever participate in the program as either taxpayers or beneficiaries, or both. See also *Closed-group population*.

Open-group unfunded obligation. See *Unfunded obligation*.

Outpatient hospital. Part of the hospital providing services covered by SMI Part B, including, for example, services in an emergency room or outpatient clinic, ambulatory surgical procedures, medical supplies such as splints, and laboratory tests billed by the hospital.

Part A. The Medicare Hospital Insurance trust fund.

Part A premium. A monthly premium paid by or on behalf of individuals who wish for and are entitled to voluntary enrollment in Medicare HI. These individuals are those who are aged 65 and older, are uninsured for Social Security or Railroad Retirement, and do not otherwise meet the requirements for entitlement to Part A. Disabled individuals who have exhausted other entitlement are also qualified. These individuals are those not now entitled but who have been entitled under section 226(b) of the Social Security Act, who continue to have the disabling impairment upon which their entitlement was based, and whose entitlement ended solely because the individuals had earnings that exceeded the substantial gainful activity amount (as defined in section 223(d)(4) of the Social Security Act).

Part B. The account within the Medicare Supplementary Medical Insurance trust fund that pays for a portion of the costs of physician services, outpatient hospital services, and other related medical and health services for voluntarily enrolled aged and disabled individuals.

Part B premium. The monthly amount paid by those individuals who have voluntarily enrolled in Part B. Most enrollees pay the standard premium amount, which currently represents approximately 25 percent of the average program costs for an aged beneficiary. Beneficiaries with high income are also required to pay an income-related monthly adjustment amount starting in 2007, and those who enroll late are required to pay a penalty. In addition, beneficiaries who are affected by the hold-harmless provision pay a lower premium. See section V.E for more details about the Part B premium.

Part C. See *Private health plans*.

Part D. The account within the Medicare Supplementary Medical Insurance trust fund that pays private plans to provide prescription drug coverage.

Pay-as-you-go financing. A financing scheme in which taxes are scheduled to produce just as much income as required to pay current benefits, with trust fund assets built up only to the extent needed to prevent depletion of the fund by random fluctuations.

Payroll taxes. Taxes levied on the gross wages of employees and net earnings of self-employed workers.

Peer Review Organization (PRO). A group of practicing physicians and other health care professionals paid by the Federal Government to review the care given to Medicare patients. Starting in 2002, these organizations are called Quality Improvement Organizations.

Percentile. A number that corresponds to one of the equal divisions of the range of a variable in a given sample and that characterizes a value of the variable as not exceeded by a specified percentage of all the values in the sample. For example, a score higher than 97 percent of those attained is said to be in the 97th percentile.

Prescription Drug Plans (PDPs). Stand-alone prescription drug plans offered to beneficiaries in traditional fee-for-service Medicare and to beneficiaries in Medicare Advantage plans that do not offer a prescription drug benefit.

Present value. The present value of a future stream of payments is the lump-sum amount that, if invested today, together with interest earnings would be just enough to meet each of the payments as it fell due. At the time of the last payment, the invested fund would be exactly zero.

Private health plans. Plans offered by private companies that contract with Medicare to provide coverage for Part A and Part B services. Medicare Advantage plans, cost plans, and Program of All-Inclusive Care for the Elderly (PACE) plans are all private health plans.

Projection error. Degree of variation between estimated and actual amounts.

Prospective payment system (PPS). A method of reimbursement in which Medicare payment is made based on a predetermined, fixed amount. The payment amount for a particular service is derived based on the classification system of that service (for example, DRGs for inpatient hospital services).

Provider. Any organization, institution, or individual who provides health care services to Medicare beneficiaries. Hospitals (inpatient services), skilled nursing facilities, home health agencies, and hospices are the providers of services covered under Medicare Part A. Physicians, ambulatory surgical centers, and outpatient clinics are some of the providers of services covered under Medicare Part B.

Quality Improvement Organization (QIO). See *Peer Review Organization*.

Quinquennial military service determination and adjustments. Prior to the Social Security Amendments of 1983, quinquennial determinations (that is, estimates made once every 5 years) were made of the costs arising from the granting of deemed wage credits for military service prior to 1957; annual reimbursements were made from the general fund of the Treasury to the HI trust fund for these costs. The Social Security Amendments of 1983 provided for (i) a lump-sum transfer in 1983 for (a) the costs arising from the pre-1957 wage credits and (b) amounts equivalent to the HI taxes that would have been paid on the deemed wage credits for military service for 1966 through 1983, inclusive, if such credits had been counted as covered earnings; (ii) quinquennial adjustments to the pre-1957 portion of the 1983 lump-sum transfer; (iii) general fund transfers equivalent to HI taxes on military deemed wage credits for 1984 and later, to be credited to the fund on July 1 of each year; and (iv) adjustments as deemed necessary to any previously transferred amounts representing HI taxes on military deemed wage credits.

Railroad Retirement. A Federal insurance program similar to Social Security designed for workers in the railroad industry. The provisions of the Railroad Retirement Act provide for a system of coordination and financial interchange between the Railroad Retirement program and the Social Security program.

Ratebook. See *Medicare Advantage ratebook*.

Real-wage differential. The difference between the percentage increases, before rounding, in (i) the average annual wage in covered employment and (ii) the average annual CPI.

Reasonable-cost basis. The calculation to determine the reasonable cost incurred by individual providers when furnishing covered services to beneficiaries. The reasonable cost is based on the actual cost of providing such services, including direct and indirect costs of

providers, and excluding any costs that are unnecessary in the efficient delivery of services covered by a health insurance program.

Reinsurance subsidy. Payments to the prescription drug plans in the amount of 80 percent of drug expenses that exceed the annual out-of-pocket threshold.

Residual factors. Factors other than price, including volume of services, intensity of services, and age/sex changes.

Risk corridor. Triggers that are set to protect Part D prescription drug plans from unexpected losses and that allow the government to share in unexpected gains.

Self-employment. Operation of a trade or business by an individual or by a partnership in which an individual is a member.

Self-Employment Contributions Act (SECA). Provision authorizing taxes on the net income of most self-employed persons to provide for OASDI and HI.

Sequestration. The process of applying automatic reductions to certain Federal funding, which was required by the Budget Control Act of 2011.

Short range. The next 10 years.

Skilled nursing facility (SNF). An institution that is primarily engaged in providing skilled nursing care and related services for residents who require medical or nursing care or that is engaged in the rehabilitation of injured, disabled, or sick persons.

SNF coinsurance. For the 21st through 100th day of extended care services in a benefit period, a daily amount for which the beneficiary is responsible, equal to one-eighth of the inpatient hospital deductible.

Social Security Act. Public Law 74-271, enacted on August 14, 1935, with subsequent amendments. The Social Security Act consists of 20 titles, four of which have been repealed. The HI and SMI trust funds are authorized by Title XVIII of the Social Security Act.

Special public-debt obligation. Securities of the U.S. Government issued exclusively to the OASI, DI, HI, and SMI trust funds and other Federal trust funds. Sections 1817(c) and 1841(a) of the Social Security Act provide that the public-debt obligations issued for purchase by the HI and SMI trust funds, respectively, shall have maturities fixed with

due regard for the needs of the funds. The usual practice in the past has been to spread the holdings of special issues, as of every June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Special public-debt obligations are redeemable at par at any time.

Spell of illness. A period of consecutive days, beginning with the first day on which a beneficiary is furnished inpatient hospital or extended care services, and ending with the close of the first period of 60 consecutive days thereafter in which the beneficiary is in neither a hospital nor a skilled nursing facility.

Standard prescription drug coverage. Part D prescription drug coverage that includes a deductible, coinsurance up to an initial coverage limit, and protection against high out-of-pocket expenditures by having reduced coinsurance provisions for individuals exceeding the out-of-pocket threshold.

Stochastic model. An analysis involving a random variable. For example, a stochastic model may include a frequency distribution for one assumption. From the frequency distribution, possible outcomes for the assumption are selected randomly for use in an illustration.

Summarized cost rate. The ratio of the present value of expenditures to the present value of the taxable payroll for the years in a given period. The summarized cost rate includes the cost of reaching and maintaining a target trust fund level, known as a contingency fund ratio. Because a trust fund level of about 1 year's expenditures is considered to be an adequate reserve for unforeseen contingencies, the targeted contingency fund ratio used in determining summarized cost rates is 100 percent of annual expenditures. Accordingly, the summarized cost rate is equal to the ratio of (i) the sum of the present value of the outgo during the period, plus the present value of the targeted ending trust fund level, plus the beginning trust fund amount, to (ii) the present value of the taxable payroll during the period.

Summarized income rate. The ratio of the present value of HI income (including payroll taxes, income from taxation of Social Security benefits, premiums, general revenue transfers for uninsured beneficiaries, and monies from fraud and abuse control activities, but excluding interest income) incurred during a given period to the present value of the taxable payroll for the years in the period.

Supplemental prescription drug coverage. Coverage in excess of the standard prescription drug coverage.

Supplementary Medical Insurance (SMI). The Medicare trust fund comprising the Part B account, the Part D account, and the Transitional Assistance Account. The Part B account pays for a portion of the costs of physician services, outpatient hospital services, and other related medical and health services for voluntarily enrolled aged and disabled individuals. The Part D account pays private plans to provide prescription drug coverage, beginning in 2006. The Transitional Assistance Account paid for transitional assistance under the prescription drug card program in 2004 and 2005.

Sustainable growth rate (SGR). A system for establishing goals for the rate of growth in Medicare Part B expenditures for physician services. The Medicare Access and CHIP Reauthorization Act of 2015 permanently repealed the SGR formula.

Tax rate. The percentage of taxable earnings, up to the maximum tax base, that is paid for the HI tax. Currently, the percentages are 1.45 for employees and employers, each. The self-employed pay 2.9 percent. There is an additional 0.9-percent tax on earnings above $200,000 (for those who file an individual tax return) or $250,000 (for those who file a joint income tax return).

Taxable earnings. Taxable wages and/or self-employment income under the prevailing annual maximum taxable limit.

Taxable payroll. A weighted average of taxable wages and taxable self-employment income. When multiplied by the combined employee-employer tax rate, it yields the total amount of taxes incurred by employees, employers, and the self-employed for work during the period.

Taxable self-employment income. Net earnings from self-employment—generally above $400 and below the annual maximum taxable amount for a calendar or other taxable year—less any taxable wages in the same taxable year.

Taxable wages. Wages paid for services rendered in covered employment up to the annual maximum taxable amount.

Taxation of benefits. Beginning in 1994, up to 85 percent of an individual's or a couple's OASDI benefits are potentially subject to Federal income taxation under certain circumstances. The revenue derived from taxation of benefits in excess of 50 percent, up to 85 percent, is allocated to the HI trust fund.

Taxes. See *Payroll taxes*.

Term insurance. A type of insurance that is in force for a specified period of time.

Test of Long-Range Close Actuarial Balance. The conditions required to meet this test are as follows: (i) The trust fund satisfies the short-range test of financial adequacy; and (ii) the trust fund ratios stay above zero throughout the 75-year projection period, such that benefits would be payable in a timely manner throughout the period. This test is applied to HI trust fund projections made under the intermediate assumptions.

Test of Short-Range Financial Adequacy. The conditions required to meet this test are as follows: (i) If the trust fund ratio for a fund exceeds 100 percent at the beginning of the projection period, then it must be projected to remain at or above 100 percent throughout the 10-year projection period; (ii) alternatively, if the fund ratio is initially less than 100 percent, it must be projected to reach a level of at least 100 percent within 5 years (and not be depleted at any time during this period), and then remain at or above 100 percent throughout the rest of the 10-year period. This test is applied to HI trust fund projections made under the intermediate assumptions.

Transitional assistance. An interim benefit for 2004 and 2005 that provided up to $600 per year to assist low-income beneficiaries who had no drug insurance coverage with prescription drug purchases. This benefit also paid the enrollment fee in the Medicare Prescription Drug Discount Card program.

Transitional Assistance Account. The separate account within the SMI trust fund that managed revenues and expenditures for the transitional assistance drug benefit in 2004 and 2005.

Trust fund. Separate accounts in the U.S. Treasury, mandated by Congress, whose assets may be used only for a specified purpose. For the HI and SMI trust funds, monies not withdrawn for current benefit payments and administrative expenses are invested in interest-bearing Federal securities, as required by law; the interest earned is also deposited in the trust funds.

Trust fund ratio. A short-range measure of the adequacy of the HI and SMI trust fund level; defined as the assets at the beginning of the year expressed as a percentage of the outgo during the year.

Unfunded obligation. A measure of the shortfall of trust fund income to fully cover program cost over a specified time period after depletion

of trust fund asset reserves. This measure can be expressed in present value dollars, discounted to the beginning of the valuation period, by computing the excess of the present value of the projected cost of the program over the sum of (i) the value of trust fund reserves at the beginning of the valuation period and (ii) the present value of the projected non-interest income of the program, assuming scheduled tax rates and benefit levels. This measure can apply for all participants over a specified time period—that is, the *open-group population*—or be limited to a specified subgroup of participants, referred to as the *closed-group population*.

Uninsured beneficiaries. HI beneficiaries who do not have 40 quarters of covered earnings but are entitled to HI coverage either because (i) they were deemed additional wage credits during the transitional periods when the HI program began or when it was expanded to cover Federal employees, or because (ii) they pay a monthly premium that is intended to cover their full cost. See *Part A premium*.

Unit input intensity allowance. The amount added to, or subtracted from, the hospital input price index to yield the prospective payment system update factor.

Valuation period. A period of years that is considered as a unit for purposes of calculating the status of a trust fund.

Voluntary enrollees. Certain individuals, aged 65 or older or disabled, who are not otherwise entitled to Medicare and who opt to obtain coverage under Part A by paying a monthly premium.

Year of depletion. The first year in which a trust fund is unable to pay full benefits when due because the assets of the fund are depleted.

TABLES

FIGURES

STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the techniques and methodology used herein to evaluate the financial status of the Federal Hospital Insurance Trust Fund and the Federal Supplementary Medical Insurance Trust Fund are based upon sound principles of actuarial practice and are generally accepted within the actuarial profession; and (2) with the important caveats noted below, the principal assumptions used and the resulting actuarial estimates are, individually and in the aggregate, reasonable for the purpose of evaluating the financial status of the trust funds under current law, taking into consideration the past experience and future expectations for the population, the economy, and the program. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The Trustees construct high-cost and low-cost projections as a share of GDP over time to demonstrate the variability in program costs under different scenarios. The projections in this report, particularly for the next several years, are subject to greater uncertainty than is typically the case, given recent economic changes and the continued effects of the COVID-19 pandemic.

The annual reports of the Board of Trustees and the accompanying Actuarial Opinions have cautioned for a number of years about the challenges of adhering to current-law Medicare payment updates, especially in the long range. For physician services, not only are updates below the rate of inflation in all future years, but there are more immediate concerns because updates for these services are projected to be −2.9 percent in 2023 and 0.0 percent for 2024 and 2025 and certain bonuses paid to physicians are scheduled to expire in 2025. Should payment rates prove to be inadequate for any service, beneficiaries' access to and the quality of Medicare benefits would deteriorate over time, or future legislation would need to be enacted that would likely increase program costs beyond those projected under current law in this report.

For more information, I encourage readers to review the illustrative alternative projection, which provides the potential magnitude of the understatement of Medicare costs relative to the current-law projections.[108]

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[108]See https://www.cms.gov/files/document/illustrative-alternative-scenario-2022.pdf.