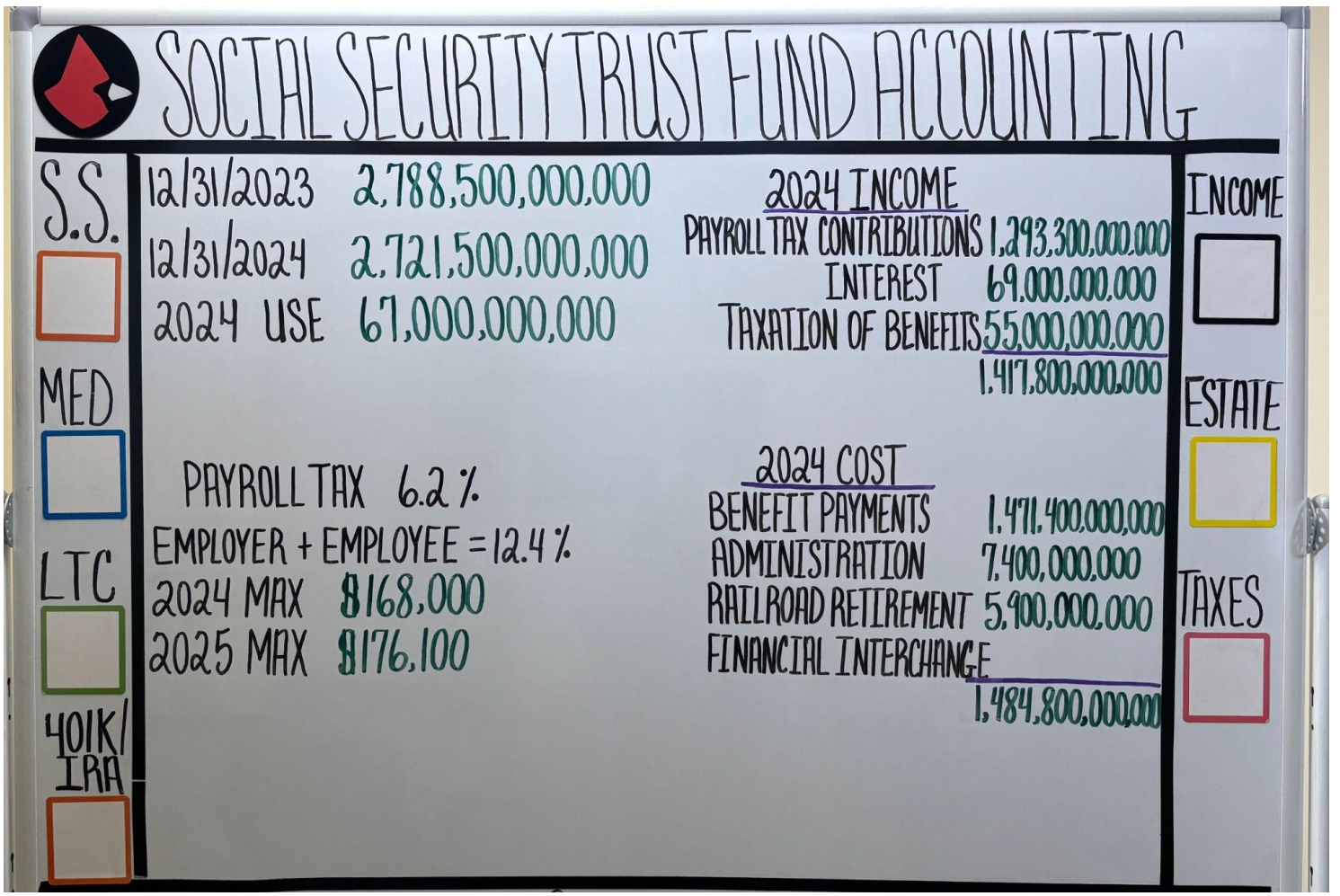
CARDINAL ADVISORS

Social Security Trust Fund Accounting

Hans and Tom use the 2025 Social Security Report to discuss the video entitled “Social Security Trust Fund Accounting”



Aug 2025

THE 2025 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS

COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS

TRANSMITTING

THE 2025 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS

LETTER OF TRANSMITTAL

BOARD OF TRUSTEES OF THE
FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND
FEDERAL DISABILITY INSURANCE TRUST FUNDS,
Washington, D.C., June 18, 2025

HON. MIKE JOHNSON,
Speaker of the House of Representatives.

HON. JD VANCE,
President of the Senate.

DEAR MR. SPEAKER AND MR. PRESIDENT:

We have the honor of transmitting to you the 2025 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, the 85th such report.

Respectfully,

SCOTT BESSENT,
Secretary of the Treasury,
and Managing Trustee of the Trust Funds.

LORI CHAVEZ-DEREMER,
Secretary of Labor,
and Trustee.

ROBERT F. KENNEDY, JR.,
Secretary of Health and Human Services,
and Trustee.

FRANK J. BISIGNANO
Commissioner of Social Security,
and Trustee.

VACANT,
Public Trustee.

VACANT,
Public Trustee.

MARK A. STEFFENSEN,
Deputy Commissioner and General Counsel,
Law and Policy, Social Security Administration,
and Acting Secretary, Board of Trustees.

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THE 2025 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL OLD-AGE AND SURVIVORS INSURANCE AND FEDERAL DISABILITY INSURANCE TRUST FUNDS

I. INTRODUCTION

The Old-Age, Survivors, and Disability Insurance (OASDI) program provides monthly income to insured workers and their families at retirement, death, or disability. The OASDI program consists of two parts. Retired workers, their families, and survivors of deceased workers receive monthly benefits under the Old-Age and Survivors Insurance (OASI) program. Disabled workers and their families receive monthly benefits under the Disability Insurance (DI) program.

The Social Security Act established the Board of Trustees to oversee the OASI and DI Trust Funds' financial operations. 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.

The President appoints and the Senate confirms the other two members to serve as public representatives. These positions are currently vacant. The Deputy Commissioner of the Social Security Administration serves as Secretary of the Board.

The Social Security Act requires that the Board report annually to Congress on the OASI and DI Trust Funds' actuarial status and financial operations. The 2025 report is the 85th such report.

II. OVERVIEW

A. HIGHLIGHTS

Since last year's report, one law was enacted that is projected to have a substantial effect on Social Security's financial status.

- *Social Security Fairness Act of 2023*: Enacted on January 5, 2025, this law repeals the Windfall Elimination Provision and Government Pension Offset, which reduced or eliminated the Social Security benefits of individuals receiving a pension based on work that was not covered by Social Security. Therefore, implementation of this law increases Social Security benefits for people who worked in jobs that were not covered by Social Security.

In addition, the Trustees have reassessed their expectations and have made changes to the intermediate assumptions in two primary areas.

- *Total fertility rate (TFR):* The ultimate TFR is 1.9 children per woman, unchanged from last year's report. For last year's report, the ultimate rate was reached in 2040. In this year's report, the ultimate rate is reached ten years later, in 2050.
- *Ratio of total labor compensation to Gross Domestic Product (GDP):* The ratio of total labor compensation to GDP (that is, the labor share of output) is assumed to increase gradually to 61.2 percent in 2034 and to remain nearly constant thereafter. In last year's report, this ratio was assumed to reach 62.8 percent in 2033 and to stay at about that level.

Section IV.B.6 of this report includes a detailed explanation of the long-range financial effects of the changes since last year's report, by category.

The intermediate (best estimate) assumptions for this report were set in December 2024. The Trustees will continue to monitor developments, reevaluate the assumptions, and modify the projections in later reports.

In 2024

The OASDI program was providing benefit payments[1] to about 68 million people at the end of 2024:

- 54 million retired workers and dependents of retired workers,
- 6 million survivors of deceased workers, and
- 8 million disabled workers and dependents of disabled workers.

[1] The definitions of "benefit payments" and other terms appear in the Glossary.

During the year, an estimated 184 million people had earnings covered by Social Security and paid payroll taxes on those earnings.

Total program cost in 2024 was $1,485 billion. Total income was $1,418 billion, which consisted of $1,349 billion in non-interest income and $69 billion in interest earnings. Trust fund reserves held in special issue U.S. Treasury securities declined from $2,788 billion at the beginning of the year to $2,721 billion at the end of the year.

Short-Range Results (2025-34)

Under the Trustees' intermediate assumptions, Social Security's total cost is projected to be higher than its total income in 2025 and all later years. Total cost began to be higher than total income in 2021. Social Security's cost has exceeded its non-interest income since 2010.

To illustrate the Social Security program's actuarial status as a whole, the OASI and DI Trust Funds' operations are often shown on a combined basis as OASDI. However, the two funds are separate entities by law, and therefore the combined fund operations and reserves are hypothetical. The combined reserves are projected to decrease from $2,721 billion at the beginning of 2025 to $214 billion at the beginning of 2034, and are then expected to become depleted during 2034, the last year of the short-range period.

The OASDI reserves along with projected program income are sufficient to cover projected program cost over the next 9 years under the intermediate assumptions. The ratio of reserves to annual cost is projected to decline from 169 percent at the beginning of 2025, falling below 100 percent to 95 percent at the beginning of 2029. It is projected to remain below 100 percent until reserves become depleted during 2034.

Because this ratio falls below 100 percent by the end of the 10th projection year, and remains below 100 percent, the hypothetical OASDI fund fails the Trustees' test of short-range financial adequacy. For last year's report, the combined reserves were projected to be 188 percent of annual cost at the beginning of 2024, falling below 100 percent to 84 percent at the beginning of 2030.

Considered separately, the OASI Trust Fund fails the test of short-range financial adequacy, but the DI Trust Fund satisfies the test. The OASI reserves are projected to become depleted during 2033 under the intermediate assumptions. The DI reserves along with projected program income are sufficient to cover projected program cost over the next 10 years.

Long-Range Results (2025-99)

Under the Trustees' intermediate assumptions, OASDI cost exceeds total income in every year of the long-range period, which runs from 2025 through 2099. The hypothetical combined trust fund reserves decline until reserves become depleted in 2034, one year earlier than projected in last year's report. Figure II.D2 shows the implications of reserve depletion for the combined OASI and DI Trust Funds.

Considered separately, the OASI reserves become depleted in 2033, which is the same year projected in last year's report. As in last year's report, the DI reserves do not become depleted within the 75-year long-range projection period.[1]

The DI program continued to have low levels of disability applications and benefit awards through 2024. Disability applications have declined substantially since 2010, and the total number of disabled-worker beneficiaries in current payment status has been falling since 2014.

Over the 75-year long-range period, the projected OASDI annual cost rate[2] increases from 15.15 percent of taxable payroll for 2025 to 18.96 percent for 2081, and then decreases generally to 18.34 percent for 2099. The projected cost rate for 2099 is 4.84 percent of taxable payroll more than the projected income rate[3] for 2099. For last year's report, projected OASDI cost for 2099 was 18.16 percent, or 4.67 percent of payroll more than the annual income rate.

When expressed as a share of GDP, OASDI cost generally rises from 5.3 percent of GDP for 2025 to a peak of about 6.4 percent for 2079. It then declines to 6.1 percent by 2099.

OASDI cost has generally increased much more rapidly than taxable payroll since 2008 and is projected to continue to do so through about 2040. In this period, the baby-boom generation is aging and increasing the number of beneficiaries much faster than the increase in the number of covered workers, as subsequent lower-birth-rate generations replace the baby-boom generation at working ages. Between about 2040 and 2080, the OASDI cost rate continues to grow, but at a slower pace. After 2080, the OASDI cost rate declines and then stabilizes.

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[1] If the OASI Trust Fund reserves were to become depleted in 2033 as is currently projected, the operations of the hypothetical combined OASI and DI Trust Funds would not reflect the aggregated operation of the OASI Trust Fund and the DI Trust Fund because part of the OASI benefits could not be paid without a change in the law. The values shown for the hypothetical combined trust funds assume the law will have been changed to permit the transfer of resources between funds as needed.

[2] The cost rate is defined as the ratio of program cost to taxable payroll.

[3] The income rate is defined as the ratio of non-interest income to taxable payroll.

These patterns in the cost rate are largely driven by the effect of birth rates on the adult population's age distribution. Birth rates are assumed to increase from recent very low levels to an ultimate level of 1.9 children per woman for 2050 and thereafter. In last year's report, the same ultimate total fertility rate of 1.9 children per woman was assumed for 2040 and later.

The OASDI actuarial deficit is 3.82 percent of taxable payroll for the 75-year projection period 2025-99, which is larger than the value of 3.50 percent for 2024-98 in last year's report. The open-group unfunded obligation for OASDI is 3.64 percent of taxable payroll for 2025-99, which is larger than the value of 3.32 percent of payroll for 2024-98 in last year's report.

Expressed in present-value dollars discounted to January 1, 2025, the open-group unfunded obligation for OASDI is $25.1 trillion over the 75-year projection period 2025-99. This is $2.5 trillion more than the measured level in last year's report of $22.6 trillion over 2024-98, discounted to January 1, 2024.

The actuarial deficit and unfunded obligation measures are reported separately for the OASI and DI funds in section IV.B of this report. The OASDI actuarial deficit and unfunded obligation both round to 1.3 percent of GDP over the 75-year projection period 2025-99, compared to 1.2 percent for both the actuarial deficit and the unfunded obligation over 2024-98 in last year's report.

If the assumptions, methods, starting values, and the law had all remained unchanged, the actuarial deficit would have increased to 3.56 percent of taxable payroll, and the unfunded obligation would have risen to 3.38 percent of taxable payroll and $23.5 trillion in present value. This is due to the change in the valuation date and the extension of the valuation period through an additional year, 2099.

The actuarial deficit increased significantly in this year's report primarily due to: (1) the implementation of the Social Security Fairness Act, (2) the extension in the assumed year the ultimate total fertility rate is reached, and (3) the reduction in the ultimate assumption for the ratio of total labor compensation to GDP. These changes are described in detail in section IV.B.6 of this report.

To illustrate the magnitude of the 75-year actuarial deficit, consider that for the combined OASI and DI Trust Funds to remain fully solvent throughout the 75-year projection period ending in 2099:

- revenue would have to increase by an amount equivalent to an immediate and permanent payroll tax rate increase of 3.65 percentage points[1] to 16.05 percent beginning in January 2025;
- scheduled benefits would have to either be reduced by an amount equivalent to an immediate and permanent reduction of 22.4 percent applied to all current and future beneficiaries effective in January 2025, or by 26.8 percent if the reductions were applied only to those who become initially eligible for benefits in 2025 or later; or
- some combination of these approaches would have to be adopted.

If substantial actions are deferred for several years, the changes necessary to maintain solvency for the combined OASI and DI Trust Funds would be concentrated on fewer years and fewer generations. Significantly larger changes would be necessary if action is deferred until the combined trust fund reserves become depleted in 2034. For example, maintaining 75-year solvency through 2099 with changes that begin in 2034 would require:

- an increase in revenue by an amount equivalent to a permanent 4.27 percentage point payroll tax rate increase to 16.67 percent starting in 2034,
- a reduction in scheduled benefits by an amount equivalent to a permanent 25.8 percent reduction in all benefits starting in 2034, or
- some combination of these approaches.

Conclusion

Under the intermediate assumptions, the projected hypothetical combined OASI and DI Trust Fund reserves become depleted and unable to pay scheduled benefits in full on a timely basis in 2034. At the time of reserve depletion, continuing income to the combined trust funds would be sufficient to pay 81 percent of scheduled benefits.

The OASI Trust Fund reserves are projected to become depleted in 2033, at which time OASI income would be sufficient to pay 77 percent of OASI scheduled benefits. DI Trust Fund reserves are not projected to become depleted during the 75-year period ending in 2099.

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[1] The 3.65 percentage point increase in the payroll tax rate required to achieve 75-year solvency through 2099 differs somewhat from the 3.82 percent actuarial deficit. This is primarily because the rate increase required to achieve 75-year solvency reflects a zero trust fund reserve at the end of the period in 2099, whereas the 3.82 percent actuarial deficit incorporates an ending trust fund reserve equal to one year's cost. While such an increase in the payroll tax rate would cause some behavioral changes in earnings and ensuing changes in benefit levels, such changes are not included in these calculations because they are assumed to have roughly offsetting effects on actuarial status over the 75-year long-range period as a whole.

The Trustees recommend that lawmakers address the projected trust fund shortfalls in a timely way in order to phase in necessary changes gradually and give workers and beneficiaries time to adjust. Implementing changes sooner rather than later would allow more generations to share in the needed revenue increases or reductions in scheduled benefits.

Social Security will play a critical role in the lives of 70 million beneficiaries and 185 million covered workers and their families during 2025. With informed discussion, creative thinking, and timely legislative action, Social Security can continue to protect future generations.

B. TRUST FUND FINANCIAL OPERATIONS IN 2024

Table II.B1 shows the income, cost, and reserves for the OASI, the DI, and the combined OASI and DI Trust Funds in calendar year 2024.

Table II.B1.—Summary of 2024 Trust Fund Financial Operations
[In billions]

	OASI	DI	OASDI
Reserves at the end of 2023	$2,641.5	$147.0	$2,788.5
Total income in 2024[a]	1,224.0	193.8	1,417.8
Net payroll tax contributions[b]	1,105.6	187.7	1,293.3
Interest	63.7	5.4	69.1
Taxation of benefits	54.4	.7	55.1
Total cost in 2024	1,327.2	157.6	1,484.8
Benefit payments	1,316.4	155.0	1,471.4
Administrative expenses	4.9	2.5	7.4
Railroad Retirement financial interchange	5.9	.1	5.9
Net change in reserves in 2024	-103.2	36.2	-67.0
Reserves at the end of 2024	2,538.3	183.2	2,721.5

[a] Includes $0.2 billion in reimbursements from the General Fund of the Treasury and less than $50 million in gifts. See section III.A for details.
[b] Includes adjustments for prior calendar years.

Note: Components may not sum to totals because of rounding.

In 2024, net payroll tax contributions accounted for 91.2 percent of total trust fund income. Net payroll tax contributions consist of taxes paid by employees, employers, and the self-employed on earnings covered by Social Security. These taxes are paid on covered earnings up to a specified maximum annual amount, which was $168,600 in 2024. Table II.B2 shows the payroll tax rates for 2024.

Table II.B2.—Payroll Tax Contribution Rates for 2024
[In percent]

	OASI	DI	OASDI
Payroll tax contribution rate for employees and employers, each	5.3	0.9	6.2
Payroll tax contribution rate for self-employed persons	10.6	1.8	12.4

The Department of the Treasury invests all trust fund income in interest-bearing securities issued by the U.S. Government. In 2024, the invested reserves of the combined trust funds earned interest at an effective annual rate of 2.5 percent. Interest income accounted for 4.9 percent of OASDI trust fund income in 2024.

Taxation of Social Security benefits accounted for 3.9 percent of OASDI income. This revenue comes from subjecting up to 50 percent of Social Security benefits to Federal personal income tax for beneficiaries with income that exceeds specified levels.[1]

Retirement, survivor, and disability benefits accounted for 99.1 percent of OASDI cost in 2024. The expenses to administer the Social Security program were 0.5 percent of total cost. The net payment to the Railroad Retirement Social Security Equivalent Benefit Account from the combined OASI and DI Trust Funds accounted for 0.4 percent of total OASDI cost.

Trust fund reserves provide the basis for paying benefits. Combined trust fund reserves decreased by $67.0 billion during 2024 because income to the combined funds, including interest earned, was less than total cost. In last year's report, combined reserves were projected to decrease by $100.4 billion in 2024. At the end of 2024, the OASDI reserves were $2,721.5 billion, or 169 percent of estimated cost[2] for 2025. In comparison, the combined reserves at the end of 2023 were 188 percent of actual cost for 2024.

[1] See section V.C.7 for details.

[2] Estimated cost is based on the intermediate set of assumptions.

C. ASSUMPTIONS ABOUT THE FUTURE

The future income and cost of the OASI and DI Trust Funds will depend on many factors, including the size and characteristics of the population receiving benefits, the level of monthly benefit amounts, the size of the workforce, and the level of covered workers' earnings. These factors will depend in turn on future birth rates, death rates, immigration, marriage and divorce rates, retirement patterns, disability incidence and termination rates, employment rates, productivity gains, wage increases, inflation, interest rates, and many other demographic, economic, and program-specific factors.

The Trustees set key demographic, economic, and programmatic assumptions for three alternative scenarios: intermediate, low-cost, and high-cost.

The intermediate assumptions reflect the Trustees' best estimates of future experience. Therefore, most results presented in this overview indicate outcomes under the intermediate assumptions only. Any projection of the future is uncertain. For this reason, results are also presented under low-cost and high-cost alternatives to provide a range of possible future outcomes. Actual future cost is unlikely to be as extreme as portrayed by the low-cost or high-cost projections.[1]

The Trustees reexamine the assumptions each year in light of recent experience and new information. This annual review helps to ensure that the Trustees' assumptions provide the best estimate of future possibilities.

For each scenario, table II.C1 presents key demographic, economic, and programmatic assumptions used for long-range projections. The measures shown are applicable for the last 65 years of the 75-year projection period, unless otherwise specified.[2]

[1] A separate section on the uncertainty of the projections, beginning on page 21, highlights the implications of these alternative scenarios.

[2] Details on near-term assumptions about growth rates and parameter levels are provided in Chapter V.

Table II.C1.—Key Assumptions and Summary Measures for Long-Range (75-Year) Projections[a]

Assumption	Intermediate	Low-cost	High-cost
Demographic:			
Total fertility rate (children per woman) for years 2050 and later	1.9	2.1	1.6
Annual percentage reduction in total age-sex-adjusted death rates	.73	.28	1.21
Annual net lawful permanent resident (LPR) immigration (in thousands)	788	1,000	595
Average annual net temporary or unlawfully present immigration (in thousands)	465	696	238
Economic:			
Annual percentage change in productivity (total U.S. economy)	1.63	1.93	1.33
Annual percentage change in Consumer Price Index (CPI-W)	2.4	3.0	1.8
Average annual percentage change in average OASDI covered wage (nominal)	3.56	4.78	2.34
Average annual percentage change in average OASDI covered wage (real)	1.13	1.73	.53
Age-sex-adjusted unemployment rate (percent)	4.5	3.5	5.5
Annual trust fund new-issue real interest rate (percent) for years 2042 and later	2.3	2.8	1.8
Programmatic:			
Age-sex-adjusted disability incidence rate (per thousand exposed)	4.6	3.7	5.5
Average age-sex-adjusted disability recovery rate (per thousand beneficiaries)	10.8	13.0	8.6

[a] Measures shown in this table are applicable for the last 65 years of the 75-year projection period (years 2035-99), unless otherwise specified. See chapter V for additional details, including historical and projected values.

D. PROJECTIONS OF FUTURE FINANCIAL STATUS

Short-Range Actuarial Estimates

For the short-range period (2025 through 2034), the Trustees measure financial adequacy using trust fund ratios, which compare projected reserves at the beginning of a year to projected program cost for the year. Maintaining a trust fund ratio of 100 percent or more—meaning reserves at the beginning of a year at least equal to the projected cost for the year—is a good indication that the trust fund can cover most short-term contingencies.

The Trustees' test of short-range financial adequacy is met if, under the intermediate assumptions:

- the estimated trust fund ratio is at least 100 percent at the beginning of the period and remains at or above 100 percent throughout the 10-year short-range period (from the beginning of 2025 through the end of 2034, which is indicated by the trust fund ratio at the beginning of 2035) or
- the ratio is initially less than 100 percent, but reaches at least 100 percent within 5 years and remains at or above 100 percent throughout the remainder of the 10-year short-range period.

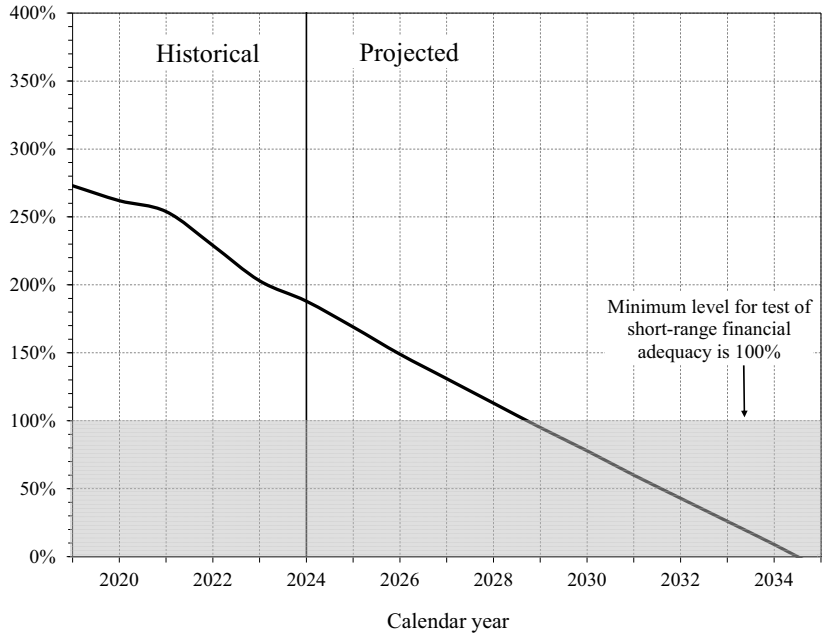
Under the intermediate assumptions, the projected trust fund ratio for the OASI Trust Fund declines to 89 percent by the beginning of 2029 and remains below 100 percent for the remainder of the short-range period, until reserves become depleted in the first quarter of 2033. Therefore, OASI fails the test of short-range financial adequacy.

The DI Trust Fund satisfies the test of short-range financial adequacy because the trust fund ratio stays above 100 percent throughout the 10-year short-range period. The DI trust fund ratio is estimated to be 108 percent at the beginning of 2025 and is projected to increase through the end of the short-range period.

On a combined basis, OASDI fails the test of short-range financial adequacy because the OASDI trust fund ratio declines to 95 percent by the beginning of 2029 and remains below 100 percent for the remainder of the short-range period, until reserves become depleted in the third quarter of 2034. Figure II.D1 shows that the OASDI trust fund ratio is expected to decline throughout the short-range period, as it has since 2010.

For this report, the level of the combined trust fund reserves is projected to decline in 2025, as it has since 2021, and to continue to decline throughout the remainder of the short-range period.

Figure II.D1.—Short-Range OASI and DI Combined Trust Fund Ratio
[Reserves at beginning of year as a percentage of annual cost for the year, under intermediate assumptions]



Long-Range Actuarial Estimates

The Trustees use three types of measures to assess the program's actuarial status over the long-range period (2025 through 2099):

- annual cash-flow measures, including income rates, cost rates, and balances;
- trust fund ratios; and
- summary measures such as actuarial balances and open-group unfunded obligations.

These measures are expressed as percentages of taxable payroll, as percentages of GDP, or in dollars.[1]

The Trustees also apply a test of long-range close actuarial balance each year. To satisfy the test, a trust fund must meet two conditions:

- the trust fund satisfies the test of short-range financial adequacy, and

[1] Appendix F also presents summary measures over the infinite horizon. The infinite horizon values provide an additional indication of Social Security's very-long-run financial condition.

- the trust fund ratio stays above zero throughout the 75-year projection period, such that benefits would be payable in a timely manner throughout the period.

Under the intermediate assumptions, the OASI Trust Fund and the combined OASI and DI Trust Funds fail the test of long-range close actuarial balance, while the DI Trust Fund satisfies the test.

Annual Income Rates, Cost Rates, and Balances

Figure II.D2 illustrates the year-by-year relationship among OASDI income (excluding interest), cost (including scheduled benefits), and expenditures (including payable benefits) starting in 2000 and for the full 75-year projection period, which is 2025 through 2099. The figure shows all values as percentages of taxable payroll.

Under the intermediate assumptions, demographic factors cause the projected cost rate to rise rapidly until about 2040, rise more gradually through 2080, and then generally decline through 2099. After some small fluctuations through 2025, the income rate is projected to be relatively stable at somewhat above 13 percent throughout the remainder of the 75-year period ending in 2099.

Annual OASDI cost has exceeded non-interest income every year beginning with 2010. Cost is projected to continue to exceed non-interest income throughout the 75-year valuation period. Cost is projected to exceed total income in 2025, as it has each year beginning in 2021, and combined OASI and DI Trust Fund reserves decline until they become depleted in 2034.

After trust fund reserve depletion, continuing income is sufficient to support expenditures at a level of 81 percent of program cost for the rest of 2034, declining to 72 percent for 2099. Figure II.D2 depicts OASDI operations as a combined whole.

However, under current law, the differences between scheduled and payable benefits for OASI would begin in 2033, when the OASI Trust Fund is projected to become depleted. Scheduled benefits equal payable benefits for DI throughout the entire 75-year projection period, because the DI Trust Fund is not projected to become depleted during the period.

Figure II.D2.—OASDI Income, Cost, and Expenditures as Percentages of Taxable Payroll
[Under intermediate assumptions]

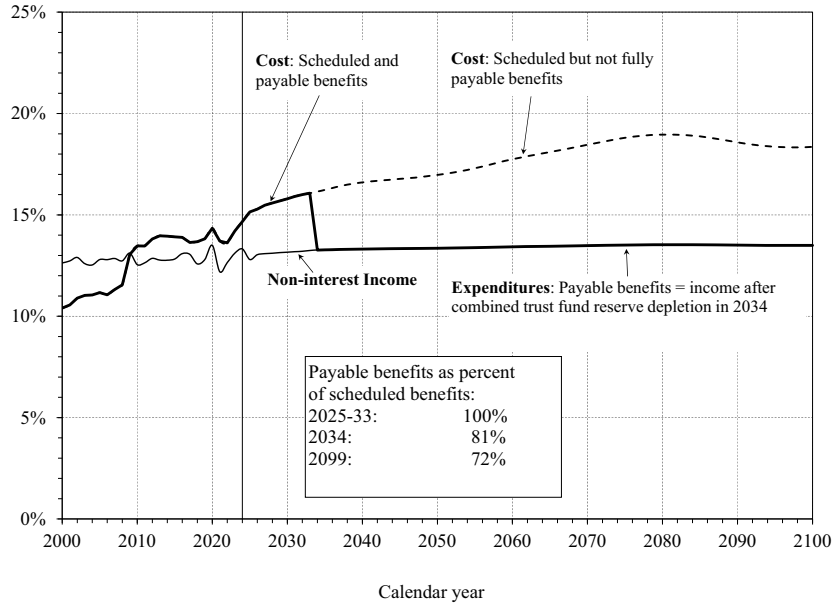
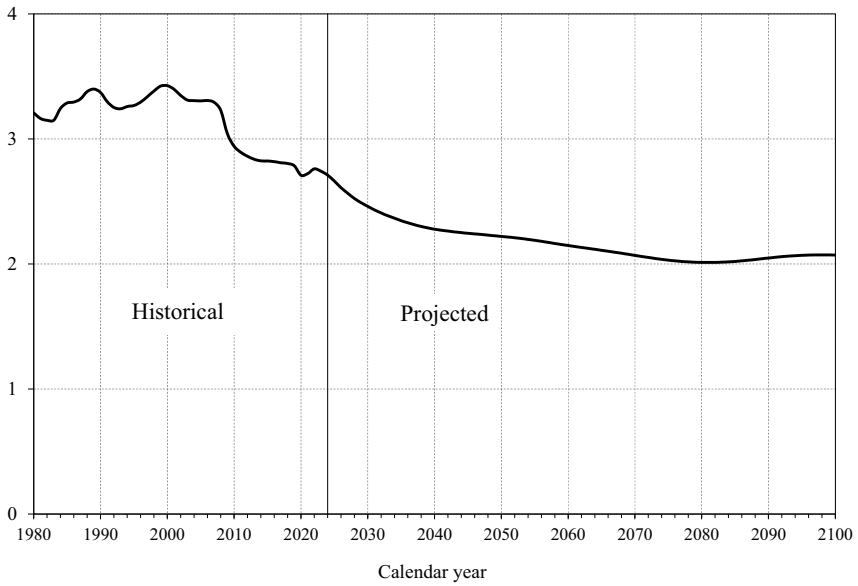


Figure II.D3 shows the estimated number of covered workers per OASDI beneficiary. Figures II.D2 and II.D3 illustrate the inverse relationship between cost rates and the number of workers per beneficiary. In particular, the projected future increase in the cost rate reflects a projected decline in the number of covered workers per beneficiary. There were about 2.7 workers for every OASDI beneficiary in 2024.

This ratio had been stable, remaining between 3.2 and 3.4 from 1974 through 2008. It has generally declined since then, initially due to the economic recession of 2007-09 and the beginning of a notable demographic shift. This shift causes the ratio of workers to beneficiaries to decline, as workers of lower-birth-rate generations replace workers of the baby-boom generation. The decline in the ratio slowed substantially between 2013 and 2019 as the economy's recovery largely offset the demographic shift during that period. The ratio declined slightly in 2020 and then increased slightly by 2022, due to effects of the pandemic-induced recession and recovery on the number of workers.

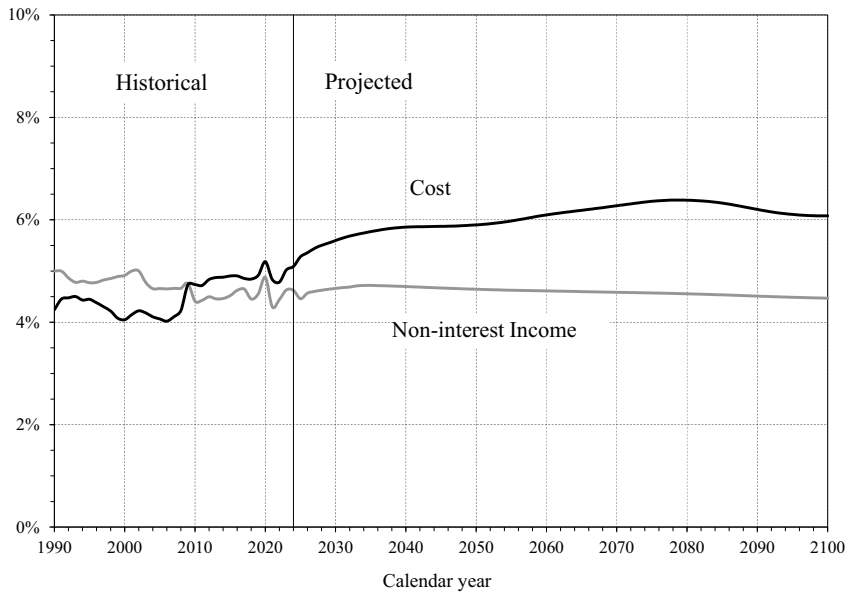
The underlying demographic shift will continue to drive this ratio down over the next 10 to 15 years. The ratio of workers to beneficiaries reaches 2.3 by 2040, when the baby-boom generation will have largely retired, and will generally decline very gradually thereafter due to increasing longevity.

Figure II.D3.—Number of Covered Workers Per OASDI Beneficiary
[Under intermediate assumptions]



Another important way to look at Social Security's future actuarial status is to view its annual cost and non-interest income as a share of U.S. economic output (GDP). As shown in figure II.D4, Social Security's cost as a percentage of GDP is generally projected to grow from 5.3 percent in 2025 to a peak of about 6.4 percent for 2079 and then generally decline to 6.1 percent by 2099. Social Security's non-interest income is 4.5 percent of GDP in 2025 and rises gradually to a peak of about 4.7 percent by 2035. Thereafter, non-interest income as a percentage of GDP declines gradually, to about 4.5 percent for 2099.

Figure II.D4.—OASDI Cost and Non-Interest Income as a Percentage of GDP
[Under intermediate assumptions]



Trust Fund Ratios

The trust fund ratio is defined as the reserves at the beginning of a year expressed as a percentage of the cost during the year. The trust fund ratio thus represents the proportion of a year's cost that could be paid solely with the accumulated reserves at the beginning of the year.

Table II.D1 displays the projected maximum trust fund ratios during the long-range period for the OASI, DI, and combined OASI and DI funds. The table also shows the year of maximum projected trust fund ratio during the long-range projection period (2025 through 2099) and the year of trust fund reserve depletion.

Trust fund ratios for OASI and OASDI are projected to decline from their current levels until reserve depletion. For DI, the trust fund ratio is projected to rise throughout the 75-year projection period from 108 percent of annual cost in 2025 to 777 percent of annual cost at the beginning of 2099. Figure II.D7 illustrates these patterns.

Table II.D1.—Projected Maximum Trust Fund Ratios During the Long-Range Period and Trust Fund Reserve Depletion Dates
[Under Intermediate Assumptions]

	OASI	DI	OASDI
Maximum projected trust fund ratio (percent)	176	777	169
Year attained	2025	2099	2025
Projected year of trust fund reserve depletion	2033	[a]	2034

[a] The trust fund is not projected to become depleted during the 75-year period ending in 2099.

Summary Measures

The actuarial balance is a summary measure of the program's financial status through the end of the 75-year valuation period. The actuarial balance measure includes:

- the trust fund reserves at the beginning of the period,
- all cost and income during the valuation period, and
- the cost of reaching a target trust fund reserve of 1 year's cost by the end of the period.

The actuarial balance is essentially the difference between the present values of income and cost from 1937 through the end of the valuation period, expressed as a percentage of the taxable payroll for the 75-year valuation period.

A negative actuarial balance is called an actuarial deficit. The actuarial deficit represents the average amount of change in income or cost that is needed throughout the valuation period in order to achieve actuarial balance.

In this report, the actuarial deficit for the combined OASI and DI Trust Funds under the intermediate assumptions is 3.82 percent of taxable payroll. The actuarial deficit was 3.50 percent of payroll in the 2024 report. If the assumptions, methods, starting values, and the law had all remained unchanged from last year, the actuarial deficit would have increased to 3.56 percent of payroll solely due to advancing the valuation period by 1 year, from 2024 through 2098 for last year's report to 2025 through 2099 for this year's report. The actuarial deficit is 1.3 percent of GDP in this year's report, an increase from 1.2 percent in last year's report.

Another way to illustrate the OASDI program's projected financial shortfall is to examine the cumulative present value of scheduled income less cost. Figure II.D5 shows the present value of cumulative OASDI income less cost from the program's inception through each of the years from 2024 to 2099. A positive value represents the present value of trust fund reserves at the end of

the selected year. A negative value is the unfunded obligation through the selected year.

The combined trust funds' reserves were about $2.72 trillion at the end of 2024. The combined trust fund reserves decline on a present value basis after 2024, but remain positive through 2033.

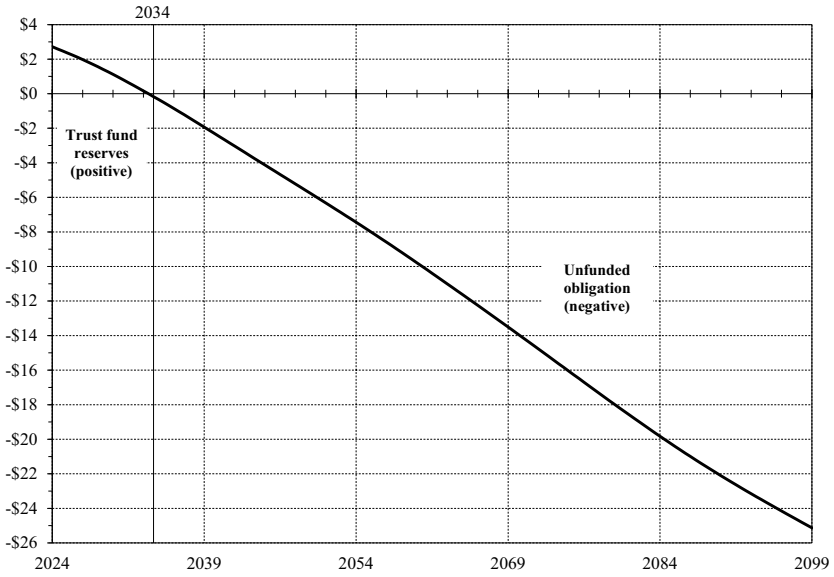
However, this cumulative amount becomes negative beginning in 2034, which means that the combined OASI and DI Trust Funds have a net unfunded obligation through the end of each year after 2033. Through the end of 2099, the combined funds have a present-value unfunded obligation of $25.1 trillion. If the assumptions, methods, starting values, and the law had all remained unchanged from last year, the unfunded obligation in this year's report would have risen to about $23.5 trillion due to the change in the valuation date and the extension of the valuation period through an additional year, 2099.

The unfunded obligation for this report represents 3.64 percent of taxable payroll and 1.3 percent of GDP for 2025 through 2099. This is an increase from the unfunded obligation of 3.32 percent of taxable payroll and 1.2 percent of GDP for 2024 through 2098 in last year's report. The unfunded obligation as a share of taxable payroll over the period (3.64 percent) and the actuarial deficit (3.82 percent) are similar measures, but they differ because the actuarial deficit includes the cost of having an ending trust fund reserve equal to 1 year's cost.

Figures II.D2, II.D4, and II.D5 show that the program's actuarial status will deteriorate throughout the projection period if current law is not altered. Negative annual balances and increasing cumulative shortfalls toward the end of the 75-year period indicate the additional change that will be needed by then in order to maintain solvency beyond 75 years. Consideration of summary measures alone for a 75-year period can lead to incorrect perceptions and to policy prescriptions that do not achieve sustainable solvency.[1]

[1] Sustainable solvency for the financing of the program under a specified set of assumptions has been achieved when the projected trust fund ratio is positive throughout the 75-year projection period and is either stable or rising at the end of the period.

Figure II.D5.—Cumulative Scheduled OASDI Income Less Cost, From Program Inception Through Years 2024-2099
[Present value as of January 1, 2025, in trillions, under intermediate assumptions]



Appendix F presents summary measures over the infinite horizon. The infinite horizon values provide an additional indication of Social Security's actuarial status extending indefinitely into the future, but results are subject to much greater uncertainty. Extending the horizon beyond 75 years increases the measured unfunded obligation. Through the infinite horizon, the unfunded obligation is equivalent to 5.2 percent of future taxable payroll or 1.6 percent of future GDP.

Uncertainty of the Projections

Significant uncertainty surrounds the intermediate assumptions. The Trustees use several methods to help illustrate that uncertainty.

First approach: Alternative scenarios

A first approach uses alternative scenarios reflecting three sets of assumptions.

- *Intermediate assumptions (Alternative II):* The intermediate alternative represents the Trustees' best estimates of future experience.
- *Low-cost assumptions (Alternative I):* The low-cost alternative includes a higher ultimate total fertility rate, slower improvement in mortality, higher real wage growth, a higher ultimate real interest rate, a higher ultimate annual change in the CPI, a lower unemployment rate, and a lower ultimate disability incidence rate.
- *High-cost assumptions (Alternative III):* The high-cost alternative includes a lower ultimate total fertility rate, more rapid improvement in mortality, lower real wage growth, a lower ultimate real interest rate, a lower ultimate annual change in the CPI, a higher unemployment rate, and a higher ultimate disability incidence rate.

These alternatives are not intended to suggest that all parameters would be likely to differ from the intermediate values in the specified directions. Instead, they are intended to illustrate the effect of clearly defined scenarios that are, on balance, very favorable or very unfavorable for the program's actuarial status. Actual future cost is unlikely to be as extreme as portrayed by the low-cost or high-cost projections. The method used to construct these projections is not designed to estimate the probability that actual experience will lie within or outside the range.

Figure II.D6 shows the projected trust fund ratios for the combined OASI and DI Trust Funds under the intermediate, low-cost, and high-cost assumptions. The figure indicates that the combined trust funds are projected to become depleted in 2034 under the intermediate alternative, in 2051 under the low-cost alternative, and in 2032 under the high-cost alternative.

Figure II.D6.—Long-Range OASI and DI Combined Trust Fund Ratios Under Alternative Scenarios
[Reserves as a percentage of annual cost]

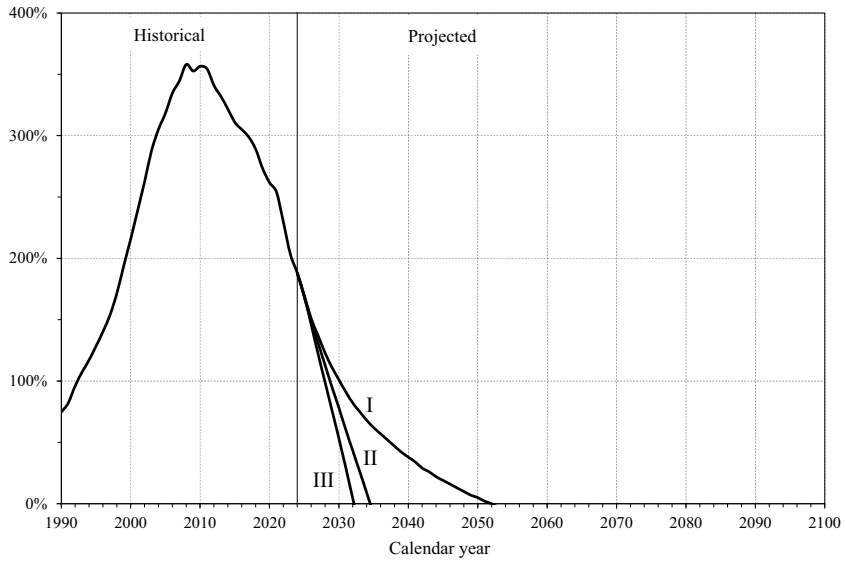
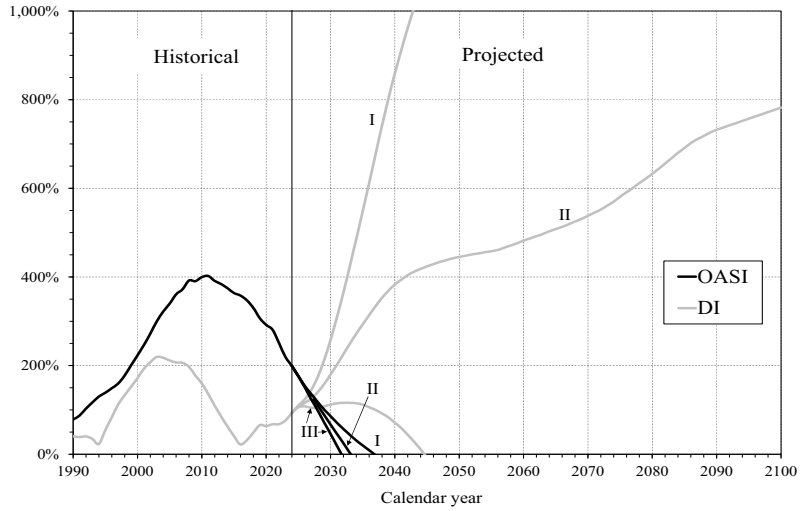


Figure II.D7 shows the projected trust fund ratios separately for OASI and DI Trust Funds under the intermediate, low-cost, and high-cost assumptions. OASI reserves are projected to become depleted in 2033 under the intermediate alternative, in 2036 under the low-cost alternative, and in 2031 under the high-cost alternative. The DI reserves are projected to become depleted in 2044 under the high-cost alternative. They are not projected to become depleted under the low-cost and intermediate alternatives. This figure illustrates that OASI reserves are expected to become depleted much sooner than DI reserves, potentially within the next 10 years.

Figure II.D7.—Long-Range OASI and DI Trust Fund Ratios
[Reserves as a percentage of annual cost]



Second approach: Long-range sensitivity analysis

Appendix D of this report presents a second approach using long-range sensitivity analysis for the OASDI program. By varying one parameter at a time, sensitivity analysis provides a way to illustrate the uncertainty surrounding projections into the future.

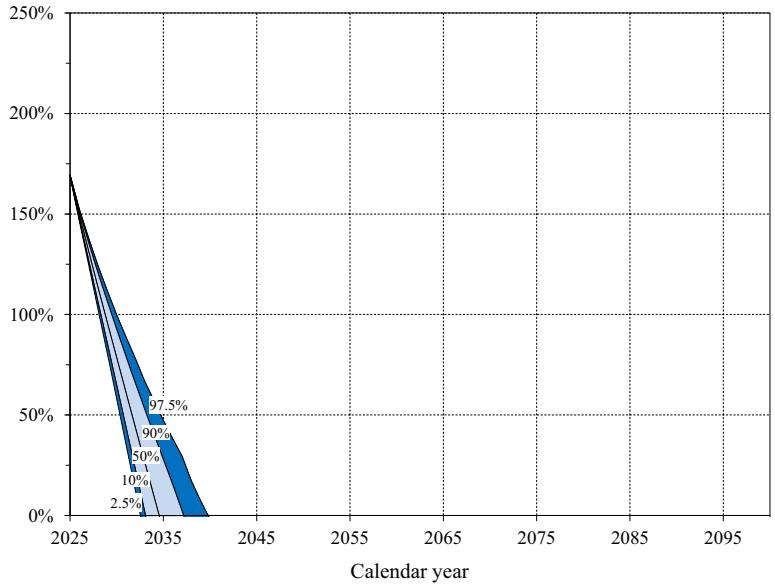
Third approach: Stochastic simulation

A third approach uses 5,000 independently generated stochastic simulations that reflect randomly assigned annual values and central tendencies for most of the key parameters. These simulations produce a distribution of projected outcomes and corresponding probabilities that future experience will fall within or outside a given range.

The results of the stochastic simulations, discussed in more detail in appendix E, suggest that trust fund reserve depletion before mid-century is very likely. In particular, figure II.D8 indicates that for 95 percent of these simulations, the reserve depletion year falls within the range from 2032 to 2039. In last year's report, this range was from 2032 to 2043.

The stochastic results suggest that trust fund ratios as high as the low-cost alternative or as low as the high-cost alternative are very unlikely.

Figure II.D8.—Long-Range OASI and DI Combined Trust Fund Ratios From Stochastic Modeling



Changes From Last Year's Report

The projected long-range OASDI actuarial deficit increased from 3.50 percent of taxable payroll for last year's report to 3.82 percent of taxable payroll for this year's report. The change in the valuation date and the extension of the 75-year projection period for an additional year, 2099, would have by itself increased the actuarial deficit to 3.56 percent.

Changes in law, methods, starting values, and assumptions combined to increase the actuarial deficit by an additional 0.26 percent of taxable payroll. This increase is mainly attributable to (1) the implementation of the Social Security Fairness Act, (2) the extension in the assumed year the ultimate total fertility rate is reached, and (3) the reduction in the ultimate assumption for the ratio of total labor compensation to GDP. For a detailed description of the specific changes identified in table II.D2, see section IV.B.6.

Table II.D2.—Reasons for Change in the 75-Year Actuarial Balance, Based on Intermediate Assumptions
[As a percentage of taxable payroll]

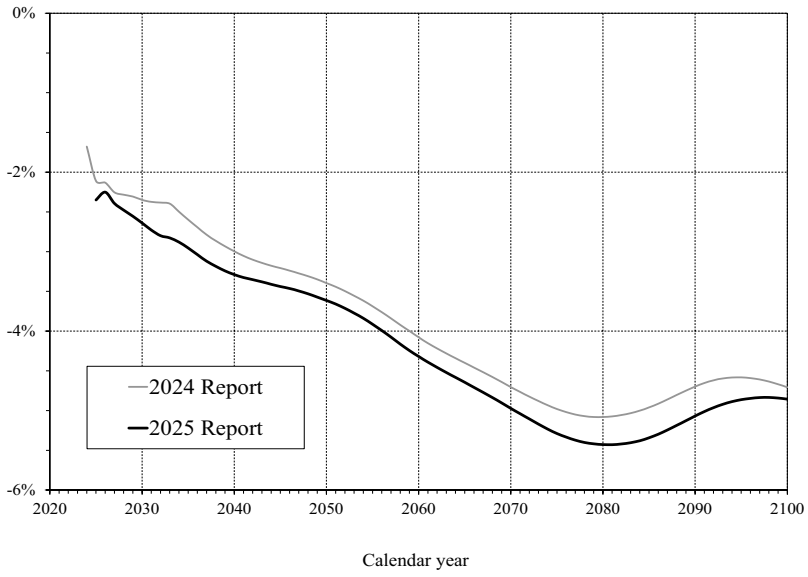
Item	OASI	DI	OASDI
Shown in last year's report:			
Income rate	11.95	1.85	13.80
Cost rate	15.58	1.72	17.30
Actuarial balance	**-3.63**	**.14**	**-3.50**
Changes in actuarial balance due to changes in:			
Legislation / Regulation	-.14	-.02	-.16
Valuation period[a]	-.06	-.01	-.06
Demographic data and assumptions	-.02	[b]	-.02
Economic data and assumptions	-.06	[b]	-.06
Disability data and assumptions	[b]	.01	[b]
Methods and programmatic data	-.04	.01	-.03
Total change in actuarial balance	-.31	-.01	-.33
Shown in this report:			
Actuarial balance	**-3.95**	**.12**	**-3.82**
Income rate	11.93	1.85	13.79
Cost rate	15.88	1.73	17.61

[a] The change in the 75-year valuation period from last year's report to this report means that the 75-year actuarial balance now includes the relatively large negative annual balance for 2099. This change in the valuation period results in a larger long-range actuarial deficit. The actuarial deficit includes the trust fund reserve at the beginning of the projection period.
[b] Between -0.005 and 0.005 percent of taxable payroll.

Note: Components may not sum to totals because of rounding.

Figure II.D9 compares this year's projections of annual balances (non-interest income minus cost) to those in last year's report. The annual balances in this year's report are lower (more negative) in all projection years. For the full 75-year projection period, the annual balances average 0.28 percentage point lower in this year's report.

Figure II.D9.—OASDI Annual Balances: 2024 and 2025 Trustees Reports
[As a percentage of taxable payroll, under the intermediate assumptions]



E. CONCLUSION

The data and projections presented in this report include the Trustees' best estimates of the future course of the population, the economy, and all aspects of the OASDI program under current law.[1] There have been three substantial changes since last year's report:

- the Social Security Fairness Act of 2023 was enacted on January 5, 2025, repealing the Windfall Elimination Provision and Government Pension Offset,
- the year in which the ultimate total fertility rate of 1.9 children per woman is reached was extended from 2040 to 2050, and
- the ultimate assumption for the ratio of total labor compensation to GDP was reduced to 61.2 percent, from 62.8 percent in last year's report.

Based on the Trustees' intermediate assumptions, Social Security's cost exceeds total income in 2025, as it has since 2021, and remains higher than income throughout the remainder of the 75-year projection period.

The OASI Trust Fund is projected to have sufficient reserves to pay full benefits on time until 2033. The DI Trust Fund is projected to have sufficient reserves to pay full benefits throughout the 75-year projection period ending in 2099. Legislative action will be needed to prevent OASI reserve depletion. In the absence of such legislation, continuing income to the trust funds at the time of reserve depletion would be sufficient to pay 77 percent of OASI benefits.

Social Security's combined trust funds are projected to cover full payment of scheduled benefits on a timely basis until the trust fund reserves become depleted in 2034. Full payment of benefits until the hypothetical combined reserves are depleted in 2034 implicitly assumes that the law will have been changed to permit the transfer of funds between OASI and DI as needed. At the time of reserve depletion, projected continuing income to the combined trust funds equals about 81 percent of the program cost. By 2099, continuing income equals about 72 percent of the program cost.

The actuarial deficit for the combined trust funds under the intermediate assumptions is 3.82 percent of taxable payroll for the 75-year period 2025-99, which is larger than the deficit of 3.50 percent for 2024-98 in last

[1] The intermediate (best estimate) assumptions for this report were set in December 2024. The Trustees will continue to monitor developments and modify the projections in later reports.

year's report. To illustrate the magnitude of the deficit, consider that for the combined OASI and DI Trust Funds to remain fully solvent throughout the 75-year projection period:

- revenue would have to be increased by an amount equivalent to an immediate and permanent payroll tax rate increase of 3.65 percentage points to 16.05 percent;
- scheduled benefits would have to either be reduced by an amount equivalent to an immediate and permanent reduction of 22.4 percent applied to all current and future beneficiaries through 2099, or by 26.8 percent if the reductions were applied only to those who become initially eligible for benefits in 2025 or later; or
- some combination of these approaches would have to be adopted.

If actions are deferred for several years, the changes necessary to maintain Social Security solvency through 2099 become concentrated on fewer years and fewer generations.

If lawmakers design legislative solutions only to eliminate the overall actuarial deficit without considering year-by-year financing, then a substantial financial imbalance could remain for 2099 and beyond. In that case, the long-range sustainability of program financing could still be in doubt. Sustainable solvency for the program's financing under a specified set of assumptions is achieved when the projected trust fund ratio is positive throughout the 75-year long-range period and is either stable or rising at the end of the period. Making changes now that achieve sustainable solvency could avoid the need for later legislative changes.

Lawmakers have a broad continuum of policy options that would close or reduce Social Security's long-term financing shortfall. Estimates for many options are available at www.ssa.gov/OACT/solvency/provisions/. Broadly speaking, the approaches that lawmakers can take include:

- increasing revenue from workers and employers by raising the tax rate or the maximum level of taxable earnings, or by dedicating revenue from other sources;
- lowering benefits for some or all beneficiaries by changing certain program parameters; or
- a combination of these approaches.

There are many variations on these options, including those that vary the timing, magnitude, and other specifics of the changes under consideration.

The Trustees recommend that lawmakers address the projected trust fund shortfalls in a timely way in order to phase in necessary changes gradually and give workers and beneficiaries time to adjust. Implementing changes sooner rather than later would allow more generations to share in the needed revenue increases or reductions in scheduled benefits.

Social Security will play a critical role in the lives of 70 million beneficiaries and 185 million covered workers and their families during 2025. With informed discussion, creative thinking, and timely legislative action, Social Security can continue to protect future generations.

For more information related to this report, see the following websites:

- www.ssa.gov/OACT/TR/2025/
- www.ssa.gov/OACT/solvency/provisions/
- www.cms.gov/OACT/TR/2025
- home.treasury.gov/policy-issues/economic-policy/social-security-and-medicare-trustee-reports

III. FINANCIAL OPERATIONS OF THE TRUST FUNDS AND LEGISLATIVE CHANGES IN THE LAST YEAR

A. OPERATIONS OF THE OLD-AGE AND SURVIVORS INSURANCE (OASI) AND DISABILITY INSURANCE (DI) TRUST FUNDS, IN CALENDAR YEAR 2024

This section presents detailed information on the operations of the OASI and DI Trust Funds[1] during calendar year 2024. Chapter IV provides projections for calendar years 2025 through 2100.

1. OASI Trust Fund

Table III.A1 presents a statement of the income and cost of the Federal Old-Age and Survivors Insurance Trust Fund in calendar year 2024, and of the reserves in the fund at the beginning and end of the calendar year. As shown in this table, total trust fund income in 2024 amounted to $1,224.0 billion, while cost totaled $1,327.2 billion, resulting in a decrease in trust fund reserves during 2024 of $103.2 billion.

Total income during calendar year 2024 included $1,110.1 billion in payroll tax contributions. These contributions include initial appropriations of payroll taxes, made on an estimated basis, and adjustments to appropriations for prior years to reflect actual tax income. The OASI fund paid the General Fund $4.5 billion for the estimated amount of employee payroll-tax refunds, partially offsetting these gross contributions. Employees who work for more than one employer during a year and pay contributions on total earnings in excess of the contribution and benefit base are eligible for such refunds. Net payroll tax contributions were therefore $1,105.6 billion in 2024.

Net reimbursements from the General Fund of the Treasury amounted to about $244 million in 2024. As shown in the table, almost all of that amount came from a transfer directed by Public Law 116-136, the Coronavirus Aid, Relief, and Economic Security Act of 2020 (CARES Act). Section 4003(e) of this act provided for loans to businesses and State and local governments to assist in alleviating losses incurred as a result of the COVID-19 pandemic. This section further specified that after amounts loaned under section 4003(e) authority are repaid to the Treasury, a portion of the remaining proceeds from those repayments be transferred to the OASI Trust Fund.

Income to the OASI Trust Fund based on the taxation of OASI benefits amounted to $54.4 billion in 2024. As first required by the 1983 Social Secu-

[1] See www.ssa.gov/oact/ProgData/fundsQuery.html.

rity Amendments, this income comes from two separate sources: (1) Federal income taxation on up to 50 percent of an individual's or couple's OASI benefits under certain circumstances, and (2) a tax withheld from the benefits paid to certain nonresident alien beneficiaries. For the direct Federal income tax portion, Treasury transfers estimated amounts to the OASI Trust Fund in advance at the beginning of each calendar quarter. Treasury makes subsequent adjustments based on the actual amounts shown on annual income tax records. There were three such adjustments made in 2024 resulting in a net transfer from the OASI Trust Fund of $1.3 billion. The amount of income from direct Federal income taxation on OASI benefits constituted approximately 99 percent of income from benefit taxation. The remaining 1 percent of the income from benefit taxation is the amounts withheld from the benefits paid to nonresident aliens.

In 2024, the OASI Trust Fund earned $63.7 billion in net interest, which consisted of: (1) interest earned on the investments held by the trust fund, (2) interest on adjustments in the allocation of administrative expenses between the trust fund and the General Fund account for the Supplemental Security Income program, (3) interest arising from the revised allocation of administrative expenses among the trust funds, and (4) interest on certain reimbursements to the trust fund.

The remaining income, about $160 thousand, consisted of gifts received under the provisions authorizing the deposit of monetary gifts or bequests in the trust funds.

Table III.A1.—Operations of the OASI Trust Fund, Calendar Year 2024
[In millions]

Total reserves, December 31, 2023		$2,641,490
Income:		
Net payroll tax contributions:		
Payroll tax contributions[a]	$1,110,054	
Payments from the General Fund of the Treasury for payroll tax contributions subject to refund[a]	-4,468	
Net payroll tax contributions[a]		1,105,586
Reimbursements from the General Fund:		
Transfer directed by P.L. 116-136	244	
Reimbursements for reductions in payroll tax contributions due to P.L. 111-312, P.L. 112-78, and P.L. 112-96[a]	[b]	
Reimbursements for payroll tax credits due to P.L. 98-21[a]	[b]	
Net General Fund reimbursements[a]		244
Income based on taxation of benefit payments:		
Withheld from benefit payments to nonresident aliens	304	
All other, not subject to withholding[a]	54,094	
Total income from taxation of benefits[a]		54,398
Investment income and interest adjustments:		
Interest on investments	63,729	
Interest adjustments[c]	-4	
Total investment income and interest adjustments		63,725
Gifts		[b]
Total income		1,223,954
Cost:		
Benefit payments:		
Monthly benefits and lump-sum death payments[d]	1,316,424	
Reimbursement from the General Fund for unnegotiated checks	-77	
Payment for costs of vocational rehabilitation services for disabled beneficiaries	14	
Net benefit payments[d]		1,316,360
Financial interchange with the Railroad Retirement "Social Security Equivalent Benefit Account"		5,860
Administrative expenses:		
Costs incurred by:		
Social Security Administration	4,248	
Department of the Treasury	668	
Net income from miscellaneous receipts and other adjustments	28	
Miscellaneous reimbursements from the General Fund [e]	-6	
Net administrative expenses		4,939
Total cost		1,327,159
Net change in reserves		-103,205
Total invested reserves	2,538,198	
Undisbursed balances [f]	87	
Total reserves, December 31, 2024		2,538,285

[a] Includes adjustments for prior calendar years.

[b] Between -$0.5 and $0.5 million.

[c] Includes: (1) interest on adjustments in the allocation of administrative expenses between the trust fund and the General Fund account for the Supplemental Security Income program, (2) interest arising from the revised allocation of administrative expenses among the trust funds, and (3) interest on certain reimbursements to the trust fund.

[d] Includes net reductions for the recovery of overpayments.

[e] Reimbursements for costs incurred in performing certain legislatively mandated activities not directly related to administering the OASI program.

[f] A positive balance represents a situation where the invested securities of the OASI Trust Fund that were redeemed to make cash payments exceeded actual program cash payments. In this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Components may not sum to totals because of rounding.

Of the $1,327.2 billion in total OASI cost in 2024, $1,316.4 billion was for net benefit payments, including recovered overpayments, reimbursements from the General Fund for unnegotiated checks, and the reimbursable costs of vocational rehabilitation services.[1] Net benefit payments increased by 7.3 percent from calendar year 2023 to calendar year 2024. This increase is due primarily to: (1) an increase in the average number of beneficiaries during the year and (2) an increase in the average monthly benefit amount. The increase in the average benefit amount in 2024 was due in part to the automatic cost-of-living benefit increase of 3.2 percent which became effective for December 2023 under the automatic-adjustment provisions in section 215(i) of the Social Security Act. In addition, new beneficiaries tend to have higher monthly benefit amounts than previous beneficiary cohorts, because their initial benefits are based on average wages, which tend to rise faster than the cost of living.

The Railroad Retirement Act requires an annual financial interchange between the Railroad Retirement program and the OASDI program. The purpose of the interchange is to put the OASI and DI Trust Funds in the same financial position in which they would have been had railroad employment always been covered directly by Social Security. The Railroad Retirement Board and the Social Security Administration (SSA) calculated an interchange of $5.9 billion from the OASI Trust Fund to the Social Security Equivalent Benefit Account for June 2024.

The remaining $4.9 billion of cost for the OASI Trust Fund was for net administrative expenses. SSA charges administrative expenses incurred to administer the OASI program directly to the trust fund on an estimated basis. Periodically, as actual expenses are recorded, adjustments are made to the allocations of administrative expenses for prior periods. These adjustments affect the OASI Trust Fund, the DI Trust Fund, the Hospital Insurance (HI) Trust Fund, the Supplementary Medical Insurance (SMI) Trust Fund, and the General Fund account for the Supplemental Security Income program, and include appropriate interest adjustments. As described earlier, the trust fund accounting records such interest adjustments under investment income.

For 2024, the cost incurred by SSA to administer the OASI program was 86 percent of OASI net administrative expenses. SSA charged such costs to the trust fund in the amount of $4.2 billion in 2024. In addition, the Department of the Treasury charged the trust fund $0.7 billion in 2024 for services

[1] Vocational rehabilitation services under the OASI program are furnished to disabled widow(er) beneficiaries and to those children of retired or deceased workers who receive benefits based on disabilities that began before age 22. The trust funds reimburse the providers of such services only in those cases where the services contributed to the successful rehabilitation of the beneficiary.

provided in administering the OASI program. A relatively small amount of administrative expenses totaling $28 million in 2024 represents the net effect of income from miscellaneous receipts due to the trust fund (which may include refunds, penalties, fees, and other receipts) and adjustments to correct prior years' miscellaneous receipts.

Finally, the General Fund of the Treasury makes net reimbursements for administrative costs incurred by the Social Security Administration in performing certain legislatively mandated activities that are not directly related to paying OASI benefits. These reimbursements include $4 million in costs associated with union activities related to administering the OASI program and $2 million in costs of providing information to participants in certain pension plans in 2024. These miscellaneous reimbursements totaled $6 million in 2024.

The reserves shown for the OASI Trust Fund at the end of calendar year 2024 totaled $2,538.3 billion, consisting of $2,538.2 billion in U.S. Government obligations and cash totaling $0.1 billion. The effective annual rate of interest earned by the reserves in the OASI Trust Fund during calendar year 2024 was 2.5 percent, slightly higher than the 2.4 percent earned during calendar year 2023. Table VI.A4, presented in appendix A, shows a detailed listing of OASI Trust Fund holdings by type of security, interest rate, and year of maturity at the end of calendar years 2023 and 2024.

By law, the Department of the Treasury must invest trust fund reserves in interest-bearing securities backed by the full faith and credit of the United States Government. The securities currently held by the OASI Trust Fund are entirely special issue securities sold by the Treasury only to the trust funds. These special issues are of two types: short-term certificates of indebtedness and longer-term bonds. Daily trust fund tax income is invested in the short-term certificates of indebtedness which mature on the next June 30 following the date of issue. The trust fund normally acquires long-term special-issue bonds when special issue securities of either type mature on June 30 and must be reinvested. The amount of long-term bonds acquired on June 30 is equal to the amount of special issue securities maturing (including accrued interest earnings), plus tax income for that day, less amounts required to meet cost on that day.

Section 201(d) of the Social Security Act provides that the obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. Each year, bond purchases for each trust fund are made on June 30, taking into account the projected reserve depletion date in the most recently issued Trustees Report. The usual

practice has been to reinvest the maturing special issue securities, as of each June 30, so that the values of the total portfolio of special issue securities maturing in each of the next 15 years are approximately equal. However, as of June 2024, the projections in the 2024 Trustees Report indicated that the reserves in the OASI Trust Fund would become depleted within 15 years. Therefore, the Department of the Treasury, in consultation with the Chief Actuary of SSA, selected the amounts and maturity dates of the OASI special-issue bonds purchased on June 30, 2024, so that the maturity dates of the total portfolio of special issue securities would be spread evenly to the extent possible over the 9-year period 2025 through 2033. The bonds purchased on that date have an interest rate of 4.625 percent, reflecting the average market yield, as of the last business day of the prior month, on all of the outstanding marketable U.S. obligations that are due or callable more than 4 years in the future. Table III.A7 shows additional details on the investment transactions during 2024, including the amounts of bonds purchased on June 30, 2024.

2. DI Trust Fund

Table III.A2 presents a statement of the income and cost of the Federal Disability Insurance Trust Fund in calendar year 2024, and of the reserves in the fund at the beginning and end of the calendar year. Line entries in the DI statement are similar to those in the OASI statement. The explanations of the OASI entries generally apply to DI as well.

Of the $193.8 billion in total income, $187.7 billion was net payroll tax contributions.

Of the $157.6 billion of total cost, $155.0 billion was net benefit payments. The total level of net benefit payments increased by 2.0 percent from calendar year 2023 to calendar year 2024, largely due to increases in average monthly benefit amounts and the total amount of retroactive benefits, partially offset by a decrease in the average number of beneficiaries during the year. DI non-interest income, and total income, exceeded total cost in 2024.

Table III.A2.—Operations of the DI Trust Fund, Calendar Year 2024
[In millions]

Total reserves, December 31, 2023		$146,973
Income:		
Net payroll tax contributions:		
Payroll tax contributions[a]	$188,504	
Payments from the General Fund of the Treasury for payroll tax contributions subject to refund[a]	-759	
Net payroll tax contributions[a]		187,745
Reimbursements from the General Fund:		
Reimbursements for reductions in payroll tax contributions due to P.L. 111-312, P.L. 112-78, and P.L. 112-96[a]	[b]	
Reimbursements for payroll tax credits due to P.L. 98-21[a]	[b]	
Net General Fund reimbursements[a]		[b]
Income based on taxation of benefit payments:		
Withheld from benefit payments to nonresident aliens	4	
All other, not subject to withholding[a]	650	
Total income from taxation of benefits[a]		654
Investment income and interest adjustments:		
Interest on investments	5,394	
Interest adjustments[c]	10	
Total investment income and interest adjustments		5,404
Gifts		[b]
Total income		193,803
Cost:		
Benefit payments:		
Monthly benefits[d]	154,983	
Reimbursement from the General Fund for unnegotiated checks	-36	
Payment for costs of vocational rehabilitation services for disabled beneficiaries	66	
Net benefit payments[d]		155,013
Financial interchange with the Railroad Retirement "Social Security Equivalent Benefit Account"		74
Administrative expenses:		
Costs incurred by:		
Social Security Administration	2,400	
Department of the Treasury	111	
Demonstration projects	[b]	
Miscellaneous reimbursements from the General Fund[e]	-3	
Net administrative expenses		2,508
Total cost		157,595
Net change in reserves		36,208
Total invested reserves	183,107	
Undisbursed balances[f]	75	
Total reserves, December 31, 2024		183,181

[a] Includes adjustments for prior calendar years.

[b] Between -$0.5 and $0.5 million.

[c] Includes: (1) interest on adjustments in the allocation of administrative expenses between the trust fund and the General Fund account for the Supplemental Security Income program, (2) interest arising from the revised allocation of administrative expenses among the trust funds, and (3) interest on certain reimbursements to the trust fund.

[d] Includes net reductions for the recovery of overpayments.

[e] Reimbursements for costs incurred in performing legislatively mandated activities not directly related to administering the DI program.

[f] A positive balance represents a situation where the invested securities of the DI Trust Fund that were redeemed to make cash payments exceeded actual program cash payments. In this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Components may not sum to totals because of rounding.

During 2024, the reserves in the DI Trust Fund increased by $36.2 billion, from $147.0 billion at the end of 2023 to $183.2 billion at the end of 2024. This $183.2 billion consisted of $183.1 billion in U.S. Government obligations and cash totaling $0.1 billion. The effective annual rate of interest earned by the reserves in the DI Trust Fund during calendar year 2024 was 3.3 percent, higher than the 2.9 percent earned during calendar year 2023. Table VI.A5 shows a detailed listing of DI Trust Fund holdings by type of security, interest rate, and year of maturity at the end of calendar years 2023 and 2024.

Section 201(d) of the Social Security Act provides that the Treasury securities issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. Each year, bond purchases for each trust fund are made on June 30, taking into account the projected reserve depletion date in the most recently issued Trustees Report. The usual practice has been to reinvest the maturing special issue securities, as of each June 30, so that the values of the securities maturing in each of the next 15 years are approximately equal. Accordingly, the Department of the Treasury, in consultation with the Chief Actuary of SSA, selected the amounts and maturity dates of the DI special-issue bonds purchased on June 30, 2024, so that the maturity dates of the total portfolio of special issue securities would be evenly spread to the extent possible over the 15-year period 2025-39. The bonds purchased have an interest rate of 4.625 percent, reflecting the average market yield, as of the last business day of the prior month, on the outstanding marketable U.S. obligations that are due or callable more than 4 years in the future. Table III.A7 shows details on investment transactions during 2024.

3. OASI and DI Trust Funds, Combined

Table III.A3 presents a statement of the operations of the OASI and DI Trust Funds on a hypothetical combined basis.[1] The entries in this table represent the sums of the corresponding values from tables III.A1 and III.A2. The two preceding subsections that cover OASI and DI provide a description of the nature of these income and cost transactions.

[1] The OASI and DI Trust Funds are distinct legal entities which operate independently. To illustrate the actuarial status of the program as a whole, the fund operations are often combined on a hypothetical basis.

Table III.A3.—Operations of the Combined OASI and DI Trust Funds, Calendar Year 2024
[In millions]

Total reserves, December 31, 2023		$2,788,463
Income:		
Net payroll tax contributions:		
Payroll tax contributions[a]	$1,298,558	
Payments from the General Fund of the Treasury for payroll tax contributions subject to refund[a]	-5,227	
Net payroll tax contributions[a]		1,293,331
Reimbursements from the General Fund:		
Transfer directed by P.L. 116-136	244	
Reimbursements for reductions in payroll tax contributions due to P.L. 111-312, P.L. 112-78, and P.L. 112-96[a]	[b]	
Reimbursements for payroll tax credits due to P.L. 98-21[a]	[b]	
Net General Fund reimbursements[a]		244
Income based on taxation of benefit payments:		
Withheld from benefit payments to nonresident aliens	308	
All other, not subject to withholding[a]	54,744	
Total income from taxation of benefits[a]		55,052
Investment income and interest adjustments:		
Interest on investments	69,123	
Interest adjustments[c]	6	
Total investment income and interest adjustments		69,129
Gifts		[b]
Total income		1,417,757
Cost:		
Benefit payments:		
Monthly benefits and lump-sum death payments[d]	1,471,406	
Reimbursement from the General Fund for unnegotiated checks	-113	
Payment for costs of vocational rehabilitation services for disabled beneficiaries	80	
Net benefit payments[d]		1,471,373
Financial interchange with the Railroad Retirement "Social Security Equivalent Benefit Account"		5,933
Administrative expenses:		
Costs incurred by:		
Social Security Administration	6,648	
Department of the Treasury	778	
Net income from miscellaneous receipts and other adjustments	28	
Demonstration projects	[b]	
Miscellaneous reimbursements from the General Fund[e]	-8	
Net administrative expenses		7,447
Total cost		1,484,753
Net change in reserves		-66,997
Total invested reserves	2,721,305	
Undisbursed balances[f]	162	
Total reserves, December 31, 2024		2,721,466

[a] Includes adjustments for prior calendar years.
[b] Between -$0.5 and $0.5 million.
[c] Includes: (1) interest on adjustments in the allocation of administrative expenses between the trust funds and the General Fund account for the Supplemental Security Income program, (2) interest arising from the revised allocation of administrative expenses among the trust funds, and (3) interest on certain reimbursements to the trust funds.
[d] Includes net reductions for the recovery of overpayments.
[e] Reimbursements for costs incurred in performing certain legislatively mandated activities not directly related to administering the OASI and DI programs.
[f] A positive balance represents a situation where the invested securities of the combined OASI and DI Trust Funds that were redeemed to make cash payments exceeded actual program cash payments. In this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Components may not sum to totals because of rounding.

Table III.A4 compares estimates of total income and total cost for calendar year 2024 from the intermediate projections in the 2020 through 2024 Trustees Reports to the corresponding actual amounts for 2024.

Table III.A4.—Comparison of Actual Calendar Year 2024 Trust Fund Operations With Estimates Made in Prior Reports, Based on Intermediate Assumptions[a]
[Amounts in billions]

	Total income[b]		Total cost	
	Amount	Difference from actual (percent)	Amount	Difference from actual (percent)
OASI Trust Fund:				
Estimate in 2020 report	$1,121.4	-8.4	$1,220.3	-8.1
Estimate in 2021 report	1,100.9	-10.1	1,211.9	-8.7
Estimate in 2022 report	1,144.9	-6.5	1,254.9	-5.4
Estimate in 2023 report	1,166.0	-4.7	1,323.5	-.3
Estimate in 2024 report	1,192.6	-2.6	1,323.0	-.3
Actual amount	1,224.0	—	1,327.2	—
DI Trust Fund:				
Estimate in 2020 report	175.8	-9.3	165.7	5.1
Estimate in 2021 report	173.3	-10.6	166.0	5.4
Estimate in 2022 report	181.0	-6.6	159.1	.9
Estimate in 2023 report	184.7	-4.7	161.1	2.2
Estimate in 2024 report	189.2	-2.4	159.3	1.1
Actual amount	193.8	—	157.6	—
OASI and DI Trust Funds, combined:				
Estimate in 2020 report	1,297.2	-8.5	1,386.0	-6.7
Estimate in 2021 report	1,274.2	-10.1	1,378.0	-7.2
Estimate in 2022 report	1,325.8	-6.5	1,413.9	-4.8
Estimate in 2023 report	1,350.7	-4.7	1,484.6	[c]
Estimate in 2024 report	1,381.8	-2.5	1,482.2	-.2
Actual amount	1,417.8	—	1,484.8	—

[a] Percentage differences are calculated prior to rounding.
[b] Actual income for 2024 reflects adjustments to payroll tax contributions for prior calendar years (see appendix A for description of these adjustments). Estimated income also includes such adjustments, but on an estimated basis.
[c] Between -0.05 percent and 0.05 percent.

Note: Components may not sum to totals because of rounding.

A number of factors contribute to differences between estimates and subsequent actual amounts, including: (1) actual values for key demographic, economic, and other variables that differ from earlier assumed levels; and (2) legislation that was enacted or other administrative initiatives that were finalized after the Trustees completed their estimates.

At the end of calendar year 2024, the OASDI program was providing monthly benefits to about 68.5 million people. The OASI Trust Fund was providing benefits to about 60.1 million people and the DI Trust Fund was providing benefits to about 8.3 million people. The number of people receiving benefits from the OASI Trust Fund grew by 2.7 percent while the number

of people receiving DI benefits fell by 2.3 percent during calendar year 2024. These changes are in large part due to the shifting age distribution of the adult population, with the baby-boom generation (born in 1946-65) moving increasingly above age 62 for retired worker benefits, and above normal retirement age, where DI benefits are no longer applicable. Table III.A5 shows the estimated distributions of benefit payments in calendar years 2023 and 2024, by type of beneficiary, for each trust fund separately.

Table III.A5.—Distribution of Benefit Payments by Type of Beneficiary or Payment, Calendar Years 2023 and 2024
[Amounts in millions]

	Calendar year 2023		Calendar year 2024	
	Amount	Percentage of total	Amount	Percentage of total
Total OASDI benefit payments	$1,379,234	100.0	$1,471,406	100.0
OASI benefit payments	1,227,389	89.0	1,316,424	89.5
DI benefit payments	151,845	11.0	154,983	10.5
OASI benefit payments, total	1,227,389	100.0	1,316,424	100.0
Monthly benefits:				
Retired workers and auxiliaries	1,072,645	87.4	1,154,994	87.7
Retired workers	1,030,242	83.9	1,111,728	84.5
Spouses	34,991	2.9	35,352	2.7
Children	7,411	.6	7,914	.6
Survivors of deceased workers	154,530	12.6	161,218	12.2
Aged widows and widowers	123,182	10.0	128,496	9.8
Disabled widows and widowers	2,350	.2	2,358	.2
Parents	20	[a]	20	[a]
Children	27,305	2.2	28,668	2.2
Widowed mothers and fathers caring for child beneficiaries	1,673	.1	1,676	.1
Lump-sum death payments	215	[a]	211	[a]
DI benefit payments, total	151,845	100.0	154,983	100.0
Disabled workers	144,103	94.9	147,174	95.0
Spouses	472	.3	477	.3
Children	7,270	4.8	7,332	4.7

[a] Less than 0.05 percent.

Note: Benefits are monthly benefits and lump-sum death payments. Components may not sum to totals because of rounding.

Net administrative expenses of the OASI and DI Trust Funds in calendar year 2024 totaled $7.4 billion, equal to 0.5 percent of total cost and 0.5 percent of total income. Table III.A6 shows corresponding percentages for each trust fund separately and for OASDI as a whole for the last 5 years.

Table III.A6.—Administrative Expenses as a Percentage of Total Income and of Total Cost, Calendar Years 2020-2024

	OASI Trust Fund		DI Trust Fund		OASI and DI Trust Funds, combined	
Calendar year	Total income	Total cost	Total income	Total cost	Total income	Total cost
2020	0.4	0.4	1.7	1.7	0.6	0.6
2021	.4	.4	1.7	1.7	.6	.6
2022	.4	.4	1.7	1.9	.6	.5
2023	.4	.4	1.5	1.8	.5	.5
2024	.4	.4	1.3	1.6	.5	.5

The acquisition and redemption of securities during calendar year 2024 changed the invested reserves of the OASI and DI Trust Funds. Table III.A7 presents investment transactions for each fund separately and combined.

Table III.A7.—Trust Fund Investment Transactions, Calendar Year 2024
[In millions]

	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Invested reserves, December 31, 2023[a]	$2,641,388	$146,892	$2,788,280
Acquisitions:			
Special issue securities:			
Certificates of indebtedness	1,197,448	193,148	1,390,596
Bonds[b]	171,011	42,199	213,210
Total acquisitions	1,368,459	235,346	1,603,806
Redemptions:			
Special issue securities:			
Certificates of indebtedness	1,214,273	189,755	1,404,028
Bonds	257,376	9,377	266,753
Total redemptions	1,471,649	199,132	1,670,781
Net change in invested reserves	-103,190	36,215	-66,975
Invested reserves, December 31, 2024[a]	2,538,198	183,107	2,721,305

[a] Invested reserves differ from total reserves by the amount of undisbursed balances. See tables VI.A4 and VI.A5 for details.

[b] Purchased on June 30, 2024. The interest rate on these purchases was 4.625 percent.

Note: Investments are shown at par value. Components may not sum to totals because of rounding.

B. CHANGES IN LAW AND POLICY AFFECTING SOCIAL SECURITY SINCE THE 2024 REPORT

Since the Trustees submitted the 2024 report to Congress, there have been two changes in law, policy, or regulation that are expected to have significant financial effects on the OASDI program.

On April 18, 2024, the Social Security Administration (SSA) published a final rule in the Federal Register titled Intermediate Improvement to the Disability Adjudication Process, Including How We Consider Past Work. This regulation reduces the time period, from 15 to 5 years, that SSA considers when determining whether an individual's past work is relevant for the purposes of making disability determinations and decisions, and makes other minor revisions to the regulations related to past relevant work. Implementation of this final rule is expected to increase disability awards and incidence rates to a small degree and, in turn, reduce labor force participation slightly. This regulation has a significant negative effect on the DI trust fund ratio over the short-range projection period and a small but significant negative effect on the actuarial balance for the DI Trust Fund over the long-range projection period.

The Social Security Fairness Act of 2023, Public Law 118-273, was signed into law on January 5, 2025. This law repeals the Windfall Elimination Provision and Government Pension Offset for benefits payable for months after December 2023. These two provisions had reduced or eliminated the Social Security benefits of individuals who receive a pension based on work that was not covered by Social Security. With their repeal, Social Security benefits will increase for certain people who worked in jobs that were not covered by Social Security, including some state and local employees, federal employees covered by the Civil Service Retirement System, and some people who worked in non-U.S. employment. Enactment of this change in law is estimated to have a significant negative effect on the OASI Trust Fund over both the short-range and long-range periods.

Sections IV.A.4 and IV.B.6 of this report provide further description of the magnitude of effects on the financial status of the OASDI program over the short-range and long-range projection periods, respectively.

IV. ACTUARIAL ESTIMATES

This chapter presents actuarial estimates of the future financial condition of the Social Security program. These estimates show the income, cost, and reserves or unfunded obligation of the OASI and DI Trust Funds: (1) in dollars over the 10-year short-range period; and (2) as a percentage of taxable payroll, as a percentage of gross domestic product, and in present-value dollars over the 75-year long-range period. In addition, the chapter discusses a variety of measures of the adequacy of current program financing. This report distinguishes between: (1) the cost (obligations) of the program, which includes all past and future benefits scheduled under current law; and (2) expenditures, which include actual payments for the past plus only the portion of projected program cost that would be payable with the financing provisions in current law.

This chapter presents the estimates and measures of trust fund financial adequacy for the short-range period (2025 through 2034) first, followed by estimates and measures of actuarial status for the long-range period (2025 through 2099). Summary measures are also provided for trust fund status over the infinite horizon. As described in chapter II of this report, these estimates depend upon a broad set of demographic, economic, and programmatic factors. This chapter presents estimates under three sets of assumptions to show a wide range of possible outcomes, because assumptions related to these factors are subject to uncertainty. The intermediate set of assumptions, designated as alternative II, reflects the Trustees' best estimate of future experience; the low-cost alternative I is significantly more optimistic and the high-cost alternative III is significantly more pessimistic for the trust funds' future financial outlook. The tables of this report show the intermediate estimates first, followed by the low-cost and high-cost estimates. Chapter V describes these three sets of assumptions, along with the actuarial methods used to produce the estimates. Appendix D and appendix E present two additional methods to illustrate the uncertainty of the projections. Appendix D presents sensitivity analyses of the effects of variation in individual factors and appendix E presents probability distributions generated by a stochastic model.

A. SHORT-RANGE ESTIMATES

The Trustees consider the trust funds to be solvent at any point in time if the funds can pay scheduled benefits in full on a timely basis. A standard measure for assessing solvency is the "trust fund ratio," which is the reserves in a fund at the beginning of a year (not including advance tax transfers) expressed as a percentage of the cost during the year. A positive trust fund ratio indicates that the trust fund was solvent at the end of the prior year. The

trust fund ratio represents the proportion of a year's cost which the reserves available at the beginning of that year can cover. The Trustees assume that a trust fund ratio of 100 percent of annual program cost provides a reasonable "contingency reserve." Maintaining a reasonable contingency reserve is important because the trust funds do not have borrowing authority. After reserves are depleted, the trust funds would be unable to pay scheduled benefits in full on a timely basis if annual revenue were less than annual cost. Unexpected events, such as severe economic recessions, can quickly diminish reserves. In such cases, a reasonable contingency reserve can maintain the ability to pay scheduled benefits while giving lawmakers time to address possible changes to the program.

The test of short-range financial adequacy applies to the OASI and DI Trust Funds individually and combined on a hypothetical basis.[1] If the estimated trust fund ratio is at least 100 percent at the beginning of the projection period, the test requires that it remain at or above 100 percent throughout the 10-year period. If the ratio is initially less than 100 percent, then it must reach at least 100 percent within 5 years (without reserve depletion at any time during this period) and then remain at or above 100 percent throughout the remainder of the 10-year period. This test is applied using the estimates based on the intermediate assumptions. If either trust fund fails this test, then program solvency in the next 10 years is in question, and lawmakers should take prompt action to improve short-range financial adequacy.

1. Operations of the OASI Trust Fund

This subsection presents projections, based on the assumptions described in chapter V, of the operations and financial status of the OASI Trust Fund for the period 2025 through 2034. These estimates assume that there are no further changes in the statutory provisions and regulations under which the OASDI program currently operates beyond the changes since last year's report indicated in section III.B.[2]

Estimates of the OASI Trust Fund operations presented in table IV.A1 indicate that the reserves of the OASI Trust Fund are projected to decrease in years 2025 through 2034 under all three sets of assumptions. Under the low-cost assumptions, reserves remain positive through the end of the short-range period, but under the intermediate and high-cost assumptions, reserves become depleted in the first quarter of 2033 and the fourth quarter of 2031, respectively. Trust fund ratios are projected to decline throughout the 10-year

[1] The OASI and DI Trust Funds are distinct legal entities which operate independently. To illustrate the actuarial status of the program as a whole, the fund operations are often combined on a hypothetical basis.

[2] The estimates shown in this subsection reflect 12 months of scheduled benefits in each year of the short-range projection period. In practice, the actual payment dates have at times shifted over calendar year boundaries as a result of the statutory requirement for early delivery of benefit payments when the normal check delivery date is a Saturday, Sunday, or legal public holiday.

projection period under all three sets of assumptions. See figure IV.A1 for an illustration of these results.

Based on the intermediate assumptions, the reserves of the OASI Trust Fund drop below 100 percent of annual cost during 2028, to a trust fund ratio of 89 percent at the beginning of 2029, and the trust fund ratio remains below 100 percent for the remainder of the short-range period. Consequently, the OASI Trust Fund fails the test of short-range financial adequacy.

Table IV.A1.—Operations of the OASI Trust Fund, Calendar Years 2020-2034[a]
[Dollar amounts in billions]

	Income					Cost[b]				Reserves[b]		
Calendar year	Total	Net payroll tax contributions[d]	GF reimbursements[e]	Taxation of benefits[d f]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	Trust fund ratio at start of year[c]
Historical data:												
2020 . . .	$968.3	$856.0	[g]	$39.0	$73.3	$961.0	$952.4	$3.7	$4.8	$7.4	$2,811.7	292
2021 . . .	942.9	838.2	[g]	37.2	67.5	1,001.9	993.1	4.0	4.8	-59.1	2,752.6	281
2022 . . .	1,056.7	945.9	$0.2	47.1	63.5	1,097.5	1,088.1	4.0	5.3	-40.7	2,711.9	251
2023 . . .	1,166.9	1,054.1	[g]	49.8	63.0	1,237.3	1,227.4	4.4	5.6	-70.4	2,641.5	219
2024 . . .	1,224.0	1,105.6	.2	54.4	63.7	1,327.2	1,316.4	4.9	5.9	-103.2	2,538.3	199
Intermediate:												
2025 . . .	1,230.4	1,110.5	[g]	58.6	61.3	1,439.7	1,429.6	4.4	5.7	-209.3	2,329.0	176
2026 . . .	1,307.0	1,174.3	.2	74.7	57.7	1,519.7	1,509.0	4.7	6.1	-212.8	2,116.2	153
2027 . . .	1,364.5	1,229.0	.4	81.0	54.1	1,609.3	1,598.4	4.8	6.1	-244.7	1,871.5	132
2028 . . .	1,422.0	1,286.4	[g]	86.9	48.7	1,702.4	1,691.4	5.0	6.1	-280.4	1,591.1	110
2029 . . .	1,478.7	1,343.9	[g]	93.4	41.4	1,796.9	1,785.7	5.1	6.1	-318.2	1,272.8	89
2030 . . .	1,534.5	1,400.7	[g]	100.9	32.8	1,893.4	1,882.0	5.3	6.1	-358.9	914.0	67
2031 . . .	1,591.4	1,459.7	[g]	109.2	22.5	1,991.3	1,979.7	5.5	6.1	-399.9	514.0	46
2032 . . .	1,647.9	1,520.3	[g]	117.5	10.0	2,089.7	2,077.9	5.6	6.1	-441.9	72.2	25
2033 . . .	[h]	1,586.3	[g]	126.3	[h]	2,188.7	2,176.7	5.8	6.2	[h]	[h]	3
2034 . . .	[h]	1,650.1	[g]	135.3	[h]	2,288.6	2,276.4	6.0	6.2	[h]	[h]	[h]
Low-cost:												
2025 . . .	1,248.9	1,127.9	[g]	58.6	62.5	1,438.6	1,428.5	4.4	5.7	-189.7	2,348.6	176
2026 . . .	1,370.2	1,233.2	.2	74.8	62.1	1,521.0	1,510.3	4.7	6.0	-150.7	2,197.9	154
2027 . . .	1,446.6	1,302.2	.4	81.3	62.7	1,616.2	1,605.3	4.8	6.0	-169.6	2,028.3	136
2028 . . .	1,533.6	1,383.9	[g]	87.6	62.0	1,717.0	1,705.9	5.1	6.0	-183.4	1,844.9	118
2029 . . .	1,622.3	1,467.5	[g]	94.6	60.2	1,819.8	1,808.4	5.3	6.1	-197.5	1,647.4	101
2030 . . .	1,714.4	1,554.0	[g]	102.6	57.8	1,925.3	1,913.6	5.6	6.1	-210.9	1,436.6	86
2031 . . .	1,811.5	1,645.4	[g]	111.5	54.6	2,033.4	2,021.5	5.9	6.1	-221.9	1,214.7	71
2032 . . .	1,910.8	1,740.4	[g]	120.5	49.9	2,143.3	2,131.0	6.1	6.2	-232.5	982.2	57
2033 . . .	2,017.9	1,843.7	[g]	130.2	44.0	2,255.2	2,242.7	6.4	6.2	-237.4	744.8	44
2034 . . .	2,122.6	1,947.5	[g]	140.1	35.1	2,369.6	2,356.7	6.6	6.2	-247.0	497.8	31

Table IV.A1.—Operations of the OASI Trust Fund, Calendar Years 2020-2034[a] (Cont.)
[Dollar amounts in billions]

Calendar year	Income					Cost[b]				Reserves[b]		Trust fund ratio at start of year[c]
	Total	Net payroll tax contributions[d]	GF reimbursements[e]	Taxation of benefits[d f]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
High-cost:												
2025	$1,200.2	$1,080.9	[g]	$58.7	$60.6	$1,441.0	$1,430.9	$4.4	$5.7	-$240.8	$2,297.5	176
2026	1,213.8	1,085.1	$0.2	74.7	53.9	1,519.1	1,508.3	4.7	6.1	-305.3	1,992.1	151
2027	1,269.5	1,141.9	.4	80.5	46.6	1,600.4	1,589.4	4.8	6.2	-330.9	1,661.2	124
2028	1,309.8	1,185.6	[g]	86.1	38.1	1,686.3	1,675.3	4.9	6.2	-376.5	1,284.6	99
2029	1,347.1	1,226.6	[g]	92.2	28.4	1,773.2	1,762.1	5.0	6.1	-426.1	858.6	72
2030	1,379.8	1,262.8	[g]	99.2	17.7	1,861.4	1,850.2	5.1	6.1	-481.6	376.9	46
2031	[h]	1,298.0	[g]	106.9	[h]	1,950.3	1,939.0	5.2	6.1	[h]	[h]	19
2032	[h]	1,332.5	[g]	114.6	[h]	2,038.6	2,027.2	5.2	6.1	[h]	[h]	[h]
2033	[h]	1,369.7	[g]	122.7	[h]	2,126.1	2,114.7	5.3	6.1	[h]	[h]	[h]
2034	[h]	1,403.8	[g]	130.9	[h]	2,213.6	2,202.1	5.4	6.1	[h]	[h]	[h]

[a] The OASI Trust Fund reserves become depleted in the first quarter of 2033 and the fourth quarter of 2031 under the intermediate and high-cost assumptions, respectively. For any period during which reserves would be depleted, scheduled benefits could not be paid in full on a timely basis, income from taxing benefits would be less than would apply to scheduled benefits, and interest on trust fund reserves would be negligible. Appendix A presents a detailed description of the components of income and cost, along with complete historical values.

[b] Amounts for 2020 and 2021 are adjusted to include in 2021 operations those benefit payments regularly scheduled in the law to be paid on January 3, 2021, which were actually paid on December 31, 2020 as required by the statutory provision for early benefit payments when the normal delivery date is on a weekend or holiday. Such shifts in payments across calendar years occur periodically whenever January 3rd falls on a Sunday. In order to provide a consistent perspective on trust fund operations over time, all trust fund operations in each year reflect the 12 months of benefits that are regularly scheduled for payment in that year.

[c] Represents reserves at the beginning of a year (which are identical to reserves at the end of the prior year shown in the "Amount at end of year" column) as a percentage of cost for the year. The trust fund ratio at the beginning of 2035 is projected to be 20 percent under the low-cost assumptions. Under the intermediate and high-cost assumptions, reserves are projected to become depleted by the beginning of 2034 and 2032, respectively.

[d] Includes adjustments for prior calendar years. For example, in June 2021, an unusually large negative adjustment to payroll tax contributions in the amount of $30.4 billion was made because payroll tax revenue credited to the trust fund in 2020 was based on estimates that did not anticipate effects of the pandemic and recession.

[e] Includes net reimbursements from the General Fund of the Treasury to the OASI Trust Fund for: (1) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; and (2) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Also includes transfers of a portion of proceeds from repayments of loans authorized under Public Law 116-136.

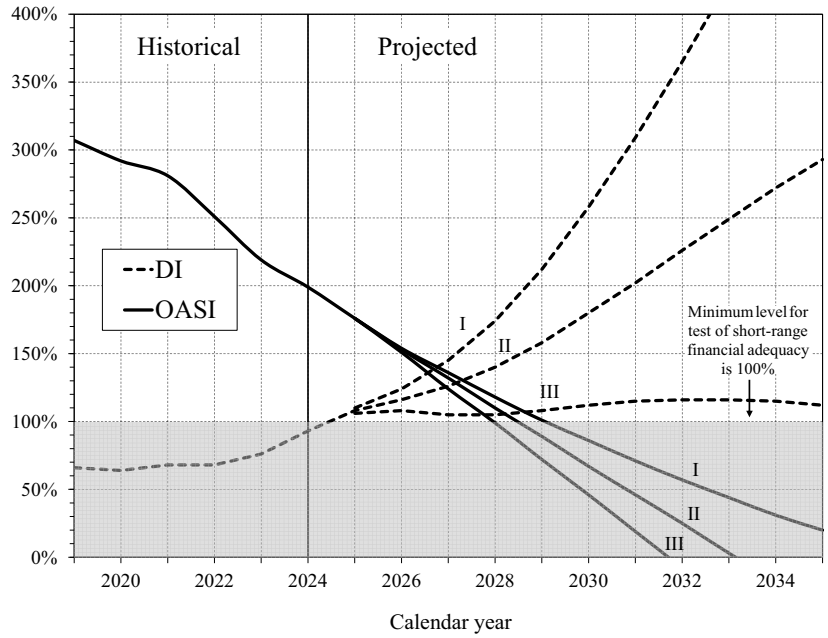
[f] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in the law.

[g] Between -$50 million and $50 million.

[h] When the trust fund reserves are depleted, values under current law would reflect permissible expenditures only, which would be less than the full cost of paying scheduled benefits shown in this table.

Note: Components may not sum to totals because of rounding.

Figure IV.A1.—Short-Range OASI and DI Trust Fund Ratios
[Reserves as a percentage of annual cost]



The estimated income shown in table IV.A1 increases annually under each set of assumptions throughout the short-range projection period, with the exception of a small decrease in 2025 for the high-cost alternative. The estimated increases in income result primarily from the projected increases in OASDI taxable payroll. Employment increases in years 2025 through 2034 for all three alternatives, with the exception of small decreases in covered employment in 2025 and 2026 for the high-cost alternative: the number of covered workers increases under alternatives I, II, and III from 184 million during calendar year 2024 to about 196 million, 191 million, and 187 million, respectively, in 2034.[1] The total annual amount of taxable payroll increases in years 2025 through 2034 for each alternative. Total taxable payroll increases from $10,124 billion in 2024 to $18,416 billion, $15,594 billion, and $13,258 billion in 2034, under alternatives I, II, and III, respectively.[2] These increases in taxable payroll are due primarily to: (1) projected increases in employment levels as the working-age population increases; (2) trend increases in average earnings in covered employment (reflecting both real growth and price inflation); and (3) increases in the contribution and benefit base under the automatic-adjustment provisions.

[1] See table IV.B3.
[2] See table VI.G6.

Interest earnings contribute to the overall projected level of trust fund income during this period. Interest income declines at an increasing rate under the intermediate and high-cost assumptions, as reserves approach depletion, and remains relatively constant through 2028 before decreasing steadily under the low-cost assumptions, due to the net effects of changes in reserve levels and the patterns of projected interest rates. Under the intermediate assumptions, interest also declines as a share of total OASI Trust Fund income from 5 percent of total trust fund income for 2024 to 1 percent in 2032, prior to reserve depletion in 2033.

Rising OASI cost through 2034 reflects automatic benefit increases each year after initial benefit eligibility and increases each year for those becoming newly eligible based on rising average earnings levels, as well as the upward trend in the number of beneficiaries. The steady growth in the number of OASI beneficiaries in the past and the expected future growth result both from the increase in the aged population and from the increase in the proportion of the population that is insured for benefits.

The Treasury invests OASI income in financial securities, generally special public-debt obligations of the U.S. Government. The revenue used to make these purchases flows to the General Fund of the Treasury. The trust fund earns interest on these securities, and the Treasury reinvests the proceeds from maturing securities in new securities if not immediately needed to pay program costs. Program expenditures require the redemption of trust fund securities, generally prior to maturity, to cover the payments made from the trust fund.

2. Operations of the DI Trust Fund

Table IV.A2 shows the projected operations and financial status of the DI Trust Fund during calendar years 2025 through 2034 under the three sets of assumptions, together with values for actual experience during 2020 through 2024. For 2024, non-interest income was higher than DI cost. Non-interest income increases generally throughout the short-range projection period under each alternative, due to most of the same factors described previously for the OASI Trust Fund beginning on page 47. DI cost grows over the short-range period under each alternative. Under all three alternatives, income remains higher than cost through 2034, and as a result, DI reserves are higher at the end of 2034 compared to the level at the end of 2024.

Table IV.A2.—Operations of the DI Trust Fund, Calendar Years 2020-2034[a]
[Dollar amounts in billions]

Calendar year	Income					Cost[b]				Reserves[b]		Trust fund ratio at start of year[c]
	Total	Net payroll tax contributions[d]	GF reimbursements[e]	Taxation of benefits[d f]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
Historical data:												
2020 . .	$149.7	$145.3	[g]	$1.7	$2.8	$146.3	$143.6	$2.6	$0.1	$3.5	$96.6	64
2021 . .	145.5	142.4	[g]	.5	2.6	142.6	140.1	2.5	.1	2.8	99.4	68
2022 . .	165.1	160.7	[g]	1.6	2.8	146.5	143.6	2.7	.2	18.6	118.0	68
2023 . .	183.8	179.0	[g]	.9	3.8	154.8	151.9	2.8	.1	29.0	147.0	76
2024 . .	193.8	187.7	[g]	.7	5.4	157.6	155.0	2.5	.1	36.2	183.2	93
Intermediate:												
2025 . .	197.0	188.6	[g]	1.5	6.9	169.2	166.5	2.7	[g]	27.8	211.0	108
2026 . .	209.6	199.4	[g]	2.0	8.2	181.4	178.6	2.8	[g]	28.2	239.2	116
2027 . .	220.3	208.7	[g]	2.1	9.4	190.3	187.3	2.9	[g]	30.0	269.2	126
2028 . .	231.6	218.4	[g]	2.2	10.9	192.8	189.7	3.0	.1	38.8	308.0	140
2029 . .	243.3	228.2	[g]	2.2	12.8	195.1	191.9	3.1	.1	48.2	356.2	158
2030 . .	255.2	237.9	[g]	2.3	15.1	198.0	194.7	3.1	.1	57.3	413.5	180
2031 . .	267.9	247.9	[g]	2.4	17.6	204.2	200.9	3.2	.1	63.7	477.2	202
2032 . .	281.2	258.2	[g]	2.6	20.5	211.4	208.0	3.3	.2	69.8	547.0	226
2033 . .	295.7	269.4	[g]	2.8	23.6	219.9	216.3	3.4	.2	75.8	622.8	249
2034 . .	310.1	280.2	[g]	2.9	26.9	229.1	225.4	3.5	.2	81.0	703.8	272
Low-cost:												
2025 . .	200.2	191.5	[g]	1.5	7.2	165.9	163.3	2.7	[g]	34.3	217.5	110
2026 . .	220.8	209.4	[g]	2.0	9.4	175.2	172.4	2.8	[g]	45.6	263.0	124
2027 . .	235.4	221.1	[g]	2.0	12.2	181.5	178.6	2.9	[g]	53.9	316.9	145
2028 . .	252.8	235.0	[g]	2.1	15.7	182.4	179.3	3.0	[g]	70.4	387.4	174
2029 . .	271.4	249.2	[g]	2.1	20.1	183.1	179.9	3.1	.1	88.3	475.7	212
2030 . .	291.4	263.9	[g]	2.2	25.4	184.3	181.0	3.2	.1	107.2	582.8	258
2031 . .	313.3	279.4	[g]	2.2	31.7	188.5	185.1	3.3	.1	124.8	707.6	309
2032 . .	336.7	295.5	[g]	2.4	38.8	193.9	190.3	3.4	.1	142.8	850.4	365
2033 . .	362.7	313.1	[g]	2.5	47.1	200.6	196.8	3.6	.2	162.1	1,012.5	424
2034 . .	390.0	330.7	[g]	2.7	56.6	208.4	204.5	3.7	.2	181.6	1,194.1	486

Table IV.A2.—Operations of the DI Trust Fund, Calendar Years 2020-2034[a] (Cont.)
[Dollar amounts in billions]

Calendar year	Income					Cost[b]				Reserves[b]		Trust fund ratio at start of year[c]
	Total	Net payroll tax contributions[d]	GF reimbursements[e]	Taxation of benefits[d f]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
High-cost:												
2025	$191.8	$183.5	[g]	$1.5	$6.7	$172.4	$169.8	$2.7	[g]	$19.4	$202.5	106
2026	193.5	184.3	[g]	2.1	7.1	187.6	184.9	2.8	[g]	5.8	208.4	108
2027	203.4	193.9	[g]	2.2	7.2	198.5	195.6	2.9	$0.1	4.9	213.3	105
2028	211.0	201.3	[g]	2.3	7.4	202.2	199.2	3.0	.1	8.8	222.0	105
2029	218.3	208.3	[g]	2.4	7.7	205.7	202.6	3.0	.1	12.6	234.6	108
2030	224.9	214.4	[g]	2.5	8.0	209.9	206.7	3.1	.1	15.0	249.6	112
2031	231.4	220.4	[g]	2.6	8.4	217.7	214.3	3.2	.2	13.8	263.4	115
2032	237.8	226.3	[g]	2.8	8.7	226.3	222.8	3.3	.2	11.5	274.9	116
2033	244.6	232.6	[g]	3.0	9.0	236.1	232.5	3.3	.2	8.5	283.4	116
2034	250.8	238.4	[g]	3.2	9.3	246.3	242.7	3.4	.3	4.5	287.9	115

[a] Appendix A presents a detailed description of the components of income and cost, along with complete historical values.

[b] Amounts for 2020 and 2021 are adjusted to include in 2021 operations those benefit payments regularly scheduled in the law to be paid on January 3, 2021, which were actually paid on December 31, 2020 as required by the statutory provision for early benefit payments when the normal delivery date is on a weekend or holiday. Such shifts in payments across calendar years occur periodically whenever January 3rd falls on a Sunday. In order to provide a consistent perspective on trust fund operations over time, all trust fund operations in each year reflect the 12 months of benefits that are regularly scheduled for payment in that year.

[c] Represents reserves at the beginning of a year (which are identical to reserves at the end of the prior year shown in the "Amount at end of year" column) as a percentage of cost for the year. The trust fund ratio at the beginning of 2035 is projected to be 293 percent under the intermediate, 548 percent under the low-cost, and 112 percent under the high-cost assumptions.

[d] Includes adjustments for prior calendar years. For example, in June 2021, an unusually large negative adjustment to payroll tax contributions in the amount of $5.2 billion was made because payroll tax revenue credited to the trust fund in 2020 was based on estimates that did not anticipate effects of the pandemic and recession.

[e] Includes net reimbursements from the General Fund of the Treasury to the DI Trust Fund for: (1) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; and (2) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96.

[f] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in the law.

[g] Between -$50 million and $50 million.

Note: Components may not sum to totals because of rounding.

For the future, DI cost is projected to increase in part due to increases in average benefit levels resulting from: (1) automatic benefit increases and (2) projected increases in the amounts of average monthly earnings on which benefits are based. Future changes in DI cost also reflect changes in the number of DI beneficiaries in current-payment status. In 2024, the number of DI beneficiaries in current-payment status continued to decline, as it has over the prior ten years. Under the intermediate assumptions, the number of DI beneficiaries is projected to begin to increase in 2025, reaching a level of about 9 million at the end of 2034. The rate of increase after 2024 is much slower than was experienced on average from 1990 to 2010, when the population with the highest disability prevalence rates was growing rapidly due to the aging of the baby-boom generation. See section V.C.5 for further details.

At the beginning of calendar year 2025, the reserves of the DI Trust Fund represented 108 percent of estimated annual cost. Under the intermediate assumptions, DI trust fund reserves and the trust fund ratio increase through

the end of the short-range projection period. Because the trust fund ratio was above 100 percent at the beginning of 2025 and remains above 100 percent throughout the short-range period under the intermediate assumptions, the DI Trust Fund satisfies the Trustees' test of short-range financial adequacy.

3. Operations of the Combined OASI and DI Trust Funds

Table IV.A3 shows the projected operations and status of the combined OASI and DI Trust Funds for calendar years 2025 through 2034 under the three alternatives, together with actual experience in 2020 through 2024. Income and cost for the OASI Trust Fund represent over 80 percent of the corresponding amounts for the combined OASI and DI Trust Funds. Under the low-cost assumptions, the combined OASI and DI Trust Funds would have sufficient financial resources to pay all scheduled benefits through the end of the short-range period, although it is important to note that under current law, one trust fund cannot share financial resources with another trust fund. Under the intermediate and high-cost assumptions, combined OASI and DI Trust Fund reserves become depleted in the third quarter of 2034 and the first quarter of 2032, respectively.

The combined OASI and DI Trust Funds do not satisfy the test of short-range financial adequacy because under the intermediate assumptions, trust fund reserves drop below 100 percent of annual cost during 2028, to a trust fund ratio of 95 percent at the beginning of 2029, and the trust fund ratio remains below 100 percent for the remainder of the short-range period.

Table IV.A3.—Operations of the Combined OASI and DI Trust Funds, Calendar Years 2020-2034[a]

[Dollar amounts in billions]

	Income					Cost[b]				Reserves[b]		Trust
Calendar year	Total	Net payroll tax contributions[d]	GF reimbursements[e]	Taxation of benefits[d f]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	fund ratio at start of year[c]
Historical data:												
2020 . .	$1,118.1	$1,001.3	[g]	$40.7	$76.1	$1,107.2	$1,095.9	$6.3	$5.0	$10.9	$2,908.3	262
2021 . .	1,088.3	980.6	[g]	37.6	70.1	1,144.6	1,133.2	6.5	4.9	-56.3	2,852.0	254
2022 . .	1,221.8	1,106.6	$0.2	48.6	66.4	1,243.9	1,231.7	6.7	5.5	-22.1	2,829.9	229
2023 . .	1,350.7	1,233.1	[g]	50.7	66.9	1,392.1	1,379.3	7.2	5.6	-41.4	2,788.5	203
2024 . .	1,417.8	1,293.3	.2	55.1	69.1	1,484.8	1,471.4	7.4	5.9	-67.0	2,721.5	188
Intermediate:												
2025 . .	1,427.4	1,299.1	[g]	60.1	68.2	1,608.9	1,596.1	7.1	5.7	-181.4	2,540.0	169
2026 . .	1,516.6	1,373.7	.2	76.7	65.9	1,701.1	1,687.6	7.5	6.0	-184.6	2,355.4	149
2027 . .	1,584.8	1,437.7	.4	83.1	63.5	1,799.5	1,785.7	7.7	6.1	-214.7	2,140.7	131
2028 . .	1,653.6	1,504.9	[g]	89.1	59.6	1,895.2	1,881.1	8.0	6.1	-241.6	1,899.1	113
2029 . .	1,722.0	1,572.1	[g]	95.7	54.2	1,992.0	1,977.6	8.2	6.2	-270.1	1,629.1	95

Table IV.A3.—Operations of the Combined OASI and DI Trust Funds, Calendar Years 2020-2034[a] (Cont.)

[Dollar amounts in billions]

Calendar year	Income					Cost[b]				Reserves[b]		Trust fund ratio at start of year[c]
	Total	Net payroll tax contributions[d]	GF reimbursements[e]	Taxation of benefits[d f]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
Intermediate (Cont.):												
2030 . .	$1,789.7	$1,638.6	[g]	$103.3	$47.9	$2,091.4	$2,076.7	$8.4	$6.2	-$301.6	$1,327.4	78
2031 . .	1,859.3	1,707.6	[g]	111.6	40.1	2,195.5	2,180.6	8.7	6.2	-336.2	991.2	60
2032 . .	1,929.1	1,778.5	[g]	120.1	30.5	2,301.2	2,285.9	8.9	6.3	-372.1	619.2	43
2033 . .	2,003.5	1,855.7	[g]	129.1	18.6	2,408.6	2,393.0	9.2	6.4	-405.1	214.1	26
2034 . .	[h]	1,930.3	[g]	138.2	[h]	2,517.7	2,501.8	9.4	6.4	[h]	[h]	9
Low-cost:												
2025 . .	1,449.2	1,319.4	[g]	60.1	69.7	1,604.6	1,591.8	7.1	5.7	-155.4	2,566.1	170
2026 . .	1,591.1	1,442.6	$0.2	76.7	71.6	1,696.2	1,682.7	7.5	6.0	-105.1	2,460.9	151
2027 . .	1,682.0	1,523.3	.4	83.3	74.9	1,797.6	1,783.9	7.7	6.0	-115.7	2,345.3	137
2028 . .	1,786.4	1,618.9	[g]	89.7	77.8	1,899.4	1,885.2	8.1	6.1	-113.0	2,232.3	123
2029 . .	1,893.7	1,716.7	[g]	96.7	80.3	2,002.9	1,988.3	8.5	6.1	-109.2	2,123.1	111
2030 . .	2,005.9	1,817.8	[g]	104.8	83.2	2,109.6	2,094.6	8.8	6.2	-103.7	2,019.4	101
2031 . .	2,124.8	1,924.9	[g]	113.7	86.3	2,221.9	2,206.5	9.2	6.2	-97.1	1,922.3	91
2032 . .	2,247.6	2,035.9	[g]	122.9	88.8	2,337.2	2,321.4	9.6	6.3	-89.7	1,832.6	82
2033 . .	2,380.5	2,156.7	[g]	132.7	91.1	2,455.8	2,439.5	9.9	6.4	-75.3	1,757.3	75
2034 . .	2,512.6	2,278.2	[g]	142.7	91.7	2,578.0	2,561.2	10.3	6.4	-65.4	1,692.0	68
High-cost:												
2025 . .	1,391.9	1,264.4	[g]	60.2	67.3	1,613.4	1,600.7	7.1	5.7	-221.5	2,500.0	169
2026 . .	1,407.3	1,269.3	.2	76.8	61.0	1,706.8	1,693.2	7.5	6.1	-299.5	2,200.5	146
2027 . .	1,472.9	1,335.8	.4	82.7	53.9	1,798.9	1,785.0	7.7	6.3	-326.1	1,874.4	122
2028 . .	1,520.8	1,387.0	[g]	88.4	45.5	1,888.6	1,874.5	7.9	6.2	-367.8	1,506.7	99
2029 . .	1,565.5	1,434.8	[g]	94.6	36.1	1,978.9	1,964.6	8.0	6.2	-413.5	1,093.2	76
2030 . .	1,604.7	1,477.3	[g]	101.7	25.8	2,071.4	2,056.9	8.2	6.3	-466.6	626.6	53
2031 . .	1,640.3	1,518.4	[g]	109.5	12.3	2,168.0	2,153.4	8.3	6.2	-527.7	98.9	29
2032 . .	[h]	1,558.8	[g]	117.4	[h]	2,264.9	2,250.1	8.5	6.3	[h]	[h]	4
2033 . .	[h]	1,602.3	[g]	125.7	[h]	2,362.2	2,347.2	8.7	6.3	[h]	[h]	[h]
2034 . .	[h]	1,642.2	[g]	134.1	[h]	2,459.9	2,444.7	8.8	6.4	[h]	[h]	[h]

[a] The OASDI Trust Fund reserves become depleted in the third quarter of 2034 and the first quarter of 2032 under the intermediate and high-cost assumptions, respectively. For any period during which reserves would be depleted, scheduled benefits could not be paid in full on a timely basis, income from taxing benefits would be less than would apply to scheduled benefits, and interest on trust fund reserves would be negligible. Appendix A presents a detailed description of the components of income and cost, along with complete historical values.

[b] Amounts for 2020 and 2021 are adjusted to include in 2021 operations those benefit payments regularly scheduled in the law to be paid on January 3, 2021, which were actually paid on December 31, 2020 as required by the statutory provision for early benefit payments when the normal delivery date is on a weekend or holiday. Such shifts in payments across calendar years occur periodically whenever January 3rd falls on a Sunday. In order to provide a consistent perspective on trust fund operations over time, all trust fund operations in each year reflect the 12 months of benefits that are regularly scheduled for payment in that year.

[c] Represents reserves at the beginning of a year (which are identical to reserves at the end of the prior year shown in the "Amount at end of year" column) as a percentage of cost for the year. The trust fund ratio at the beginning of 2035 is projected to be 62 percent under the low-cost assumptions. Under the intermediate and high-cost assumptions, combined reserves are projected to become depleted by the beginning of 2035 and 2033, respectively.

[d] Includes adjustments for prior calendar years. For example, in June 2021, an unusually large negative adjustment to payroll tax contributions in the amount of $35.5 billion was made because payroll tax revenue credited to the trust funds in 2020 was based on estimates that did not anticipate effects of the pandemic and recession.

[e] Includes net reimbursements from the General Fund of the Treasury to the OASI and DI Trust Funds for: (1) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; and (2) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Also includes transfers of a portion of proceeds from repayments of loans authorized under Public Law 116-136.

[f] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in the law.

[g] Between -$50 million and $50 million.

[h] When the combined trust fund reserves are depleted, values under current law would reflect permissible expenditures only, which would be less than the full cost of paying scheduled benefits shown in this table.

Note: Components may not sum to totals because of rounding.

4. Factors Underlying Changes in 10-Year Trust Fund Ratio Estimates From Last Year's Report

Table IV.A4 presents an analysis of the factors underlying the changes in the intermediate estimates over the short-range projection period for the OASI, DI, and the combined funds from last year's report to this report.

In the 2024 report under the intermediate assumptions, the trust fund ratio for OASI reached 16 percent at the beginning of 2033—the tenth projection year for that report. In this year's report, the OASI Trust Fund reserves become depleted during 2033. For the analysis in this section, we use a theoretical OASI trust fund ratio for 2034, which is the ratio of the unfunded obligation at the beginning of the year to the cost for that year. The change in the short-range valuation period alone, from 2024 through 2033 to 2025 through 2034, lowered the estimated trust fund ratio for the tenth year by 18 percentage points, to -2 percent. All other changes to reflect modifications in law and regulations since last year's report, the most recent data, adjustments to the assumptions for future years, and changes in projection methods combined for a net decrease in the ratio for the tenth projection year of 16 percentage points. Therefore, the total change in the tenth-year projected trust fund ratio from last year's report to this year's report is a reduction of 34 percentage points to -18 percent.

Legislative and regulatory changes since the 2024 report was published, primarily the passage of the Social Security Fairness Act of 2023, lowered the projected tenth-year OASI trust fund ratio by 10 percentage points. Changes in demographic assumptions over the short-range period increased the projected tenth-year trust fund ratio for OASI by 1 percentage point. Several changes in economic data and assumptions combined for no significant change in the OASI trust fund ratio by the beginning of 2034. Incorporating recent programmatic data and assumptions, including actual average benefits and higher beneficiary counts than anticipated for 2024, resulted in a decrease of 6 percentage points in the tenth-year OASI trust fund ratio. Finally, the tenth-year trust fund ratio was not affected significantly by changes in the short-range methodology for this report.

Table IV.A4 also shows corresponding estimates of the factors underlying the changes in the financial projections for the DI Trust Fund and for the combined OASI and DI Trust Funds. In this report, the OASDI trust fund ratio for 2034 is theoretical because the OASI Trust Fund reserves become depleted during 2033. The 32-percentage-point increase in the DI trust fund ratio from the beginning of 2033 in last year's report to the beginning of 2034 in this year's report is the net effect of increases and decreases from the factors described above for the OASI Trust Fund, combined with other changes that are significant for DI but not OASI. The decrease of 14 percent-

age points due to legislation and regulations for DI is primarily caused by the recent regulation which decreases the number of years used in the consideration of past relevant work when making a disability determination. The large increase of 21 percentage points due to programmatic data and assumptions reflects changes in several factors relevant to the DI beneficiary projections, including actual award and termination experience in 2024.

Table IV.A4.—Reasons for Change in Trust Fund (Unfunded Obligation) Ratios at the Beginning of the Tenth Year of Projection Under Intermediate Assumptions
[In percent]

Item	OASI Trust Fund	DI Trust Fund	OASI and DI Trust Funds, combined
Trust fund ratio shown in last year's report for calendar year 2033	16	240	37
Change in trust fund ratio due to changes in:			
Legislation and regulations	-10	-14	-11
Valuation period	-18	22	-15
Demographic data and assumptions	1	[a]	1
Economic data and assumptions	[a]	2	[a]
Programmatic data and assumptions	-6	21	-4
Projection methods and data	[a]	[a]	[a]
Total change in trust fund ratio	-34	32	-28
Trust fund ratio shown in this report for calendar year 2034[b]	-18	272	9

[a] Between -0.5 and 0.5 percent.

[b] Values for OASI, and OASI and DI combined, are theoretical because the OASI Trust Fund reserves are depleted before the beginning of the tenth projection year under the assumptions of this report. The negative value for OASI represents the ratio of the unfunded obligation at the beginning of the tenth year to cost for that year.

Note: Components may not sum to totals because of rounding.

B. LONG-RANGE ESTIMATES

The Trustees use three types of financial measures to assess the actuarial status of the Social Security trust funds under the financing approach specified in current law: (1) annual cash-flow measures, including income rates, cost rates, and balances; (2) trust fund ratios; and (3) summary measures such as actuarial balances and unfunded obligations.

The difference between the annual income rate and annual cost rate, both expressed as percentages of taxable payroll, is the annual balance. The level and trend of the annual balances at the end of the 75-year projection period are factors used to assess the actuarial status of the program.

The trust fund ratio for a year is the proportion of the year's projected cost that could be paid with trust fund reserves available at the beginning of the year. Critical factors considered in assessing actuarial status include: (1) the year of depletion of the trust fund reserves and the percent of scheduled benefits that is still payable after reserves are depleted, (2) the stability of the trust fund ratio at the end of the long-range period, and (3) the level and year of maximum trust fund ratio.

Solvency at any point in time requires that sufficient financial resources are available to pay all scheduled benefits at that time. Solvency is generally indicated by a positive trust fund ratio. "Sustainable solvency" for the financing of the program under a specified set of assumptions is achieved when the projected trust fund ratio is positive throughout the 75-year projection period and is either stable or rising at the end of the period.

Total income and cost are summarized over valuation periods that extend through 75 years and over the infinite horizon.[1] This section presents several summarized measures, including the actuarial balance and the open-group unfunded obligation. The actuarial balance indicates the size of any surplus or shortfall as a percentage of taxable payroll over the period. The open-group unfunded obligation indicates the size of any shortfall in present-value dollars.

This section also includes additional information that is used to assess the actuarial status of the Social Security program, including: (1) a comparison of the number of beneficiaries to the number of covered workers, (2) the test of long-range close actuarial balance, and (3) the reasons for the change in the actuarial balance from the last report.

[1] See appendix F.

1. Annual Income Rates, Cost Rates, and Balances

The concepts of income rate and cost rate, expressed as percentages of taxable payroll, are important in the consideration of the long-range actuarial status of the trust funds. The annual income rate is the ratio of all non-interest income to the OASDI taxable payroll for the year. Non-interest income includes payroll taxes, taxes on scheduled benefits, and any General Fund reimbursements. The OASDI taxable payroll consists of the total earnings subject to OASDI taxes with some relatively small adjustments.[1] The annual cost rate is the ratio of the cost of the program to the taxable payroll for the year. The cost includes scheduled benefits, administrative expenses, net interchange with the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. For any year, the annual income rate minus the annual cost rate is the annual "balance" for the year.

Table IV.B1 presents a comparison of the estimated annual income rates and cost rates by trust fund and alternative. Table IV.B2 shows the separate components of the annual income rates.

Under the intermediate assumptions, the OASI income rate decreases from 11.46 percent of payroll for 2024 to 11.01 percent of payroll for 2025. The income rate for 2024 was relatively high because of a positive adjustment to payroll tax contributions made in June 2024. The projected income rate for 2025 is relatively low because of a negative adjustment expected in June 2025.[2] After 2025, the OASI income rate generally gradually rises, reaching 11.66 percent of taxable payroll for 2099. Income from taxation of benefits causes this gradual increase in the OASI income rate for two main reasons: (1) total scheduled benefits are rising faster than payroll; and (2) the ratio of total income tax on benefits to total benefits increases over time for reasons discussed in detail on page 156.

The OASI cost rate rises rapidly from 2024 to about 2040. During this period, the aging of the baby-boom generation will increase the number of beneficiaries much faster than the number of workers increases, as subsequent lower-birth-rate generations continue to replace the baby-boom generation at working ages. During the 2040s, the cost rate continues to increase,

[1] Adjustments include adding deemed wage credits based on military service for 1983-2001 and reflecting the lower effective tax rates (as compared to the combined employee-employer rate) that apply to multiple-employer "excess wages." Lower rates also applied to net earnings from self-employment before 1984 and to income from tips before 1988.

[2] Payroll taxes are initially credited to the trust funds on an estimated basis during a given year. Adjustments reflect differences due to the subsequent determination of taxes owed based on earnings for that year as reported to the Social Security Administration. A positive adjustment indicates that the initial taxes credited were underestimated; a negative adjustment indicates an overestimate.

but at a relatively slower pace, because the aging baby-boom generation is gradually replaced at retired worker benefit eligibility ages by the lower-birth-rate generations that followed. The OASI cost rate then has another period of relatively faster growth, largely because of a period of low birth rates starting in about 2010. The OASI cost rate reaches a maximum of 17.20 percent for 2081 and then generally declines to 16.51 percent for 2099.

Projections of income rates under the low-cost and high-cost sets of assumptions are similar to those projected for the intermediate assumptions, because income rates are largely a reflection of the payroll tax rates specified in the law, with the changes from taxation of benefits noted above. In contrast, OASI cost rates for the low-cost and high-cost assumptions are significantly different from those projected for the intermediate assumptions. For the low-cost assumptions, the OASI cost rate generally declines from 13.26 percent for 2025 to 12.28 percent for 2052, rises to 12.72 percent for 2075, and then generally declines to 11.45 percent for 2099, at which point the income rate reaches 11.33 percent. For the high-cost assumptions, the OASI cost rate rises throughout the projection period from 14.09 percent for 2025 to 25.82 percent for 2099, at which point the income rate reaches 12.26 percent.

The pattern of the projected OASI annual balance is important in the analysis of the actuarial status of the program. Under the intermediate assumptions, the annual balance is negative throughout the projection period. The annual deficit generally increases from 1.65 percent of taxable payroll for 2024 to 5.51 percent for 2080, and generally declines thereafter, reaching 4.85 percent of taxable payroll for 2099.

Under the low-cost assumptions, the OASI annual deficit generally decreases from 2.32 percent of payroll for 2025 to 0.92 percent of payroll for 2052. After 2052, the annual deficit rises to 1.32 percent for 2075, before generally decreasing and reaching an annual deficit of 0.13 percent in 2099. Under the high-cost assumptions, the OASI annual deficit rises throughout the projection period from 2.95 percent for 2025 to 13.56 percent for 2099.

Table IV.B1.—Annual Income Rates, Cost Rates, and Balances, Calendar Years 1990-2100
[As a percentage of taxable payroll]

Calendar year	OASI			DI			OASDI		
	Income rate[a]	Cost rate[b]	Balance[b]	Income rate[a]	Cost rate[b]	Balance[b]	Income rate[a]	Cost rate[b]	Balance[b]
Historical data:									
1990	11.47	9.65	1.82	1.18	1.09	0.10	12.65	10.74	1.91
1995	10.65	10.23	.42	1.87	1.44	.43	12.52	11.67	.85
2000	10.85	8.98	1.87	1.78	1.42	.36	12.62	10.40	2.23
2005	10.96	9.31	1.65	1.84	1.85	-.02	12.80	11.16	1.63
2010	10.75	11.06	-.30	1.79	2.41	-.62	12.54	13.47	-.92
2015	11.02	11.64	-.62	1.81	2.27	-.47	12.82	13.91	-1.09
2016	10.70	11.69	-.99	2.39	2.20	.19	13.09	13.89	-.80
2017	10.63	11.55	-.92	2.42	2.09	.33	13.05	13.64	-.59
2018	10.26	11.67	-1.41	2.32	2.01	.31	12.58	13.68	-1.10
2019	10.96	11.89	-.93	1.84	1.93	-.09	12.80	13.82	-1.02
2020	11.60	12.45	-.85	1.90	1.90	.01	13.50	14.35	-.84
2021	10.48	12.00	-1.52	1.71	1.71	[c]	12.20	13.71	-1.51
2022	10.87	12.01	-1.14	1.78	1.60	.17	12.65	13.62	-.97
2023	11.27	12.63	-1.36	1.84	1.58	.26	13.10	14.21	-1.11
2024	11.46	13.11	-1.65	1.86	1.56	.30	13.32	14.67	-1.34
Intermediate:									
2025	11.01	13.56	-2.55	1.79	1.59	.20	12.80	15.15	-2.35
2026	11.22	13.66	-2.43	1.81	1.63	.18	13.03	15.29	-2.25
2027	11.27	13.84	-2.57	1.81	1.64	.18	13.08	15.48	-2.39
2028	11.29	14.00	-2.71	1.81	1.59	.23	13.11	15.59	-2.48
2029	11.32	14.15	-2.83	1.82	1.54	.28	13.14	15.69	-2.55
2030	11.34	14.30	-2.96	1.81	1.50	.32	13.16	15.80	-2.64
2031	11.37	14.43	-3.06	1.81	1.48	.33	13.18	15.91	-2.73
2032	11.39	14.53	-3.14	1.81	1.47	.34	13.20	16.00	-2.80
2033	11.43	14.60	-3.18	1.82	1.47	.35	13.24	16.07	-2.83
2034	11.45	14.68	-3.23	1.82	1.47	.35	13.27	16.15	-2.88
2035	11.46	14.75	-3.29	1.82	1.48	.34	13.28	16.23	-2.95
2040	11.50	15.04	-3.54	1.82	1.56	.26	13.32	16.60	-3.29
2045	11.51	15.07	-3.56	1.82	1.70	.12	13.34	16.77	-3.44
2050	11.53	15.18	-3.65	1.83	1.79	.04	13.36	16.97	-3.61
2055	11.56	15.46	-3.91	1.83	1.84	-.01	13.39	17.30	-3.91
2060	11.59	15.92	-4.33	1.83	1.82	.01	13.42	17.74	-4.32
2065	11.62	16.28	-4.66	1.83	1.82	.01	13.45	18.10	-4.65
2070	11.65	16.64	-4.99	1.83	1.81	.02	13.48	18.46	-4.97
2075	11.68	17.02	-5.34	1.83	1.78	.05	13.51	18.80	-5.29
2080	11.70	17.20	-5.50	1.83	1.76	.07	13.53	18.96	-5.43
2085	11.69	17.13	-5.43	1.83	1.74	.09	13.53	18.87	-5.34
2090	11.68	16.81	-5.13	1.83	1.77	.07	13.51	18.58	-5.07
2095	11.66	16.55	-4.89	1.83	1.81	.03	13.50	18.36	-4.86
2100	11.66	16.52	-4.86	1.84	1.83	[c]	13.50	18.35	-4.86
First year balance becomes negative and remains negative throughout the 75-year projection period			2010			[d]			2010

Table IV.B1.—Annual Income Rates, Cost Rates, and Balances, Calendar Years 1990-2100 (Cont.)
[As a percentage of taxable payroll]

Calendar year	OASI			DI			OASDI		
	Income rate[a]	Cost rate[b]	Balance[b]	Income rate[a]	Cost rate[b]	Balance[b]	Income rate[a]	Cost rate[b]	Balance[b]
Low-cost:									
2025	10.93	13.26	-2.32	1.78	1.53	0.25	12.71	14.78	-2.07
2026	11.28	13.12	-1.84	1.82	1.51	.31	13.11	14.63	-1.52
2027	11.23	13.11	-1.88	1.81	1.47	.34	13.04	14.59	-1.55
2028	11.24	13.12	-1.88	1.81	1.39	.42	13.05	14.51	-1.46
2029	11.26	13.12	-1.86	1.81	1.32	.49	13.07	14.44	-1.37
2030	11.27	13.10	-1.83	1.81	1.25	.56	13.08	14.35	-1.27
2031	11.29	13.07	-1.78	1.81	1.21	.60	13.10	14.28	-1.18
2032	11.30	13.01	-1.71	1.81	1.18	.63	13.11	14.19	-1.08
2033	11.33	12.94	-1.61	1.81	1.15	.66	13.14	14.09	-.95
2034	11.34	12.87	-1.53	1.81	1.13	.68	13.15	14.00	-.85
2035	11.34	12.84	-1.50	1.81	1.12	.69	13.15	13.96	-.81
2040	11.35	12.70	-1.35	1.81	1.13	.68	13.17	13.83	-.66
2045	11.35	12.44	-1.09	1.82	1.20	.61	13.17	13.64	-.48
2050	11.35	12.29	-.94	1.82	1.25	.57	13.17	13.54	-.37
2055	11.36	12.32	-.96	1.82	1.26	.56	13.18	13.58	-.40
2060	11.38	12.50	-1.12	1.82	1.24	.58	13.20	13.73	-.54
2065	11.39	12.59	-1.20	1.82	1.22	.60	13.21	13.81	-.60
2070	11.40	12.66	-1.26	1.82	1.21	.61	13.22	13.87	-.65
2075	11.40	12.72	-1.32	1.82	1.19	.63	13.22	13.91	-.69
2080	11.40	12.61	-1.21	1.82	1.17	.65	13.22	13.78	-.56
2085	11.38	12.29	-.91	1.82	1.16	.66	13.20	13.45	-.25
2090	11.35	11.80	-.45	1.82	1.18	.64	13.17	12.98	.19
2095	11.33	11.47	-.14	1.82	1.22	.60	13.15	12.69	.46
2100	11.33	11.48	-.15	1.82	1.23	.59	13.15	12.71	.44
First year balance becomes negative and remains negative throughout the 75-year projection period			2010			[e]			[d]
High-cost:									
2025	11.14	14.09	-2.95	1.81	1.69	.12	12.95	15.77	-2.82
2026	11.13	14.58	-3.45	1.79	1.80	-.01	12.92	16.38	-3.46
2027	11.32	14.82	-3.50	1.82	1.84	-.02	13.14	16.65	-3.52
2028	11.36	15.06	-3.70	1.82	1.81	.01	13.17	16.86	-3.69
2029	11.39	15.31	-3.92	1.82	1.78	.04	13.20	17.09	-3.88
2030	11.42	15.60	-4.19	1.82	1.76	.06	13.24	17.36	-4.13
2031	11.46	15.90	-4.45	1.82	1.78	.04	13.28	17.68	-4.40
2032	11.49	16.18	-4.70	1.82	1.80	.02	13.31	17.98	-4.67
2033	11.54	16.44	-4.90	1.82	1.83	[c]	13.36	18.27	-4.90
2034	11.58	16.70	-5.12	1.82	1.86	-.04	13.40	18.55	-5.16

Table IV.B1.—Annual Income Rates, Cost Rates, and Balances, Calendar Years 1990-2100 (Cont.)
[As a percentage of taxable payroll]

Calendar year	OASI			DI			OASDI		
	Income rate[a]	Cost rate[b]	Balance[b]	Income rate[a]	Cost rate[b]	Balance[b]	Income rate[a]	Cost rate[b]	Balance[b]
High-cost (Cont.):									
2035	11.59	16.90	-5.31	1.82	1.90	-0.07	13.41	18.79	-5.38
2040	11.66	17.82	-6.16	1.83	2.08	-.25	13.49	19.90	-6.41
2045	11.71	18.38	-6.67	1.83	2.31	-.47	13.54	20.69	-7.14
2050	11.76	19.04	-7.28	1.84	2.46	-.62	13.60	21.50	-7.91
2055	11.82	19.87	-8.05	1.84	2.57	-.73	13.66	22.44	-8.78
2060	11.90	20.89	-8.99	1.84	2.60	-.75	13.74	23.49	-9.75
2065	11.96	21.82	-9.86	1.84	2.63	-.78	13.81	24.45	-10.64
2070	12.03	22.78	-10.75	1.85	2.65	-.80	13.88	25.43	-11.55
2075	12.10	23.82	-11.71	1.85	2.62	-.78	13.95	26.44	-12.49
2080	12.17	24.70	-12.53	1.85	2.60	-.75	14.01	27.30	-13.28
2085	12.21	25.33	-13.12	1.85	2.55	-.71	14.06	27.89	-13.83
2090	12.24	25.63	-13.39	1.85	2.55	-.71	14.09	28.18	-14.10
2095	12.25	25.76	-13.51	1.85	2.57	-.72	14.10	28.33	-14.23
2100	12.26	25.83	-13.57	1.85	2.59	-.74	14.11	28.42	-14.31
First year balance becomes negative and remains negative throughout the 75-year projection period			2010			2033			2010

[a] Income rates include certain reimbursements from the General Fund of the Treasury.

[b] Benefit payments scheduled to be paid on January 3 are actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

[c] Between -0.005 and 0.005 percent of taxable payroll.

[d] The annual balance is projected to be negative for a temporary period and then become positive before the end of the projection period.

[e] The annual balance is projected to be positive throughout the entire 75-year projection period.

Notes:
1. The income rate excludes interest income.
2. Revisions of taxable payroll may change some historical values.
3. Components may not sum to totals because of rounding.

Under the intermediate assumptions, the projected DI cost rate is 1.59 percent for 2025. After 2025, the cost rate fluctuates, reaching 1.47 percent for 2033. Then the DI cost rate increases gradually to 1.84 percent for 2056. Thereafter, the cost rate remains relatively stable, decreasing slowly to 1.74 percent for 2085, and then increasing to 1.83 percent for 2099. The DI income rate decreases from 1.86 percent for 2024 to 1.79 percent for 2025 and thereafter generally increases to 1.84 percent for 2099. The annual balance decreases from 0.30 percent of payroll for 2024 to 0.18 percent for 2027, increases to 0.35 percent for 2033 and then decreases and becomes slightly negative (i.e., an annual deficit) in years 2054 through 2058. After 2058, the annual balance increases to 0.09 percent for 2085 and then declines to 0.01 percent for 2099.

Under the low-cost assumptions, the projected DI cost rate declines from 1.53 percent of payroll for 2025 to 1.11 percent for 2038 and then increases to 1.26 percent for 2055. The cost rate then declines through 2084 and

increases slowly thereafter, reaching 1.23 percent for 2099. The annual balance is positive throughout the long-range period, reaching 0.70 percent of payroll for 2099. Under the high-cost assumptions, the DI cost rate rises from 1.69 percent of payroll for 2025 to 2.65 percent for 2071 and fluctuates thereafter, reaching 2.59 percent for 2099. The DI annual balance declines from 0.12 percent of payroll for 2025 and becomes negative in years 2026 and 2027, positive in years 2028 through 2032, and then negative again in 2033 with annual deficits persisting thereafter. The annual deficits increase to 0.80 percent for 2071, decrease to 0.70 percent for 2087 and then increase to 0.74 percent for 2099.

Figure IV.B1 shows the patterns of the historical and projected OASI and DI annual cost rates. The patterns in projected OASI and DI cost rates are described earlier in this chapter. Historical annual OASI cost rates shifted upward starting in 2008 and have remained at relatively high levels since then, primarily due to the changing age distribution of the adult population with the retirement of the baby-boom generation and entry of lower birth-rate generations into working ages.

Historical annual DI cost rates rose substantially between 1990 and 2010 in large part due to: (1) aging of the working population as the baby-boom generation moved from ages 25-44 in 1990, where disability prevalence is low, to ages 45-64 in 2010, where disability prevalence is much higher; (2) a substantial increase in the percentage of women insured for DI benefits as a result of increased and more consistent rates of employment; and (3) increased disability incidence rates for women to a level similar to those for men by 2010. As of 2010, these three factors have largely stabilized. Other factors that are not yet fully understood, including the changing nature of work, have caused age-sex-adjusted disability incidence rates to generally decline from 2010 to 2022, and remain low through 2024. In turn, age-sex-adjusted disability prevalence rates and DI cost rates have declined over the last decade.

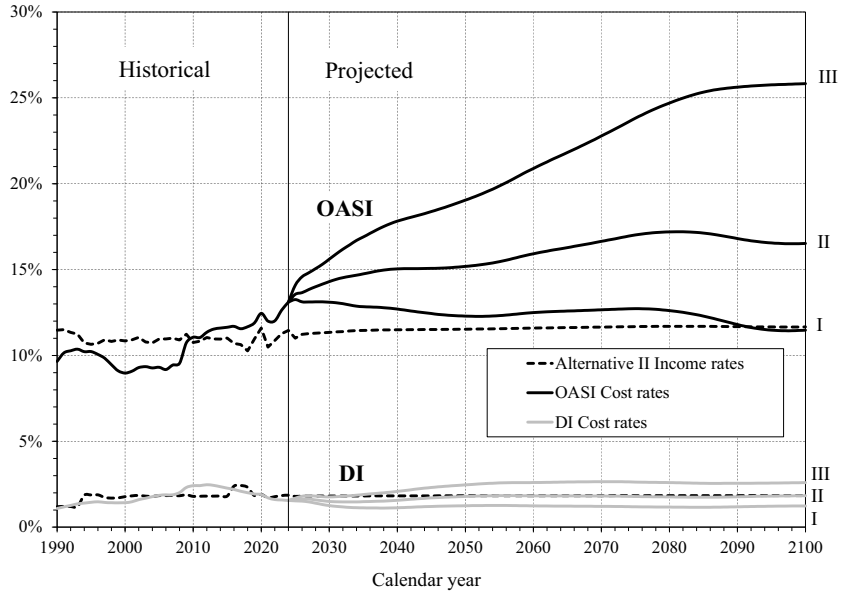
Figure IV.B1 shows only the income rates for alternative II because the variation in income rates by alternative is very small. Income rates generally increase slowly for each of the alternatives over the long-range period. Taxation of benefits, which is a small portion of income, is the main source of the increases in the income rate and the variation among the alternatives.

Table IV.B1 shows the annual balances for OASI, DI, and OASDI. The pattern of the annual balances is important to the analysis of the actuarial status of the Social Security program as a whole. As seen in figure IV.B1, the magnitude of each of the positive annual balances is the distance between the appropriate cost-rate curve and the income-rate curve above it. The magnitude of each of the annual deficits is the distance between the appropriate

cost-rate curve and the income-rate curve below it. Annual balances follow closely the pattern of annual cost rates after 1990 because the payroll tax rate for the OASDI program has not changed and will not under current law, with only small variations in the allocation between DI and OASI except for changes due to the 1994 and the 2016-18 payroll tax rate reallocations.

In the future, the costs of OASI, DI, and the combined OASDI programs as a percentage of taxable payroll are unlikely to fall outside the range encompassed by alternatives I and III, because alternatives I and III define a wide range of demographic, economic, and program-specific conditions.

Figure IV.B1.—Long-Range OASI and DI Annual Income Rates and Cost Rates
[As a percentage of taxable payroll]



Long-range OASDI cost and income are most often expressed as percentages of taxable payroll. However, cost and income are also presented as shares of gross domestic product (GDP), the value of goods and services produced during the year in the United States. Under alternative II, the OASDI cost increases from about 5.3 percent of GDP for 2025 to about 6.4 percent for 2079. After 2079, OASDI cost as a percentage of GDP declines, reaching about 6.1 percent by 2099. Appendix G presents detailed estimates of income and cost relative to GDP.

Table IV.B2 contains historical and projected annual income rates and their components by trust fund and alternative. The annual income rates consist of the scheduled payroll tax rates, the rates of income from taxation of scheduled benefits, and the rates of income from General Fund reimbursements. Projected income from taxation of benefits increases over time for reasons discussed on page 156.

Table IV.B2.—Components of Annual Income Rates, Calendar Years 1990-2100
[As a percentage of taxable payroll]

Calendar year	OASI				DI				OASDI			
	Payroll tax	Taxation of benefits[a]	General Fund reimbursements[b]	Total[c]	Payroll tax	Taxation of benefits[a]	General Fund reimbursements[b]	Total[c]	Payroll tax	Taxation of benefits[a]	General Fund reimbursements[b]	Total[c]
Historical data:												
1990 . .	11.29	0.21	-0.03	11.47	1.21	0.01	-0.03	1.18	12.50	0.21	-0.06	12.65
1995 . .	10.46	.19	-.01	10.65	1.87	.01	-.01	1.87	12.33	.20	-.01	12.52
2000 . .	10.56	.29	[d]	10.85	1.78	.02	-.02	1.78	12.34	.31	-.02	12.62
2005 . .	10.68	.29	-.01	10.96	1.81	.02	[d]	1.84	12.49	.31	-.01	12.80
2010 . .	10.30	.42	.04	10.75	1.75	.04	.01	1.79	12.05	.45	.05	12.54
2015 . .	10.54	.47	[d]	11.02	1.79	.02	[d]	1.81	12.33	.49	.01	12.82
2016 . .	10.22	.48	[d]	10.70	2.37	.02	[d]	2.39	12.59	.49	[d]	13.09
2017 . .	10.12	.51	[d]	10.63	2.39	.03	[d]	2.42	12.51	.54	[d]	13.05
2018 . .	9.79	.47	[d]	10.26	2.31	.01	[d]	2.32	12.10	.48	[d]	12.58
2019 . .	10.50	.46	[d]	10.96	1.82	.02	[d]	1.84	12.32	.48	[d]	12.80
2020 . .	11.09	.51	[d]	11.60	1.88	.02	[d]	1.90	12.97	.53	[d]	13.50
2021 . .	10.04	.44	[d]	10.48	1.71	.01	[d]	1.71	11.75	.45	[d]	12.20
2022 . .	10.35	.52	[d]	10.87	1.76	.02	[d]	1.78	12.11	.53	[d]	12.65
2023 . .	10.76	.51	[d]	11.27	1.83	.01	[d]	1.84	12.59	.52	[d]	13.10
2024 . .	10.92	.54	[d]	11.46	1.85	.01	[d]	1.86	12.77	.54	[d]	13.32
Intermediate:												
2025 . .	10.46	.55	[d]	11.01	1.78	.01	[d]	1.79	12.23	.57	[d]	12.80
2026 . .	10.55	.67	[d]	11.22	1.79	.02	[d]	1.81	12.35	.69	[d]	13.03
2027 . .	10.57	.70	[d]	11.27	1.80	.02	[d]	1.81	12.37	.71	[d]	13.08
2028 . .	10.58	.71	[d]	11.29	1.80	.02	[d]	1.81	12.38	.73	[d]	13.11
2029 . .	10.58	.74	[d]	11.32	1.80	.02	[d]	1.82	12.38	.75	[d]	13.14
2030 . .	10.58	.76	[d]	11.34	1.80	.02	[d]	1.81	12.38	.78	[d]	13.16
2031 . .	10.58	.79	[d]	11.37	1.80	.02	[d]	1.81	12.38	.81	[d]	13.18
2032 . .	10.57	.82	[d]	11.39	1.80	.02	[d]	1.81	12.37	.84	[d]	13.20
2033 . .	10.58	.84	[d]	11.43	1.80	.02	[d]	1.82	12.38	.86	[d]	13.24
2034 . .	10.58	.87	[d]	11.45	1.80	.02	[d]	1.82	12.38	.89	[d]	13.27
2035 . .	10.58	.88	[d]	11.46	1.80	.02	[d]	1.82	12.38	.90	[d]	13.28
2040 . .	10.58	.91	[d]	11.50	1.80	.02	[d]	1.82	12.38	.94	[d]	13.32
2045 . .	10.58	.93	[d]	11.51	1.80	.03	[d]	1.82	12.38	.96	[d]	13.34
2050 . .	10.58	.95	[d]	11.53	1.80	.03	[d]	1.83	12.38	.98	[d]	13.36
2055 . .	10.58	.97	[d]	11.56	1.80	.03	[d]	1.83	12.38	1.01	[d]	13.39
2060 . .	10.58	1.01	[d]	11.59	1.80	.03	[d]	1.83	12.38	1.04	[d]	13.42
2065 . .	10.58	1.04	[d]	11.62	1.80	.03	[d]	1.83	12.38	1.07	[d]	13.45
2070 . .	10.58	1.07	[d]	11.65	1.80	.04	[d]	1.83	12.38	1.10	[d]	13.48
2075 . .	10.58	1.10	[d]	11.68	1.80	.04	[d]	1.83	12.38	1.13	[d]	13.51
2080 . .	10.58	1.11	[d]	11.70	1.80	.04	[d]	1.83	12.38	1.15	[d]	13.53
2085 . .	10.58	1.11	[d]	11.69	1.80	.04	[d]	1.83	12.38	1.15	[d]	13.53
2090 . .	10.58	1.09	[d]	11.68	1.80	.04	[d]	1.83	12.38	1.13	[d]	13.51
2095 . .	10.58	1.08	[d]	11.66	1.80	.04	[d]	1.83	12.38	1.12	[d]	13.50
2100 . .	10.58	1.08	[d]	11.66	1.80	.04	[d]	1.84	12.38	1.12	[d]	13.50
Low-cost:												
2025 . .	10.39	.54	[d]	10.93	1.76	.01	[d]	1.78	12.16	.55	[d]	12.71
2026 . .	10.64	.64	[d]	11.28	1.81	.02	[d]	1.82	12.44	.66	[d]	13.11
2027 . .	10.57	.66	[d]	11.23	1.79	.02	[d]	1.81	12.36	.68	[d]	13.04
2028 . .	10.57	.67	[d]	11.24	1.80	.02	[d]	1.81	12.37	.69	[d]	13.05
2029 . .	10.58	.68	[d]	11.26	1.80	.02	[d]	1.81	12.38	.70	[d]	13.07
2030 . .	10.57	.70	[d]	11.27	1.80	.01	[d]	1.81	12.37	.71	[d]	13.08
2031 . .	10.57	.72	[d]	11.29	1.80	.01	[d]	1.81	12.37	.73	[d]	13.10
2032 . .	10.57	.73	[d]	11.30	1.79	.01	[d]	1.81	12.36	.75	[d]	13.11
2033 . .	10.58	.75	[d]	11.33	1.80	.01	[d]	1.81	12.37	.76	[d]	13.14
2034 . .	10.57	.76	[d]	11.34	1.80	.01	[d]	1.81	12.37	.78	[d]	13.15

Table IV.B2.—Components of Annual Income Rates, Calendar Years 1990-2100 (Cont.)
[As a percentage of taxable payroll]

Calendar year	OASI				DI				OASDI			
	Payroll tax	Taxation of benefits[a]	General Fund reimbursements[b]	Total[c]	Payroll tax	Taxation of benefits[a]	General Fund reimbursements[b]	Total[c]	Payroll tax	Taxation of benefits[a]	General Fund reimbursements[b]	Total[c]
Low-cost (Cont.):												
2035 . .	10.58	0.76	[d]	11.34	1.80	0.01	[d]	1.81	12.37	0.78	[d]	13.15
2040 . .	10.58	.78	[d]	11.35	1.80	.02	[d]	1.81	12.37	.79	[d]	13.17
2045 . .	10.58	.77	[d]	11.35	1.80	.02	[d]	1.82	12.37	.79	[d]	13.17
2050 . .	10.58	.77	[d]	11.35	1.80	.02	[d]	1.82	12.37	.80	[d]	13.17
2055 . .	10.58	.78	[d]	11.36	1.80	.02	[d]	1.82	12.37	.81	[d]	13.18
2060 . .	10.58	.80	[d]	11.38	1.80	.02	[d]	1.82	12.37	.82	[d]	13.20
2065 . .	10.58	.81	[d]	11.39	1.80	.02	[d]	1.82	12.37	.84	[d]	13.21
2070 . .	10.58	.82	[d]	11.40	1.80	.02	[d]	1.82	12.37	.84	[d]	13.22
2075 . .	10.58	.83	[d]	11.40	1.80	.02	[d]	1.82	12.37	.85	[d]	13.22
2080 . .	10.58	.82	[d]	11.40	1.80	.02	[d]	1.82	12.37	.85	[d]	13.22
2085 . .	10.58	.80	[d]	11.38	1.80	.02	[d]	1.82	12.37	.83	[d]	13.20
2090 . .	10.58	.77	[d]	11.35	1.80	.03	[d]	1.82	12.37	.80	[d]	13.17
2095 . .	10.58	.75	[d]	11.33	1.80	.03	[d]	1.82	12.37	.78	[d]	13.15
2100 . .	10.58	.75	[d]	11.33	1.80	.03	[d]	1.82	12.37	.78	[d]	13.15
High-cost:												
2025 . .	10.57	.57	[d]	11.14	1.79	.02	[d]	1.81	12.36	.59	[d]	12.95
2026 . .	10.41	.72	[d]	11.13	1.77	.02	[d]	1.79	12.18	.74	[d]	12.92
2027 . .	10.57	.75	[d]	11.32	1.80	.02	[d]	1.82	12.37	.77	[d]	13.14
2028 . .	10.59	.77	[d]	11.36	1.80	.02	[d]	1.82	12.38	.79	[d]	13.17
2029 . .	10.59	.80	[d]	11.39	1.80	.02	[d]	1.82	12.39	.82	[d]	13.20
2030 . .	10.59	.83	[d]	11.42	1.80	.02	[d]	1.82	12.38	.85	[d]	13.24
2031 . .	10.59	.87	[d]	11.46	1.80	.02	[d]	1.82	12.38	.89	[d]	13.28
2032 . .	10.58	.91	[d]	11.49	1.80	.02	[d]	1.82	12.38	.93	[d]	13.31
2033 . .	10.59	.95	[d]	11.54	1.80	.02	[d]	1.82	12.39	.97	[d]	13.36
2034 . .	10.59	.99	[d]	11.58	1.80	.02	[d]	1.82	12.39	1.01	[d]	13.40
2035 . .	10.59	1.00	[d]	11.59	1.80	.02	[d]	1.82	12.39	1.03	[d]	13.41
2040 . .	10.59	1.07	[d]	11.66	1.80	.03	[d]	1.83	12.39	1.10	[d]	13.49
2045 . .	10.59	1.12	[d]	11.71	1.80	.03	[d]	1.83	12.39	1.15	[d]	13.54
2050 . .	10.59	1.17	[d]	11.76	1.80	.04	[d]	1.84	12.39	1.21	[d]	13.60
2055 . .	10.59	1.23	[d]	11.82	1.80	.04	[d]	1.84	12.39	1.28	[d]	13.66
2060 . .	10.59	1.31	[d]	11.90	1.80	.04	[d]	1.84	12.39	1.35	[d]	13.74
2065 . .	10.59	1.37	[d]	11.96	1.80	.05	[d]	1.84	12.39	1.42	[d]	13.81
2070 . .	10.59	1.44	[d]	12.03	1.80	.05	[d]	1.85	12.39	1.49	[d]	13.88
2075 . .	10.59	1.51	[d]	12.10	1.80	.05	[d]	1.85	12.39	1.56	[d]	13.95
2080 . .	10.59	1.58	[d]	12.17	1.80	.05	[d]	1.85	12.39	1.63	[d]	14.01
2085 . .	10.59	1.62	[d]	12.21	1.80	.05	[d]	1.85	12.39	1.67	[d]	14.06
2090 . .	10.59	1.65	[d]	12.24	1.80	.05	[d]	1.85	12.39	1.70	[d]	14.09
2095 . .	10.59	1.66	[d]	12.25	1.80	.05	[d]	1.85	12.39	1.71	[d]	14.10
2100 . .	10.59	1.67	[d]	12.26	1.80	.05	[d]	1.85	12.39	1.72	[d]	14.11

[a] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in the law.

[b] Includes payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96, and other miscellaneous reimbursements. Also includes transfers of a portion of the proceeds from repayments of loans authorized under Public Law 116-136.

[c] Values exclude interest income.

[d] Between 0 and 0.005 percent of taxable payroll.

Note: Components may not sum to totals because of rounding.

2. Comparison of Workers to Beneficiaries

Under the intermediate assumptions, the OASDI cost rate will rise rapidly between 2025 and about 2040, primarily because the number of beneficiaries rises much more rapidly than the number of covered workers as the baby-boom generation continues to retire and is replaced at working ages by lower birth-rate generations. The ratio of OASDI beneficiaries to workers is dominated by the OASI program because all workers eventually die or reach retired worker benefit eligibility age, but only a small minority become eligible for benefits under the DI program. The trends described below are primarily due to demographic changes and thus affect the DI program roughly 20 years earlier than the OASI and OASDI programs. The baby-boom generation had lower fertility rates than their parents, and these are expected to persist for all future generations; therefore, the ratio of OASDI beneficiaries to workers will rise rapidly and reach a permanently higher level after all of the baby-boom generation has retired. Due to increasing longevity, the ratio of beneficiaries to workers will generally rise slowly thereafter. Table IV.B3 provides a comparison of the numbers of covered workers and beneficiaries.

Table IV.B3.—Covered Workers and Beneficiaries, Calendar Years 1945-2100

Calendar year	Covered workers[a] (in thousands)	Beneficiaries[b] (in thousands)			Covered workers per OASDI beneficiary	OASDI beneficiaries per 100 covered workers
		OASI	DI	OASDI[c]		
Historical data:						
1945	46,390	1,106	—	1,106	41.9	2
1950	48,280	2,930	—	2,930	16.5	6
1955	65,066	7,564	—	7,564	8.6	12
1960	72,371	13,740	522	14,262	5.1	20
1965	80,539	18,509	1,648	20,157	4.0	25
1970	92,963	22,618	2,568	25,186	3.7	27
1975	100,193	26,998	4,125	31,123	3.2	31
1980	112,651	30,384	4,734	35,117	3.2	31
1985	120,438	32,763	3,874	36,636	3.3	30
1990	133,005	35,255	4,204	39,459	3.4	30
1995	140,800	37,364	5,731	43,096	3.3	31
2000	154,707	38,556	6,606	45,162	3.4	29
2005	159,035	39,961	8,172	48,133	3.3	30
2010	157,054	43,440	9,958	53,398	2.9	34
2015	168,123	48,663	10,881	59,543	2.8	35
2016	170,614	49,811	10,728	60,539	2.8	35
2017	172,692	50,962	10,517	61,480	2.8	36
2018	175,102	52,168	10,296	62,464	2.8	36
2019	177,024	53,508	10,063	63,570	2.8	36
2020	175,244	54,843	9,844	64,686	2.7	37
2021	176,995	55,546	9,486	65,032	2.7	37
2022	181,099	56,544	9,070	65,614	2.8	36
2023	182,689	57,924	8,707	66,631	2.7	36
2024	183,936	59,556	8,312	67,868	2.7	37
Intermediate:						
2025	185,251	61,259	8,317	69,575	2.7	38
2030	189,406	68,219	8,765	76,985	2.5	41
2035	191,744	72,691	9,038	81,728	2.3	43
2040	193,113	75,178	9,599	84,777	2.3	44
2045	194,800	76,268	10,492	86,761	2.2	45

Table IV.B3.—Covered Workers and Beneficiaries, Calendar Years 1945-2100 (Cont.)

Calendar year	Covered workers[a] (in thousands)	Beneficiaries[b] (in thousands) OASI	DI	OASDI[c]	Covered workers per OASDI beneficiary	OASDI beneficiaries per 100 covered workers
Intermediate (Cont.):						
2050	197,170	77,667	11,141	88,808	2.2	45
2055	200,084	79,799	11,606	91,405	2.2	46
2060	203,185	82,903	11,718	94,621	2.1	47
2065	206,041	85,815	11,865	97,680	2.1	47
2070	208,457	88,812	11,974	100,787	2.1	48
2075	210,673	91,814	11,952	103,766	2.0	49
2080	213,152	93,927	11,984	105,912	2.0	50
2085	216,310	94,999	12,079	107,078	2.0	50
2090	220,158	95,044	12,478	107,522	2.0	49
2095	224,383	95,485	12,959	108,444	2.1	48
2100	228,446	96,987	13,326	110,313	2.1	48
Low-cost:						
2025	187,069	61,232	8,274	69,506	2.7	37
2030	193,530	67,898	8,083	75,981	2.5	39
2035	196,962	71,859	7,768	79,626	2.5	40
2040	199,284	73,537	7,875	81,412	2.4	41
2045	202,347	73,905	8,432	82,337	2.5	41
2050	207,044	74,667	8,872	83,539	2.5	40
2055	212,896	76,200	9,201	85,400	2.5	40
2060	219,209	78,758	9,284	88,042	2.5	40
2065	225,314	81,155	9,415	90,571	2.5	40
2070	230,998	83,577	9,550	93,128	2.5	40
2075	236,768	85,965	9,631	95,596	2.5	40
2080	243,353	87,486	9,801	97,287	2.5	40
2085	251,390	88,029	10,075	98,104	2.6	39
2090	260,666	87,708	10,653	98,362	2.7	38
2095	270,343	88,434	11,314	99,749	2.7	37
2100	279,508	91,128	11,817	102,945	2.7	37
High-cost:						
2025	182,359	61,294	8,359	69,652	2.6	38
2030	185,672	68,664	9,442	78,106	2.4	42
2035	187,322	73,906	10,310	84,216	2.2	45
2040	187,987	77,508	11,318	88,826	2.1	47
2045	188,424	79,738	12,523	92,262	2.0	49
2050	188,281	82,204	13,361	95,565	2.0	51
2055	187,841	85,253	13,946	99,199	1.9	53
2060	187,263	89,126	14,061	103,187	1.8	55
2065	186,330	92,722	14,179	106,902	1.7	57
2070	184,933	96,381	14,186	110,567	1.7	60
2075	183,064	100,016	13,933	113,948	1.6	62
2080	180,858	102,714	13,645	116,359	1.6	64
2085	178,658	104,247	13,303	117,551	1.5	66
2090	176,598	104,493	13,178	117,671	1.5	67
2095	174,820	104,148	13,101	117,249	1.5	67
2100	173,175	103,528	13,084	116,612	1.5	67

[a] Workers who are paid at some time during the year for employment on which OASDI taxes are due.
[b] Beneficiaries with monthly benefits in current-payment status as of June 30.
[c] This column is the sum of OASI and DI beneficiaries. A small number of beneficiaries receive benefits from both funds.

Notes:

1. The number of beneficiaries does not include uninsured individuals who received benefits under section 228 of the Social Security Act. The General Fund of the Treasury reimbursed the trust funds for the costs of most of these individuals.

2. Historical covered worker and beneficiary data are subject to revision.

3. Components may not sum to totals because of rounding.

The effect of the demographic shift on the OASDI cost rates is clear when one considers the projected number of OASDI beneficiaries per 100 covered workers under the three alternatives. Compared to the 2024 level of 37 beneficiaries per 100 covered workers, this ratio is projected to rise to 44 by 2040 under the intermediate assumptions, because the growth in beneficiaries greatly exceeds the growth in workers. This projected ratio continues to rise through 2080 and then generally declines, reaching 48 under the intermediate assumptions by 2100. Under the high-cost assumptions, this ratio rises to 67 by 2100. Under the low-cost assumptions, this ratio rises to 41 by 2040 and then generally declines, reaching 37 by 2100. Figure IV.B2 shows beneficiaries per 100 covered workers.

For each alternative, the curve in figure IV.B2 is strikingly similar to the corresponding cost-rate curve in figure IV.B1. This similarity emphasizes the extent to which the cost rate is determined by the age distribution of the population. The cost rate is essentially the product of the number of beneficiaries and their average benefit, divided by the product of the number of covered workers and their average taxable earnings. For this reason, the pattern of the annual cost rates is similar to that of the annual ratios of beneficiaries to workers.

Figure IV.B2.—Number of OASDI Beneficiaries Per 100 Covered Workers

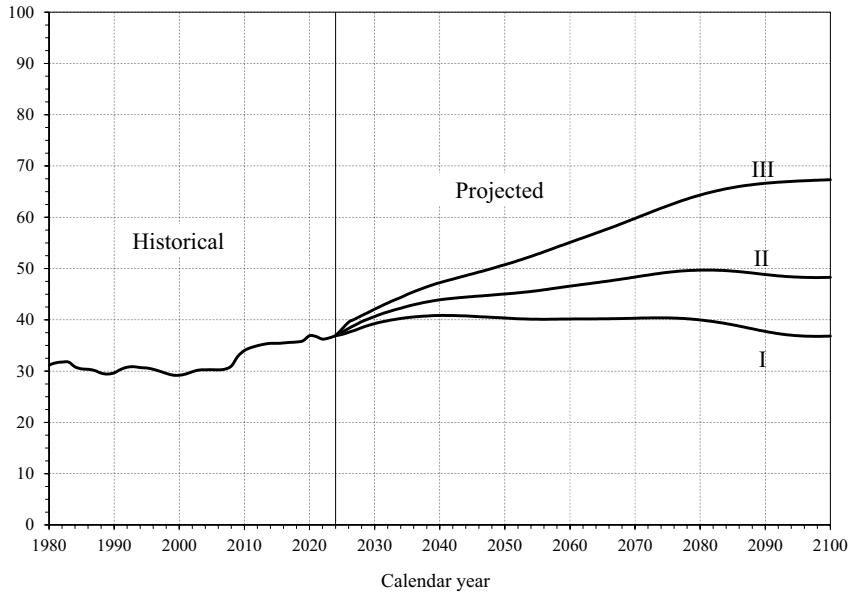


Table IV.B3 also shows the number of covered workers per OASDI beneficiary, which was about 2.7 for 2024. Under the intermediate assumptions, this ratio declines generally throughout the long-range period, reaching 2.3 for 2040 and 2.1 by 2100. Under the low-cost assumptions, this ratio declines to 2.4 for 2040, then generally rises to 2.7 by 2100. Under the high-cost assumptions, this ratio decreases to 1.5 by 2100.

3. Trust Fund Ratios and Test of Long-Range Close Actuarial Balance

Trust fund ratios are critical indicators of the adequacy of the financial resources of the Social Security program. The trust fund ratio for a year is the amount of reserves in a fund at the beginning of a year expressed as a percentage of the cost for the year. Under current law, the OASI and DI Trust Funds do not have the authority to borrow other than in the form of advance tax transfers. If reserves held in either trust fund become depleted during a year, and continuing revenue falls short of the cost of scheduled benefits, then full scheduled benefits would not be payable on a timely basis. For this reason, the trust fund ratio is a critical financial measure.

The trust fund ratio serves an additional important purpose in assessing the actuarial status of the program. If the projected trust fund ratio is positive throughout the period and is either level or increasing at the end of the period, then projected adequacy for the long-range period is likely to continue for subsequent reports. Under these conditions, the program has achieved sustainable solvency.

Table IV.B4 shows the projections of trust fund ratios by alternative, without regard to advance tax transfers that would be effected, for the separate and combined OASI and DI Trust Funds. The table also shows the years of trust fund reserve depletion and the percentage of scheduled benefits that would be payable thereafter, by alternative.

Under the intermediate assumptions, the OASI trust fund ratio is projected to decline from 176 percent at the beginning of 2025 until the trust fund reserves become depleted in 2033 (the same year as projected in last year's report), at which time 77 percent of scheduled benefits would be payable.

The DI Trust Fund remains solvent throughout the long-range period under the intermediate assumptions, as in last year's report. The DI trust fund ratio increases throughout the projection period from 108 percent at the beginning of 2025 to 782 percent for 2100. Because the DI trust fund ratio is positive throughout the 75-year projection period and increasing at the end of the period, the DI program achieves sustainable solvency under the intermediate assumptions.

Under the intermediate assumptions, the trust fund ratio for the combined OASI and DI Trust Funds declines from 169 percent at the beginning of 2025 until the combined fund reserves become depleted in 2034 (one year earlier than projected in last year's report), at which time 81 percent of scheduled benefits would be payable.

Under the low-cost assumptions, the trust fund ratio for the DI program increases from 2025 throughout the projection period, from 110 percent at the beginning of 2025 to the extremely high level of 4,372 percent for 2100. For the OASI program, the trust fund ratio declines steadily, from 176 percent for 2025 until the reserves become depleted in 2036, at which time 88 percent of scheduled benefits would be payable. For the combined OASDI program, the trust fund ratio declines from 170 percent for 2025 until the combined fund reserves become depleted in 2051. Because the DI trust fund ratio is positive throughout the projection period and increasing at the end of the period, the DI program achieves sustainable solvency under the low-cost assumptions.

Under the high-cost assumptions, the OASI trust fund ratio declines from 176 percent for 2025 until reserves become depleted in 2031, at which time 70 percent of scheduled benefits would still be payable. The DI trust fund ratio increases from 106 percent for 2025 to 108 percent for 2026, and then generally declines until the reserves become depleted in 2044. At that time, 80 percent of scheduled benefits would still be payable. The combined OASI and DI trust fund ratio declines from 169 percent for 2025 until reserves become depleted in 2032, at which time 73 percent of scheduled benefits would still be payable.

Trust fund reserve depletion occurs within the 75-year projection period for the OASI Trust Fund under the low-cost, intermediate, and high-cost assumptions, and for the DI Trust Fund under the high-cost assumptions. It is therefore very likely that lawmakers will need to increase income, reduce program costs, or both, in order to maintain solvency for the OASI Trust Fund. The stochastic projections discussed in appendix E suggest that OASI and combined OASI and DI Trust Fund reserve depletion is highly probable by 2040.

In the 2024 report, the combined trust fund reserves were projected to become depleted in 2032 and 2035 under the high-cost and intermediate assumptions, respectively, and become temporarily depleted between 2080 and 2086 under the low-cost assumptions.

Table IV.B4.—Trust Fund Ratios, Calendar Years 2025-2100[a]
[In percent]

Calendar year	Intermediate			Low-cost			High-cost		
	OASI	DI	OASDI	OASI	DI	OASDI	OASI	DI	OASDI
2025	176	108	169	176	110	170	176	106	169
2026	153	116	149	154	124	151	151	108	146
2027	132	126	131	136	145	137	124	105	122
2028	110	140	113	118	174	123	99	105	99
2029	89	158	95	101	212	111	72	108	76
2030	67	180	78	86	258	101	46	112	53
2031	46	202	60	71	309	91	19	115	29
2032	25	226	43	57	365	82	[b]	116	4
2033	3	249	26	44	424	75	[b]	116	[b]
2034	[b]	272	9	31	486	68	[b]	115	[b]
2035	[b]	293	[b]	20	548	62	[b]	112	[b]
2040	[b]	383	[b]	[b]	859	38	[b]	71	[b]
2045	[b]	424	[b]	[b]	1,099	19	[b]	[b]	[b]
2050	[b]	445	[b]	[b]	1,332	5	[b]	[b]	[b]
2055	[b]	458	[b]	[b]	1,573	[b]	[b]	[b]	[b]
2060	[b]	482	[b]	[b]	1,869	[b]	[b]	[b]	[b]
2065	[b]	508	[b]	[b]	2,178	[b]	[b]	[b]	[b]
2070	[b]	538	[b]	[b]	2,509	[b]	[b]	[b]	[b]
2075	[b]	581	[b]	[b]	2,889	[b]	[b]	[b]	[b]
2080	[b]	633	[b]	[b]	3,280	[b]	[b]	[b]	[b]
2085	[b]	691	[b]	[b]	3,657	[b]	[b]	[b]	[b]
2090	[b]	732	[b]	[b]	3,906	[b]	[b]	[b]	[b]
2095	[b]	757	[b]	[b]	4,106	[b]	[b]	[b]	[b]
2100	[b]	782	[b]	[b]	4,372	[b]	[b]	[b]	[b]
Trust fund reserves permanently become depleted in	2033	[c]	2034	2036	[c]	2051	2031	2044	2032
Payable benefits as percent of scheduled benefits:									
At the time of permanent reserve depletion	77	[c]	81	88	[c]	97	70	80	73
For 2099	69	[c]100	72	99	[c]100	100	44	71	46

[a] Benefit payments scheduled to be paid on January 3 are actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund ratios reflect the 12 months of benefits scheduled for payment each year.
[b] Trust fund reserves would be depleted at the beginning of this year.
[c] Trust fund reserves would not be depleted within the projection period.

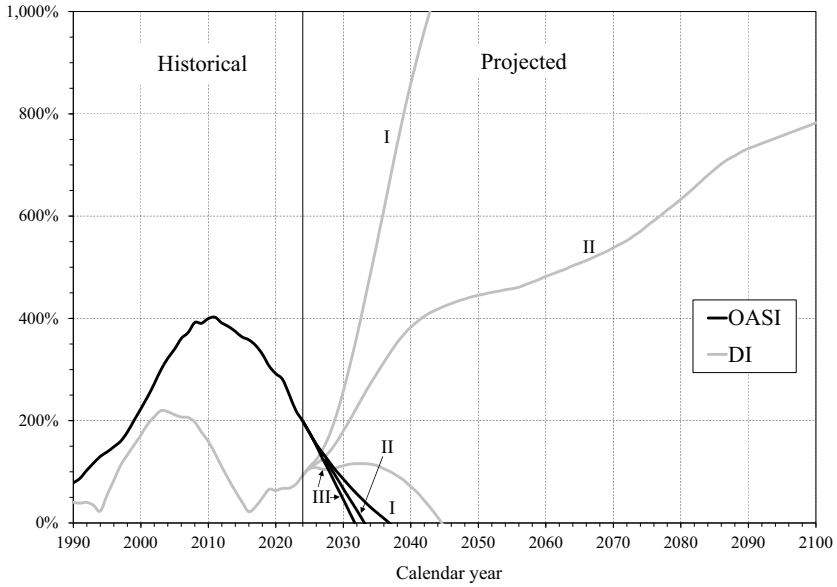
Note: The definition of trust fund ratio appears in the Glossary. The ratios shown for the combined trust funds for years after reserve depletion of either the DI or OASI Trust Fund are hypothetical.

Since 2013, when the Trustees last modified the test of long-range close actuarial balance, the standard for each trust fund requires meeting two conditions: (1) the test of short-range financial adequacy is satisfied; and (2) the trust fund ratios stay above zero throughout the 75-year projection period, allowing scheduled benefits to be paid in a timely manner throughout the period. Both the long-range test and the short-range test are applied based on the intermediate set of assumptions. As discussed in section IV.A, the DI Trust Fund passes the test of short-range financial adequacy because the trust

fund ratio stays above 100 percent throughout the 10-year short-range projection period. The OASI and combined OASI and DI Trust Funds fail the test of short-range financial adequacy because the trust fund ratios drop below 100 percent by the end of the 10-year period. Under the intermediate assumptions, the OASI Trust Fund reserves become depleted in 2033, DI Trust Fund reserves stay positive throughout the 75-year period, and the combined OASI and DI Trust Fund reserves become depleted in 2034. Therefore, the OASI and combined OASI and DI Trust Funds fail the test of long-range close actuarial balance, and the DI program passes the test of long-range close actuarial balance.

Figure IV.B3 illustrates the trust fund ratios for the separate OASI and DI Trust Funds for each of the alternative sets of assumptions. DI Trust Fund status is more uncertain than OASI Trust Fund status because there is a high degree of uncertainty associated with future disability prevalence. A graph of the trust fund ratios for the combined trust funds appears in figure II.D6.

Figure IV.B3.—Long-Range OASI and DI Trust Fund Ratios
[Reserves as a percentage of annual cost]



4. Summarized Income Rates, Summarized Cost Rates, and Actuarial Balances

Summarized values for the full 75-year period are useful in analyzing the program's long-range actuarial status over the period as a whole, both under current law and under proposed modifications to the law. All annual amounts included in a summarized value are present-value discounted to the valuation date. It is important to note that the actuarial balance indicates the solvency status of the fund only for the very end of the period.

Table IV.B5 presents summarized income rates, summarized cost rates, and actuarial balances for 25-year, 50-year, and 75-year valuation periods. Summarized income rates are the sum of the present value of non-interest income for a period (which includes scheduled payroll taxes, the projected income from the taxation of scheduled benefits, and reimbursements from the General Fund of the Treasury) and the starting trust fund reserves, expressed as a percentage of the present value of taxable payroll over the period. Under current law, the total OASDI payroll tax rate will remain at 12.4 percent in the future. In contrast, income from taxation of benefits, expressed as a percentage of taxable payroll, is expected to increase in most years of the long-range period for the reasons discussed on page 156. Summarized cost rates are the sum of the present value of cost for a period (which includes scheduled benefits, administrative expenses, net interchange with the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries) and the present value of the cost of reaching a target trust fund of 100 percent of annual cost at the end of the period, expressed as a percentage of the present value of taxable payroll over the period.

The actuarial balance for a valuation period is equal to the difference between the summarized income rate and the summarized cost rate for the period. An actuarial balance of zero for any period indicates that cost for the period could be met for the period as a whole (but not necessarily at all points within the period), with a remaining trust fund reserve at the end of the period equal to 100 percent of the following year's cost. A negative actuarial balance for a period indicates that the present value of income to the program plus the existing trust fund is less than the present value of the cost of the program plus the cost of reaching a target trust fund reserve of one year's cost by the end of the period. Generally, a trust fund is deemed to be adequately financed for a period as a whole if the actuarial balance is zero or positive, meaning that the reserves at the end of the period are at least

equal to annual cost. Note that solvency is possible at the end of the period with a small negative actuarial balance where reserves are still positive.[1]

Table IV.B5 contains summarized rates for the intermediate, low-cost, and high-cost assumptions. The low-cost and high-cost assumptions define a wide range of possibilities. Financial outcomes as good as the low-cost scenario or as bad as the high-cost scenario are unlikely to occur.

For the 25-year valuation period, the OASDI program has an actuarial balance of -0.51 percent of taxable payroll under the low-cost assumptions, -2.67 percent under the intermediate assumptions, and -5.20 percent under the high-cost assumptions. These balances indicate that the program is not adequately financed for the 25-year valuation period under any of these three sets of assumptions.

For the 50-year valuation period, the OASDI program has actuarial balances of -0.48 percent under the low-cost assumptions, -3.40 percent under the intermediate assumptions, and -7.18 percent under the high-cost assumptions. These actuarial balances mean that the OASDI program is not adequately financed for the 50-year valuation period under any of these three sets of assumptions.

For the entire 75-year valuation period, the combined OASDI program has actuarial balances of -0.33 percent of taxable payroll under the low-cost assumptions, -3.82 percent under the intermediate assumptions, and -8.60 percent under the high-cost assumptions. These balances indicate that the combined OASDI program is not adequately financed for the 75-year valuation period under any of these three sets of assumptions.

Assuming the intermediate assumptions accurately capture future demographic, economic, and program-specific trends, solvency for the program over the next 75 years could be restored using a variety of approaches. For example, revenue could be increased in a manner equivalent to an immediate and permanent increase in the combined Social Security payroll tax rate from 12.40 percent to 16.05 percent (a relative increase of 29.4 percent),[2] cost

[1] A program is solvent over any period for which the trust fund maintains a positive level of reserves. In contrast, the actuarial balance for a period includes the cost of having a target fund equal to 100 percent of the following year's cost at the end of the period. Therefore, if a program ends the period with reserves that are positive but not sufficient to cover the following year's costs, it will be solvent at the end of the period and yet still have a small negative actuarial balance for that period.

[2] The 3.65 percentage point increase in the payroll tax rate required to achieve 75-year solvency differs somewhat from the 3.82 percent actuarial deficit. This is primarily because the rate increase required to achieve 75-year solvency reflects a zero trust fund reserve at the end of the period, whereas the 3.82 percent actuarial deficit incorporates an ending trust fund reserve equal to one year's cost. While such an increase in the payroll tax rate would cause some behavioral changes in earnings and ensuing changes in benefit levels, such changes are not included in these calculations because they are assumed to have roughly offsetting effects on actuarial status over the 75-year long-range period as a whole.

could be reduced in a manner equivalent to an immediate and permanent reduction in scheduled benefits of 22.4 percent, or some combination of approaches could be used.

However, eliminating the actuarial deficit for the next 75-year valuation period requires raising payroll taxes or lowering benefits by more than is required just to achieve solvency, because the actuarial deficit includes the cost of attaining a target trust fund equal to 100 percent of annual program cost by the end of the period. The actuarial deficit could be eliminated for the 75-year period by increasing revenue in a manner equivalent to an immediate and permanent increase in the combined payroll tax from 12.40 percent to 16.22 percent (a relative increase of 30.8 percent),[1] reducing cost in a manner equivalent to an immediate reduction in scheduled benefits of 23.2 percent, or some combination of approaches could be used.

Under the intermediate assumptions, the OASDI program has large annual deficits toward the end of the long-range period that reach 4.84 percent of payroll for 2099 (see table IV.B1). These large deficits indicate that annual cost continues to exceed non-interest income after 2099, so continued adequate financing would require larger changes than those needed to maintain solvency for the 75-year period. Over the period extending through the infinite horizon, the actuarial deficit is 5.2 percent of payroll under the intermediate assumptions.

Table IV.B5.—Components of Summarized Income Rates and Cost Rates, Calendar Years 2025-2099
[As a percentage of taxable payroll]

	Summarized income rate			Summarized cost rate			
Valuation period	Non-interest income	Beginning reserves[a]	Total	Cost[a]	Ending target fund[a]	Total	Actuarial balance
OASI:							
Intermediate:							
2025-49.	11.44	0.92	12.35	14.68	0.57	15.25	-2.90
2025-74.	11.52	.50	12.02	15.28	.28	15.56	-3.54
2025-99.	11.56	.37	11.93	15.72	.16	15.88	-3.95
Low-cost:							
2025-49.	11.33	.83	12.15	12.78	.49	13.26	-1.11
2025-74.	11.36	.43	11.79	12.64	.23	12.87	-1.08
2025-99.	11.36	.31	11.67	12.48	.13	12.61	-.94
High-cost:							
2025-49.	11.56	1.04	12.60	16.92	.68	17.60	-5.00
2025-74.	11.72	.59	12.31	18.72	.34	19.07	-6.76
2025-99.	11.83	.46	12.29	20.20	.20	20.40	-8.11

[1] The calculation of the payroll tax rate increase required to eliminate the actuarial deficit also does not include the effects of behavioral changes, because they are assumed to have roughly offsetting effects.

Table IV.B5.—Components of Summarized Income Rates and Cost Rates, Calendar Years 2025-2099 (Cont.)
[As a percentage of taxable payroll]

	Summarized income rate			Summarized cost rate			
Valuation period	Non-interest income	Beginning reserves[a]	Total	Cost[a]	Ending target fund[a]	Total	Actuarial balance
DI:							
Intermediate:							
2025-49.	1.82	0.07	1.89	1.59	0.07	1.65	0.23
2025-74.	1.82	.04	1.86	1.69	.03	1.72	.14
2025-99.	1.83	.03	1.85	1.71	.02	1.73	.12
Low-cost:							
2025-49.	1.81	.06	1.87	1.22	.05	1.27	.60
2025-74.	1.82	.03	1.85	1.23	.02	1.25	.60
2025-99.	1.82	.02	1.84	1.22	.01	1.23	.61
High-cost:							
2025-49.	1.82	.08	1.90	2.01	.09	2.10	-.20
2025-74.	1.83	.04	1.88	2.26	.04	2.30	-.42
2025-99.	1.84	.03	1.87	2.33	.02	2.35	-.48
OASDI:							
Intermediate:							
2025-49.	13.25	.99	14.24	16.26	.64	16.91	-2.67
2025-74.	13.34	.54	13.88	16.97	.31	17.28	-3.40
2025-99.	13.39	.39	13.79	17.43	.18	17.61	-3.82
Low-cost:							
2025-49.	13.14	.89	14.02	14.00	.54	14.53	-.51
2025-74.	13.18	.46	13.64	13.87	.25	14.12	-.48
2025-99.	13.18	.33	13.51	13.69	.15	13.84	-.33
High-cost:							
2025-49.	13.39	1.12	14.50	18.93	.77	19.70	-5.20
2025-74.	13.55	.64	14.19	20.98	.38	21.37	-7.18
2025-99.	13.67	.49	14.16	22.54	.22	22.76	-8.60

[a] Benefit payments scheduled to be paid on January 3 are actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

Note: Components may not sum to totals because of rounding.

5. Open-Group Unfunded Obligation

Consistent with practice since 1965, this report focuses on a 75-year open-group valuation to evaluate the long-range actuarial status of the OASDI program. The open-group valuation includes non-interest income and cost for past, current, and future participants through the year 2099. The open-group unfunded obligation measures the adequacy of financing over the period as a whole for a program financed on a pay-as-you-go basis. On this basis, payroll taxes and scheduled benefits for all participants are included through 2099.

The open-group unfunded obligation increased from $22.6 trillion shown in last year's report to $25.1 trillion in this report. If there had been no changes in starting values, assumptions, laws, or methods for this report, then the open-group unfunded obligation would have increased to $23.5 trillion

solely due to the change in the valuation period. This expected increase in the unfunded obligation occurs because: (1) the unfunded obligation is now discounted to January 1, 2025, rather than to January 1, 2024, which tends to increase the unfunded obligation by the annual nominal interest rate; and (2) the unfunded obligation now includes an additional year (2099). Changes in the law, assumptions, methods, and starting values resulted in an additional $1.6 trillion increase in the unfunded obligation.

The 75-year unfunded obligation is equivalent to 3.64 percent of OASDI taxable payroll and 1.3 percent of GDP for 2025-99.[1] These percentages were 3.32 and 1.2, respectively, for last year's report. The 75-year unfunded obligation as a percentage of taxable payroll is less than the actuarial deficit, because the unfunded obligation excludes the cost of having an ending target trust fund value.

The actuarial deficit was 3.50 percent of payroll in last year's report, and was expected to increase to a deficit of 3.56 percent of payroll solely due to the change in the valuation period. Changes in the law, assumptions, methods, and starting values combined to account for an additional 0.26 percentage point increase (worsening) in the actuarial deficit to 3.82 percent of payroll. The actuarial deficit is 1.3 percent of GDP in this year's report, 0.1 percent higher than in last year's report.

As mentioned above, the open-group unfunded obligation expressed in dollars is higher than it would have been if only the valuation period had been changed. This net increase occurred for a variety of reasons described in the next section, in particular: (1) the implementation of the Social Security Fairness Act, (2) the extension in the assumed year the ultimate total fertility rate is reached, and (3) the reduction in the ultimate assumption for the ratio of total labor compensation to GDP.

Table IV.B6 presents the components and the calculation of the long-range (75-year) actuarial balance under the intermediate assumptions. The present value of future cost less future non-interest income over the long-range period, minus the amount of trust fund reserves at the beginning of the projection period, is $25.1 trillion for the OASDI program. This amount is the 75-year "open-group unfunded obligation" (see row H). The actuarial deficit (which is the negative of the actuarial balance) combines this unfunded obligation with the present value of the ending target trust fund and expresses the total as a percentage of the present value of the taxable payroll for the period. The present value of future non-interest income minus cost, plus starting

[1] The present value of taxable payroll for 2025-99 is $689.6 trillion. The present value of GDP for 2025-99 is $2,001.2 trillion. In last year's report, the present value of taxable payroll for 2024-98 was $681.8 trillion and the present value of GDP was $1,944.1 trillion.

trust fund reserves, minus the present value of the ending target trust fund, is -$26.4 trillion for the OASDI program.

Table IV.B6.—Components of 75-Year Actuarial Balance and Unfunded Obligation Under Intermediate Assumptions

Item	OASI	DI	OASDI
Present value as of January 1, 2025 (in billions):			
A. Payroll tax revenue	$73,018	$12,399	$85,417
B. Reimbursements from general revenue	1	[a]	1
C. Taxation of benefits revenue	6,731	205	6,936
D. Non-interest income (A + B + C)	79,749	12,604	92,353
E. Cost	108,384	11,819	120,203
F. Cost minus non-interest income (E - D)	28,635	-785	27,851
G. Trust fund reserves at start of period	2,538	183	2,721
H. Open-group unfunded obligation (F - G)	26,097	-968	25,129
I. Ending target trust fund[b]	1,120	124	1,244
J. Income minus cost, plus reserves at start of period, minus ending target trust fund (D - E + G - I = - H - I)	-27,217	844	-26,373
K. Taxable payroll	689,615	689,615	689,615
Percent of taxable payroll:			
Actuarial balance (100 × J ÷ K)	-3.95	.12	-3.82

[a] Less than $0.5 billion.

[b] The calculation of the actuarial balance includes the cost of accumulating a target trust fund reserve equal to 100 percent of annual cost at the end of the period.

Note: Components may not sum to totals because of rounding.

Consideration of summary measures alone (such as the actuarial balance and open-group unfunded obligation) for a 75-year period can lead to incorrect perceptions and to policy prescriptions that do not achieve sustainable solvency. These concerns can be addressed by considering the trend in trust fund ratios toward the end of the period. (See the discussion of "sustainable solvency" beginning on page 55.)

Another measure of trust fund finances, discussed in appendix F, is the infinite horizon unfunded obligation, which takes account of all annual balances, even those after 75 years. The extension of the time period past 75 years assumes that the current-law OASDI program and the demographic, economic, and program-specific trends used for the 75-year projection continue indefinitely. This infinite horizon unfunded obligation is estimated to be 5.2 percent of taxable payroll or 1.6 percent of GDP. These percentages were 4.5 and 1.4, respectively, for last year's report. Of course, the degree of uncertainty associated with estimates increases substantially for years further in the future.

6. Reasons for Change in Actuarial Balance From Last Year's Report

Table IV.B7 shows the net effects of changes on the long-range actuarial balance for OASI, DI, and OASDI under the intermediate assumptions, by broad category, between last year's report and this report.

Table IV.B7.—Reasons for Change in the 75-Year Actuarial Balance, Based on Intermediate Assumptions
[As a percentage of taxable payroll]

Item	OASI	DI	OASDI
Shown in last year's report:			
Income rate	11.95	1.85	13.80
Cost rate	15.58	1.72	17.30
Actuarial balance	**-3.63**	**.14**	**-3.50**
Changes in actuarial balance due to changes in:			
Legislation / Regulation	-.14	-.02	-.16
Valuation period[a]	-.06	-.01	-.06
Demographic data and assumptions	-.02	[b]	-.02
Economic data and assumptions	-.06	[b]	-.06
Disability data and assumptions	[b]	.01	[b]
Methods and programmatic data	-.04	.01	-.03
Total change in actuarial balance	-.31	-.01	-.33
Shown in this report:			
Actuarial balance	**-3.95**	**.12**	**-3.82**
Income rate	11.93	1.85	13.79
Cost rate	15.88	1.73	17.61

[a] The change in the 75-year valuation period from last year's report to this report means that the 75-year actuarial balance now includes the relatively large negative annual balance for 2099. This change in the valuation period results in a larger long-range actuarial deficit. The actuarial deficit includes the trust fund reserve at the beginning of the projection period.
[b] Between -0.005 and 0.005 percent of taxable payroll.

Note: Components may not sum to totals because of rounding.

If the law, data, assumptions, and methods had all remained unchanged from last year's Trustees Report, the long-range OASDI actuarial balance would have decreased (worsened) by 0.06 percent of taxable payroll solely due to the change in the valuation period. However, as described in more detail below, projections in this report also reflect new data and changes in law, assumptions, and methods. These changes, including the change in the valuation period, combine to decrease the long-range OASDI actuarial balance by 0.33 percentage point, from -3.50 percent of taxable payroll in last year's report to -3.82 percent in this report.[1]

Legislation/Regulation

Changes in law, regulations, and policy since the last report combine to decrease the long-range OASDI actuarial balance by 0.16 percent of taxable payroll. See section III.B for further details about these changes.

On April 18, 2024, the Social Security Administration (SSA) published a final rule on past relevant work. This regulation reduces the time period, from 15 to 5 years, that SSA considers when determining whether an individual's past work is relevant for the purposes of making disability determi-

[1] Values in this section may not sum to totals because of rounding.

nations and decisions. Implementation of the past relevant work regulation is expected to increase disability awards and incidence rates to a small degree and, in turn, reduce labor force participation slightly. Together, the net effects of this regulation decrease the OASDI actuarial balance by 0.02 percent of taxable payroll.

The Social Security Fairness Act of 2023 was signed into law on January 5, 2025. This law repeals the Windfall Elimination Provision and Government Pension Offset, which reduced or eliminated the Social Security benefits of individuals who receive a pension based on work that was not covered by Social Security. Implementation of this law therefore increases Social Security benefits for certain people who worked in jobs that were not covered by Social Security, including some state and local employees, federal employees covered by the Civil Service Retirement System, and some people who worked in non-U.S. employment. The overall effect of this law change is a decrease in the OASDI actuarial balance of 0.14 percent of taxable payroll.

Valuation Period

As mentioned above, changing the 75-year valuation period from 2024 through 2098 for last year's report to 2025 through 2099 for this report decreases the projected long-range OASDI actuarial balance by 0.06 percent of taxable payroll. This decrease occurs because (1) the annual balances after 2024 are now discounted to January 1, 2025, rather than to January 1, 2024, and (2) the relatively large negative annual balance for 2099 is now included in this year's 75-year projection period. Note that the actuarial balance calculation includes trust fund reserves at the beginning of the projection period. These reserves reflect the program's net financial flows for all past years, including 2024, up to the start of the valuation period.

Demographic Data and Assumptions

New demographic data and changes in demographic assumptions combine to decrease the long-range OASDI actuarial balance by 0.02 percent of taxable payroll.

The ultimate demographic assumptions are unchanged for this year's report. However, updates to recent demographic data and near-term assumptions result in significant changes in the actuarial balance.

First, the year the ultimate total fertility rate is reached was extended from 2040 to 2050. This change is consistent with the Trustees' expectation that the total fertility rate will recover relatively slowly from current low levels to

the ultimate assumed value of 1.90 children per woman. This assumption change decreases the actuarial balance by 0.11 percent of taxable payroll.

Second, final birth data for calendar year 2023 and preliminary data for 2024 indicate that total fertility rates were somewhat lower than the rates assumed in last year's report for those years. Incorporating the updated data led to generally slightly lower birth rates during the transition period to the ultimate level, decreasing the actuarial balance by 0.02 percent of taxable payroll.

Third, the assumed levels of temporary or unlawfully present immigrant entrants have been increased for calendar years 2022-25, compared to the levels in last year's report. The higher levels in 2022-25 reflect recent increases in border crossings per Department of Homeland Security data and the expectation that these high levels will abate by 2026. These changes result in an increase in the actuarial balance of 0.05 percent of taxable payroll.

Fourth, updates to data for mortality, the historical population, immigration, marriage, and divorce combine to increase the actuarial balance by 0.05 percent of taxable payroll.

Economic Data and Assumptions

New economic data and changes in economic assumptions, in combination, decrease the long-range OASDI actuarial balance by 0.06 percent of taxable payroll.

One ultimate economic assumption was changed for this year's report, decreasing the actuarial balance by 0.12 percent of taxable payroll. The ratio of total labor compensation to GDP (that is, the labor share of output) is assumed to increase gradually to 61.2 percent in 2034, and to remain approximately constant thereafter. In last year's report, this ratio was assumed to be about 62.8 percent for 2033 and later. This assumption change, considered by itself, implies somewhat slower average earnings growth over the first ten projection years and a level shift in average earnings in the longer term.

Updates to recent economic data and near-term assumptions also result in significant changes in the actuarial balance. First, historical OASDI covered employment for 2022 was slightly higher, and its age distribution was different, than had been estimated for last year's report. This data update and the resulting effects on employment and beneficiary levels in years after 2022 increase the actuarial balance by 0.02 percent of taxable payroll.

Other small changes to historical data and near-term economic assumptions combine for a net increase in the actuarial balance of about 0.03 percent of taxable payroll. These changes include an update to educational attainment

data and small changes to the assumed real interest rates over the first 20 years of the projection period.

Disability Data and Assumptions

New disability data and changes in disability assumptions have a negligible effect on the long-range OASDI actuarial balance.

Methods and Programmatic Data

The projections in this report also reflect several methodological improvements and updates based on new program-specific data. These methodological changes, programmatic data updates, and interactions combine to decrease the long-range OASDI actuarial balance by 0.03 percent of taxable payroll. Descriptions of seven significant methodological changes and programmatic data updates follow.

First, the method used for projecting death rates now incorporates Medicare data for deaths at ages 95 through 99, rather than using data only for ages up to 94 as in prior reports. This method improvement increases the actuarial balance by 0.02 percent of taxable payroll.

Second, the method used for projecting temporary or unlawfully present immigration has been improved to better reflect recent data on the composition of the entrant population by age and sex. This method change decreases the actuarial balance by 0.02 percent of taxable payroll.

The third significant change is an update to the approach used by the economics model to project the civilian noninstitutional (CNI) population, to make the CNI projections more consistent with the projections of the Social Security area population. This method improvement increases the actuarial balance by 0.02 percent of taxable payroll.

The fourth significant change is an update to the method used for projecting average weeks worked during a calendar year, a key component of projections of OASDI covered employment. The updated approach uses historical data through 2021 and a more directly relevant data source. This method improvement increases the actuarial balance by 0.03 percent of taxable payroll.

Fifth, the process used to calculate and apply adjustments that smooth the age profile of labor force participation rates was improved. Relative to last year's report, the main result of this change was a decrease in projected labor force participation rates of workers age 75 and older. This method change decreases the actuarial balance by 0.04 percent of taxable payroll.

Sixth, recent data and estimates provided by the Office of Tax Analysis in the Department of the Treasury indicate lower near-term levels of revenue from income taxation of OASDI benefits than projected in last year's report. The decrease in projected ratios of income tax on benefits to benefit amounts decreases the actuarial balance by 0.02 percent of taxable payroll.

The seventh significant change is related to the sample used for the long-range model for projecting average benefit levels of retired-worker and disabled-worker beneficiaries who become newly entitled for benefits. This model uses a large sample of 10 percent of all newly entitled retired-worker beneficiaries in a recent year. For this year's report, the model's projection of earnings for workers becoming newly entitled in future years was improved to better reflect the distribution of taxable earnings levels observed through 2019. This improvement in the average benefits model decreases the actuarial balance by 0.02 percent of taxable payroll.

In addition to these seven methodological changes and programmatic data updates, changes in starting levels and projected levels of OASI and DI beneficiaries and benefit amounts over the first 10 years of the projection period, updating other programmatic data, other small methodological improvements, and interactions among the various method changes and updates to programmatic experience combine to increase the long-range actuarial balance by about 0.01 percent of taxable payroll.

Figure IV.B4.—OASDI Annual Balances: 2024 and 2025 Trustees Reports
[As a percentage of taxable payroll, under intermediate assumptions]

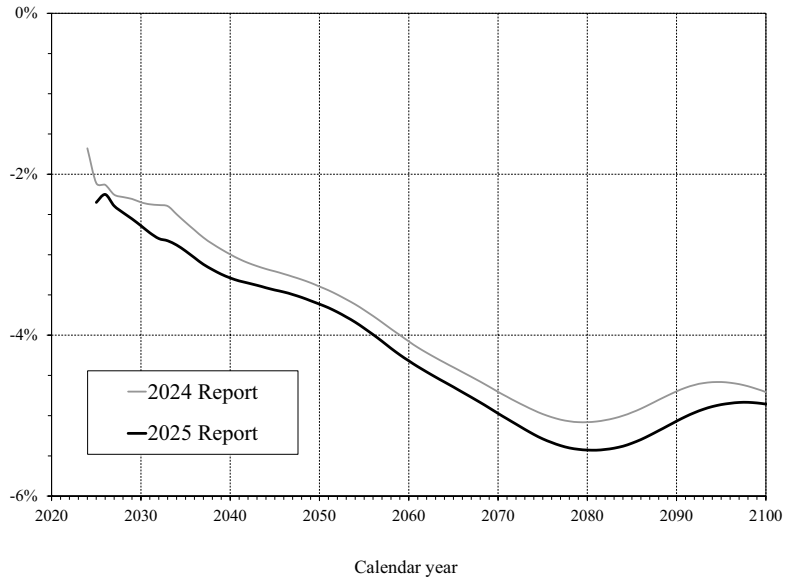


Figure IV.B4 compares the annual balances for this report and the prior year's report for the combined OASDI program over the long-range (75-year) projection period. The figure illustrates the annual effects of the changes described earlier in this section.

The projected annual balances in this year's report are lower (more negative) in all years, primarily due to three factors described above: (1) the implementation of the Social Security Fairness Act, (2) the extension in the assumed year the ultimate total fertility rate is reached, and (3) the reduction in the ultimate assumption for the ratio of total labor compensation to GDP. The relatively low annual balance shown for 2025 in this year's report is due to a large negative adjustment to payroll tax contributions expected to be made in June 2025. For the full 75-year projection period (2025-99), the annual balances average 0.28 percentage point lower in this year's report. For 2099, the projected annual deficit is 4.84 percent of taxable payroll in this report, compared to 4.67 percent in last year's report.

V. ASSUMPTIONS AND METHODS UNDERLYING ACTUARIAL ESTIMATES

The future income and cost of the OASDI program will depend on many demographic, economic, and program-specific factors. Trust fund income will depend on how these factors affect the size and composition of the working population as well as the level and distribution of earnings. Similarly, program cost will depend on how these factors affect the size and composition of the beneficiary population as well as the general level of benefits.

The Trustees make basic assumptions for several of these factors based on analysis of historical trends, historical conditions, and expected future conditions. These factors include fertility, mortality, immigration, marriage, divorce, productivity, inflation, average earnings, unemployment, real interest rates, and disability incidence and termination. Other factors depend on these basic assumptions. These other, often interdependent, factors include total population, life expectancy, labor force participation, gross domestic product, and program-specific factors. Each year, the Trustees reexamine these assumptions and methods in light of new information and make appropriate revisions.

Future levels of these factors and their interrelationships are inherently uncertain. To address these uncertainties, this report uses three sets of assumptions, designated as intermediate (alternative II), low-cost (alternative I), and high-cost (alternative III). The intermediate set represents the Trustees' best estimate of the future course of the population and the economy as of the time assumptions were set in December 2024. With regard to the net effect on the actuarial status of the OASDI program, the low-cost set is more optimistic and the high-cost set is more pessimistic. The low-cost and high-cost sets of assumptions reflect significant potential changes in the interrelationships among factors, as well as changes in the values for individual factors.

While it is unlikely that all of the factors and interactions will differ in the specified directions from the intermediate values, many combinations of individual differences in the factors could have a similar overall effect. Outcomes with overall long-range cost as low as the low-cost scenario or as high as the high-cost scenario are very unlikely. This report also includes a section on sensitivity analysis, where factors are changed one at a time (see appendix D), and a section on stochastic projections, which provides a probability distribution of possible future outcomes, with most of the key factors being varied around the intermediate alternative (see appendix E).

Readers should interpret the estimates based on the three sets of alternative assumptions with care. These estimates are not specific predictions of the future financial status of the OASDI program. Rather, they are intended to provide a reasonable range of future income and cost.

All of the key demographic, economic, and program-specific assumptions reach their long-range ultimate values within the next 25 years. For extrapolations beyond the 75-year long-range period, the ultimate levels or trends reached by the end of the 75-year period remain unchanged. The assumed ultimate values represent average annual experience or growth rates. Actual future values will exhibit fluctuations or cyclical patterns, as in the past.

The following sections briefly discuss the various assumptions and methods used in making the estimates of trust fund actuarial status, which are the focus of this report.[1] There are, of course, many interrelationships among these factors that are important but are beyond the scope of this discussion.

A. DEMOGRAPHIC ASSUMPTIONS AND METHODS

This section of the report provides a brief overview of the demographic historical data and the assumptions used for the projections.

1. Fertility Assumptions

Birth rates by single year of age, for girls and women aged 14 to 49,[2] are the basis for the fertility assumptions. These rates apply to the total number of women, across all marital statuses, in the midyear population at each age. Table V.A1 displays the historical and projected total fertility rates.[3]

Historically, birth rates in the United States have fluctuated widely. The total fertility rate decreased from 3.31 children per woman in 1918 at the end of World War I to 2.15 in 1936 during the Great Depression. After 1936, the total fertility rate rose to 3.68 in 1957 and then fell to 1.74 by 1976. After 1976, the total fertility rate rose above 2.00 by 1990, where it generally remained through 2009. Since then, it has been generally decreasing, reaching an all-time low of 1.62 in 2023.

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[1] Actuarial Studies published by the Office of the Chief Actuary, Social Security Administration, contain further details about the assumptions, methods, and actuarial estimates. A complete list of available studies may be found at www.ssa.gov/OACT/NOTES/actstud.html. This entire report, along with supplemental year-by-year tables and additional documentation on assumptions and methods, may be found at www.ssa.gov/OACT/TR/2025/.

[2] Birth rates at age 14 include births to girls aged 14 and under, and birth rates at age 49 include births to women aged 49 and over.

[3] The total fertility rate may be interpreted as the average number of children that would be born to a woman if she were to experience, at each age of her life, the birth rate observed in, or assumed for, a specified year, and if she were to survive the entire childbearing period. A rate of about 2.1 would ultimately result in a nearly constant population if immigration and emigration were both zero, and if death rates were to remain at current levels.

The variations in the historical total fertility rate resulted from changes in many factors, including social attitudes, economic conditions, birth-control practices, and the racial/ethnic composition of the population. Since the baby-boom era (1946-65), women have had higher educational attainment, higher labor force participation, an older average age at first marriage, and a higher propensity to be unmarried. All of these factors are consistent with continued lower total fertility rates than those experienced during the baby-boom era.

It is unclear whether the Supreme Court's 2022 decision in Dobbs v. Jackson Women's Health Organization and changes being made and considered in states regarding abortion policy will have a significant effect on future fertility rates. However, there are many factors that indicate that the ultimate total fertility rate may be lower than the average level since the end of the baby-boom era, including results from recent surveys of birth expectations, continued lower total fertility rates in recent years, lower total fertility rates in high-immigrant source countries such as Mexico, increased utilization of more effective birth control, other societal changes including lower marriage rates, and possible concerns about economic opportunity for the future.

The Trustees assume ultimate total fertility rates of 2.10, 1.90, and 1.60 children per woman for the low-cost, intermediate, and high-cost assumptions, respectively. These rates are the same as the ultimate rates assumed in last year's report for each alternative.

For the intermediate assumptions, the projected total fertility rate gradually increases on a period (annual) basis through the year the ultimate period value is reached (2050). The assumed low-cost and high-cost total fertility rates trend away from the intermediate path, also reaching their ultimate period values in 2050. The ultimate period values were reached in 2040 in last year's report. The Trustees continue to assume that recent low rates of period fertility are, in part, indicative of a gradual shift to older ages of childbearing for younger birth cohorts. Reaching the ultimate total fertility rate later than it was reached in last year's report is consistent with the expectation that the total fertility rate will recover relatively slowly from current low levels.

2. Mortality Assumptions

Mortality projections are developed assuming ultimate average annual percentage reductions in future mortality rates by age group and cause of death. The assumptions are used to estimate future central death rates by age group,

sex, and cause of death. From the estimated central death rates, probabilities of death by single year of age and sex are calculated.

Historical death rates were calculated for years 1900 through 2023 for ages below 65 (and for all ages for years prior to 1968) using data from the National Center for Health Statistics (NCHS).[1] For ages 65 and over, final Medicare data on deaths for years 1968 through 2021 and preliminary data for 2022 and 2023 were used.[2] Death rates by cause of death were produced for all ages for years 1979-2023 using data from the NCHS. Note, however, that regressions used for the model projections do not include data for 2020 through 2023 due to the elevated death rates caused by COVID-19.

The total age-sex-adjusted death rate[3] declined at an average annual rate of 1.02 percent between 1900 and 2019. Between 1979 and 2019, the period for which death rates were analyzed by cause, the total age-sex-adjusted death rate, for all causes combined, declined at an average rate of 0.88 percent per year.

Death rates have declined substantially in the U.S. since 1900, with rapid declines over some periods and slow or no improvement over the other periods. Many factors are responsible for historical reductions in death rates, including medical advances, increased availability of health-care services, and improvements in sanitation and nutrition. Historical death rates generally declined more slowly for older ages and more rapidly for children and infants than for the rest of the population. Between 1900 and 2019, the age-sex-adjusted death rate declined at an average rate of 0.78 percent per year for ages 65 and over, and 2.97 percent per year for ages under 15.

Mortality assumptions differ for the low-cost, intermediate, and high-cost scenarios. Throughout the projection period, the low-cost scenario contains annual percentage reductions that are smaller than those in the intermediate scenario, while those in the high-cost scenario are larger. The ultimate annual percentage reductions for each of the three alternatives are unchanged from last year's report.

The trends in the annual reductions in central death rates were calculated for the period from 2008 to 2019 for both the NCHS and Medicare data, by age

[1] These rates reflect NCHS data on deaths and Census estimates of population. NCHS death data for 2023 are provisional.

[2] These rates reflect Medicare data on deaths and enrollments.

[3] Based on the enumerated total population as of April 1, 2010, if that population were to experience the death rates by age and sex for the selected year.

group, sex, and cause of death.[1] These trends are the starting rates of reduction for alternative II. For alternatives I and III, 50 and 150 percent of the starting rates of reduction are used, respectively. These annual rates of reduction, by alternative, are assumed to transition rapidly from the starting rates of reduction until they reach the ultimate annual rates of reduction assumed for 2049 and later.

Adjustments were made to the assumed death rates for 2024 and 2025 to account for the effects of the COVID-19 pandemic. The table below shows the multiplicative factors that were applied to the probabilities of death that would have been projected in the absence of the pandemic. Factors for 2020 through 2023 are not necessary, as actual data are available.

Year	Age 0	Ages 1-14	Ages 15-64	Ages 65-84	Ages 85 and older
2024	1.01	1.17	0.99	1.02	0.98
2025	1.00	1.09	1.00	1.00	1.00

Factors for 2024 are based on partial, provisional data through July, and assumptions about the remainder of the year. Compared to the factors used for last year's report, the factors in the table above for 2024 are higher for ages under 15, lower for ages 15-64 and ages 85 and older, and the same for ages 65-84. The factors in the table above for 2025 are 1.09 for the 1-14 age group and 1.00 for all other ages, whereas the factors for 2025 in last year's report were 1.00 for all ages.

Note that in the table above, the factors are lower than 1.00 for age groups 15-64 and 85 and older in 2024. This suggests that death probabilities for these age groups in 2024 were lower than they would have been if the pandemic had not occurred. This is consistent with the assumption that increased deaths in the acute phase of the pandemic were primarily an acceleration of deaths that would have occurred in later years.

Projected death rates for years after 2025 are unchanged from the levels that would have been projected in the absence of the pandemic, under the assumption that increased deaths from the residual effects of living through the pandemic (both physiological and psychological) will be roughly offset by decreased deaths that instead happened earlier (during the pandemic).

Table V.A1 contains historical and projected age-sex-adjusted death rates for the total population (all ages), for ages under 65, and for ages 65 and over. Age-sex adjustment eliminates the effect of a changing distribution of population by age and sex. Under the intermediate assumptions, projected total

[1] Cause of death is only available for the NCHS data.

age-sex-adjusted death rates are slightly lower than the rates in last year's report after 2024. These changes result primarily from incorporating additional historical data and other minor methodological updates. In particular, actual death rates for 2023 are lower than those projected in the 2024 report for all age groups except age 0, where actual death rates exceeded those projected in the 2024 report.

The projected average annual rate of decline between 2024 and 2099 for the total age-sex-adjusted death rate is about 0.27 percent for alternative I, 0.74 percent for alternative II, and 1.26 percent for alternative III.[1] In keeping with the patterns observed in the historical data, the assumed future rates of decline are greater for younger ages than for older ages, but to a substantially lesser degree than in the past. Accordingly, the projected age-sex-adjusted death rates for ages 65 and over decline between 2024 and 2099 at average annual rates of about 0.26 percent for alternative I, 0.68 percent for alternative II, and 1.12 percent for alternative III. The projected age-sex-adjusted death rates for ages under 15 decline between 2024 and 2099 at average annual rates of about 0.59 percent for alternative I, 1.59 percent for alternative II, and 3.00 percent for alternative III.

Demographers express a wide range of views on the likely rate of future decline in death rates. For example, some believe that the long-standing historical tendency for mortality to decline more slowly at the oldest ages will cease in the future. Others believe that biological factors, social factors, and limitations on health care spending may slow future rates of decline in mortality.

[1] These average annual rates of decline between 2024 and 2099 are not directly comparable with the 75-year average annual rates of decline shown in recent reports. This is because the death rates for the first year in each report's valuation period, which are used as the starting points for the 75-year geometric averages, have varied significantly due to the effects of the pandemic.

Table V.A1.—Fertility and Mortality Assumptions,[a] Calendar Years 1940-2100

Calendar year	Total fertility rate[b]	Age-sex-adjusted death rate[c] per 100,000		
		Total	Under 65	65 and over
Historical data:				
1940	2.23	1,919.8	750.1	9,718.8
1945	2.42	1,716.6	674.8	8,662.9
1950	3.03	1,561.9	570.2	8,173.7
1955	3.50	1,453.8	508.2	7,758.4
1960	3.61	1,454.3	503.2	7,795.6
1965	2.88	1,428.8	495.2	7,653.9
1970	2.43	1,350.2	485.8	7,113.9
1975	1.77	1,214.2	426.2	6,467.8
1980	1.82	1,145.2	383.9	6,221.5
1985	1.83	1,088.6	352.8	5,994.7
1990	2.07	1,026.2	333.3	5,646.0
1995	1.98	1,005.0	318.3	5,582.9
2000	2.05	964.1	281.4	5,515.8
2005	2.06	903.7	271.1	5,121.7
2010	1.93	821.5	248.5	4,641.9
2015	1.84	813.7	253.0	4,552.0
2016	1.81	805.9	258.0	4,458.7
2017	1.76	810.4	258.2	4,492.0
2018	1.73	801.8	254.7	4,449.5
2019	1.70	789.5	253.2	4,365.3
2020	1.64	918.2	300.0	5,040.0
2021	1.66	930.8	334.3	4,907.8
2022	1.66	[d]867.4	294.7	[d]4,686.2
2023	1.62	[e]802.0	[e]270.2	[e]4,347.6
2024	[f]1.62	[g]769.7	[g]248.5	[g]4,244.5
Intermediate:				
2025	1.64	764.4	248.8	4,201.9
2030	1.72	734.3	238.4	4,040.6
2035	1.80	704.5	227.4	3,885.9
2040	1.87	676.1	216.5	3,740.0
2045	1.90	649.2	206.1	3,602.8
2050	1.90	623.8	196.3	3,474.2
2055	1.90	600.0	187.0	3,353.4
2060	1.90	577.6	178.2	3,240.0
2065	1.90	556.5	170.0	3,133.4
2070	1.90	536.6	162.1	3,033.1
2075	1.90	517.8	154.7	2,938.6
2080	1.90	500.1	147.7	2,849.5
2085	1.90	483.4	141.1	2,765.4
2090	1.90	467.6	134.9	2,686.0
2095	1.90	452.6	128.9	2,610.9
2100	1.90	438.5	123.3	2,539.8

Table V.A1.—Fertility and Mortality Assumptions,[a] Calendar Years 1940-2100 (Cont.)

Calendar year	Total fertility rate[b]	Age-sex-adjusted death rate[c] per 100,000		
		Total	Under 65	65 and over
Low-cost:				
2025	1.67	790.5	258.3	4,339.2
2030	1.84	781.2	255.7	4,284.9
2035	1.97	770.8	252.1	4,228.6
2040	2.07	760.0	248.1	4,172.5
2045	2.10	749.2	244.1	4,117.2
2050	2.10	738.6	240.0	4,063.0
2055	2.10	728.2	236.0	4,010.0
2060	2.10	718.1	232.1	3,958.1
2065	2.10	708.1	228.3	3,907.3
2070	2.10	698.4	224.6	3,857.7
2075	2.10	688.9	220.9	3,809.1
2080	2.10	679.5	217.3	3,761.6
2085	2.10	670.4	213.7	3,715.1
2090	2.10	661.4	210.3	3,669.5
2095	2.10	652.7	206.9	3,625.0
2100	2.10	644.1	203.5	3,581.4
High-cost:				
2025	1.59	732.6	237.2	4,035.6
2030	1.54	676.5	216.8	3,741.5
2035	1.55	624.6	197.1	3,474.7
2040	1.58	578.0	179.0	3,237.6
2045	1.60	536.4	162.8	3,027.7
2050	1.60	499.5	148.2	2,841.7
2055	1.60	466.6	135.2	2,676.3
2060	1.60	437.2	123.5	2,528.6
2065	1.60	410.8	113.0	2,396.2
2070	1.60	387.1	103.6	2,277.0
2075	1.60	365.7	95.1	2,169.3
2080	1.60	346.2	87.5	2,071.4
2085	1.60	328.6	80.6	1,982.3
2090	1.60	312.5	74.3	1,900.7
2095	1.60	297.8	68.6	1,825.7
2100	1.60	284.2	63.4	1,756.5

[a] This table contains basic assumptions along with key summary values that are derived from basic assumptions.

[b] The total fertility rate for any year is the average number of children that would be born to a woman if she were to experience, at each age of her life, the birth rate observed in, or assumed for, the selected year, and if she were to survive the entire childbearing period.

[c] Based on the enumerated total population as of April 1, 2010, if that population were to experience the death rates by age and sex observed in, or assumed for, the selected year.

[d] Estimated using final data for ages below 65 and preliminary data for ages 65 and older.

[e] Estimated using preliminary data.

[f] Estimated using partial-year, provisional data.

[g] Estimated, intermediate alternative.

3. Immigration Assumptions

Projections of the total Social Security area population reflect assumptions for the following four immigration flows:[1]

- Lawful permanent resident (LPR) immigration: The flow of persons who enter the Social Security area and are granted LPR status, or who are already in the Social Security area and adjust their status to become LPRs.[2]
- Legal emigration: The flow of LPRs and citizens who leave the Social Security area population.
- Temporary or unlawfully present immigration: The flow of persons who enter the Social Security area and stay to the end of the year without being granted LPR status, such as foreign workers and students entering with temporary visas, and immigrants who enter the country illegally.
- Temporary or unlawfully present emigration: The flow of temporary or unlawfully present immigrants who leave the Social Security area population or who adjust their status to become LPRs. The stock of immigrants from which these emigrants are drawn includes temporary visa holders, those who entered the Social Security area lawfully on temporary visas but subsequently overstayed their visas, and those who entered the country illegally.

Net LPR immigration is the difference between LPR immigration and legal emigration. Net temporary or unlawfully present immigration is the difference between temporary or unlawfully present immigration and temporary or unlawfully present emigration. Total net immigration refers to the sum of net LPR immigration and net temporary or unlawfully present immigration.

Immigration assumptions differ for the low-cost, intermediate, and high-cost scenarios. The low-cost scenario includes higher annual net immigration and the high-cost scenario includes lower annual net immigration. Table V.A2 contains historical and projected levels of various immigration flows.

LPR immigration has increased significantly since World War II, due to various factors and legislative changes, including the Immigration Act of 1965 and the Immigration Act of 1990.

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[1] The general modeling approach for immigration is unchanged from last year's report, but the terminology used has been updated. The Trustees now use the term "temporary or unlawfully present" rather than "other-than-LPR."

[2] Persons who enter the country with valid visas but without LPR status, such as temporary foreign workers and students, are not included in the "LPR immigration" category.

LPR new arrival immigration levels dropped significantly in the initial years of the COVID-19 pandemic and are estimated to be about 362,000 persons lower in 2020, 234,000 persons lower in 2021, and 12,000 persons lower in 2022 than would have been expected in the absence of the pandemic. The LPR new arrival immigration level for 2023 is estimated to be about 76,000 persons higher than would have been expected in the absence of the pandemic, representing the start of an assumed make-up for the lower levels in the prior years. LPR new arrival immigration levels for 2024-26 are assumed to be higher than would have been assumed in the absence of the pandemic, completing the make-up for the lower levels in 2020-22. These pandemic-related effects on LPR new arrival immigration levels in 2024-26 are assumed to be slightly smaller in magnitude than those in last year's report.

For the intermediate alternative, the ultimate level of annual LPR immigration, which includes residents who adjust their status to become LPRs, is assumed to be 1,050,000 persons for 2027 and later. For alternative I, ultimate annual LPR immigration is assumed to be 1,250,000 persons for 2027 and later, and for alternative III, ultimate annual LPR immigration is assumed to be 850,000 persons for 2027 and later. The ultimate levels of LPR immigration are unchanged from last year's report.

The assumed ratios of annual legal emigration to LPR immigration are 20, 25, and 30 percent for alternatives I, II, and III, respectively. This range is consistent with the limited historical data for legal emigration from the Social Security area. These ratios are unchanged from last year's report. Under the intermediate alternative, by combining the ultimate annual LPR immigration and legal emigration assumptions, ultimate annual net LPR immigration is about 788,000 persons. Ultimate annual net LPR immigration is 1,000,000 persons for the low-cost scenario and 595,000 persons for the high-cost scenario.

The estimated number of temporary or unlawfully present immigrants residing in the Social Security area and the annual level of temporary or unlawfully present immigration were affected significantly by the economic recession of 2007-09. Although temporary or unlawfully present immigration was greatly reduced during the economic downturn and immediate years thereafter, it returned to higher levels for most years from 2014 through 2019, reflecting a recovery from levels experienced during the recession. The COVID-19 pandemic began to affect temporary or unlawfully present immigration in 2020; the estimated level of temporary or unlawfully present immigration is about 510,000 persons lower in 2020 and 95,000 persons

lower in 2021 than would have been estimated in the absence of the pandemic.

Data from the Department of Homeland Security indicate a notable increase in border crossings after 2021. The Trustees estimate that historical levels of border crossings in years 2022-24 are higher than had been assumed in last year's report. They further assume that border crossings will remain somewhat elevated in 2025. As a result, temporary or unlawfully present immigration over years 2022-25 averages a relatively high level of 2,375,000 persons per year, up from the average of 1,484,000 persons per year that was assumed in last year's report over the same time period.

The ultimate annual levels of temporary or unlawfully present immigration are 1,350,000 persons for alternative II, 1,850,000 persons for alternative I, and 850,000 persons for alternative III. These ultimate levels are unchanged from those used in last year's report. The ultimate levels are attained in 2026 for all three alternatives.

Emigration from the temporary or unlawfully present immigrant population includes those who leave the Social Security area and those who adjust their status to become LPRs. This temporary or unlawfully present immigrant population is highly mobile and far more likely to leave the Social Security area than is the citizen or LPR population. However, as unlawfully present immigrants stay in the country for longer periods of time, they generally become less likely to leave the country.

Under the intermediate assumptions, the total annual number of temporary or unlawfully present immigrants who leave the Social Security area averages about 426,000 through the 75-year projection period. The ultimate annual number of temporary or unlawfully present immigrants who adjust status to become LPRs is assumed to be 450,000 for the intermediate assumptions and is unchanged from last year's report. The total annual number of temporary or unlawfully present immigrants who leave the Social Security area averages about 582,000 for the low-cost scenario and 268,000 for the high-cost scenario through the 75-year projection period. The ultimate annual number of people adjusting status to LPR status is assumed to be 550,000 persons for the low-cost scenario and 350,000 persons for the high-cost scenario; these levels are unchanged from last year's report.

The projected size of the temporary or unlawfully present immigrant population grows substantially under the intermediate assumptions, from about 19.9 million by the end of 2025 to about 35.0 million by the end of 2099. This growth reflects the excess of annual immigration over the combined

annual numbers of emigrants (including adjustments of status) and deaths that occur within the temporary or unlawfully present immigrant population.

Under the intermediate assumptions, the projected levels of net temporary or unlawfully present immigration gradually decrease over time. Because the projected number of temporary or unlawfully present immigrants leaving the Social Security area is based on rates of departure, an increase in the number of temporary or unlawfully present immigrants residing in the Social Security area results in an increase in the number who emigrate out of the area. All other components of net temporary or unlawfully present immigration are assumed to be stable after 2025, and thus do not contribute toward any change in annual net temporary or unlawfully present immigration. Under the intermediate assumptions, the projected average annual level of net temporary or unlawfully present immigration over the 75-year projection period is about 482,000 persons. Projected average annual net temporary or unlawfully present immigration is about 729,000 persons under the low-cost assumptions and 238,000 persons under the high-cost assumptions.

The projected average annual level of total net immigration (LPR immigration and temporary or unlawfully present immigration, combined) is about 1,273,000 persons per year during the 75-year projection period under the intermediate assumptions. Projected average annual total net immigration is about 1,733,000 persons under the low-cost assumptions and about 836,000 persons under the high-cost assumptions.

Demographers express a wide range of views about the future course of immigration for the United States. Some believe that net immigration will increase substantially in the future. Others believe that potential immigrants may be increasingly attracted to other countries, that the number of potential immigrants may be lower due to lower birth rates in many countries, or that changes in the law or enforcement of the law will reduce immigration.

Table V.A2.—Immigration Assumptions,[a] Calendar Years 1940-2100
[In thousands]

Calendar year	Lawful permanent resident (LPR)				Temporary or unlawfully present[b]				Total net change
	Inflow	Outflow[c]	Adjustments of status[d e]	Net change	Inflow	Outflow	Adjustments of status[d e]	Net change	
Historical data:									
1940	61	15	—	46	—	—	—	—	—
1945	73	18	—	55	—	—	—	—	—
1950	227	57	—	171	—	—	—	—	—
1955	280	70	—	210	—	—	—	—	—
1960	268	67	—	201	—	—	—	—	—
1965	279	77	31	232	—	—	31	—	—
1970	307	93	65	279	—	—	65	—	—
1975	342	98	51	294	—	—	51	—	—
1980	430	135	112	406	—	—	112	203	610
1985	458	144	119	432	—	—	119	261	693
1990	545	166	1,114	1,493	—	—	1,114	-371	1,122
1995	509	192	260	577	—	—	260	557	1,134
2000	482	224	413	672	1,358	368	413	577	1,249
2005	561	290	597	869	1,645	33	597	1,015	1,884
2010	622	262	426	786	647	205	426	17	803
2015	702	280	419	841	1,262	180	419	663	1,503
2016	770	297	418	891	1,081	658	418	6	896
2017	703	276	399	827	884	238	399	247	1,073
2018	693	273	397	818	738	543	397	-202	615
2019	543	258	489	774	882	885	489	-492	281
2020	238	145	344	436	690	70	344	276	713
2021	366	209	471	628	1,205	460	471	274	902
2022	588	262	462	787	[f]2,200	[f]258	462	[f]1,480	[f]2,267
2023	676	298	516	894	[g]2,700	[f]264	516	[g]1,920	[g]2,814
2024	[g]763	[g]316	[g]500	[g]947	[g]2,600	[g]314	[g]500	[g]1,786	[g]2,733
Intermediate:									
2025	763	303	450	910	2,000	358	450	1,192	2,102
2030	600	263	450	788	1,350	364	450	536	1,323
2035	600	263	450	788	1,350	380	450	520	1,308
2040	600	263	450	788	1,350	398	450	502	1,289
2045	600	263	450	788	1,350	416	450	484	1,272
2050	600	263	450	788	1,350	427	450	473	1,260
2055	600	263	450	788	1,350	432	450	468	1,255
2060	600	263	450	788	1,350	437	450	463	1,251
2065	600	263	450	788	1,350	440	450	460	1,247
2070	600	263	450	788	1,350	444	450	456	1,244
2075	600	263	450	788	1,350	446	450	454	1,242
2080	600	263	450	788	1,350	448	450	452	1,240
2085	600	263	450	788	1,350	449	450	451	1,238
2090	600	263	450	788	1,350	451	450	449	1,237
2095	600	263	450	788	1,350	451	450	449	1,236
2100	600	263	450	788	1,350	452	450	448	1,235

Table V.A2.—Immigration Assumptions,[a] Calendar Years 1940-2100 (Cont.)
[In thousands]

Calendar year	Lawful permanent resident (LPR)				Temporary or unlawfully present[b]				Total net change
	Inflow	Outflow[c]	Adjustments of status[d e]	Net change	Inflow	Outflow	Adjustments of status[d e]	Net change	
Low-cost:									
2025	863	283	550	1,130	2,700	392	550	1,758	2,889
2030	700	250	550	1,000	1,850	433	550	867	1,867
2035	700	250	550	1,000	1,850	472	550	828	1,828
2040	700	250	550	1,000	1,850	514	550	786	1,786
2045	700	250	550	1,000	1,850	553	550	747	1,747
2050	700	250	550	1,000	1,850	581	550	719	1,719
2055	700	250	550	1,000	1,850	598	550	702	1,702
2060	700	250	550	1,000	1,850	612	550	688	1,688
2065	700	250	550	1,000	1,850	622	550	678	1,678
2070	700	250	550	1,000	1,850	629	550	671	1,671
2075	700	250	550	1,000	1,850	635	550	665	1,665
2080	700	250	550	1,000	1,850	639	550	661	1,661
2085	700	250	550	1,000	1,850	642	550	658	1,658
2090	700	250	550	1,000	1,850	644	550	656	1,656
2095	700	250	550	1,000	1,850	645	550	655	1,655
2100	700	250	550	1,000	1,850	645	550	655	1,655
High-cost:									
2025	663	304	350	709	1,300	324	350	626	1,335
2030	500	255	350	595	850	296	350	204	799
2035	500	255	350	595	850	287	350	213	808
2040	500	255	350	595	850	282	350	218	813
2045	500	255	350	595	850	279	350	221	816
2050	500	255	350	595	850	273	350	227	822
2055	500	255	350	595	850	266	350	234	829
2060	500	255	350	595	850	261	350	239	834
2065	500	255	350	595	850	257	350	243	838
2070	500	255	350	595	850	255	350	245	840
2075	500	255	350	595	850	254	350	246	841
2080	500	255	350	595	850	253	350	247	842
2085	500	255	350	595	850	253	350	247	842
2090	500	255	350	595	850	253	350	247	842
2095	500	255	350	595	850	253	350	247	842
2100	500	255	350	595	850	253	350	247	842

[a] This table contains basic assumptions along with key summary values that are derived from basic assumptions.

[b] Historical estimates of immigration to (inflow), and emigration from (outflow), the temporary or unlawfully present immigrant population depend on a residual method. The Office of the Chief Actuary developed these estimates, as well as the resulting temporary or unlawfully present January 1 stock estimates, for years through 2000. For years 2001 and later, the residual method uses stock estimates. For 2001 through 2004, the stock is set to values that linearly grade from the 2000 stock estimate to the 2005 stock estimate. Stock estimates are developed by the Office of the Chief Actuary, based on the latest methods used by the Department of Homeland Security.

[c] Includes both LPRs and citizens who leave the Social Security area population.

[d] Estimates include persons who attained LPR status under the special one-time provisions of the Immigration Reform and Control Act of 1986.

[e] Adjustments of status are a positive for net LPR immigration and a negative for net temporary or unlawfully present immigration.

[f] Estimated.

[g] Estimated, intermediate alternative.

Note: Components may not sum to totals because of rounding.

4. Total Population Estimates

The starting Social Security area population for December 31, 2022, is derived from the Census Bureau's estimate of the residents of the 50 States and D.C. and U.S. Armed Forces overseas. Adjustments are made to reflect mortality assumptions for the aged population since 2020 that are consistent with Medicare and Social Security data, net immigration assumptions for the aged population since 2020, estimates of the net undercount in the 2020 census, inclusion of U.S. citizens living abroad (including residents of U.S. territories), and inclusion of non-citizens living abroad who are insured for Social Security benefits. The Office of the Chief Actuary projects the Social Security area population by age, sex, and marital status for December 31 of each year from 2023 through 2099 by combining the assumptions for future fertility, mortality, and immigration with assumptions for marriage and divorce. Previous sections of this chapter present the assumptions for future fertility, mortality, and immigration. Assumptions for future rates of marriage and divorce reflect historical data from the National Center for Health Statistics, the Census Bureau, and selected individual States.

This report presents a July 1 (i.e., midyear) population for each year, which is derived from surrounding December populations. Table V.A3 shows the historical and projected population for July 1 by broad age group, for the three alternatives. It also shows the aged and total dependency ratios (see table footnotes for definitions).

Table V.A3.—Social Security Area Population on July 1 and Dependency Ratios, Calendar Years 1945-2100

Calendar year	Population (in thousands)				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged[a]	Total[b]
Historical data:						
1945	49,107	87,890	10,886	147,883	0.124	0.683
1950	53,918	92,190	12,789	158,897	.139	.724
1955	63,337	96,003	15,161	174,500	.158	.818
1960	72,915	99,752	17,323	189,990	.174	.905
1965	80,005	104,881	19,153	204,039	.183	.945
1970	80,856	112,953	21,007	214,815	.186	.902
1975	78,576	122,592	23,370	224,538	.191	.832
1980	74,841	134,029	26,315	235,184	.196	.755
1985	72,893	144,586	29,129	246,609	.201	.706
1990	74,791	152,730	31,926	259,447	.209	.699
1995	79,287	160,733	34,294	274,314	.213	.707
2000	81,980	170,138	35,501	287,620	.209	.691
2005	83,906	180,820	37,132	301,858	.205	.669
2010	85,687	188,381	41,016	315,084	.218	.673
2015	84,758	194,455	47,711	326,924	.245	.681
2016	84,826	195,333	49,253	329,411	.252	.686
2017	84,779	195,950	50,840	331,568	.259	.692
2018	84,631	196,366	52,498	333,495	.267	.698
2019	84,302	196,399	54,240	334,941	.276	.705
2020	83,857	196,384	55,889	336,130	.285	.712
2021	83,331	196,462	57,404	337,197	.292	.716
2022[c]	83,078	196,976	59,124	339,177	.300	.722
2023[d]	82,988	198,203	60,971	342,161	.308	.726
2024[d]	83,034	199,564	62,835	345,433	.315	.731
Intermediate:						
2025	83,024	200,715	64,665	348,404	.322	.736
2030	81,865	203,623	72,664	358,152	.357	.759
2035	82,604	206,999	77,361	366,963	.374	.773
2040	84,997	210,207	79,889	375,094	.380	.784
2045	88,528	212,180	81,549	382,256	.384	.802
2050	90,798	213,474	84,100	388,372	.394	.819
2055	91,756	214,827	87,445	394,029	.407	.834
2060	91,963	216,625	91,350	399,937	.422	.846
2065	92,472	219,167	94,849	406,488	.433	.855
2070	93,941	220,944	98,573	413,457	.446	.871
2075	96,051	222,037	102,241	420,329	.460	.893
2080	98,095	224,144	104,528	426,767	.466	.904
2085	99,524	227,526	105,762	432,812	.465	.902
2090	100,415	232,425	105,939	438,779	.456	.888
2095	101,233	236,743	107,012	444,988	.452	.880
2100	102,374	240,154	109,090	451,617	.454	.881

Table V.A3.—Social Security Area Population on July 1 and Dependency Ratios, Calendar Years 1945-2100 (Cont.)

Calendar year	Population (in thousands)				Dependency ratio	
	Under 20	20-64	65 and over	Total	Aged[a]	Total[b]
Low-cost:						
2025	83,643	201,977	64,628	350,247	0.320	0.734
2030	84,340	206,833	72,232	363,405	.349	.757
2035	87,843	212,033	76,296	376,172	.360	.774
2040	93,562	216,975	78,038	388,574	.360	.791
2045	100,486	220,694	78,882	400,063	.357	.813
2050	105,217	224,641	80,692	410,549	.359	.828
2055	107,927	229,496	83,432	420,855	.364	.834
2060	109,878	235,201	86,878	431,957	.369	.837
2065	112,712	241,655	90,013	444,380	.372	.839
2070	117,121	247,353	93,314	457,788	.377	.851
2075	122,350	252,644	96,462	471,456	.382	.866
2080	127,240	259,501	98,218	484,959	.378	.869
2085	131,063	268,381	98,954	498,398	.369	.857
2090	134,136	279,317	98,774	512,227	.354	.834
2095	137,324	289,179	100,380	526,883	.347	.822
2100	141,210	297,543	103,797	542,550	.349	.823
High-cost:						
2025	82,398	199,477	64,725	346,600	.324	.738
2030	79,017	200,536	73,255	352,808	.365	.759
2035	76,296	202,198	78,805	357,299	.390	.767
2040	74,525	203,782	82,398	360,704	.404	.770
2045	73,826	204,088	85,164	363,078	.417	.779
2050	73,223	202,405	88,725	364,353	.438	.800
2055	72,372	199,577	92,880	364,829	.465	.828
2060	70,922	196,615	97,356	364,893	.495	.856
2065	69,185	194,359	101,233	364,776	.521	.877
2070	67,744	191,336	105,319	364,400	.550	.904
2075	66,770	187,355	109,387	363,512	.584	.940
2080	66,075	183,801	112,033	361,910	.610	.969
2085	65,350	180,709	113,524	359,583	.628	.990
2090	64,441	178,545	113,732	356,718	.637	.998
2095	63,385	176,700	113,448	353,533	.642	1.001
2100	62,352	174,948	112,912	350,212	.645	1.002

[a] Ratio of the population at ages 65 and over to the population at ages 20-64.
[b] Ratio of the population at ages 65 and over and the population under age 20 to the population at ages 20-64.
[c] Estimated.
[d] Estimated, intermediate alternative.

Notes:
1. Historical data are subject to revision.
2. Components may not sum to totals because of rounding.

5. Life Expectancy Estimates

Life expectancy, or the average remaining number of years expected prior to death, is an additional way to summarize the Trustees' mortality assumptions. This report includes life expectancy both at birth and at age 65, in two different forms (period and cohort), which are useful for separate purposes.

- Period life expectancy at a selected age for a particular year incorporates the actual or expected death rates at the selected age and each older age for that year. It is a useful summary statistic for illustrating the overall level of the death rates at or above the given age experienced in a single year. Period life expectancy for a particular year provides an individual's expected average remaining lifetime at a selected age, assuming no change in death rates after that year. Table V.A4 presents historical and projected life expectancy calculated on a period basis.
- Cohort life expectancy does not incorporate death rates for a single year, but for the series of years in which the individual will actually reach each succeeding age if he or she survives. Cohort life expectancy provides the expected average remaining lifetime for an individual at a selected age in a particular year, using actual or expected future death rates for the selected age and all succeeding ages. Table V.A5 presents historical and projected life expectancy calculated on a cohort basis. Cohort life expectancy is generally greater than period life expectancy for a given year because: (1) death rates at any age generally decline over time; and (2) cohort life expectancy uses death rates for future years, while period life expectancy uses death rates only for the given year.

Life expectancy at a given age reflects death rates at that and all older ages. Period life expectancy is somewhat related to the age-sex-adjusted death rate discussed in section V.A.2. However, life expectancy places far greater weight on death rates at relatively younger ages (those at or just above the given age) than those at relatively older ages. Therefore, changes in death rates at young ages, particularly in infancy, affect life expectancy at birth to a much greater degree than changes in death rates at older ages. It is important to keep this concept in mind when considering trends in life expectancy.

Table V.A4.—Period Life Expectancy[a]

Calendar year	Historical data			
	At birth		At age 65	
	Male	Female	Male	Female
1940	61.4	65.7	11.9	13.4
1945	62.9	68.4	12.6	14.4
1950	65.6	71.1	12.8	15.1
1955	66.7	72.8	13.1	15.6
1960	66.7	73.2	12.9	15.9
1965	66.8	73.8	12.9	16.3
1970	67.1	74.9	13.1	17.1
1975	68.7	76.6	13.7	18.0
1980	69.9	77.5	14.0	18.4
1985	71.1	78.2	14.4	18.6
1990	71.8	78.9	15.0	19.0
1995	72.5	79.1	15.4	19.0
2000	74.0	79.4	15.9	19.0
2005	74.8	80.0	16.7	19.5
2010	76.1	80.9	17.5	20.2
2015	76.2	80.9	17.8	20.3
2016	76.1	81.0	17.9	20.5
2017	76.0	81.0	17.9	20.4
2018	76.2	81.1	17.9	20.5
2019	76.3	81.3	18.1	20.7
2020	74.2	79.8	16.9	19.6
2021	73.5	79.3	16.9	19.7
2022[b] . . .	74.7	80.2	17.5	20.1
2023[c] . . .	75.8	81.1	18.1	20.7
2024[d] . . .	76.6	81.5	18.3	20.9

Calendar year	Intermediate				Low-cost				High-cost			
	At birth		At age 65		At birth		At age 65		At birth		At age 65	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
2025	76.7	81.6	18.4	21.0	76.2	81.2	18.2	20.7	77.2	82.1	18.7	21.3
2030	77.2	82.1	18.7	21.3	76.4	81.4	18.3	20.8	78.3	82.9	19.4	21.8
2035	77.7	82.5	19.1	21.6	76.5	81.5	18.4	20.9	79.3	83.8	20.0	22.4
2040	78.3	83.0	19.4	21.8	76.7	81.7	18.5	21.0	80.3	84.6	20.6	22.9
2045	78.8	83.4	19.7	22.1	76.9	81.8	18.6	21.1	81.2	85.4	21.2	23.4
2050	79.3	83.8	20.0	22.4	77.1	82.0	18.7	21.2	82.1	86.1	21.7	23.9
2055	79.8	84.2	20.3	22.6	77.3	82.2	18.8	21.3	82.9	86.8	22.2	24.3
2060	80.3	84.6	20.6	22.9	77.5	82.3	18.9	21.4	83.7	87.4	22.7	24.8
2065	80.8	85.0	20.9	23.2	77.6	82.5	19.0	21.5	84.5	88.0	23.1	25.2
2070	81.2	85.4	21.1	23.4	77.8	82.6	19.1	21.6	85.1	88.5	23.6	25.5
2075	81.7	85.7	21.4	23.6	78.0	82.8	19.2	21.7	85.8	89.0	24.0	25.9
2080	82.1	86.1	21.7	23.9	78.2	82.9	19.3	21.8	86.4	89.5	24.4	26.2
2085	82.5	86.4	21.9	24.1	78.4	83.1	19.4	21.9	87.0	90.0	24.8	26.6
2090	82.9	86.7	22.2	24.3	78.5	83.2	19.5	22.0	87.5	90.4	25.1	26.9
2095	83.3	87.1	22.4	24.5	78.7	83.3	19.6	22.1	88.1	90.8	25.5	27.2
2100	83.7	87.4	22.6	24.7	78.9	83.5	19.7	22.2	88.6	91.2	25.8	27.4

[a] The period life expectancy at a given age for a given year is the average remaining number of years expected prior to death for a person at that exact age, born on January 1, using the mortality rates for that year over the course of his or her remaining life.
[b] Estimated using final data for ages below 65 and preliminary data for ages 65 and older.
[c] Estimated using preliminary data.
[d] Estimated, intermediate alternative.

Table V.A5.—Cohort Life Expectancy[a]

Calendar year	Intermediate				Low-cost				High-cost			
	At birth[b]		At age 65[c]		At birth[b]		At age 65[c]		At birth[b]		At age 65[c]	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1940	70.1	76.4	12.7	14.7	70.1	76.3	12.7	14.7	70.2	76.5	12.7	14.7
1945	71.9	78.0	13.0	15.4	71.7	77.8	13.0	15.4	72.1	78.3	13.0	15.4
1950	73.0	79.3	13.1	16.2	72.7	79.0	13.1	16.2	73.4	79.8	13.1	16.2
1955	73.5	79.8	13.1	16.7	73.1	79.3	13.1	16.7	74.2	80.5	13.1	16.7
1960	74.2	80.2	13.2	17.4	73.6	79.5	13.2	17.4	75.1	81.1	13.2	17.4
1965	75.1	80.8	13.5	18.0	74.2	79.8	13.5	18.0	76.3	82.0	13.5	18.0
1970	76.3	81.6	13.8	18.5	75.1	80.4	13.8	18.5	77.8	83.1	13.8	18.5
1975	77.1	82.3	14.2	18.7	75.7	80.9	14.2	18.7	79.0	84.1	14.2	18.7
1980	77.8	82.9	14.7	18.8	76.1	81.3	14.7	18.8	80.1	85.0	14.7	18.8
1985	78.4	83.4	15.4	19.0	76.4	81.6	15.4	19.0	81.0	85.8	15.4	19.0
1990	78.9	83.9	16.0	19.3	76.7	81.8	16.0	19.3	81.9	86.5	16.0	19.3
1995	79.6	84.4	16.7	19.6	77.1	82.1	16.6	19.6	82.8	87.2	16.7	19.7
2000	80.1	84.8	17.3	20.0	77.3	82.3	17.3	19.9	83.6	87.9	17.4	20.1
2005	80.6	85.2	17.8	20.4	77.4	82.4	17.7	20.3	84.4	88.4	17.9	20.6
2010	81.1	85.6	18.2	20.7	77.7	82.6	18.0	20.5	85.2	89.0	18.5	21.1
2015	81.6	86.0	18.5	21.1	77.9	82.8	18.1	20.7	85.9	89.5	19.0	21.7
2016	81.7	86.0	18.5	21.2	77.9	82.8	18.1	20.7	86.0	89.6	19.1	21.8
2017	81.7	86.1	18.5	21.2	78.0	82.9	18.1	20.7	86.1	89.7	19.2	21.9
2018	81.8	86.2	18.6	21.3	78.0	82.9	18.1	20.7	86.3	89.8	19.3	22.0
2019	81.9	86.2	18.7	21.3	78.1	82.9	18.1	20.8	86.4	89.9	19.4	22.1
2020	82.0	86.3	18.7	21.4	78.1	83.0	18.2	20.8	86.6	90.0	19.6	22.3
2021	82.1	86.4	18.9	21.5	78.1	83.0	18.2	20.8	86.7	90.1	19.8	22.4
2022	82.2	86.4	19.0	21.6	78.2	83.0	18.3	20.9	86.8	90.2	20.0	22.6
2023	82.3	86.5	19.1	21.7	78.2	83.0	18.4	21.0	86.9	90.3	20.1	22.7
2024	82.4	86.6	19.2	21.8	78.3	83.1	18.4	21.0	87.1	90.4	20.3	22.9
2025	82.5	86.7	19.3	21.8	78.3	83.1	18.4	21.0	87.2	90.5	20.4	23.0
2030	82.9	87.0	19.6	22.1	78.5	83.3	18.5	21.1	87.9	91.0	21.0	23.5
2035	83.3	87.4	19.9	22.4	78.7	83.4	18.6	21.2	88.5	91.5	21.6	24.0
2040	83.8	87.7	20.2	22.7	78.8	83.6	18.8	21.3	89.0	91.9	22.2	24.5
2045	84.2	88.0	20.5	22.9	79.0	83.7	18.9	21.4	89.6	92.3	22.7	24.9
2050	84.5	88.3	20.8	23.2	79.2	83.9	19.0	21.5	90.1	92.7	23.2	25.3
2055	84.9	88.6	21.1	23.5	79.4	84.0	19.1	21.6	90.6	93.0	23.7	25.7
2060	85.3	88.8	21.4	23.7	79.5	84.1	19.2	21.7	91.0	93.3	24.1	26.1
2065	85.6	89.1	21.6	23.9	79.7	84.3	19.3	21.8	91.4	93.7	24.5	26.5
2070	86.0	89.4	21.9	24.2	79.9	84.4	19.4	21.9	91.8	94.0	24.9	26.8
2075	86.3	89.6	22.2	24.4	80.0	84.5	19.5	22.0	92.2	94.3	25.3	27.1
2080	86.6	89.9	22.4	24.6	80.2	84.7	19.6	22.1	92.6	94.6	25.7	27.4
2085	86.9	90.1	22.7	24.8	80.4	84.8	19.7	22.2	93.0	94.8	26.0	27.7
2090	87.2	90.3	22.9	25.0	80.5	84.9	19.8	22.3	93.3	95.1	26.4	28.0
2095	87.5	90.5	23.1	25.2	80.7	85.1	19.9	22.3	93.7	95.3	26.7	28.3
2100	87.8	90.8	23.4	25.4	80.8	85.2	20.0	22.4	94.0	95.6	27.0	28.5

[a] The cohort life expectancy at a given age for a given year is the average remaining number of years expected prior to death for a person at that exact age, born on January 1, using the mortality rates for the series of years in which the individual will actually reach each succeeding age if he or she survives.

[b] Cohort life expectancy at birth for those born in the calendar year is based on a combination of actual, estimated, and projected death rates for birth years 1940 through 2022. For birth years after 2022, these values depend on estimated and projected death rates.

[c] Age 65 cohort life expectancy for those attaining age 65 in calendar years 1940 through 2021 is based on a combination of actual, estimated, and projected death rates. After 2021, these values depend on estimated and projected death rates.

B. ECONOMIC ASSUMPTIONS AND METHODS

The three alternative sets of economic assumptions are intended to provide a reasonable range for estimating the future financial status of the trust funds. The intermediate assumptions reflect stronger-than-expected economic growth in 2024 and the Trustees' expectation of a return to moderate growth, and their best estimates for other economic parameters. The low-cost assumptions represent a more optimistic outlook, maintaining a higher level of economic output, stronger long-term economic growth, and relatively optimistic levels for other parameters. The high-cost assumptions represent a more pessimistic scenario with a recession in 2025, slower economic growth in the long term, and relatively pessimistic levels for other parameters.

Actual economic data were generally available through the third quarter of 2024 at the time the assumptions for this report were set. Those data indicate that economic activity reached a peak in the fourth quarter of 2019.[1] A recession started in the first quarter of 2020 due to the precipitous decline in economic activity in March resulting from the onset of the COVID-19 pandemic, continuing into April, leading to the gross domestic product (GDP) in the second quarter of 2020 being more than 9 percent below the peak in the fourth quarter of 2019, expressed in constant 2017 dollars. GDP recovered rapidly, surpassing the fourth quarter 2019 peak in the first quarter of 2021. In the third quarter of 2024, GDP was about 11 percent above the previous peak.

Under the intermediate assumptions, the economy is estimated to be 0.6 percent above its sustainable trend level of output in the third quarter of 2024 and then grows slower than the sustainable trend rate in 2025, with GDP reaching and stabilizing at the sustainable trend level in the first quarter of 2026. Under the low-cost assumptions, GDP is estimated to be 0.4 percent below a higher sustainable trend level of output in the third quarter of 2024 and then grows relatively faster to reach the higher sustainable trend level of output by the third quarter of 2026. Under the high-cost assumptions, the sustainable trend level is lower, and GDP is estimated to be 1.6 percent above it in the third quarter of 2024. GDP falls to 2.5 percent below that lower sustainable trend level in the fourth quarter of 2025 and then recovers to the sustainable trend level by the first quarter of 2030. Complete economic cycles have little effect on the long-range estimates of financial status of the

[1] On a monthly basis, economic activity peaked in February 2020, but the decline in March was sharp enough that the output in the first quarter of 2020 was substantially below the output in the fourth quarter of 2019. See www.nber.org/news/business-cycle-dating-committee-announcement-june-8-2020.

trust funds, so the assumptions do not include cycles beyond the short-range period (2025 through 2034).

The key economic assumptions underlying the three sets of projections of the future financial status of the OASI and DI Trust Funds are discussed in the remainder of this section.

1. Productivity Assumptions

Total U.S. economy productivity is defined as the ratio of real GDP to hours worked by all workers.[1] The rate of change in total-economy productivity is a major determinant of the growth of average earnings. Over the last six complete economic cycles (1969-73, 1973-79, 1979-90, 1990-2001, 2001-07, and 2007-19, measured peak to peak), the annual increase in total-economy productivity averaged 2.64, 1.06, 1.40, 1.84, 2.17, and 1.20 percent, respectively. For the period from 1969 to 2019, covering those last six complete economic cycles, the annual increase in total-economy productivity averaged 1.60 percent.

The assumed ultimate annual increase in total-economy productivity is 1.93, 1.63, and 1.33 percent for the low-cost, intermediate, and high-cost assumptions, respectively.[2] These rates of increase are unchanged from the 2024 report.

The average annual rate of change in total-economy productivity from 2019 (the end of the last complete economic cycle) to 2024 is estimated to be 1.76 percent. For the intermediate assumptions, the annual rate of change in productivity is assumed to be 1.26 percent for 2025, to average 1.51 percent from 2025 to 2030, and to reach its ultimate value of 1.63 percent for 2031 and thereafter. For the low-cost assumptions, the annual rate of change in productivity is assumed to be 1.28 percent for 2025, to average 1.59 percent from 2025 to 2028, to average 1.96 percent from 2028 to 2033, and to reach its ultimate value of 1.93 percent for 2034 and thereafter. For the high-cost assumptions, the assumed recession lowers the annual rate of change in productivity to 0.70 percent for 2025. The growth rate rebounds to an average of 1.51 percent from 2025 to 2027, averages 1.34 percent from 2027 to 2030, and stabilizes at 1.33 percent for 2031 and thereafter.

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[1] Historical levels of real GDP are from the National Income and Product Accounts (NIPA) produced by the Bureau of Economic Analysis (BEA). Historical total hours worked are provided by the Bureau of Labor Statistics (BLS) and cover all U.S. Armed Forces and civilian employment.

[2] These assumptions for total-economy productivity are consistent with ultimate annual increases in private nonfarm business productivity of 2.36, 2.00, and 1.63 percent. Private nonfarm business productivity excludes the farm, government, nonprofit institution, and private household sectors.

2. Price Inflation Assumptions

Changes in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI) directly affect the OASDI program through the automatic cost-of-living benefit increases. Changes in the GDP price index (GDP deflator) affect the nominal levels of GDP, wages, self-employment income, average earnings, and taxable payroll. For a given real rate of growth in average earnings, a higher price inflation rate immediately results in a higher nominal rate of growth in both earnings and revenues, while the resulting added growth in nominal benefit levels occurs with a delay, causing an overall increase (improvement) in the actuarial balance. Similarly, a lower price inflation rate causes an overall decrease in the actuarial balance.

The annual increase in the CPI averaged 4.91, 8.54, 5.30, 2.73, 2.63, and 1.73 percent over the economic cycles 1969-73, 1973-79, 1979-90, 1990-2001, 2001-07, and 2007-19, respectively.[1] The annual increase in the GDP deflator averaged 5.04, 7.54, 4.62, 2.08, 2.52, and 1.56 percent for the respective economic cycles. For the period from 1969 to 2019, covering the last six complete economic cycles, the annual increase averaged 3.89 percent for the CPI and 3.44 percent for the GDP deflator. The annual rate of change for 2020, which was affected by the recession, was 1.21 percent for the CPI and 1.34 percent for the GDP deflator. During the subsequent recovery, aggregate demand increased while supply was constrained, leading to 2021 and 2022 growth rates of 5.26 and 8.46 percent for the CPI and 4.55 and 7.14 percent for the GDP deflator, respectively. Inflation then subsided quickly; the annual growth rate in the CPI was 3.82 percent for 2023 and is estimated to be 2.84 percent for 2024, while the growth rate in the GDP deflator was 3.58 percent for 2023 and is estimated to be 2.41 percent for 2024.

The assumed ultimate annual increase in the CPI is 3.00, 2.40, and 1.80 percent for the low-cost, intermediate, and high-cost assumptions, respectively. These values are unchanged from the 2024 report.

For the intermediate assumptions, the annual rate of change in the CPI is 2.47 percent for 2025, 2.49 percent for 2026, and reaches the ultimate growth rate of 2.40 percent for 2027 and thereafter. For the low-cost assumptions, the annual rate of change in the CPI is 2.70 percent for 2025, and reaches its

[1] BLS produces a series called the Consumer Price Index Research Series Using Current Methods (CPI-U-RS) that approximates the measured rate of inflation since 1978 had the method currently used been in effect since then. BLS does not revise the CPI values published in earlier years, for which different methods were used. These CPI published values are shown in table V.B1. The Trustees use an adjusted CPI series based on the CPI-U-RS when setting the ultimate price inflation assumption because it provides a time series that is consistent with the current method for computing the CPI.

ultimate growth rate of 3.00 percent for 2026 and thereafter. For the high-cost assumptions, the annual rate of change in the CPI is 2.21 percent for 2025, 1.85 percent for 2026, and reaches its ultimate growth rate of 1.80 percent for 2027 and thereafter.

The annual increase in the GDP deflator differs from the annual increase in the CPI because the two indices are constructed using different computational methods and coverage (the set of goods and services used in the measurement). The difference between the rate of change in the CPI and the rate of change in the GDP deflator is called the price differential in this report. For the period including 1969 through 2019, covering the last six complete economic cycles, the average annual price differential was 0.47 percentage point. The annual price differential was -0.13 percentage point for 2020, 0.71 percentage point for 2021, 1.32 percentage points for 2022, 0.24 percentage point for 2023, and is estimated to be 0.43 percentage point for 2024.

The fluctuations in the price differential for 2020-24 primarily reflect a decline, subsequent increase, and eventual relative stabilization in oil prices, as well as price increases concentrated in consumer goods categories during the economic recovery of 2020-22. Changes in oil prices affect the CPI much more than the GDP deflator because oil comprises a much larger share of U.S. consumption than of U.S. production. Oil prices are assumed to grow at a relatively stable rate in the future. For the intermediate assumptions, the price differential is 0.30 percentage point for 2025, 0.42 percentage point for 2026, and 0.35 percentage point for 2027 and later.

The assumed ultimate price differential is 0.25, 0.35, and 0.45 percentage point for the low-cost, intermediate, and high-cost alternative, respectively. Varying the ultimate projected price differential across alternatives recognizes the historical variation in this measure. Accordingly, the assumed ultimate annual increase in the GDP deflator is 2.75 (3.00 less 0.25), 2.05 (2.40 less 0.35), and 1.35 (1.80 less 0.45) percent for the low-cost, intermediate, and high-cost alternative, respectively. The ultimate price differentials for the three alternatives are unchanged from the 2024 report.

3. Average Earnings Assumptions

The size of the taxable payroll—the main source of the OASDI program's income—for each year depends primarily on the nominal earnings in OASDI covered employment, which is the product of covered employment[1] for the

[1] Covered employment for a year is defined as the total number of persons who have any OASDI covered earnings (that is, earnings subject to the OASDI payroll tax) at any time during that year. See section V.C.2 for a more detailed discussion of covered employment.

year and average covered earnings for the year. The level of average covered earnings also affects the future level of average benefits. In addition, the average reported annual wage in the U.S. economy determines the national average wage index (AWI). Under the automatic adjustment provisions in the law, the growth in the AWI affects the contribution and benefit base, certain parameters used in the OASDI benefit formula, and certain other program parameters.[1]

The projected growth rate in average annual covered earnings and in the AWI are derived from the projected growth rate in average U.S. earnings. The level of average U.S. earnings is defined as the ratio of the sum of total U.S. wages and net proprietors' income to the sum of average weekly U.S. civilian employment and Armed Forces. The growth rate in average U.S. earnings for any period is equal to the combined growth rates for total U.S. economy productivity, average hours worked per week, the ratio of earnings to total labor compensation (which includes fringe benefits), the ratio of total labor compensation to GDP, and the GDP deflator.

The average annual change in average hours worked per week was -0.20 percent over the last six complete economic cycles covering the period from 1969 to 2019. The annual change in average hours worked averaged -0.87, -0.53, -0.09, 0.11, -0.49, and -0.04 percent over the economic cycles 1969-73, 1973-79, 1979-90, 1990-2001, 2001-07, and 2007-19, respectively. From 2019 to 2024, the first five years after the peak of the last complete cycle, the average annual change in average hours worked per week is estimated to be an increase of 0.13 percent.

The assumed ultimate annual rate of change for average hours worked per week is 0.05, -0.05, and -0.15 percent for the low-cost, intermediate, and high-cost assumptions, respectively. These values are unchanged from the 2024 report.

The average annual change in the ratio of earnings to total labor compensation was -0.15 percent from 1969 to 2019. Data from BEA indicate that the most significant component of this change was the relative increase in the cost of employer-sponsored group health insurance (ESGHI) for wage workers, followed by the increase in employer contributions to social insurance (as statutory payroll tax rates increased between 1970 and 1990), and, to a lesser extent, an increase in employer contributions to retirement plans. Assuming that the level of total employee compensation is not affected by the amount of non-wage compensation, such as ESGHI, any increase or

[1] See section V.C.1 for a discussion of the AWI and the parameters indexed to it.

decrease in the cost of non-wage compensation leads to a commensurate decrease or increase in wages. Projections of future ratios of earnings to total labor compensation follow this principle.

The average annual rate of change in the ratio of wages to employee compensation was -0.17 percent from 1969 to 2019. The average annual rate of change in this ratio increased to 0.27 percent for the period 2019 to 2024, in part due to the unusual effects of the pandemic-induced recession. The average annual rate from 2024 to 2034 is assumed to be about -0.05, -0.10, and -0.16 percent for the low-cost, intermediate, and high-cost assumptions, respectively. For the last 65 years of the long-range period, from 2034 to 2099, the annual rate is assumed to be 0.00, -0.10, and -0.20 percent for the low-cost, intermediate, and high-cost assumptions, respectively. The rates for the last 65 years are unchanged from the 2024 report. Under the intermediate assumptions, the ratio of wages to employee compensation declines from 0.826 for 2024 to 0.766 for 2099.

Because earnings and compensation are the same for self-employed workers, the ratio of earnings to total labor compensation includes self-employment income both in the numerator and in the denominator. As a result, the rate of change in the ratio of earnings to total labor compensation (which, under the intermediate assumptions, averages -0.09 percent from 2034 to 2099) is slightly higher (i.e., less negative) than the rate of change in the ratio of wages to employee compensation.

The ratio of total labor compensation (i.e., employee compensation and net proprietors' income) to GDP varies over the economic cycle and with various other factors, such as changes in the relative sizes of different sectors of the economy. Over the last six complete economic cycles from 1969 to 2019, this ratio averaged 0.621, but it was lower over the last complete cycle from 2007 to 2019, averaging 0.604. The ratio increased to 0.618 for 2020, but then declined to 0.582 for 2023, and is estimated to be 0.584 for 2024. It is projected to gradually rise until 2034 to a level of 0.619, 0.612, and 0.605 under the low-cost, intermediate, and high-cost assumptions, respectively, and to remain approximately constant thereafter. These values are lower than in the 2024 report, where the level for 2033 was 0.628 for all three sets of assumptions.

For the intermediate assumptions, the projected average annual growth rate in average nominal U.S. earnings from 2024 to 2034 is 3.92 percent. The projected average annual growth rate from 2034 to 2099 is 3.57 percent,

which reflects the assumed ultimate annual growth rates of 1.63 percent for productivity, -0.05 percent for average hours worked, 2.05 percent for the GDP deflator, and -0.09 percent for the ratio of earnings to total labor compensation. Over the same period, the projected average annual growth rate in average nominal U.S. earnings is 4.79 percent for the low-cost assumptions and 2.37 percent for the high-cost assumptions.

The average annual wage in OASDI covered employment (often referred to as the "average covered wage") is defined as the total wages and salaries paid in OASDI covered employment during the year, divided by the number of workers who worked in OASDI covered employment at any time during the year. Over long periods, the average annual growth rate in the average covered wage is expected to be very close to the average annual growth rate in average U.S. earnings. The estimated annual rate of change in the average covered wage is 4.21 percent for 2024 under the intermediate assumptions. From 2024 to 2034, the annual rate of change in the average covered wage averages 5.27, 3.98, and 2.72 percent for the low-cost, intermediate, and high-cost assumptions, respectively. The projected average annual growth rate in the average covered wage from 2034 to 2099 is 4.78, 3.56, and 2.34 percent for the low-cost, intermediate, and high-cost assumptions, respectively.

4. Assumed Real Wage Growth

For the period from 1969 to 2019, covering the last six complete economic cycles, the annual real (i.e., inflation-adjusted) growth rate in the average covered wage averaged 0.77 percent, the result of averages of 0.98, 0.03, 0.46, 1.42, 0.80, and 0.76 percent over the economic cycles 1969-73, 1973-79, 1979-90, 1990-2001, 2001-07, and 2007-19, respectively. The real wage increased 1.56 percent for 2020, a year which included the pandemic-induced recession and the beginning of the ensuing recovery. It then increased 3.58 percent for 2021, during the continuing rapid recovery from the recession, decreased 2.89 percent for 2022, primarily due to the high inflation rate, increased 1.24 percent for 2023, and is estimated to increase 1.34 percent for 2024 under the intermediate assumptions.

For the period 2034 to 2099, the projected average annual real wage growth rate in OASDI covered employment is 1.73, 1.13, and 0.53 percent for the low-cost, intermediate, and high-cost assumptions, respectively. The average annual real wage growth rates are slightly lower than in the 2024 report for the intermediate and low-cost alternatives, and unchanged for the high-cost alternative.

Under the intermediate assumptions, the annual real wage growth rate is projected to be 1.47 percent for 2025, to average 1.53 percent from 2025 to 2034, and to average 1.13 percent from 2034 to 2099. For the low-cost assumptions, the annual real wage growth rate is 2.34 percent for 2025, averages 2.22 percent from 2025 to 2034, and averages 1.73 percent from 2034 to 2099. For the high-cost assumptions, the real wage growth rate is projected to be -0.93 percent for 2025, averages 1.06 percent from 2025 to 2034, and 0.53 percent from 2034 to 2099.

Table V.B1.—Principal Economic Assumptions

Calendar year	Annual percentage change[a] in— Productivity (Total U.S. economy)	GDP price index	Average hours worked per week	Earnings as a percentage of total labor compensation	Average annual wage in covered employment: Nominal	Average annual wage in covered employment: Real	Consumer Price Index
Historical data:							
5-year periods:							
1960 to 1965 . . .	3.24	1.36	0.19	-0.18	3.22	1.95	1.24
1965 to 1970 . . .	2.04	4.02	-.66	-.30	5.84	1.55	4.23
1970 to 1975 . . .	2.07	6.61	-.87	-.49	6.58	-.17	6.76
1975 to 1980 . . .	.93	7.21	-.16	-.33	8.88	-.02	8.91
1980 to 1985 . . .	1.72	5.24	.02	-.36	6.52	1.24	5.22
1985 to 1990 . . .	1.33	3.14	-.06	-.20	4.79	.93	3.83
1990 to 1995 . . .	1.29	2.45	.35	-.11	3.54	.49	3.03
1995 to 2000 . . .	2.33	1.67	.13	.28	5.31	2.81	2.43
2000 to 2005 . . .	2.63	2.32	-.78	-.38	2.69	.19	2.49
2005 to 2010 . . .	1.87	1.91	-.51	-.02	2.51	.21	2.30
2010 to 2015 . . .	.52	1.65	.43	.13	2.94	1.30	1.61
2015 to 2020 . . .	1.83	1.61	-.16	.12	2.98	1.25	1.70
Economic cycles:[b]							
1969 to 1973 . . .	2.64	5.04	-.87	-.34	5.94	.98	4.91
1973 to 1979 . . .	1.06	7.54	-.53	-.43	8.58	.03	8.54
1979 to 1990 . . .	1.40	4.62	-.09	-.29	5.78	.46	5.30
1990 to 2001 . . .	1.84	2.08	.11	.05	4.19	1.42	2.73
2001 to 2007 . . .	2.17	2.52	-.49	-.18	3.45	.80	2.63
2007 to 2019 . . .	1.20	1.56	-.04	.04	2.51	.76	1.73
2019 to 2024[c] . .	1.76	3.79	.13	.22	5.27	.94	4.29
Single years:							
2014	.57	1.74	.34	.23	3.60	2.07	1.50
2015	.79	.87	.46	.06	3.39	3.82	-.41
2016	.60	.96	-.50	.10	1.30	.32	.98
2017	1.27	1.82	-.06	.14	3.49	1.33	2.13
2018	1.09	2.29	.28	-.09	3.66	1.08	2.55
2019	1.52	1.65	-.08	.25	3.66	1.96	1.66
2020	4.73	1.34	-.42	.19	2.79	1.56	1.21
2021	1.55	4.55	1.15	.67	9.03	3.58	5.26
2022	-.64	7.14	-.51	.57	5.32	-2.89	8.46
2023	1.45	3.58	-.29	-.19	5.11	1.24	3.82
2024[c]	1.76	2.41	.72	-.13	4.21	1.34	2.84
Intermediate:							
2025	1.26	2.17	.11	-.12	3.97	1.47	2.47
2026	1.47	2.07	-.23	-.08	4.13	1.60	2.49
2027	1.46	2.05	-.21	-.08	4.03	1.59	2.40
2028	1.56	2.05	-.12	-.08	4.11	1.67	2.40
2029	1.51	2.05	-.11	-.08	3.94	1.50	2.40
2030	1.56	2.05	-.08	-.09	3.88	1.45	2.40
2031	1.63	2.05	-.05	-.09	3.93	1.49	2.40
2032	1.63	2.05	-.05	-.09	3.95	1.51	2.40
2033	1.63	2.05	-.05	-.09	3.96	1.53	2.40
2034	1.63	2.05	-.05	-.09	3.85	1.42	2.40
2034 to 2099 . . .	1.63	2.05	-.05	-.09	3.56	1.13	2.40

Table V.B1.—Principal Economic Assumptions (Cont.)

Calendar year	Annual percentage change[a] in— Productivity (Total U.S. economy)	GDP price index	Average hours worked per week	Earnings as a percentage of total labor compensation	Average annual wage in covered employment: Nominal	Average annual wage in covered employment: Real	Consumer Price Index
Low-cost:							
2025	1.28	2.47	0.14	-0.13	5.10	2.34	2.70
2026	1.51	2.77	-.06	-.07	5.50	2.43	3.00
2027	1.55	2.75	[d]	-.06	5.28	2.22	3.00
2028	1.71	2.75	[d]	-.05	5.31	2.24	3.00
2029	1.91	2.75	[d]	-.04	5.38	2.31	3.00
2030	1.99	2.75	[d]	-.04	5.32	2.25	3.00
2031	1.98	2.75	[d]	-.04	5.23	2.17	3.00
2032	1.98	2.75	[d]	-.02	5.20	2.14	3.00
2033	1.96	2.75	.02	-.01	5.23	2.16	3.00
2034	1.93	2.75	.05	[d]	5.12	2.06	3.00
2034 to 2099	1.93	2.75	.05	[d]	4.78	1.73	3.00
High-cost:							
2025	.70	1.86	.06	-.12	1.25	-.93	2.21
2026	1.53	1.38	-.27	-.07	2.22	.37	1.85
2027	1.49	1.35	-.27	-.10	3.61	1.78	1.80
2028	1.39	1.35	-.27	-.12	3.49	1.66	1.80
2029	1.33	1.35	-.26	-.13	3.10	1.28	1.80
2030	1.30	1.35	-.16	-.14	2.81	.99	1.80
2031	1.33	1.35	-.15	-.15	2.70	.88	1.80
2032	1.33	1.35	-.15	-.16	2.72	.90	1.80
2033	1.33	1.35	-.15	-.17	2.71	.90	1.80
2034	1.33	1.35	-.15	-.18	2.59	.78	1.80
2034 to 2099	1.33	1.35	-.15	-.17	2.34	.53	1.80

[a] For rows with a single year listed, the value is the annual percentage change from the prior year. For rows with a range of years listed, the value is the compound average annual percentage change.
[b] Economic cycles are shown from peak to peak, except for the last cycle, which is not yet complete.
[c] Estimated values for 2024 vary slightly by alternative and are shown for the intermediate assumptions.
[d] Greater than -0.005 and less than 0.005 percent.

5. Labor Force, Employment, and Unemployment Projections

Employment is a fundamental component of economic output (GDP), taxable payroll, and the determination of OASDI benefit eligibility and benefit levels. U.S. employment is projected in two components: the size of the labor force (those employed or seeking employment) and the unemployment rate (the proportion of those in the labor force who are not employed). Table V.B2 provides the historical and projected rates of change in employment, which follow from the rates of change in the labor force, adjusted for the varying unemployment rates from year to year.

The model used by the Office of the Chief Actuary projects the civilian labor force by age, sex, marital status, and presence of children. Projections of the labor force participation rates reflect changes in disability prevalence, educational attainment, marriage patterns, the average level of Social Security retirement benefits, the state of the economy, and life expectancy.

The annual rate of growth in the size of the labor force decreased from an average of about 2.6 percent during the 1969-73 economic cycle and 2.7 percent during the 1973-79 cycle to 1.7 percent during the 1979-90 cycle, 1.2 percent during the 1990-2001 cycle, 1.1 percent during the 2001-07 cycle, and 0.5 percent during the 2007-19 cycle. From 2019 to 2024, during the current (incomplete) economic cycle, labor force growth averaged 0.6 percent per year, which combines the fall in the labor force during the pandemic-induced recession of 2020 and the growth in the labor force in 2021-24. Under the intermediate assumptions, labor force growth is projected to be 1.3 percent in 2025, average 0.8 percent per year from 2025 to 2028, and average 0.5 percent per year from 2028 to 2034. The long-term growth rate in the labor force is expected to remain subdued due to a slowing of growth in the working-age population—a consequence of the baby-boom generation reaching retirement ages and succeeding lower-birth-rate cohorts reaching working ages. Under the intermediate assumptions, the labor force is projected to increase by an average of 0.3 percent per year from 2034 to 2099.

Labor force participation rates are projected with a model that uses demographic and economic assumptions specific to each alternative. More optimistic economic assumptions in the low-cost alternative are consistent with higher labor force participation rates, while demographic assumptions in the low-cost alternative (such as slower improvement in longevity) are consistent with lower labor force participation rates. These economic and demographic influences have largely offsetting effects. Therefore, the projected labor force participation rates do not vary substantially across alternatives.

Historically, labor force participation rates reflect trends in demographics and pensions. Between the mid-1960s and the mid-1980s, labor force participation rates at ages 55 and over declined for men but were fairly stable for women. During this period, the baby-boom generation reached working age and more women entered the labor force. This increasing supply of labor allowed employers to offer attractive early retirement options. Between the mid-1980s and the mid-1990s, participation rates at ages 55 and over roughly stabilized for men and increased for women. Since the mid-1990s, however, participation rates for both sexes at ages 55 and over have generally risen.

Many economic and demographic factors, including longevity, disability prevalence, the business cycle, incentives for retirement in Social Security and private pensions, education, and marriage patterns, will influence future labor force participation rates. The Office of the Chief Actuary models some of these factors explicitly. To model the effects of other factors related to increases in life expectancy, projected participation rates are adjusted upward for mid-career and older ages to reflect projected increases in life expec-

tancy. For the intermediate projections, this adjustment increases the total labor force by 2.8 percent for 2099.

For men and boys age 16 and over, the projected age-adjusted labor force participation rate[1] for 2099 is 70.7, 70.5, and 70.1 percent for the low-cost, intermediate, and high-cost assumptions, respectively. For women and girls age 16 and over, the projected age-adjusted labor force participation rate for 2099 is 61.1, 60.8, and 61.0 percent for the low-cost, intermediate, and high-cost assumptions, respectively. These age-adjusted labor force participation rates for 2099 are higher under all three alternatives than the age-adjusted rates for 2023 of 68.6 percent for men and boys and 57.9 percent for women and girls (based on actual age-specific rates published by the Bureau of Labor Statistics), primarily due to the Trustees' projected increases in life expectancy, as well as the rise in educational attainment for women.

The aggregate civilian unemployment rates are presented in table V.B2. For years through 2034, the table presents aggregate civilian rates without adjustment for the changing age-sex distribution of the population. For years after 2034, the table presents age-sex-adjusted rates, using the age-sex distribution of the 2020 civilian labor force. Age-sex-adjusted rates allow for more meaningful comparisons across longer time periods.

The aggregate civilian unemployment rate reflects the projected levels of unemployment for various age-sex groups of the population. Each group's unemployment rate gradually approaches an assumed stable value within the first ten years of the projection period for all alternatives, and thus the age-sex-adjusted civilian unemployment rate reaches its ultimate assumed value within the first ten years of the projection period.

The assumed ultimate age-sex-adjusted unemployment rate is 3.5, 4.5, and 5.5 percent for the low-cost, intermediate, and high-cost assumptions, respectively. These values are unchanged from the 2024 report. Under the intermediate assumptions, as economic growth slows to approach the sustainable long-term trend, the unemployment rate increases from 4.1 percent for 2024 to 4.5 percent for 2026 and thereafter. Under the low-cost assumptions, the unemployment rate is projected to decrease to 3.8 percent for 2025 and to the ultimate unemployment rate of 3.5 percent for 2026 and thereafter. Under the high-cost assumptions, due to the assumed economic recession, the unemployment rate increases to 5.4 percent for 2025 and to 6.6 percent

[1] The Office of the Chief Actuary adjusts the labor force participation rates to the 2020 age distribution of the civilian noninstitutional U.S. population.

for 2026, with the age-sex-adjusted rate then gradually decreasing to the ultimate unemployment rate of 5.5 percent for 2030 and thereafter.[1]

6. Gross Domestic Product Projections

The value of real GDP is equal to the product of three components: (1) productivity (i.e., output per hour worked), (2) average weekly total employment,[2] and (3) average hours worked per week, times 52. Consequently, the growth rate in real GDP is equal to the combined growth rates for productivity, total employment, and average hours worked. For the period from 1969 to 2019, which covers the last six complete economic cycles, the average annual growth in real GDP was 2.76 percent, combining average growth rates of 1.60 percent for productivity, 1.35 percent for total employment, and -0.20 percent for average hours worked ($1.0276 \cong 1.0160 \times 1.0135 \times 0.9980$). The real GDP growth rate was -2.2 percent for 2020, 6.1 percent for 2021, 2.5 percent for 2022, 2.9 percent for 2023, and is estimated to be 2.8 percent for 2024 under the intermediate assumptions.

For the intermediate assumptions, the average annual growth in real GDP is 2.1 percent from 2024 to 2034, combining the average growth rates of 1.54 percent for productivity, 0.59 percent for total employment, and -0.08 percent for average hours worked. The projected underlying sustainable trend rate of real GDP growth is also approximately 2.1 percent from 2024 to 2034 because the economy is estimated to be only slightly above the sustainable trend in 2024. After 2034, the annual growth in real GDP follows the sustainable trend rate and averages 1.9 percent, which combines the projected ultimate annual growth rate of 1.63 percent for productivity, average annual growth rate of 0.28 percent for total employment, and the ultimate annual growth rate of -0.05 percent for average hours worked per week. The projected growth rate of real GDP is lower than the past average growth rate mainly because the working-age population is expected to grow more slowly than in the past.

For the low-cost assumptions, the annual growth in real GDP averages 2.8 percent from 2024 to 2034 and 2.5 percent from 2034 to 2099. For the high-cost assumptions, the annual growth in real GDP averages 1.4 percent from 2024 to 2034 and 1.1 percent from 2034 to 2099.

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[1] The assumed ultimate unemployment rates are age-sex-adjusted rates. For the high-cost assumptions, the age-sex-adjusted unemployment rates for 2031 through 2034 are approximately 0.1 percentage point higher than the rates without adjustment for the changing age-sex distribution, which are shown in table V.B2.

[2] Average weekly total employment is the sum of average weekly U.S. civilian employment, which can be expressed as a product of the total civilian labor force and the complement of the unemployment rate, and U.S. Armed Forces.

7. Interest Rates

Table V.B2 presents average annual nominal and real interest rates for newly issued trust fund securities. The nominal rate is the average of the nominal interest rates for special U.S. Government obligations issuable to the trust funds in each of the 12 months of the year. Interest for these securities is compounded semiannually, or at redemption if sooner. The real interest rate is defined as the annual yield rate for investments in these securities divided by the annual rate of growth in the CPI for the first year after issuance. The real rate shown for each year reflects the actual realized (historical) or expected (future) real yield on securities issuable in the prior year.

To develop a reasonable range of assumed ultimate future real interest rates for the three alternatives, the Office of the Chief Actuary examined historical experience for the last six complete economic cycles. For the period from 1969 to 2019, the real interest rate averaged 2.4 percent per year. The real interest rate averaged 1.6, -1.0, 5.1, 4.1, 2.0, and 0.8 percent per year over the economic cycles 1969-73, 1973-79, 1979-90, 1990-2001, 2001-07, and 2007-19, respectively. The assumed ultimate real interest rate is 2.8 percent, 2.3 percent, and 1.8 percent for the low-cost, intermediate, and high-cost assumptions, respectively. These ultimate rates are unchanged from the 2024 report. In this year's report, the real interest rate reaches its ultimate level in 2038 for the low-cost assumptions, 2042 for the intermediate assumptions, and 2042 for the high-cost assumptions.

The average annual nominal interest rate was approximately 4.1 percent for securities newly issuable in 2023, implying an effective annual yield of approximately 4.2 percent for securities held for one year. The CPI rose from 2023 to 2024 by approximately 2.8 percent. Consistent with these values, the annual real interest rate for 2024 was 1.3 percent. From 2024 to 2034, projected nominal interest rates depend on changes in economic conditions and in the CPI. When combined with the ultimate CPI assumptions of 3.0, 2.4, and 1.8 percent, the assumed ultimate real interest rates produce an ultimate nominal interest rate of 5.8 percent for the low-cost assumptions, 4.7 percent for the intermediate assumptions, and 3.6 percent for the high-cost assumptions. These nominal rates for newly issued trust fund securities reach their ultimate levels in 2037 for the low-cost assumptions, 2041 for the intermediate assumptions, and 2041 for the high-cost assumptions.

Table V.B2.—Additional Economic Factors

Calendar year	Average annual unemployment rate[a]	Annual percentage change[b] in—			Average annual interest rate	
		Labor force[c]	Total employment[d]	Real GDP[e]	Nominal[f]	Real[g]
Historical data:						
5-year periods:						
1960 to 1965	5.5	1.3	1.6	5.1	4.0	2.5
1965 to 1970	3.9	2.2	2.1	3.5	5.9	1.0
1970 to 1975	6.1	2.5	1.5	2.7	6.7	[h]
1975 to 1980	6.8	2.7	2.9	3.7	8.5	-.9
1980 to 1985	8.3	1.5	1.5	3.3	12.1	6.9
1985 to 1990	5.9	1.7	2.0	3.3	8.5	5.1
1990 to 1995	6.6	1.0	.9	2.6	7.0	4.3
1995 to 2000	4.6	1.5	1.8	4.3	6.2	3.9
2000 to 2005	5.4	.9	.7	2.6	4.6	2.4
2005 to 2010	6.8	.6	-.4	1.0	3.8	1.8
2010 to 2015	7.2	.4	1.3	2.3	2.0	.5
2015 to 2020	5.0	.5	-.2	1.5	2.0	.5
Economic cycles:[i]						
1969 to 1973	5.3	2.6	1.8	3.6	6.5	1.6
1973 to 1979	6.8	2.7	2.4	3.0	7.7	-1.0
1979 to 1990	7.1	1.7	1.7	3.0	10.3	5.1
1990 to 2001	5.5	1.2	1.2	3.2	6.5	4.1
2001 to 2007	5.3	1.1	1.1	2.8	4.5	2.0
2007 to 2019	6.4	.5	.6	1.8	2.4	.8
2019 to 2024[j]	5.0	.6	.5	2.4	2.7	-1.9
Single years:						
2014	6.2	.3	1.6	2.5	2.3	.4
2015	5.3	.8	1.7	2.9	2.0	2.7
2016	4.9	1.3	1.7	1.8	1.8	1.0
2017	4.4	.7	1.2	2.5	2.3	-.3
2018	3.9	1.1	1.6	3.0	2.9	-.2
2019	3.7	.9	1.1	2.6	2.2	1.2
2020	8.1	-1.7	-6.2	-2.2	1.0	1.0
2021	5.4	.3	3.2	6.1	1.4	-4.1
2022	3.6	1.9	3.7	2.5	3.0	-6.5
2023	3.6	1.7	1.7	2.9	4.1	-.8
2024[j]	4.1	.7	.3	2.8	4.3	1.3

Table V.B2.—Additional Economic Factors (Cont.)

Calendar year	Average annual unemployment rate[a]	Annual percentage change[b] in—			Average annual interest rate	
		Labor force[c]	Total employment[d]	Real GDP[e]	Nominal[f]	Real[g]
Intermediate:						
2025	4.4	1.3	0.9	2.3	4.2	1.8
2026	4.5	.9	.8	2.1	4.1	1.7
2027	4.5	.8	.7	2.0	4.1	1.7
2028	4.5	.7	.7	2.1	4.1	1.7
2029	4.5	.7	.7	2.1	4.1	1.7
2030	4.5	.5	.5	2.0	4.1	1.7
2031	4.5	.4	.4	2.0	4.1	1.7
2032	4.5	.4	.4	2.0	4.1	1.7
2033	4.5	.4	.4	2.0	4.1	1.7
2034	4.5	.3	.3	1.9	4.1	1.7
2035	4.5	.3	.3	1.9	4.3	1.7
2040	4.5	.3	.3	1.9	4.6	2.2
2045	4.5	.3	.3	1.8	4.7	2.3
2050	4.5	.3	.3	1.8	4.7	2.3
2055	4.5	.3	.3	1.9	4.7	2.3
2060	4.5	.3	.3	1.9	4.7	2.3
2065	4.5	.3	.3	1.8	4.7	2.3
2070	4.5	.2	.2	1.8	4.7	2.3
2075	4.5	.2	.2	1.8	4.7	2.3
2080	4.5	.3	.3	1.8	4.7	2.3
2085	4.5	.3	.3	1.9	4.7	2.3
2090	4.5	.4	.4	1.9	4.7	2.3
2095	4.5	.4	.4	1.9	4.7	2.3
2100	4.5	.3	.3	1.9	4.7	2.3
Low-cost:						
2025	3.8	1.8	2.0	3.5	4.8	1.6
2026	3.5	1.4	1.7	3.2	5.1	1.8
2027	3.5	1.2	1.2	2.8	5.3	2.1
2028	3.5	.9	.9	2.6	5.3	2.3
2029	3.5	.7	.7	2.6	5.3	2.3
2030	3.5	.6	.6	2.6	5.3	2.3
2031	3.5	.6	.6	2.6	5.3	2.3
2032	3.5	.6	.6	2.6	5.3	2.3
2033	3.5	.6	.6	2.6	5.3	2.3
2034	3.5	.5	.5	2.5	5.4	2.3
2035	3.5	.5	.5	2.5	5.6	2.4
2040	3.5	.4	.4	2.4	5.8	2.8
2045	3.5	.4	.4	2.4	5.8	2.8
2050	3.5	.5	.5	2.5	5.8	2.8
2055	3.5	.6	.5	2.5	5.8	2.8
2060	3.5	.6	.6	2.6	5.8	2.8
2065	3.5	.5	.5	2.5	5.8	2.8
2070	3.5	.5	.5	2.5	5.8	2.8
2075	3.5	.5	.5	2.5	5.8	2.8
2080	3.5	.6	.6	2.6	5.8	2.8
2085	3.5	.7	.7	2.6	5.8	2.8
2090	3.5	.7	.7	2.7	5.8	2.8
2095	3.5	.7	.7	2.7	5.8	2.8
2100	3.5	.6	.6	2.6	5.8	2.8

Table V.B2.—Additional Economic Factors (Cont.)

Calendar year	Average annual unemployment rate[a]	Annual percentage change[b] in— Labor force[c]	Total employment[d]	Real GDP[e]	Average annual interest rate Nominal[f]	Real[g]
High-cost:						
2025	5.4	0.5	-1.0	-0.2	3.9	2.1
2026	6.6	.5	-.8	.4	3.4	2.1
2027	6.1	.7	1.3	2.5	3.0	1.6
2028	5.7	.7	1.1	2.2	3.0	1.2
2029	5.5	.6	.8	1.9	3.0	1.2
2030	5.5	.3	.4	1.5	3.0	1.2
2031	5.4	.3	.3	1.5	3.0	1.2
2032	5.4	.3	.3	1.5	3.0	1.2
2033	5.4	.2	.2	1.4	3.0	1.2
2034	5.4	.2	.2	1.4	3.1	1.2
2035	5.5	.2	.2	1.4	3.1	1.3
2040	5.5	.1	.1	1.3	3.5	1.7
2045	5.5	h	.1	1.2	3.6	1.8
2050	5.5	h	h	1.2	3.6	1.8
2055	5.5	-.1	-.1	1.1	3.6	1.8
2060	5.5	-.1	-.1	1.1	3.6	1.8
2065	5.5	-.1	-.1	1.0	3.6	1.8
2070	5.5	-.2	-.2	1.0	3.6	1.8
2075	5.5	-.2	-.2	1.0	3.6	1.8
2080	5.5	-.2	-.2	.9	3.6	1.8
2085	5.5	-.2	-.2	.9	3.6	1.8
2090	5.5	-.2	-.2	1.0	3.6	1.8
2095	5.5	-.2	-.2	1.0	3.6	1.8
2100	5.5	-.2	-.2	1.0	3.6	1.8

[a] The Office of the Chief Actuary adjusts the civilian unemployment rates for 2035 and later to the age-sex distribution of the civilian labor force in 2020. For years through 2034, the values are the aggregate rates without adjustment for the changing age-sex distribution.

[b] For rows with a single year listed, the value is the annual percentage change from the prior year. For rows with a range of years listed, the value is the compounded average annual percentage change.

[c] The U.S. civilian labor force.

[d] Total U.S. military and civilian employment.

[e] The value of the total output of goods and services in 2017 dollars.

[f] The average of the nominal interest rates, compounded semiannually, for special public-debt obligations issuable to the trust funds in each of the 12 months of the year.

[g] The realized or expected annual real yield for each year on securities issuable in the prior year.

[h] Greater than -0.05 and less than 0.05 percent.

[i] Economic cycles are shown from peak to peak, except for the last cycle, which is not yet complete.

[j] Estimated values for 2024 vary slightly by alternative and are shown for the intermediate assumptions.

C. PROGRAM-SPECIFIC ASSUMPTIONS AND METHODS

The Office of the Chief Actuary at the Social Security Administration uses a set of models to project future income and cost under the OASDI program. These models rely not only on the demographic and economic assumptions described in the previous sections, but also on several program-specific assumptions and methods. Values of many program parameters change from year to year as prescribed by formulas set out in the Social Security Act. These program parameters affect the level of payroll taxes collected and the level of benefits paid. The office uses complex models to project the numbers of future workers covered under OASDI and the levels of their covered earnings, as well as the numbers of future beneficiaries and the expected levels of their benefits. The following subsections provide descriptions of these program-specific assumptions and methods.

1. Automatically Adjusted Program Parameters

The Social Security Act requires that certain parameters affecting the determination of OASDI benefits and taxes be adjusted annually to reflect changes in particular economic measures. Formulas prescribed in the law, applied to reported statistics, change these program parameters annually. The law bases these automatic adjustments on measured changes in the national average wage index (AWI) and the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI).[1] This section shows values for program parameters adjusted using these indices from the time that these adjustments became effective through 2034. Projected values for future years depend on the economic assumptions described in the preceding section of this report.

Tables V.C1 and V.C2 present the historical and projected values of the CPI-based benefit increases, the AWI series, and the values of many of the wage-indexed program parameters. Each table shows projections under the three alternative sets of assumptions. Table V.C1 includes:

- *The annual cost-of-living benefit increase percentages.* The automatic cost-of-living adjustment provisions in the Social Security Act specify increases in OASDI monthly benefits based on increases in the CPI. In general, the benefit increase equals the percentage increase in the CPI measured from the third quarter of the last year with a benefit increase to the third quarter of the current year. If there is no increase in the CPI,

[1] The *Federal Register* publishes details of these indexation procedures annually. Also see www.ssa.gov/OACT/COLA/.

there is no benefit increase. All three sets of assumptions include annual cost-of-living adjustments for all future years.

- *The annual levels of and percentage increases in the AWI.* Under section 215(b)(3) of the Social Security Act, Social Security benefit computations index taxable earnings (for most workers first becoming eligible for benefits in 1979 or later) using the AWI for each year after 1950. This procedure converts a worker's past taxable earnings to approximately average-wage-indexed equivalent values near the time of his or her benefit eligibility. Other program parameters presented in this section that are subject to the automatic-adjustment provisions also rely on the AWI.
- *The wage-indexed contribution and benefit base.* For any year, the contribution and benefit base is the maximum amount of covered earnings subject to the OASDI payroll tax and creditable toward benefit computation. The Social Security Act defers any increase in the contribution and benefit base if there is no cost-of-living adjustment effective for December of the preceding year. Under all three sets of assumptions, the contribution and benefit base is projected to increase for all future years.
- *The wage-indexed retirement earnings test exempt amounts.* The exempt amounts are the annual amount of earnings below which beneficiaries do not have benefits withheld. A lower exempt amount applies for years prior to the year of attaining normal retirement age. A higher exempt amount applies beginning with the year in which a beneficiary attains normal retirement age. Starting in 2000, the retirement earnings test no longer applies beginning with the month of attaining normal retirement age. The Social Security Act defers any increase in these exempt amounts if there is no cost-of-living adjustment effective for December of the preceding year. Under all three sets of assumptions, the exempt amounts increase for all future years.

Table V.C1.—Cost-of-Living Benefit Increases, Average Wage Index, Contribution and Benefit Bases, and Retirement Earnings Test Exempt Amounts, 1975-2034

Calendar year	Cost-of-living benefit increase[a] (percent)	Average wage index (AWI)[b] Amount	Average wage index (AWI)[b] Increase (percent)	Contribution and benefit base[c]	Retirement earnings test exempt amount Under NRA[d]	Retirement earnings test exempt amount At NRA[e]
Historical data:						
1975	8.0	$8,630.92	7.5	$14,100	$2,520	$2,520
1976	6.4	9,226.48	6.9	15,300	2,760	2,760
1977	5.9	9,779.44	6.0	16,500	3,000	3,000
1978	6.5	10,556.03	7.9	17,700	3,240	4,000
1979	9.9	11,479.46	8.7	22,900	3,480	4,500
1980	14.3	12,513.46	9.0	25,900	3,720	5,000
1981	11.2	13,773.10	10.1	29,700	4,080	5,500
1982	7.4	14,531.34	5.5	32,400	4,440	6,000
1983	3.5	15,239.24	4.9	35,700	4,920	6,600
1984	3.5	16,135.07	5.9	37,800	5,160	6,960
1985	3.1	16,822.51	4.3	39,600	5,400	7,320
1986	1.3	17,321.82	3.0	42,000	5,760	7,800
1987	4.2	18,426.51	6.4	43,800	6,000	8,160
1988	4.0	19,334.04	4.9	45,000	6,120	8,400
1989	4.7	20,099.55	4.0	48,000	6,480	8,880
1990	5.4	21,027.98	4.6	51,300	6,840	9,360
1991	3.7	21,811.60	3.7	53,400	7,080	9,720
1992	3.0	22,935.42	5.2	55,500	7,440	10,200
1993	2.6	23,132.67	.9	57,600	7,680	10,560
1994	2.8	23,753.53	2.7	60,600	8,040	11,160
1995	2.6	24,705.66	4.0	61,200	8,160	11,280
1996	2.9	25,913.90	4.9	62,700	8,280	12,500
1997	2.1	27,426.00	5.8	65,400	8,640	13,500
1998	1.3	28,861.44	5.2	68,400	9,120	14,500
1999	[f]2.5	30,469.84	5.6	72,600	9,600	15,500
2000	3.5	32,154.82	5.5	76,200	10,080	17,000
2001	2.6	32,921.92	2.4	80,400	10,680	25,000
2002	1.4	33,252.09	1.0	84,900	11,280	30,000
2003	2.1	34,064.95	2.4	87,000	11,520	30,720
2004	2.7	35,648.55	4.6	87,900	11,640	31,080
2005	4.1	36,952.94	3.7	90,000	12,000	31,800
2006	3.3	38,651.41	4.6	94,200	12,480	33,240
2007	2.3	40,405.48	4.5	97,500	12,960	34,440
2008	5.8	41,334.97	2.3	102,000	13,560	36,120
2009	.0	40,711.61	-1.5	106,800	14,160	37,680
2010	.0	41,673.83	2.4	106,800	14,160	37,680
2011	3.6	42,979.61	3.1	106,800	14,160	37,680
2012	1.7	44,321.67	3.1	110,100	14,640	38,880
2013	1.5	44,888.16	1.3	113,700	15,120	40,080
2014	1.7	46,481.52	3.5	117,000	15,480	41,400
2015	.0	48,098.63	3.5	118,500	15,720	41,880
2016	.3	48,642.15	1.1	118,500	15,720	41,880
2017	2.0	50,321.89	3.5	127,200	16,920	44,880
2018	2.8	52,145.80	3.6	128,400	17,040	45,360
2019	1.6	54,099.99	3.7	132,900	17,640	46,920
2020	1.3	55,628.60	2.8	137,700	18,240	48,600
2021	5.9	60,575.07	8.9	142,800	18,960	50,520
2022	8.7	63,795.13	5.3	147,000	19,560	51,960
2023	3.2	66,621.80	4.4	160,200	21,240	56,520

Table V.C1.—Cost-of-Living Benefit Increases, Average Wage Index, Contribution and Benefit Bases, and Retirement Earnings Test Exempt Amounts, 1975-2034 (Cont.)

Calendar year	Cost-of-living benefit increase[a] (percent)	Average wage index (AWI)[b] Amount	Average wage index (AWI)[b] Increase (percent)	Contribution and benefit base[c]	Retirement earnings test exempt amount Under NRA[d]	Retirement earnings test exempt amount At NRA[e]
Intermediate:						
2024	[g]2.5	$69,472.44	4.3	[g]$168,600	[g]$22,320	[g]$59,520
2025	2.7	72,255.52	4.0	[g]176,100	[g]23,400	[g]62,160
2026	2.5	75,264.81	4.2	183,600	24,360	64,800
2027	2.4	78,304.32	4.0	190,800	25,320	67,440
2028	2.4	81,522.64	4.1	198,900	26,400	70,200
2029	2.4	84,736.18	3.9	207,000	27,480	73,080
2030	2.4	88,030.45	3.9	215,400	28,560	76,080
2031	2.4	91,479.46	3.9	223,800	29,760	79,080
2032	2.4	95,090.94	3.9	232,500	30,840	82,080
2033	2.4	98,856.61	4.0	241,800	32,040	85,320
2034	2.4	102,670.10	3.9	251,100	33,360	88,680
Low-cost:						
2024	[g]2.5	69,522.54	4.4	[g]168,600	[g]22,320	[g]59,520
2025	3.0	73,057.02	5.1	[g]176,100	[g]23,400	[g]62,160
2026	3.0	77,084.67	5.5	183,600	24,360	64,920
2027	3.0	81,153.50	5.3	192,900	25,560	68,160
2028	3.0	85,457.87	5.3	203,700	27,000	71,880
2029	3.0	90,042.11	5.4	214,500	28,440	75,720
2030	3.0	94,831.50	5.3	225,900	30,000	79,680
2031	3.0	99,787.85	5.2	237,900	31,560	84,000
2032	3.0	104,969.61	5.2	250,500	33,240	88,440
2033	3.0	110,438.84	5.2	263,700	35,040	93,120
2034	3.0	116,089.15	5.1	277,500	36,840	97,920
High-cost:						
2024	[g]2.5	69,390.16	4.2	[g]168,600	[g]22,320	[g]59,520
2025	2.4	70,350.14	1.4	[g]176,100	[g]23,400	[g]62,160
2026	1.8	71,937.84	2.3	183,300	24,360	64,680
2027	1.8	74,514.96	3.6	186,000	24,720	65,640
2028	1.8	77,112.55	3.5	190,200	25,200	67,080
2029	1.8	79,514.34	3.1	196,800	26,160	69,480
2030	1.8	81,759.43	2.8	203,700	27,000	72,000
2031	1.8	83,972.40	2.7	210,000	27,840	74,160
2032	1.8	86,260.19	2.7	216,000	28,680	76,320
2033	1.8	88,606.27	2.7	222,000	29,400	78,360
2034	1.8	90,915.95	2.6	228,000	30,240	80,520

[a] Effective with benefits payable for June in each year 1975-82, and for December in each year after 1982.

[b] See table VI.G6 for projected dollar amounts of the AWI for years beyond the last year of this table.

[c] Public Law 95-216 specified amounts for 1978-81. Public Law 101-239 changed the indexing procedure and caused slightly higher bases after 1989.

[d] Normal retirement age. See table V.C3 for specific values.

[e] In 1955-82, the retirement earnings test did not apply at ages 72 and over. In 1983-99, the test did not apply at ages 70 and over. Beginning in 2000, the test does not apply beginning with the month of normal retirement age attainment. In the year of normal retirement age attainment, the higher exempt amount applies to earnings prior to the month of normal retirement age attainment. Public Law 95-216 specified amounts for 1978-82. Public Law 104-121 specified amounts for 1996-2002.

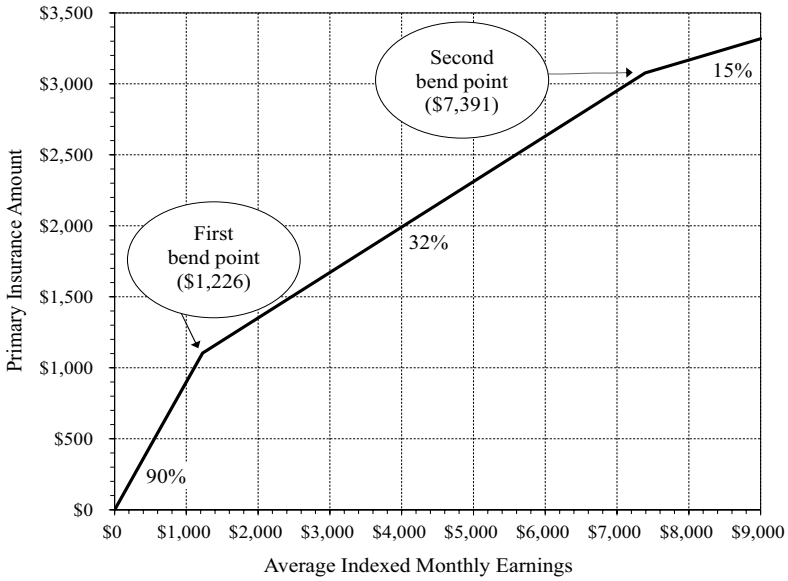
[f] Originally determined as 2.4 percent. Pursuant to Public Law 106-554, effectively 2.5 percent.

[g] Actual amount, as determined under automatic-adjustment provisions.

Table V.C2 shows values for other wage-indexed parameters. The table provides historical values from 1978, when indexing of the amount of covered earnings required for a quarter of coverage first began, through 2025, and also shows projected values through 2034. These other wage-indexed program parameters are:

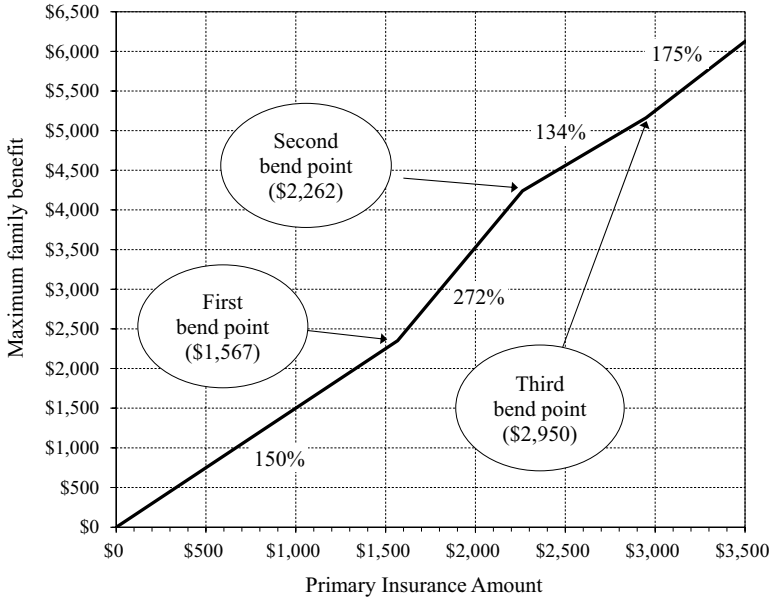
- *The bend points in the formula for computing the primary insurance amount (PIA) for workers who reach age 62, become disabled, or die in a given year.* As figure V.C1 illustrates, these two bend points define three ranges in a worker's average indexed monthly earnings (AIME). The formula for the worker's PIA multiplies a 90, 32, or 15 percent factor by the portion of the worker's AIME that falls within the three respective ranges, and then adds the resulting products together.

Figure V.C1.—Primary-Insurance-Amount Formula for Those Newly Eligible in 2025



- *The bend points in the formula for computing the maximum total amount of monthly benefits payable based on the earnings record of a retired or deceased worker (maximum family benefit).* As figure V.C2 illustrates, these three bend points define four ranges in a worker's PIA. The formula for the maximum family benefit multiplies a 150, 272, 134, or 175 percent factor by the portion of the worker's PIA that falls within the four respective ranges, and then adds the resulting products together.

Figure V.C2.—OASI Maximum-Family-Benefit Formula for Those Newly Eligible in 2025



- *The amount of covered earnings required in a year to earn a quarter of coverage (QC).* The number and timing of QCs earned determines an individual's insured status—the basic requirement for benefit eligibility under OASDI.
- *The old-law contribution and benefit base—the contribution and benefit base that would have been in effect without enactment of the 1977 amendments.* This old-law base is used in determining special-minimum benefits for certain workers who have many years of low earnings in covered employment. From 1986 through 2023, the calculation[1] of OASDI benefits for certain workers who are eligible to receive pensions based on noncovered employment used the old-law base. In addition, the Railroad Retirement program and the Employee Retirement Income Security Act of 1974 use the old-law base for certain purposes.

[1] This calculation was repealed for benefits paid for months after December 2023 by the Social Security Fairness Act, which was signed into law on January 5, 2025. See section III.B for more detail.

Table V.C2.—Values for Selected Wage-Indexed Program Parameters, Calendar Years 1978-2034

Calendar year	AIME bend points in PIA formula[a] First	AIME bend points in PIA formula[a] Second	PIA bend points in OASI maximum-family-benefit formula[b] First	PIA bend points in OASI maximum-family-benefit formula[b] Second	PIA bend points in OASI maximum-family-benefit formula[b] Third	Earnings required for a quarter of coverage	Old-law contribution and benefit base[c]
Historical data:							
1978	[d]	[d]	[d]	[d]	[d]	[e] $250	[e] $17,700
1979	[e] $180	[e] $1,085	[e] $230	[e] $332	[e] $433	260	18,900
1980	194	1,171	248	358	467	290	20,400
1981	211	1,274	270	390	508	310	22,200
1982	230	1,388	294	425	554	340	24,300
1983	254	1,528	324	468	610	370	26,700
1984	267	1,612	342	493	643	390	28,200
1985	280	1,691	358	517	675	410	29,700
1986	297	1,790	379	548	714	440	31,500
1987	310	1,866	396	571	745	460	32,700
1988	319	1,922	407	588	767	470	33,600
1989	339	2,044	433	626	816	500	35,700
1990	356	2,145	455	656	856	520	38,100
1991	370	2,230	473	682	890	540	39,600
1992	387	2,333	495	714	931	570	41,400
1993	401	2,420	513	740	966	590	42,900
1994	422	2,545	539	779	1,016	620	45,000
1995	426	2,567	544	785	1,024	630	45,300
1996	437	2,635	559	806	1,052	640	46,500
1997	455	2,741	581	839	1,094	670	48,600
1998	477	2,875	609	880	1,147	700	50,700
1999	505	3,043	645	931	1,214	740	53,700
2000	531	3,202	679	980	1,278	780	56,700
2001	561	3,381	717	1,034	1,349	830	59,700
2002	592	3,567	756	1,092	1,424	870	63,000
2003	606	3,653	774	1,118	1,458	890	64,500
2004	612	3,689	782	1,129	1,472	900	65,100
2005	627	3,779	801	1,156	1,508	920	66,900
2006	656	3,955	838	1,210	1,578	970	69,900
2007	680	4,100	869	1,255	1,636	1,000	72,600
2008	711	4,288	909	1,312	1,711	1,050	75,900
2009	744	4,483	950	1,372	1,789	1,090	79,200
2010	761	4,586	972	1,403	1,830	1,120	79,200
2011	749	4,517	957	1,382	1,803	1,120	79,200
2012	767	4,624	980	1,415	1,845	1,130	81,900
2013	791	4,768	1,011	1,459	1,903	1,160	84,300
2014	816	4,917	1,042	1,505	1,962	1,200	87,000
2015	826	4,980	1,056	1,524	1,987	1,220	88,200
2016	856	5,157	1,093	1,578	2,058	1,260	88,200
2017	885	5,336	1,131	1,633	2,130	1,300	94,500
2018	895	5,397	1,144	1,651	2,154	1,320	95,400
2019	926	5,583	1,184	1,708	2,228	1,360	98,700
2020	960	5,785	1,226	1,770	2,309	1,410	102,300
2021	996	6,002	1,272	1,837	2,395	1,470	106,200
2022	1,024	6,172	1,308	1,889	2,463	1,510	109,200
2023	1,115	6,721	1,425	2,056	2,682	1,640	118,800
2024	1,174	7,078	1,500	2,166	2,825	1,730	125,100
2025	1,226	7,391	1,567	2,262	2,950	1,810	130,800

Table V.C2.—Values for Selected Wage-Indexed Program Parameters, Calendar Years 1978-2034 (Cont.)

Calendar year	AIME bend points in PIA formula[a] First	AIME bend points in PIA formula[a] Second	PIA bend points in OASI maximum-family-benefit formula[b] First	PIA bend points in OASI maximum-family-benefit formula[b] Second	PIA bend points in OASI maximum-family-benefit formula[b] Third	Earnings required for a quarter of coverage	Old-law contribution and benefit base[c]
Intermediate:							
2026	$1,279	$7,708	$1,634	$2,359	$3,076	$1,880	$136,200
2027	1,330	8,017	1,699	2,453	3,199	1,960	141,900
2028	1,385	8,350	1,770	2,555	3,332	2,040	147,600
2029	1,441	8,688	1,842	2,658	3,467	2,120	153,600
2030	1,501	9,045	1,917	2,768	3,610	2,210	159,900
2031	1,560	9,401	1,993	2,877	3,752	2,300	166,200
2032	1,620	9,767	2,070	2,989	3,898	2,390	172,800
2033	1,684	10,149	2,151	3,106	4,050	2,480	179,400
2034	1,750	10,550	2,236	3,228	4,210	2,580	186,600
Low-cost:							
2026	1,280	7,713	1,635	2,360	3,078	1,880	136,500
2027	1,345	8,105	1,718	2,480	3,235	1,980	143,400
2028	1,419	8,552	1,813	2,617	3,413	2,090	151,200
2029	1,494	9,004	1,909	2,755	3,593	2,200	159,300
2030	1,573	9,481	2,010	2,901	3,784	2,320	167,700
2031	1,657	9,990	2,118	3,057	3,987	2,440	176,700
2032	1,745	10,521	2,230	3,219	4,199	2,570	186,000
2033	1,837	11,071	2,347	3,388	4,418	2,700	195,900
2034	1,932	11,646	2,469	3,564	4,648	2,840	206,100
High-cost:							
2026	1,277	7,699	1,632	2,356	3,072	1,880	136,200
2027	1,295	7,805	1,655	2,388	3,115	1,910	138,000
2028	1,324	7,981	1,692	2,442	3,185	1,950	141,000
2029	1,372	8,267	1,752	2,530	3,299	2,020	146,100
2030	1,419	8,555	1,814	2,618	3,414	2,090	151,200
2031	1,464	8,822	1,870	2,699	3,521	2,150	156,000
2032	1,505	9,071	1,923	2,776	3,620	2,220	160,500
2033	1,546	9,316	1,975	2,851	3,718	2,280	164,700
2034	1,588	9,570	2,029	2,928	3,819	2,340	169,200

[a] The formula to compute a PIA is: (1) 90% of AIME below the first bend point, plus (2) 32% of AIME in excess of the first bend point but not in excess of the second, plus (3) 15% of AIME in excess of the second bend point. The bend points are determined based on the first year a beneficiary becomes eligible for benefits.

[b] The formula to compute an OASI family maximum is: (1) 150% of PIA below the first bend point, plus (2) 272% of PIA in excess of the first bend point but not in excess of the second, plus (3) 134% of PIA in excess of the second bend point but not in excess of the third, plus (4) 175% of PIA in excess of the third bend point. This formula also determines family maximums for disabled-worker beneficiaries first eligible after 1978 and entitled before July 1980.

[c] Contribution and benefit base that would have been in effect without enactment of the Social Security Amendments of 1977. Public Law 101-239 changed the indexing procedure and caused slightly higher bases after 1989.

[d] No provision in law for this amount in this year.

[e] Amount specified by Social Security Amendments of 1977.

In addition to the economic factors that affect the determination of OASDI benefits, there are certain legislated changes that affect current and future benefit amounts. Two such changes are the scheduled increases in the normal retirement age and in the delayed retirement credits. Table V.C3 shows the scheduled changes in these parameters and the resulting effects on benefit levels expressed as a percentage of PIA.

Table V.C3.—Legislated Changes in Normal Retirement Age and Delayed Retirement Credits for Persons Attaining Age 62 in Each Year 1986 and Later

Year of birth	Year of attainment of age 62	Normal retirement age (NRA)	Credit for each year of delayed retirement after NRA (percent)	Benefit, as a percentage of PIA, beginning at age —				
				62	65	66	67	70
1924	1986	65	3	80	100	103	106	115
1925	1987	65	3 1/2	80	100	103 1/2	107	117 1/2
1926	1988	65	3 1/2	80	100	103 1/2	107	117 1/2
1927	1989	65	4	80	100	104	108	120
1928	1990	65	4	80	100	104	108	120
1929	1991	65	4 1/2	80	100	104 1/2	109	122 1/2
1930	1992	65	4 1/2	80	100	104 1/2	109	122 1/2
1931	1993	65	5	80	100	105	110	125
1932	1994	65	5	80	100	105	110	125
1933	1995	65	5 1/2	80	100	105 1/2	111	127 1/2
1934	1996	65	5 1/2	80	100	105 1/2	111	127 1/2
1935	1997	65	6	80	100	106	112	130
1936	1998	65	6	80	100	106	112	130
1937	1999	65	6 1/2	80	100	106 1/2	113	132 1/2
1938	2000	65, 2 mo	6 1/2	79 1/6	98 8/9	105 5/12	111 11/12	131 5/12
1939	2001	65, 4 mo	7	78 1/3	97 7/9	104 2/3	111 2/3	132 2/3
1940	2002	65, 6 mo	7	77 1/2	96 2/3	103 1/2	110 1/2	131 1/2
1941	2003	65, 8 mo	7 1/2	76 2/3	95 5/9	102 1/2	110	132 1/2
1942	2004	65, 10 mo	7 1/2	75 5/6	94 4/9	101 1/4	108 3/4	131 1/4
1943-54	2005-16	66	8	75	93 1/3	100	108	132
1955	2017	66, 2 mo	8	74 1/6	92 2/9	98 8/9	106 2/3	130 2/3
1956	2018	66, 4 mo	8	73 1/3	91 1/9	97 7/9	105 1/3	129 1/3
1957	2019	66, 6 mo	8	72 1/2	90	96 2/3	104	128
1958	2020	66, 8 mo	8	71 2/3	88 8/9	95 5/9	102 2/3	126 2/3
1959	2021	66, 10 mo	8	70 5/6	87 7/9	94 4/9	101 1/3	125 1/3
1960 & later	2022 & later	67	8	70	86 2/3	93 1/3	100	124

2. Covered Employment

Projections of the total U.S. civilian labor force and unemployment rate (see table V.B2) are based on Bureau of Labor Statistics definitions from the Current Population Survey (CPS). These projections represent the average weekly number of employed and unemployed persons, age 16 and over, in the U.S. in a calendar year. Covered employment for a calendar year is defined as the total number of persons who have any OASDI covered earnings (that is, earnings subject to the OASDI payroll tax) at any time during that year. For those age 16 and over, projected covered employment is the sum of age-sex groups, each reflecting the growth projected for the group's total U.S employment and average weeks worked per year.[1] For the short-range period, the age-sex-adjusted average weeks worked declines slightly as the age-sex-adjusted unemployment rate rises from current low levels to its ultimate assumed value of 4.5 percent. After 2030, the average weeks

[1] For those under age 16, projected covered employment is the sum of age-sex components, each of which is projected as a ratio to the Social Security area population.

worked for each age-sex group is assumed to remain constant. The projection method also accounts for changes in non-OASDI-covered employment and the increase in coverage of Federal civilian employment as a result of the 1983 Social Security Amendments. It also reflects changes in the number and employment status of temporary or unlawfully present immigrants residing within the Social Security coverage area.

The covered-worker rate is the ratio of OASDI covered workers to the Social Security area population. For men and boys age 16 and over, the projected age-adjusted covered-worker rates[1] for 2099 are 67.9, 67.5, and 67.1 percent for the low-cost, intermediate, and high-cost assumptions, respectively. For women and girls age 16 and over, the projected age-adjusted covered-worker rates for 2099 are 66.1, 65.5, and 65.5 percent for the low-cost, intermediate, and high-cost assumptions, respectively. An important factor in the variation among the projected rates for the three alternatives is the portion of the men and women in the population that is projected to be temporary or unlawfully present immigrants. For men and boys, the intermediate projected rate for 2099 is lower than the 2023 age-adjusted rate of 68.5 percent primarily due to the projected increase in the portion of the Social Security area population that consists of temporary or unlawfully present immigrants. For women and girls, the intermediate projected rate for 2099 is higher than the 2023 age-adjusted rate of 64.3 percent because the projected increase in the age-adjusted labor force participation rate more than offsets the projected increase in the portion of the population that will be temporary or unlawfully present immigrants.

3. Insured Population

Eligibility for worker benefits under the OASDI program requires some threshold level of work in covered employment. A worker satisfies this requirement by his or her accumulation of quarters of coverage (QCs). Prior to 1978, a worker earned one QC for each calendar quarter in which he or she had covered earnings of at least $50. In 1978, when annual earnings reporting replaced quarterly reporting, the amount required to earn a QC (up to a maximum of four per year) was set at $250. As specified in the law, the Social Security Administration has adjusted this amount each year since then according to changes in the AWI. Its value in 2025 is $1,810.

There are three types of insured status that a worker can earn under the OASDI program. The number and recency of QCs earned determine each

[1] Age-adjusted covered-worker rates are adjusted to the 2020 age distribution of the Social Security area population.

status. A worker is fully insured when his or her total number of QCs is greater than or equal to the number of years elapsed after the year of attainment of age 21 (but not less than six). After a worker has accumulated 40 QCs, he or she remains permanently fully insured. A worker is disability insured if he or she is: (1) a fully insured worker who has accumulated 20 QCs during the 40-quarter period ending with the current quarter, (2) a fully insured worker aged 24-30 who has accumulated QCs during one-half of the quarters elapsed after the quarter of attainment of age 21 and up to and including the current quarter, or (3) a fully insured worker under age 24 who has accumulated six QCs during the 12-quarter period ending with the current quarter. A worker is currently insured when he or she has accumulated six QCs during the 13-quarter period ending with the current quarter. Periods of disability reduce the number of quarters required for insured status, but not below the minimum of six QCs.

There are many types of benefits payable to workers and their family members under the OASDI program. A worker must be fully insured to be eligible for a primary retirement benefit and for his or her spouse or children to be eligible for auxiliary retirement benefits. A deceased worker must have been either currently insured or fully insured at the time of death for his or her children (and their mother or father) to be eligible for benefits. If there are no eligible surviving children, the deceased worker must have been fully insured at the time of death for his or her surviving spouse to be eligible. A worker must be disability insured to be eligible for a primary disability benefit and for his or her spouse or children to be eligible for auxiliary disability benefits.

The Office of the Chief Actuary estimates the fully insured population, as a percentage of the Social Security area population, by single year of age and sex starting in 1969. The short-range model extrapolates the historical trend in these rates from data in the Continuous Work History Sample (CWHS). The model uses information on quarters of coverage earned due to employment covered by Social Security derived from tabulations of the CWHS. The model also uses historical administrative data on beneficiaries in force and estimated historical mortality rates. The model combines this information to estimate the proportion of individuals who were alive and fully insured as of the end of each historical year. Using projected mortality rates and covered workers, the model extrapolates these rates into the future and applies them to the historical and projected population to arrive at the fully insured population by age and sex through the end of the short-range period.

The long-range fully insured model uses 30,000 simulated work histories for each sex and birth cohort, representing everyone except the temporary or

unlawfully present immigrant population.[1] For the temporary or unlawfully present immigrant population, the model generates substantially lower percentages attaining fully insured status. The model constructs simulated work histories using past coverage rates, earnings distributions, and amounts required for crediting QCs, and develops them in a manner that replicates historical individual variations in work patterns. The probability of covered employment in any year is assumed to be higher for those who have worked more consistently in the recent past. Model parameters are selected so that simulated fully insured percentages are consistent with the fully insured percentages estimated by the short-range model for the recent historical period.

The Office of the Chief Actuary estimates the disability insured population, as a percentage of the fully insured population, by age and sex starting in 1969. The office bases historical values on a tabulation of the disability insured population from the CWHS and estimates of the fully insured population. The short-range model projects these percentages by using the relationship between the historical percentages and covered-worker rates. The long-range model projects these percentages by using the same simulated work histories used to project the fully insured percentages. The long-range model makes additional adjustments to the model simulations in order to bring the disability insured percentages in the historical and short-range periods into close agreement with those estimated from the CWHS and the short-range model.

The office does not project the currently insured population because the number of beneficiaries who are entitled to benefits based solely on currently insured status has been very small recently and is likely to remain small in the future.

Using these insured models, the percentage of the Social Security area population age 62 that is fully insured is projected to change from its estimated level of 90.5 for December 31, 2022, to 86.5, 87.3, and 88.7 for December 31, 2100, under the low-cost, intermediate, and high-cost alternatives, respectively. Over the projection period, the percentages for both men and women change significantly. The percentage for men declines, reflecting, in part, increases in the percent of the population that is classified as temporary or unlawfully present immigrants and is thus less likely to have earnings reported and credited to them. The percentage for women declines more gradually than the percentage for men. For women, the decrease in the percentage due to increases in temporary or unlawfully present immigrants is

[1] Those granted valid work authorization through the 2012 Deferred Action for Childhood Arrivals program are included in the simulations.

partially offset by an increase due to the substantial growth in the employment of younger cohorts of women in recent decades. Under the intermediate assumptions, for example, the percentage for men decreases from 92.4 to 87.7, and the percentage for women decreases from 88.6 to 87.0.

The percentage of the Social Security area population age 50 that is disability insured is projected to change from its estimated level of 76.6 for December 31, 2022, to 75.4, 76.6, and 78.3 for December 31, 2100, under the low-cost, intermediate, and high-cost alternatives, respectively. The changes in the disability insured percentages over time are affected by the same factors as the fully insured percentages, but they are also influenced by additional recent work criteria, leading to percentages that do not change significantly over the long-range projection period.

4. Old-Age and Survivors Insurance Beneficiaries

The Office of the Chief Actuary projects the number of OASI beneficiaries for each type of benefit separately by the sex of the worker on whose covered earnings the benefits are based and by the age of the beneficiary. For the long-range period, the office also projects the number of beneficiaries by marital status for several types of benefits. The office uses two separate models in making these projections. The short-range model makes projections during the first 10 years of the projection period, reflecting recent and expected short-term trends. The long-range model makes projections thereafter, reflecting anticipated longer-term trends.

The short-range model develops the number of retired-worker beneficiaries by applying award rates to the aged fully insured population, excluding those already receiving retired-worker, disabled-worker, aged-widow(er), or aged-spouse benefits, and by applying termination rates to the number of retired-worker beneficiaries.

The long-range model projects the number of retired-worker beneficiaries who were not previously converted from disabled-worker beneficiary status as a percentage of the exposed population.[1] For age 62, the model projects this percentage by using a linear regression based on the historical relationship between this percentage, the employment rate[2] at age 62, and the number of months from age 62 to normal retirement age. The percentage for ages 70 and over is nearly 100 because delayed retirement credits cannot be earned after age 70. The long-range model projects the percentage for each

[1] The exposed population is the fully insured population age 62 and over, excluding persons entitled to or converted from disabled-worker benefits and fully insured persons entitled only to widow(er) benefits.

[2] The employment rate is the ratio of U.S. civilian employment to the civilian noninstitutional population.

age 63 through 69 based on historical experience with an adjustment for changes in the portion of the primary insurance amount that is payable at each age of entitlement. The model adjusts these percentages for ages 62 through 69 to reflect changes in the normal retirement age.

The long-range model calculates the number of retired-worker beneficiaries previously converted from disabled-worker beneficiary status using an extension of disabled-worker death rates by age, sex, and duration.

The Office of the Chief Actuary estimates the number of aged-spouse beneficiaries, excluding those who are also receiving a retired-worker benefit, from the population projected by age and sex. Benefits of aged-spouse beneficiaries depend on the earnings records of their husbands or wives, who are referred to as "earners." The short-range model projects insured aged-spouse beneficiaries in conjunction with the retired-worker beneficiaries. This model projects uninsured aged-spouse beneficiaries by applying award rates to the aged uninsured male or female population and by applying termination rates to the population already receiving such benefits.

The long-range model estimates aged-spouse beneficiaries separately for those married and divorced. The model projects the number of married aged-spouse beneficiaries, by age and sex, by applying a series of factors to the number of spouses, aged 62 and over, in the population. These factors are the probabilities that the spouse and the earner meet all of the conditions of eligibility—that is, the probabilities that: (1) the earner is 62 or over, (2) the earner is insured, (3) the earner is receiving benefits, (4) the spouse is not receiving a benefit for the care of an entitled child, and (5) the spouse is either not insured or is insured but not receiving benefits. To calculate the estimated number of aged-spouse beneficiaries, the model applies a projected prevalence rate to the resulting number of spouses. Due to implementation of the Social Security Fairness Act, an adjustment is also applied to account for additional beneficiaries in 2025 and later who were previously not eligible to receive aged-spouse benefits due to receipt of a significant government pension based on earnings from noncovered employment. Due to the Bipartisan Budget Act of 2015, for those turning age 62 in 2016 and later, deemed filing now applies to all retired workers and spouses even after initial entitlement, regardless of age. Thus, spouses who are insured are no longer eligible to delay their retired-worker benefit while receiving an aged-spouse benefit.[1]

[1] Deemed filing does not apply if the spouse is caring for an entitled child or is receiving a disabled-worker benefit.

The long-range model estimates the number of divorced aged-spouse beneficiaries, by age and sex, by applying the same factors to the number of divorced persons aged 62 and over in the population, with three differences. First, the model applies a factor to reflect the probability that the earner (former spouse) is still alive. If the former spouse is not alive, the person may be entitled to a divorced widow(er) benefit. Second, the model applies a factor to reflect the probability that the marriage to the former spouse lasted at least 10 years. Third, the model does not apply factor (3) in the previous paragraph because, effective January 1985, a divorced person is generally no longer required to wait for the former spouse to receive benefits.

The Office of the Chief Actuary bases the projected numbers of children under age 18, and students aged 18 and 19, who are eligible for benefits as children of retired-worker beneficiaries, on the projected number of children in the population. The short-range model develops the number of entitled children by applying award rates to the number of children in the population who have two living parents and by applying termination rates to the number of children already receiving benefits.

The long-range model projects separately the number of entitled children by sex of the earner parent. For each age under 18, the model multiplies the projected number of children with a parent aged 62 and over by the ratio of the number of retired workers aged 62 to 71 to the number of members of the population aged 62 to 71. For student beneficiaries, the model multiplies the number of children aged 18 and 19 in the population by the probabilities that: (1) the parent is alive, aged 62 or over, insured, and receiving a retired-worker benefit; and (2) the child is attending high school.

The Office of the Chief Actuary projects the number of disabled children, aged 18 and over, of retired-worker beneficiaries from the adult population. The short-range model applies award rates to the population and applies termination rates to the number of disabled children already receiving benefits. The long-range model projects the number of disabled children in a manner similar to that used for student children except for an additional factor that reflects the probability of being disabled before age 22.

The short-range model develops the number of spouses of retired workers, who are entitled to spouse benefits because they are caring for a child who is under age 16 or disabled, by applying award rates to the number of awards to children of retired workers and by applying termination rates to the number of young spouses with a child in their care who are already receiving benefits. The long-range model projects the number of young-spouse beneficiaries with a child in their care as a proportion of the number of child

beneficiaries of retired workers, including projected changes in average family size.

The Office of the Chief Actuary projects the number of aged-widow(er) beneficiaries, excluding those who are also receiving a retired-worker benefit, from the population by age and sex. The short-range model projects fully insured aged-widow(er) beneficiaries in conjunction with the retired-worker beneficiaries. The model projects the number of uninsured aged-widow(er) beneficiaries by applying award rates to the aged uninsured male or female population and by applying termination rates to the population already receiving such benefits. The long-range model projects uninsured aged-widow(er) beneficiaries by marital status. The model multiplies the number of widow(er)s in the population aged 60 and over by the probabilities that: (1) the deceased earner is fully insured at death, (2) the widow(er) is not receiving a benefit for the care of an entitled child, and (3) the widow(er) is not fully insured.

Due to implementation of the Social Security Fairness Act, an adjustment is also applied to account for additional beneficiaries in 2025 and later who were previously not eligible to receive aged-widow(er) benefits due to receipt of a significant government pension based on earnings from noncovered employment. In addition, the model applies the same factors to the number of divorced persons aged 60 and over in the population and includes additional factors representing the probability that the person's former earner spouse has died and that the marriage lasted at least 10 years. The model projects the number of insured aged-widow(er) beneficiaries who are ages 60 through 70 in a manner similar to that for uninsured aged-widow(er) beneficiaries. In addition, the model assumes that some insured widow(er)s who had not applied for their retired-worker benefits will receive widow(er) benefits. The model projects insured aged-widow(er) beneficiaries over age 70 by applying termination rates to the population that started receiving such benefits prior to age 70.

The short-range model develops the number of disabled-widow(er) beneficiaries by applying award rates to the male or female population and by applying termination rates to the population already receiving a disabled-widow(er) benefit. The long-range model projects the number for each cohort by age from 50 to normal retirement age as percentages of the widowed and divorced populations, adjusted for the insured status of the deceased spouse, the prevalence of disability, and the probability that the disabled spouse is not receiving another type of benefit.

The Office of the Chief Actuary bases the projected number of children under age 18, and students aged 18 and 19, who are entitled to benefits as survivors of deceased workers, on the number of children in the population whose mothers or fathers are deceased. The short-range model develops the number of entitled children by applying award rates to the number of orphaned children and by applying termination rates to the number of children already receiving benefits.

The long-range model projects the number of surviving-child beneficiaries in a manner similar to that for student beneficiaries of retired workers, except that the model replaces the probability that the parent is aged 62 or over with the probability that the parent is deceased.

The Office of the Chief Actuary projects the number of surviving-disabled-child beneficiaries, aged 18 and over, from the adult population. The short-range model applies award rates to the population and applies termination rates to the number of surviving-disabled-child beneficiaries already receiving benefits. The long-range model projects the number of surviving-disabled-child beneficiaries in a manner similar to that for surviving-student-child beneficiaries, except for including an additional factor to reflect the probability of being disabled before age 22.

The short-range model develops the numbers of entitled surviving-mother and surviving-father beneficiaries by applying award rates to the number of awards to surviving-child beneficiaries, in cases where the children are either under age 16 or disabled, and by applying termination rates to the number of surviving-mother and surviving-father beneficiaries already receiving benefits. The long-range model estimates the numbers of surviving-mother and surviving-father beneficiaries, assuming they are not remarried, from the number of surviving-child beneficiaries.

The Office of the Chief Actuary projects the number of surviving-parent beneficiaries based on the historical pattern of the number of such beneficiaries.

Table V.C4 shows the projected number of beneficiaries under the OASI program by type of benefit. The retired-worker beneficiary counts include those persons who receive a residual auxiliary benefit in addition to their retired-worker benefit. The office makes estimates of the number and amount of residual payments separately for spouses and widow(er)s.

Table V.C4.—OASI Beneficiaries With Benefits in Current-Payment Status at the End of Calendar Years 1945-2100
[In thousands]

	Retired workers and auxiliaries			Survivors				
Calendar year	Worker[a]	Spouse	Child	Widow-widower	Mother-father	Child	Parent	Total
Historical data:								
1945	518	159	13	94	121	377	6	1,288
1950	1,771	508	46	314	169	653	15	3,477
1955	4,474	1,192	122	701	292	1,154	25	7,961
1960	8,061	2,269	268	1,544	401	1,577	36	14,157
1965	11,101	2,614	461	2,371	472	2,074	35	19,128
1970	13,349	2,668	546	3,227	523	2,688	29	23,030
1975	16,589	2,867	643	3,888	582	2,919	21	27,509
1980	19,564	3,018	639	4,415	563	2,610	15	30,823
1985	22,435	3,069	456	4,862	372	1,918	10	33,122
1990	24,841	3,104	421	5,098	304	1,777	6	35,551
1995	26,679	3,027	441	5,213	275	1,884	4	37,522
2000	28,505	2,798	459	4,901	203	1,878	3	38,747
2005	30,461	2,524	488	4,569	178	1,903	2	40,126
2010	34,593	2,316	580	4,285	159	1,913	2	43,847
2015	40,089	2,335	648	4,050	140	1,893	1	49,155
2016	41,233	2,370	661	4,004	133	1,893	1	50,296
2017	42,447	2,375	675	3,961	128	1,904	1	51,491
2018	43,721	2,391	690	3,908	121	1,911	1	52,743
2019	45,094	2,430	701	3,878	117	1,916	1	54,137
2020	46,330	2,323	704	3,823	115	1,936	1	55,231
2021	47,293	2,165	687	3,773	114	1,976	1	56,009
2022	48,588	2,022	682	3,728	112	2,020	1	57,152
2023	50,148	1,895	685	3,688	108	2,037	1	58,562
2024	51,773	1,861	713	3,630	104	2,051	1	60,132
Intermediate:								
2025	53,257	2,131	730	3,760	100	2,066	1	62,045
2030	60,111	1,989	822	3,648	88	2,109	1	68,768
2035	64,520	1,835	901	3,571	85	2,109	1	73,022
2040	67,298	1,555	970	3,307	93	2,097	1	75,319
2045	68,692	1,348	1,064	3,048	98	2,116	1	76,367
2050	70,251	1,320	1,143	2,888	97	2,126	1	77,826
2055	72,587	1,319	1,210	2,763	94	2,099	1	80,074
2060	75,820	1,325	1,274	2,667	90	2,035	1	83,212
2065	78,798	1,340	1,295	2,623	87	1,962	1	86,106
2070	81,864	1,347	1,314	2,600	84	1,915	1	89,126
2075	84,842	1,346	1,336	2,586	83	1,896	1	92,090
2080	86,883	1,342	1,348	2,543	82	1,886	1	94,083
2085	87,925	1,332	1,354	2,483	80	1,866	1	95,041
2090	88,003	1,345	1,347	2,428	78	1,837	1	95,039
2095	88,558	1,378	1,368	2,401	75	1,804	1	95,585
2100	90,128	1,424	1,399	2,391	73	1,771	1	97,188
Low-cost:								
2025	53,213	2,131	732	3,755	101	2,071	1	62,004
2030	59,711	1,994	831	3,629	91	2,157	1	68,413
2035	63,424	1,810	923	3,594	89	2,275	1	72,115
2040	65,229	1,539	1,006	3,368	97	2,361	1	73,601
2045	65,747	1,333	1,123	3,146	105	2,487	1	73,941
2050	66,533	1,289	1,221	3,017	106	2,597	1	74,764
2055	68,177	1,268	1,304	2,914	106	2,648	1	76,418
2060	70,804	1,247	1,395	2,827	105	2,640	1	79,017
2065	73,218	1,230	1,436	2,776	105	2,626	1	81,392
2070	75,641	1,208	1,474	2,743	107	2,659	1	83,831
2075	77,919	1,178	1,519	2,710	111	2,742	1	86,179

Table V.C4.—OASI Beneficiaries With Benefits in Current-Payment Status at the End of Calendar Years 1945-2100 (Cont.)
[In thousands]

	Retired workers and auxiliaries			Survivors				
Calendar year	Worker[a]	Spouse	Child	Widow-widower	Mother-father	Child	Parent	Total
Low-cost (Cont.):								
2080	79,279	1,150	1,549	2,656	114	2,837	1	87,586
2085	79,697	1,128	1,578	2,595	117	2,908	1	88,023
2090	79,337	1,133	1,581	2,563	119	2,955	1	87,688
2095	80,119	1,163	1,631	2,585	120	2,992	1	88,611
2100	82,770	1,207	1,710	2,637	122	3,035	1	91,482
High-cost:								
2025	53,314	2,131	729	3,765	100	2,061	1	62,100
2030	60,644	1,986	813	3,674	85	2,057	1	69,260
2035	66,046	1,878	878	3,525	81	1,928	1	74,337
2040	70,146	1,587	930	3,212	84	1,802	1	77,763
2045	72,865	1,387	995	2,908	85	1,705	1	79,946
2050	75,620	1,377	1,048	2,711	79	1,625	1	82,461
2055	78,950	1,396	1,086	2,559	74	1,545	1	85,610
2060	83,011	1,425	1,112	2,442	67	1,450	1	89,508
2065	86,709	1,466	1,103	2,388	60	1,353	1	93,080
2070	90,478	1,502	1,095	2,356	55	1,272	1	96,759
2075	94,152	1,516	1,085	2,346	50	1,208	1	100,358
2080	96,835	1,519	1,069	2,299	46	1,153	1	102,922
2085	98,398	1,506	1,050	2,232	42	1,100	1	104,329
2090	98,715	1,497	1,027	2,150	39	1,049	1	104,477
2095	98,493	1,487	1,013	2,065	35	1,001	1	104,095
2100	97,990	1,491	997	2,000	32	954	1	103,465

[a] Retired-worker beneficiaries include persons who also receive a residual benefit consisting of the excess of an auxiliary benefit over their retired-worker benefit.

Notes:
1. The number of beneficiaries does not include uninsured individuals who receive benefits under section 228 of the Social Security Act. Transfers from the General Fund of the Treasury reimburse the OASI Trust Fund for the cost of most of these individuals.

2. Components may not sum to totals because of rounding.

5. Disability Insurance Beneficiaries

The DI Trust Fund pays for benefits to workers who: (1) satisfy the disability insured requirements, (2) have applied for disabled-worker benefits, (3) are determined to be unable to engage in any substantial gainful activity due to a medically determinable physical or mental impairment severe enough to satisfy the requirements of the program, and (4) have not yet attained normal retirement age. Spouses and children of such disabled-worker beneficiaries may also receive DI benefits provided they satisfy certain criteria, primarily age and earnings requirements.

The Office of the Chief Actuary projects the number of disabled-worker beneficiaries in current-payment status (disability prevalence) for each future year. The projections start with the number in current-payment status as of December 2024. Projections of the number of applicants and new beneficiaries awarded benefits each year (disability incidence) and the number of ben-

eficiaries leaving the disability rolls each year then determine the number in current-payment status in later years. Beneficiaries leave the rolls due to death and recovery (disability terminations) and due to conversion from disabled-worker to retired-worker beneficiary status at normal retirement age, after which the OASI Trust Fund pays for benefits. The remainder of this section describes the concepts of disability incidence, termination, and prevalence.

a. Disability Incidence

The disability incidence rate is the ratio of the number of applicants newly awarded disabled-worker benefits during each year to the number of individuals who meet insured requirements but are not yet receiving benefits (the disability-exposed population[1]). The Office of the Chief Actuary projects the number of newly awarded beneficiaries for each future year by multiplying assumed age-sex-specific disability incidence rates and the projected disability-exposed population by age and sex.

Figure V.C3 illustrates the projected incidence rates under the three alternatives along with historical rates. Incidence rates have varied substantially during the historical period since 1970 due to a variety of demographic and economic factors, along with changes in legislation and program administration. The solid lines in figure V.C3 show the age-sex-adjusted incidence rate consistent with the age-sex distribution of the disability-exposed population for 2000. This adjustment allows a meaningful comparison of incidence rates over time by focusing on the likelihood of being awarded disabled-worker benefits, excluding the effects of a changing distribution of the population toward ages where disability is more or less likely.

The dashed lines in figure V.C3 represent the gross (unadjusted) incidence rates. The changing age-sex distribution of the exposed population over time influences these unadjusted rates. The gross incidence rate declined relative to the age-sex-adjusted rate between 1970 and 1990 as the baby-boom generation increased the size of the younger working-age population, where disability incidence is lower than in older populations. Between 1990 and 2010, the gross rate increased relative to the age-sex-adjusted rate as the baby-boom generation moved into an age range where disability incidence is higher. The projected gross incidence rate generally declines relative to the age-sex-adjusted rate as the baby-boom generation moves above the normal retirement age and the lower-birth-rate cohorts of the 1970s enter prime dis-

[1] The disability-exposed population excludes those receiving benefits, while the disability insured population includes them. Section V.C.3 of this report describes the projection of the disability insured population.

ability ages (50 to normal retirement age). As these smaller cohorts age beyond normal retirement age, by about 2050, the gross incidence rate returns to a higher relative level under the intermediate assumptions. Thereafter, the gross rate remains higher than the age-sex-adjusted rate, reflecting the persistently higher average age of the working-age population compared to the population in 2000, which is largely due to lower birth rates since 1965 and to the increase in the normal retirement age.

For the first 10 years of the projection period (through 2034), incidence rates reflect several factors following on the experience since the recession of 2007-09. At the beginning of the period of high unemployment that began in 2007, disability incidence rates started to rise to a level well above the general trend level, with rates reaching a peak in 2010. Between 2010 and 2012, incidence rates subsided as the economy recovered, but the decline continued after 2012, reaching levels well below those expected over the long-term. A portion of the elevation of disability incidence rates experienced during the recession of 2007-09 likely contributed to the lowering of incidence rates experienced during and after the economic recovery that followed, as many individuals applied for disability benefits earlier than they would have otherwise.

For 2024, the actual age-sex-adjusted incidence rate (3.3 per thousand) was below the level projected in last year's report (3.4 per thousand). In this year's report, as in last year's report, incidence rates under the intermediate alternative are projected to rise slowly early in the projection period, consistent with the low incidence levels experienced recently. Incidence rates are projected to rise to a temporary peak level for 2027 as some of the reduced levels of new benefit awards in recent years are realized in the next few years. After 2027, incidence rates decline from the peak, reaching the ultimate assumed level of incidence at the end of the short-range period.

In 2034, at the end of the short-range period, age-sex-specific incidence rates are assumed to reach the ultimate rates assumed for the long-range projections. These ultimate age-sex-specific disability incidence rates were selected based on careful analysis of historical levels and patterns and expected future conditions, including the impact of scheduled increases in the normal retirement age.[1] The ultimate incidence rates represent the expected average rates of incidence for the future.

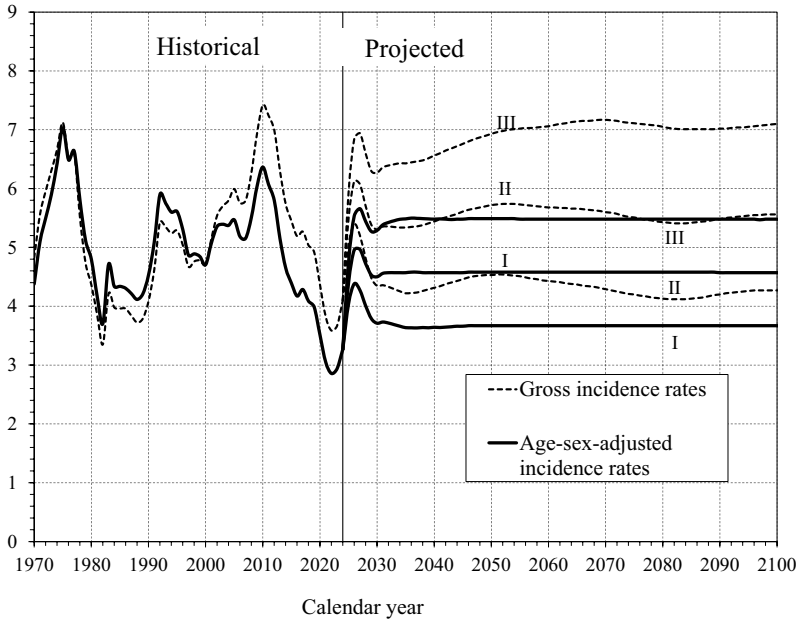
[1] Projected incidence rates are adjusted upward to account for additional workers who are expected to file for disability benefits (rather than retirement benefits) in response to reductions in retirement benefits as the normal retirement age rises.

For the intermediate alternative, the Trustees assume that the ultimate age-sex-adjusted incidence rate (adjusted to the disability-exposed population for the year 2000) will be 4.6 awards per thousand exposed, which is 0.1 per thousand higher than the ultimate rate assumed in last year's report, reflecting a recent regulation[1] that decreases the number of years used in the consideration of past relevant work when making a disability determination. Figure V.C3 illustrates that the age-sex-adjusted incidence rate averaged 4.9 per thousand over the historical period 1970 through 2024, but it has dropped substantially below that level since 2013. The rates seen in recent years are not consistent with an assumption of a full rise back to longer-term past historical averages. The Trustees continue to monitor experience and review the disability incidence rate assumption.

The Trustees assume that the ultimate age-sex-adjusted incidence rates for the low-cost and high-cost alternatives will be 3.7 and 5.5 awards per thousand exposed, or about 20 percent lower and higher, respectively, than the ultimate incidence rate for the intermediate alternative. These ultimate low-cost and high-cost incidence rates are both higher than those in last year's report by roughly 0.1 award per thousand exposed.

[1] On April 18, 2024, the Social Security Administration published a final rule in the Federal Register titled Intermediate Improvement to the Disability Adjudication Process, Including How We Consider Past Work. See section III.B for more detail.

Figure V.C3.—DI Disability Incidence Rates, 1970-2100
[Awards per thousand disability-exposed]



b. Disability Termination

Beneficiaries stop receiving disability benefits when they die, experience an improvement in their medically-determinable impairment such that they are deemed able to engage in substantial gainful activity, or return to substantial work. Disabled-worker beneficiaries who return to substantial work for an extended period are deemed to have recovered, and their benefits are then terminated. The termination rate is the ratio of the number of terminations for these reasons to the average number of disabled-worker beneficiaries during the year.

The Office of the Chief Actuary projects termination rates by age, sex, and reason for termination. In addition, the office projects termination rates by duration of entitlement to disabled-worker benefits in the long-range period (post-2034).

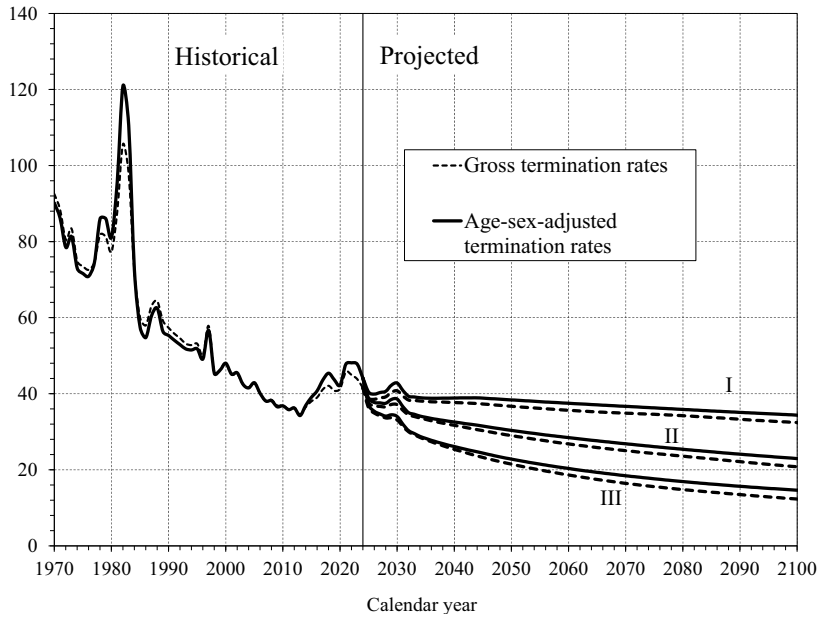
In the short-range period (through 2034), the projected age-sex-adjusted death termination rate (adjusted to the 2000 disabled-worker beneficiary population) under the intermediate assumptions declines from a rate of 26.3 deaths per thousand beneficiaries for 2024 to about 23.3 per thousand for 2034. The projected age-sex-adjusted recovery rate (medical improvement

and return to substantial work) under the intermediate assumptions decreases from the relatively high level of 17.8 per thousand beneficiaries for 2024 to 10.8 per thousand beneficiaries for 2034. The recovery rate has been high in recent years due to an ongoing administrative effort to eliminate a backlog of medical continuing disability reviews. The recovery rate is expected to decrease as the backlog of disabled-worker reviews is assumed to be processed over the next several years, with the rate approaching the expected long-term projected rate by 2034. Under the low-cost and high-cost assumptions, total age-sex-adjusted termination rates due to death and recovery are roughly 10 to 20 percent higher or lower, respectively, than under the intermediate assumptions.

For the long-range period (post-2034), the Office of the Chief Actuary projects death and recovery rates by age, sex, and duration of entitlement relative to the average level of rates experienced over the base period 2011 through 2015. The assumed age-sex-adjusted recovery rate for disabled-worker beneficiaries averages 10.8 per thousand beneficiaries for the period 2035 through 2099 under the intermediate alternative, which is the same average rate assumed in last year's report. The assumed age-sex-adjusted recovery rates for the low-cost and high-cost alternatives average 13.0 and 8.6 recoveries per thousand beneficiaries, respectively, for 2035 through 2099. Death rates by age and sex change throughout the long-range period at the same rate as death rates in the general population. The age-sex-adjusted death rate decreases from 26.3 per thousand beneficiaries in 2024 to 21.4, 12.2, and 6.1 per thousand disabled-worker beneficiaries for 2099 under the low-cost, intermediate, and high-cost assumptions, respectively.

Figure V.C4 illustrates gross and age-sex-adjusted total termination rates (including both recoveries and deaths) for disabled-worker beneficiaries for the historical period since 1970, and for the projection period through 2100. As with incidence rates, the age-sex-adjusted termination rate illustrates the real change in the tendency to terminate benefits. Changes in the age-sex distribution of the beneficiary population influence the gross termination rate. A shift in the disabled-worker beneficiary population to older ages, as occurred over the past 20 years when the baby-boom generation moved into pre-retirement ages, increases gross death termination rates relative to the age-sex-adjusted rates.

Figure V.C4.—DI Disability Termination Rates, 1970-2100
[Terminations per thousand disabled-worker beneficiaries]



c. DI Beneficiaries and Disability Prevalence Rates

Incidence and termination rates are the foundation for projecting the number of disabled-worker beneficiaries in current-payment status. At normal retirement age, all disabled-worker beneficiaries automatically convert to retired-worker status and leave the DI rolls.

The Office of the Chief Actuary makes detailed projections of disabled-worker awards, terminations, and conversions and combines these to project the number of disabled workers receiving benefits over the next 75 years. Table V.C5 presents the projected numbers of disabled-worker beneficiaries in current-payment status. The number of disabled-worker beneficiaries in current-payment status grows from 7.2 million at the end of 2024, to 9.8 million, 11.3 million, and 11.3 million at the end of 2100, under the low-cost, intermediate, and high-cost assumptions, respectively. Of course, much of this growth results from the growth and changing age distribution of the population described earlier in this chapter. Table V.C5 also presents projected numbers of auxiliary beneficiaries and disability prevalence rates on both a gross basis and an age-sex-adjusted basis.

Table V.C5.—DI Beneficiaries With Benefits in Current-Payment Status at the End of Calendar Years 1960-2100

[Beneficiaries in thousands; prevalence rates per thousand persons insured for disability benefits]

Calendar year	Disabled-worker beneficiaries	Auxiliary beneficiaries		Total beneficiaries	Disability prevalence rates	
		Spouse	Child		Gross	Age-sex-adjusted[a]
Historical data:						
1960	455	77	155	687	[b]	[b]
1965	988	193	558	1,739	[b]	[b]
1970	1,493	283	889	2,665	20	18
1975	2,488	453	1,411	4,351	29	28
1980	2,856	462	1,359	4,677	28	31
1985	2,653	306	945	3,904	24	26
1990	3,007	266	989	4,261	25	28
1995	4,179	264	1,409	5,852	33	35
2000	5,036	165	1,466	6,667	36	36
2005	6,519	157	1,633	8,309	45	40
2010	8,204	161	1,820	10,185	55	44
2015	8,909	143	1,756	10,808	59	45
2016	8,809	136	1,667	10,612	58	44
2017	8,695	127	1,590	10,412	56	43
2018	8,537	119	1,507	10,164	55	41
2019	8,378	114	1,434	9,927	54	40
2020	8,151	105	1,364	9,620	52	39
2021	7,877	97	1,245	9,219	50	37
2022	7,604	92	1,146	8,842	47	34
2023	7,366	89	1,061	8,515	46	33
2024	7,231	87	1,006	8,324	45	32
Intermediate:						
2025	7,329	88	1,013	8,431	45	32
2030	7,568	86	1,100	8,754	47	34
2035	7,832	82	1,171	9,085	47	36
2040	8,274	73	1,339	9,685	49	37
2045	8,969	76	1,529	10,575	52	38
2050	9,461	81	1,657	11,199	54	39
2055	9,816	82	1,738	11,636	56	39
2060	9,886	80	1,761	11,727	56	40
2065	10,042	81	1,756	11,879	56	40
2070	10,139	81	1,761	11,981	56	40
2075	10,070	80	1,791	11,942	56	40
2080	10,064	81	1,847	11,993	55	41
2085	10,116	80	1,905	12,102	55	41
2090	10,490	85	1,953	12,529	56	41
2095	10,927	89	1,985	13,002	57	41
2100	11,257	91	2,008	13,357	57	41
Low-cost:						
2025	7,256	88	1,000	8,344	45	32
2030	6,924	85	1,000	8,008	42	31
2035	6,677	70	1,013	7,760	39	30
2040	6,729	58	1,135	7,922	39	30
2045	7,125	57	1,305	8,487	40	30
2050	7,431	59	1,423	8,913	41	30
2055	7,668	58	1,496	9,222	42	30
2060	7,714	55	1,522	9,291	41	30
2065	7,845	54	1,531	9,430	41	30
2070	7,951	54	1,559	9,563	40	30
2075	7,961	53	1,621	9,636	39	31
2080	8,058	54	1,712	9,824	39	31
2085	8,259	54	1,802	10,115	38	31
2090	8,788	58	1,877	10,724	39	31
2095	9,375	62	1,936	11,373	40	31
2100	9,807	64	1,989	11,860	40	31

Table V.C5.—DI Beneficiaries With Benefits in Current-Payment Status at the End of Calendar Years 1960-2100 (Cont.)

[Beneficiaries in thousands; prevalence rates per thousand persons insured for disability benefits]

Calendar year	Disabled-worker beneficiaries	Auxiliary beneficiaries		Total beneficiaries	Disability prevalence rates	
		Spouse	Child		Gross	Age-sex-adjusted[a]
High-cost:						
2025	7,401	89	1,026	8,516	46	32
2030	8,217	87	1,191	9,494	51	38
2035	9,007	95	1,311	10,414	55	42
2040	9,864	89	1,491	11,444	59	44
2045	10,887	99	1,644	12,630	65	46
2050	11,587	107	1,741	13,435	69	48
2055	12,070	111	1,802	13,982	73	49
2060	12,149	109	1,810	14,068	74	50
2065	12,297	110	1,781	14,188	76	50
2070	12,326	111	1,742	14,178	77	51
2075	12,077	107	1,708	13,892	77	51
2080	11,822	106	1,690	13,617	77	51
2085	11,496	102	1,680	13,278	77	51
2090	11,391	104	1,673	13,168	77	51
2095	11,336	103	1,658	13,097	78	51
2100	11,343	104	1,636	13,082	78	52

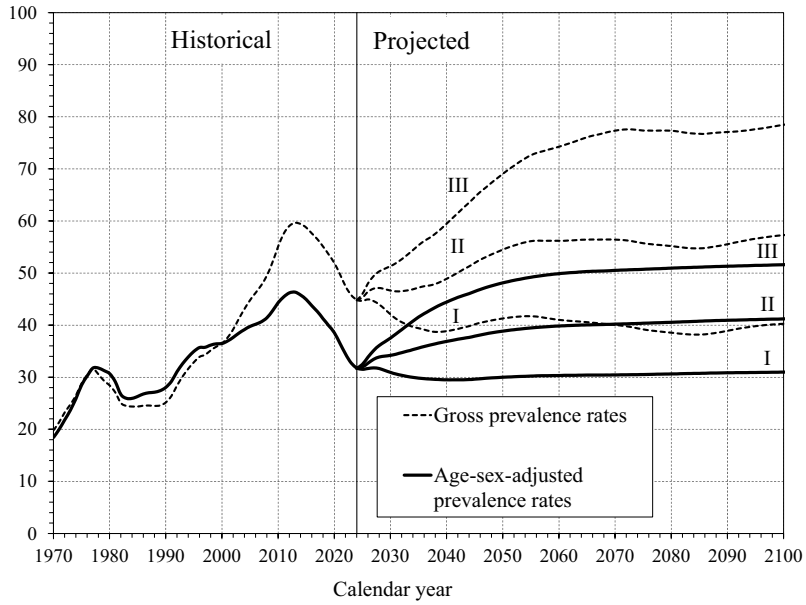
[a] Adjusted to the age-sex distribution of the disability insured population for the year 2000.
[b] Data are not available to compute prevalence rates for these years.

Note: Components may not sum to totals because of rounding.

The disability prevalence rate is the ratio of the number of disabled-worker beneficiaries in current-payment status to the number of persons insured for disability benefits. Figure V.C5 illustrates the historical and projected disability prevalence rates on both a gross basis and on an age-sex-adjusted basis (adjusted to the age-sex distribution of the disability insured population for the year 2000).

Changes in prevalence rates are a direct result of changes in incidence rates and termination rates. Annual incidence and termination rates are not directly comparable or combinable because their denominators differ.

Figure V.C5.—DI Disability Prevalence Rates, 1970-2100
[Rate per thousand persons insured for disability benefits]



Age-sex-adjusted prevalence rates have increased primarily because: (1) termination rates, in particular death termination rates, have declined; (2) incidence rates at younger ages have increased relative to rates at older ages (new beneficiaries at younger ages have more potential years on the disability rolls); (3) incidence rates have increased substantially for women to parity with men; and (4) the maturation of the DI program (disabled-worker benefits became available to those over age 50 at the start of the program in 1957 and to younger workers in 1960, and disability insured status requirements were eased for those under age 31 in 1968). Gross prevalence rates have increased more than age-sex-adjusted prevalence rates since the baby-boom generation began to reach ages 45 through normal retirement age, a time of life when disability incidence rates are relatively high. The Office of the Chief Actuary projects both gross and age-sex adjusted prevalence rates to grow at a slower pace based on assumed stabilization in these four factors: (1) the age distribution of the general population, (2) the age distribution of the disability insured population, (3) incidence rates by age and sex, and (4) DI program age and insured requirements. As these factors gradually stabilize, the declining death termination rate continues to have a small influence toward higher disability prevalence rates.

As mentioned above in the discussion of incidence and termination rates, the age-sex-adjusted prevalence rate isolates the changing trend in the underlying likelihood of receiving benefits for the insured population, without reflecting changes in the age and sex distribution of the population. As with incidence rates, gross disability prevalence rates declined relative to the age-sex-adjusted rate when the baby-boom generation reached working age between 1970 and 1990; this trend reflects the lower disability prevalence rates associated with younger ages. Conversely, the gross rate of disability prevalence has increased relative to the age-sex-adjusted rate after 1990 due to the aging of the baby-boom generation into ages with higher disability prevalence rates.

Under the intermediate assumptions, the projected age-sex-adjusted disability prevalence rate grows from 31.7 per thousand disability insured workers at the end of 2024 to 41.2 per thousand at the end of 2100. The projected age-sex-adjusted disability prevalence rate at the end of 2100 is 31.0 per thousand under the low-cost assumptions and 51.6 per thousand under the high-cost assumptions.

Table V.C5 presents projections of the numbers of auxiliary beneficiaries paid from the DI Trust Fund. As indicated at the beginning of this subsection, auxiliary beneficiaries are qualifying spouses and children of disabled-worker beneficiaries. A spouse must either be at least age 62 or have an eligible child beneficiary in his or her care who is either under age 16 or disabled prior to age 22. A child must be: (1) under age 18, (2) age 18 or 19 and still a student in high school, or (3) age 18 or older and disabled prior to age 22.

The projection of the number of auxiliary beneficiaries relies on the projected number of disabled-worker beneficiaries. In the short-range period (2025 through 2034), the Office of the Chief Actuary projects incidence and termination rates for each category of auxiliary beneficiary. After 2034, the office projects child beneficiaries at ages 18 and under in relation to the projected number of children in the population using the probability that either of their parents is a disabled-worker beneficiary. The office projects the remaining categories of children and spouses in a similar manner.

6. Covered and Taxable Earnings, Taxable Payroll, and Payroll Tax Contributions

Covered earnings include both covered wages and covered self-employment net earnings. The Office of the Chief Actuary projects covered wages for component sectors of the economy (i.e., private, State and local government, Federal civilian, and military) based on the projected overall growth of sec-

toral and total wages in the U.S. economy. The projections of covered wages also reflect changes in covered employment due to a relative increase in non-covered unlawfully present immigrants and to the mandatory coverage of new hires in the Federal civilian sector. The office projects covered self-employment net earnings based on the growth in net proprietors' income in the U.S. economy.

Taxable earnings are the portion of covered earnings subject to the Social Security payroll tax. Taxable wages for an employee are total covered wages from all wage employment up to the contribution and benefit base. Taxable wages for an employer are the sum of all covered wages paid to each employee up to the base. Employees with multiple jobs whose total wages exceed the base are eligible for a refund of excess employee taxes withheld; employers are not eligible for a refund on this basis. For self-employed workers with no taxable wages, taxable earnings are the amount of covered self-employment net earnings up to the base. For self-employed workers with taxable wages less than the base, covered self-employment net earnings are taxable up to the difference between the base and their taxable wages. For projection purposes, the Office of the Chief Actuary computes taxable earnings based on a proportion of covered earnings that is at or below the base.

The OASDI taxable payroll (see table VI.G6) for a year is computed as the amount of earnings which, when multiplied by the combined OASDI employee-employer payroll tax rate for that year, yields the total amount of payroll taxes due from wages paid and self-employment net earnings for the year. Taxable payroll is used as the denominator for income rates, cost rates, and actuarial balances. Taxable payroll is derived by adjusting total taxable earnings to account for categories of earnings that are taxed at rates other than the combined employee-employer rate and to take into account amounts credited as wages that were not included in normally reported wages. For 1951 and later, taxable earnings are reduced by one-half of the amount of wages paid to employees with multiple jobs that exceed the contribution and benefit base. For 1983 through 2001, deemed wage credits for military service after 1956 are added to taxable earnings. The self-employment tax rates for 1951 through 1983 were less than the combined employee-employer rates; therefore, the self-employment component of taxable payroll for those years is reduced by multiplying the ratio of the self-employment rate to the combined employee-employer rate times the taxable self-employment net earnings. Finally, for 1966 through 1979, employers were exempt from paying their share of payroll tax on their employees' tips and, for 1980 through 1987, employers paid tax on only part of their employees' tips. For those

years, the taxable payroll is reduced by half of the amount of tips for which the employer owed no payroll tax.

The ratio of taxable payroll to covered earnings (the taxable ratio) declined from 88.6 percent for 1984 to 82.6 percent for 2000, mostly due to much larger increases in wage levels for very high earners than for all other earners. From 2000 to 2010, the taxable ratio varied with the business cycle, rising during economic downturns and declining during recoveries. Specifically, the taxable ratio rose to 85.7 percent for 2002, declined to 82.4 percent for 2007, rose to 85.2 percent for 2009, and averaged 83.0 percent for the period 2010 to 2019.

The ratio declined to 82.2 percent for 2020 from the previous year's 83.1 percent. Unlike previous economic downturns, the pandemic-induced recession led to a much greater decrease in wages for earners at the low end of the earnings distribution than for those at the high end. This resulted in a relatively higher proportion of total wages being above the contribution and benefit base than has typically been the case in other economic downturns. The ratio declined further to 80.4 percent for 2021, mainly due to increases in bonuses paid to high earners and the exercising of stock options. The taxable ratio increased to 82.0 percent for 2022 and is estimated to increase to 83.3 percent for 2023.

For each alternative, the ratios move gradually from 2023 to the assumed level at the end of the short-range period (2034): 84.0 percent for the low-cost assumptions, 82.5 percent for the intermediate assumptions, and 81.0 percent for the high-cost assumptions.[1] These are the same assumptions that the Trustees used for the end of the short-range period (2033) for the 2024 report.

The Office of the Chief Actuary projects payroll tax contributions using the patterns of tax collection required by Federal laws and regulations. The office determines payroll tax liabilities by multiplying the scheduled tax rates for each year by the amount of taxable wages and self-employment net earnings for that year. The office then splits these liabilities into amounts by collection period. For wages, Federal law requires that employers withhold OASDI and HI payroll taxes and Federal individual income taxes from employees' pay. As an employer's accumulation of such taxes (including the employer share of payroll taxes) meets certain thresholds, which the Department of the Treasury determines, the employer must deposit these taxes with

[1] The taxable ratio drifts down slightly after 2034, to 84.0, 82.3, and 80.7 percent for 2099 for the low-cost, intermediate, and high-cost assumptions, respectively, as self-employment income (which has a lower percent taxable than wages) becomes an increasing share of total earnings.

the U.S. Treasury by a specific day, depending on the amount of money involved.[1] For projection purposes, the office splits the payroll tax contributions related to wages into amounts paid in the same quarter as incurred and in the following quarter. Self-employed workers must make estimated tax payments on their earnings four times during the year and make up any underestimate on their individual income tax returns. The projection splits the self-employed tax liabilities by collection quarter to reflect this pattern.

The projected tax contributions also reflect the method used to ensure that money transferred to the trust funds is adjusted, over time, to equal the actual liability owed. Because payers generally make tax payments without identifying the separate OASDI contribution amounts, Treasury makes daily transfers of money from the General Fund to the trust funds on an initial estimated basis. The Social Security Administration periodically certifies the amounts of wages and self-employment net earnings on which tax contributions are owed for each year, at which time Treasury determines adjustments to appropriations to reconcile tax liabilities with deposits in the trust funds. This process also includes periodic transfers from the trust funds to the General Fund for contributions on wages in excess of the contribution and benefit base.

Table V.C6 shows the payroll tax contribution rates applicable under current law in each calendar year and the allocation of these rates between the OASI and DI Trust Funds.[2] It also shows the contribution and benefit base for each year through 2025.

[1] Generally, the higher the amount of liability, the sooner the taxes must be paid. For smaller employers, payment is due by the middle of the month following when the liability was incurred. Medium-size employers have three banking days in which to make their deposits. Larger employers must make payment on the next business day after paying their employees.

[2] Table VI.G1 shows the payroll tax contribution rates for the Hospital Insurance (HI) program.

Table V.C6.—Contribution and Benefit Base and Payroll Tax Contribution Rates

Calendar years	Contribution and benefit base	Payroll tax contribution rates (percent)					
		Employees and employers, combined[a]			Self-employed[b]		
		OASDI	OASI	DI	OASDI	OASI	DI
1937-49	$3,000	2.00	2.00	—	—	—	—
1950	3,000	3.00	3.00	—	—	—	—
1951-53	3,600	3.00	3.00	—	2.2500	2.2500	—
1954	3,600	4.00	4.00	—	3.0000	3.0000	—
1955-56	4,200	4.00	4.00	—	3.0000	3.0000	—
1957-58	4,200	4.50	4.00	0.50	3.3750	3.0000	0.3750
1959	4,800	5.00	4.50	.50	3.7500	3.3750	.3750
1960-61	4,800	6.00	5.50	.50	4.5000	4.1250	.3750
1962	4,800	6.25	5.75	.50	4.7000	4.3250	.3750
1963-65	4,800	7.25	6.75	.50	5.4000	5.0250	.3750
1966	6,600	7.70	7.00	.70	5.8000	5.2750	.5250
1967	6,600	7.80	7.10	.70	5.9000	5.3750	.5250
1968	7,800	7.60	6.65	.95	5.8000	5.0875	.7125
1969	7,800	8.40	7.45	.95	6.3000	5.5875	.7125
1970	7,800	8.40	7.30	1.10	6.3000	5.4750	.8250
1971	7,800	9.20	8.10	1.10	6.9000	6.0750	.8250
1972	9,000	9.20	8.10	1.10	6.9000	6.0750	.8250
1973	10,800	9.70	8.60	1.10	7.0000	6.2050	.7950
1974	13,200	9.90	8.75	1.15	7.0000	6.1850	.8150
1975	14,100	9.90	8.75	1.15	7.0000	6.1850	.8150
1976	15,300	9.90	8.75	1.15	7.0000	6.1850	.8150
1977	16,500	9.90	8.75	1.15	7.0000	6.1850	.8150
1978	17,700	10.10	8.55	1.55	7.1000	6.0100	1.0900
1979	22,900	10.16	8.66	1.50	7.0500	6.0100	1.0400
1980	25,900	10.16	9.04	1.12	7.0500	6.2725	.7775
1981	29,700	10.70	9.40	1.30	8.0000	7.0250	.9750
1982	32,400	10.80	9.15	1.65	8.0500	6.8125	1.2375
1983	35,700	10.80	9.55	1.25	8.0500	7.1125	.9375
1984[c]	37,800	11.40	10.40	1.00	11.4000	10.4000	1.0000
1985[c]	39,600	11.40	10.40	1.00	11.4000	10.4000	1.0000
1986[c]	42,000	11.40	10.40	1.00	11.4000	10.4000	1.0000
1987[c]	43,800	11.40	10.40	1.00	11.4000	10.4000	1.0000
1988[c]	45,000	12.12	11.06	1.06	12.1200	11.0600	1.0600
1989[c]	48,000	12.12	11.06	1.06	12.1200	11.0600	1.0600
1990	51,300	12.40	11.20	1.20	12.4000	11.2000	1.2000
1991	53,400	12.40	11.20	1.20	12.4000	11.2000	1.2000
1992	55,500	12.40	11.20	1.20	12.4000	11.2000	1.2000
1993	57,600	12.40	11.20	1.20	12.4000	11.2000	1.2000
1994	60,600	12.40	10.52	1.88	12.4000	10.5200	1.8800
1995	61,200	12.40	10.52	1.88	12.4000	10.5200	1.8800
1996	62,700	12.40	10.52	1.88	12.4000	10.5200	1.8800
1997	65,400	12.40	10.70	1.70	12.4000	10.7000	1.7000
1998	68,400	12.40	10.70	1.70	12.4000	10.7000	1.7000
1999	72,600	12.40	10.70	1.70	12.4000	10.7000	1.7000
2000	76,200	12.40	10.60	1.80	12.4000	10.6000	1.8000
2001	80,400	12.40	10.60	1.80	12.4000	10.6000	1.8000
2002	84,900	12.40	10.60	1.80	12.4000	10.6000	1.8000
2003	87,000	12.40	10.60	1.80	12.4000	10.6000	1.8000
2004	87,900	12.40	10.60	1.80	12.4000	10.6000	1.8000
2005	90,000	12.40	10.60	1.80	12.4000	10.6000	1.8000

Table V.C6.—Contribution and Benefit Base and Payroll Tax Contribution Rates (Cont.)

Calendar years	Contribution and benefit base	Payroll tax contribution rates (percent)					
		Employees and employers, combined[a]			Self-employed[b]		
		OASDI	OASI	DI	OASDI	OASI	DI
2006	$94,200	12.40	10.60	1.80	12.4000	10.6000	1.8000
2007	97,500	12.40	10.60	1.80	12.4000	10.6000	1.8000
2008	102,000	12.40	10.60	1.80	12.4000	10.6000	1.8000
2009	106,800	12.40	10.60	1.80	12.4000	10.6000	1.8000
2010[d]	106,800	12.40	10.60	1.80	12.4000	10.6000	1.8000
2011[d]	106,800	10.40	8.89	1.51	10.4000	8.8900	1.5100
2012[d]	110,100	10.40	8.89	1.51	10.4000	8.8900	1.5100
2013	113,700	12.40	10.60	1.80	12.4000	10.6000	1.8000
2014	117,000	12.40	10.60	1.80	12.4000	10.6000	1.8000
2015	118,500	12.40	10.60	1.80	12.4000	10.6000	1.8000
2016	118,500	12.40	10.03	2.37	12.4000	10.0300	2.3700
2017	127,200	12.40	10.03	2.37	12.4000	10.0300	2.3700
2018	128,400	12.40	10.03	2.37	12.4000	10.0300	2.3700
2019	132,900	12.40	10.60	1.80	12.4000	10.6000	1.8000
2020	137,700	12.40	10.60	1.80	12.4000	10.6000	1.8000
2021	142,800	12.40	10.60	1.80	12.4000	10.6000	1.8000
2022	147,000	12.40	10.60	1.80	12.4000	10.6000	1.8000
2023	160,200	12.40	10.60	1.80	12.4000	10.6000	1.8000
2024	168,600	12.40	10.60	1.80	12.4000	10.6000	1.8000
2025	176,100	12.40	10.60	1.80	12.4000	10.6000	1.8000
2026 and later	[e]	12.40	10.60	1.80	12.4000	10.6000	1.8000

[a] Except as noted below, the combined employee/employer rate is divided equally between employees and employers.
[b] Beginning in 1990, self-employed persons receive a deduction, for purposes of computing their net earnings, equal to half of the combined OASDI and HI contributions that would be payable without regard to the contribution and benefit base. The OASDI contribution rate then applies to net earnings after this deduction, but subject to the OASDI base.
[c] In 1984 only, employees received an immediate credit of 0.3 percent of taxable wages against their OASDI payroll tax contributions. The self-employed received similar credits of 2.7 percent, 2.3 percent, and 2.0 percent against their combined OASDI and Hospital Insurance (HI) contributions on net earnings from self-employment in 1984, 1985, and 1986-89, respectively. The General Fund of the Treasury reimbursed the trust funds for these credits.
[d] Public Law 111-147 exempted most employers from paying the employer share of OASDI payroll tax on wages paid during the period March 19, 2010 through December 31, 2010 to certain qualified individuals hired after February 3, 2010. Public Law 111-312 reduced the OASDI payroll tax rate for 2011 by 2 percentage points for employees and for self-employed workers. Public Law 112-96 extended the 2011 rate reduction through 2012. These laws require that the General Fund of the Treasury reimburse the OASI and DI Trust Funds for these temporary reductions in 2010 through 2012 payroll tax revenue, in order to "replicate to the extent possible" revenue that would have been received if the combined employee/employer payroll tax rates had remained at 12.4 percent for OASDI (10.6 percent for OASI and 1.8 percent for DI).
[e] Subject to automatic adjustment based on increases in average wages.

7. Income From Taxation of Benefits

Under current law, the OASI and DI Trust Funds are credited with income tax revenue from the taxation of up to the first 50 percent of taxpayers' OASI and DI benefit payments. (The HI Trust Fund receives the remainder of the income tax revenue from the taxation of up to 85 percent of taxpayers' OASI and DI benefit payments.) Benefits are partially subject to federal income tax for beneficiaries with income (defined for this purpose as adjusted gross income excluding Social Security benefits, plus half of their Social Security

benefits and all of their non-taxable interest income) in excess of specified threshold amounts. The threshold amounts are $25,000 for single filers, $32,000 for joint filers, and $0 for those married individuals filing separately.

For the short-range period, the Office of the Chief Actuary estimates the income to the OASI and DI Trust Funds from taxation of benefits by applying the following two factors (projected by the Office of Tax Analysis in the Department of the Treasury) to total OASI and DI scheduled benefits: (1) the percentage of taxpayers' scheduled benefits (limited to 50 percent) that is taxable and (2) the average marginal tax rate applicable to those benefits. Up to 85 percent of benefits may be subject to federal income tax, with any tax on more than 50 percent of a taxpayer's benefits credited to the Medicare Hospital Insurance Trust Fund.

For the long-range period, the office estimates the income to the trust funds from taxation of benefits by applying projected ratios of taxation of OASI and DI benefits to total OASI and DI scheduled benefits. These tax ratios rely on estimates from the Office of Tax Analysis in the Department of the Treasury. The Office of the Chief Actuary's estimates reflect the following assumptions: (1) The income thresholds used for benefit taxation are specified in the Internal Revenue Code to be constant in the future, and have never been changed, while income and benefit levels continue to rise. Accordingly, projected ratios of income from taxation of benefits to the amount of benefits increase gradually. (2) A permanent level shift upward in the ratios is projected for 2026 and beyond due to the expiration of the personal income tax provisions in Public Law 115-97, the Tax Cuts and Jobs Act of 2017. (3) Because indexation of income tax brackets is not specified in the Social Security Act, and because periodic changes have been made in the past to avoid indefinite compression of the income tax brackets relative to income levels (bracket creep), the Trustees assume that such periodic changes will occur in the future. As a result, after the tenth year of the projection period, income tax brackets are assumed to rise with average wages, rather than with the C-CPI-U as specified under current law. Thus, the income tax brackets are projected to roughly maintain their levels relative to the income distribution.

8. Average Benefits

Projections of average benefits for each benefit type reflect recent historical averages, projected average primary insurance amounts (PIAs), and projected ratios of average benefits to average PIAs. Calculations of average PIAs are based on projected distributions of beneficiaries by duration from year of initial entitlement, average PIAs at initial entitlement, and increases in PIAs after initial entitlement. Projected increases in average PIAs after ini-

tial entitlement depend on automatic benefit increases, recomputations to reflect additional covered earnings, and differences in mortality by level of lifetime earnings. Calculations of future average PIAs at initial entitlement are based on projected earnings histories, which in turn reflect a combination of the actual earnings histories associated with a sample of 2021 initial entitlements and more recent actual earnings levels by age and sex for covered workers.

For retired-worker, aged-spouse, and aged-widow(er) benefits, the percentage of the PIA that is payable depends on the age at initial entitlement to benefits. Projected ratios of average benefits to average PIAs for these types of benefits are based on projections of age distributions at initial entitlement.

9. Scheduled Benefits

For each type of benefit, scheduled benefits are the product of the number of beneficiaries and the corresponding average monthly benefit. The short-range model calculates scheduled benefits on a quarterly basis. The long-range model calculates all scheduled benefits on an annual basis, using the number of beneficiaries at the beginning and end of the year. Adjustments to these annual scheduled benefits include retroactive payments to newly awarded beneficiaries and other amounts not reflected in the regular monthly scheduled benefits.

Scheduled lump-sum death benefits are estimated as the product of: (1) the number of lump-sum death payments projected on the basis of the assumed death rates, the projected fully insured population, and the estimated percentage of the fully insured population that will qualify for lump-sum death payments; and (2) the amount of the lump-sum death payment, which is $255 (unindexed since 1973).

10. Illustrative Scheduled Benefit Amounts

Table V.C7 shows, under the intermediate assumptions, future scheduled benefit amounts payable upon retirement at the normal retirement age and at age 65, for various hypothetical workers attaining age 65 in 2025 and subsequent years. The illustrative benefit amounts in table V.C7 are presented in CPI-indexed 2025 dollars—that is, adjusted to 2025 levels by the CPI indexing series shown in table VI.G6. Table V.C7 also shows each benefit amount as a percentage of the average of each hypothetical worker's highest 35 years

of Social Security covered earnings, indexed by national average wage growth to the year prior to initial entitlement to retired worker benefits.[1]

The normal retirement age was 65 for individuals who reached age 62 before 2000. It increased to age 66 during the period 2000 through 2005, at a rate of 2 months per year as workers attained age 62. Under current law, the normal retirement age increases to age 67 during the period 2017 through 2022, also by 2 months per year as workers attain age 62. The illustrative benefit amounts shown in table V.C7 for retirees at age 65 are lower than the amounts shown for retirees at normal retirement age because monthly benefits taken before normal retirement age are reduced to reflect the expected additional years benefits will be collected. For example, those who start collecting benefits at age 65 in 2027 and survive to age 67 will receive benefits for two more years than if they had instead waited to start collecting benefits at normal retirement age in 2029.

Table V.C7 shows five different pre-retirement earnings patterns. Four of these patterns assume the earnings history of workers with scaled-earnings patterns[2] and reflect very low, low, medium, and high career-average levels of pre-retirement earnings starting at age 21. The fifth pattern assumes the earnings history of a steady maximum earner starting at age 22. The four scaled-earnings patterns derive from earnings experienced by insured workers during calendar years 2002 through 2021. These earnings levels differ by age. The career-average level of earnings for each scaled case targets a percent of the AWI.

For the scaled medium earner, the career-average earnings level is about equal to the AWI (estimated to be $72,256 for 2025). For the scaled very low, low, and high earners, the career-average earnings level, wage-indexed to the year before starting benefits, is about 25 percent, 45 percent, and 160 percent of the AWI, respectively (estimated to be $18,064, $32,515, and $115,609, respectively, for 2025). The steady maximum earner has earnings at or above the contribution and benefit base ($176,100 for 2025) for each year starting at age 22 through the year prior to retirement.

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[1] Actuarial Note 2025.9 has additional detail on illustrative benefits for hypothetical workers. See www.ssa.gov/OACT/NOTES/ran9/.

[2] Actuarial Note 2025.3 has more details on scaled-earnings patterns. See www.ssa.gov/OACT/NOTES/ran3/.

Table V.C7.—Annual Scheduled Benefit Amounts[a] for Retired Workers With Various Pre-Retirement Earnings Patterns Based on Intermediate Assumptions, Calendar Years 2025-2100

	Retirement at normal retirement age			Retirement at age 65		
Year attain age 65[b]	Age at retirement	CPI-indexed 2025 dollars[c]	Percent of 35-year average earnings	Age at retirement	CPI-indexed 2025 dollars[c]	Percent of 35-year average earnings
Scaled very low earnings:[d]						
2025	67:0	$13,485	75.2	65:0	$11,630	67.0
2030	67:0	14,429	74.6	65:0	12,483	66.4
2035	67:0	15,608	75.2	65:0	13,504	66.8
2040	67:0	16,760	76.0	65:0	14,503	67.4
2045	67:0	17,816	76.3	65:0	15,423	67.5
2050	67:0	18,883	76.6	65:0	16,347	67.7
2055	67:0	19,949	76.7	65:0	17,268	67.8
2060	67:0	21,055	76.6	65:0	18,228	67.8
2065	67:0	22,232	76.5	65:0	19,241	67.7
2070	67:0	23,505	76.5	65:0	20,346	67.7
2075	67:0	24,860	76.5	65:0	21,520	67.7
2080	67:0	26,295	76.5	65:0	22,758	67.7
2085	67:0	27,814	76.4	65:0	24,075	67.7
2090	67:0	29,429	76.4	65:0	25,474	67.7
2095	67:0	31,143	76.5	65:0	26,958	67.7
2100	67:0	32,940	76.5	65:0	28,511	67.7
Scaled low earnings:[e]						
2025	67:0	17,700	54.8	65:0	15,238	48.7
2030	67:0	18,905	54.3	65:0	16,346	48.3
2035	67:0	20,444	54.8	65:0	17,683	48.6
2040	67:0	21,961	55.3	65:0	18,997	49.0
2045	67:0	23,341	55.5	65:0	20,192	49.1
2050	67:0	24,739	55.7	65:0	21,400	49.3
2055	67:0	26,129	55.8	65:0	22,610	49.3
2060	67:0	27,578	55.8	65:0	23,864	49.3
2065	67:0	29,117	55.7	65:0	25,191	49.3
2070	67:0	30,787	55.7	65:0	26,635	49.2
2075	67:0	32,563	55.7	65:0	28,174	49.2
2080	67:0	34,439	55.6	65:0	29,795	49.2
2085	67:0	36,430	55.6	65:0	31,518	49.2
2090	67:0	38,544	55.6	65:0	33,347	49.2
2095	67:0	40,789	55.7	65:0	35,291	49.2
2100	67:0	43,142	55.7	65:0	37,327	49.3
Scaled medium earnings:[f]						
2025	67:0	29,283	40.8	65:0	25,172	36.2
2030	67:0	31,218	40.3	65:0	26,972	35.9
2035	67:0	33,764	40.7	65:0	29,178	36.1
2040	67:0	36,242	41.1	65:0	31,336	36.4
2045	67:0	38,527	41.3	65:0	33,312	36.5
2050	67:0	40,824	41.4	65:0	35,304	36.6
2055	67:0	43,120	41.4	65:0	37,294	36.6
2060	67:0	45,511	41.4	65:0	39,357	36.6
2065	67:0	48,053	41.3	65:0	41,553	36.6
2070	67:0	50,809	41.3	65:0	43,935	36.5
2075	67:0	53,741	41.3	65:0	46,468	36.6
2080	67:0	56,836	41.3	65:0	49,147	36.5
2085	67:0	60,125	41.3	65:0	51,989	36.5
2090	67:0	63,612	41.3	65:0	55,005	36.5
2095	67:0	67,315	41.3	65:0	58,207	36.5
2100	67:0	71,199	41.3	65:0	61,566	36.6

Table V.C7.—Annual Scheduled Benefit Amounts[a] for Retired Workers With Various Pre-Retirement Earnings Patterns Based on Intermediate Assumptions, Calendar Years 2025-2100 (Cont.)

Year attain age 65[b]	Retirement at normal retirement age			Retirement at age 65		
	Age at retirement	CPI-indexed 2025 dollars[c]	Percent of 35-year average earnings	Age at retirement	CPI-indexed 2025 dollars[c]	Percent of 35-year average earnings
Scaled high earnings:[g]						
2025	67:0	$38,574	33.6	65:0	$33,230	29.9
2030	67:0	41,231	33.3	65:0	35,669	29.6
2035	67:0	44,601	33.6	65:0	38,589	29.8
2040	67:0	47,898	33.9	65:0	41,454	30.1
2045	67:0	50,925	34.1	65:0	44,077	30.2
2050	67:0	53,969	34.2	65:0	46,717	30.3
2055	67:0	57,006	34.2	65:0	49,343	30.3
2060	67:0	60,162	34.2	65:0	52,075	30.3
2065	67:0	63,519	34.2	65:0	54,979	30.2
2070	67:0	67,162	34.1	65:0	58,132	30.2
2075	67:0	71,037	34.1	65:0	61,485	30.2
2080	67:0	75,130	34.1	65:0	65,028	30.2
2085	67:0	79,473	34.1	65:0	68,789	30.2
2090	67:0	84,083	34.1	65:0	72,778	30.2
2095	67:0	88,979	34.1	65:0	77,016	30.2
2100	67:0	94,112	34.2	65:0	81,461	30.2
Steady maximum earnings:[h]						
2025	67:0	47,418	26.8	65:0	40,579	23.7
2030	67:0	50,693	26.5	65:0	43,607	23.5
2035	67:0	54,858	26.7	65:0	47,203	23.6
2040	67:0	58,870	27.0	65:0	50,686	23.8
2045	67:0	62,625	27.1	65:0	53,922	23.8
2050	67:0	66,317	27.2	65:0	57,108	23.9
2055	67:0	69,942	27.2	65:0	60,235	24.0
2060	67:0	73,764	27.2	65:0	63,525	24.0
2065	67:0	77,863	27.2	65:0	67,056	24.0
2070	67:0	82,361	27.2	65:0	70,933	24.0
2075	67:0	87,126	27.2	65:0	75,042	24.0
2080	67:0	92,149	27.2	65:0	79,373	23.9
2085	67:0	97,474	27.2	65:0	83,962	23.9
2090	67:0	103,129	27.2	65:0	88,831	23.9
2095	67:0	109,130	27.2	65:0	94,001	24.0
2100	67:0	115,420	27.2	65:0	99,420	24.0

[a] Annual amounts are the total for the 12-month period starting with the month of retirement.
[b] Attains age 65 on January 1 of the year.
[c] CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6.
[d] Career average earnings at about 25 percent of the national Average Wage Index (AWI).
[e] Career average earnings at about 45 percent of the AWI.
[f] Career average earnings at about 100 percent of the AWI.
[g] Career average earnings at about 160 percent of the AWI.
[h] Earnings for each year at or above the contribution and benefit base.

11. Administrative Expenses

The projection of administrative expenses through the short-range period is based on historical experience and the projected growth in average wages. The Office of Budget of the Social Security Administration provides estimates for the first several years of the projection. For years after the short-range period, projected administrative expenses reflect increases in the number of beneficiaries in current-payment status, and increases in the average wage. However, the increases in average wage are partially offset by assumed administrative productivity gains.

12. Railroad Retirement Financial Interchange

Railroad workers are covered under a separate multi-tiered benefit plan, with a first tier of coverage similar to OASDI coverage. An annual financial interchange between the Railroad Retirement fund and the OASI and DI Trust Funds is made to resolve the difference between: (1) the amount of OASDI benefits that would be paid to railroad workers and their families if railroad employment had been covered under the OASDI program, plus administrative expenses associated with these benefits; and (2) the amount of OASDI payroll tax and income tax that would be received with allowances for interest from railroad workers.

The Office of the Chief Actuary's projection of future amounts for the financial interchange with the Railroad Retirement fund reflects trends similar to those used in estimating the cost of OASDI benefits. The annual short-range net cost for the OASI and DI Trust Funds is about $6 to $7 billion and the long-range summarized net cost for the OASI and DI Trust Funds is 0.04 percent of taxable payroll.

VI. APPENDICES

A. HISTORY OF OASI AND DI TRUST FUND OPERATIONS

The Federal Old-Age and Survivors Insurance (OASI) Trust Fund was established on January 1, 1940 as a separate account in the United States Treasury. The Federal Disability Insurance (DI) Trust Fund, another separate account in the United States Treasury, was established on August 1, 1956. These funds conduct the financial operations of the OASI and DI programs. The Board of Trustees is responsible for overseeing the financial operations of these funds. The following paragraphs describe the various components of trust fund income and cost. Following this description, tables VI.A1 and VI.A2 present the historical operations of the separate trust funds since their inception, and table VI.A3 presents the operations of the hypothetical combined trust funds[1] during the period when they have co-existed.

The primary income of these two funds comes from appropriations under permanent authority on the basis of payroll tax contributions. Federal law requires that all employees who work in OASDI covered employment, and their employers, make payroll tax contributions on their wages up to a specified annual maximum amount (the contribution and benefit base). Employees and their employers must also make payroll tax contributions on monthly cash tips if such tips are at least $20. Self-employed persons must make payroll tax contributions on their covered net earnings from self-employment subject to the annual contribution and benefit base. The Federal Government pays amounts equivalent to the combined employer and employee contributions that would be paid on deemed wage credits attributable to military service performed between 1957 and 2001, if such wage credits were covered wages. Treasury initially deposits payroll tax contributions to the trust funds each day on an estimated basis. Subsequently, Treasury makes adjustments based on the certified amount of wages and self-employment earnings in the records of the Social Security Administration.

Income also includes net reimbursements from the General Fund of the Treasury, such as: (1) the cost of noncontributory wage credits for military service before 1957, and periodic adjustments to previous determinations of this cost; (2) the cost in 1971 through 1982 of deemed wage credits for military service performed after 1956; (3) the cost of benefits to certain uninsured persons who attained age 72 before 1968; (4) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984 through

[1] The OASI and DI Trust Funds are distinct legal entities which operate independently. To illustrate the actuarial status of the program as a whole, the fund operations are often combined on a hypothetical basis.

1989 by Public Law 98-21; (5) the cost in 2009 through 2017 of excluding certain self-employment earnings from SECA taxes under Public Law 110-246; and (6) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Income also includes transfers of a portion of the proceeds from loan repayments as authorized by Public Law 116-136.

Beginning in 1984, Federal law subjected up to 50 percent of an individual's or couple's OASDI benefits to Federal income taxation under certain circumstances. Effective for taxable years beginning after 1993, the law increased the maximum percentage from 50 percent to 85 percent. Treasury credits the proceeds from this taxation of up to 50 percent of benefits to the OASI and DI Trust Funds in advance, on an estimated basis, at the beginning of each calendar quarter, with no reimbursement to the General Fund for interest costs attributable to the advance transfers.[1] Treasury makes subsequent adjustments based on the actual amounts shown on annual income tax records. Each of the OASI and DI Trust Funds receives the income taxes paid on the benefits from that trust fund.[2]

Another source of income to the trust funds is interest received on investments held by the trust funds. On a daily basis, Treasury invests trust fund income in interest-bearing obligations of the U.S. Government. These investments include the special public-debt obligations described in the next paragraph. The Social Security Act also authorizes the trust funds to hold obligations guaranteed as to both principal and interest by the United States. The act therefore permits the trust funds to hold certain Federally sponsored agency obligations and marketable obligations.[3] The trust funds may acquire any of these obligations on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust funds. The act provides that the interest rate for special obligations newly issued in any month is the average market yield, as of the last business day of the prior month, on all of the outstanding marketable U.S. obligations that are due or callable more than 4 years in the future. This rate is rounded to the nearest one-eighth of one percent. Beginning January 1999, in calculating the average market yield

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[1] The HI Trust Fund receives the additional tax revenue resulting from the increase to 85 percent.

[2] A special provision applies to benefits paid to nonresident aliens. Effective for taxable years beginning after 1994, Public Law 103-465 subjects benefits to a flat-rate tax, usually 25.5 percent, before they are paid. Therefore, this tax remains in the trust funds. From 1984 to 1994, the flat-rate tax was usually 15 percent.

[3] The Social Security Act requires the trust funds to acquire special-issue obligations unless the Managing Trustee determines that the purchase of marketable obligations is in the public interest. The purchase of marketable obligations has been quite limited and has not occurred since 1980.

rate for this purpose, the Treasury incorporates the yield to the call date when a callable bond's market price is above par.

Although the Social Security Act does not authorize the purchase or sale of special issue securities in the open market, Treasury redeems special issue securities prior to maturity at par value when needed to meet current operating expenses. As a result, changes in market yield rates after issuance of special issue securities do not cause fluctuations in the value of these securities. As is true for marketable Treasury securities held by the public, the investments held by the trust funds are backed by the full faith and credit of the U.S. Government.

Annual cost for the OASI and DI Trust Funds primarily consists of: (1) OASDI benefit payments[1], net of any reimbursements from the General Fund of the Treasury for unnegotiated benefit checks; and (2) expenses incurred by the Social Security Administration and the Department of the Treasury in administering the OASDI program and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses include, among other items, the cost of (1) payroll; (2) construction, rental, lease, or purchase of office buildings and related facilities for the Social Security Administration; and (3) information technology systems. The Social Security Act prohibits payments from the OASI and DI Trust Funds for any purpose not related to the payment of benefits or administrative costs for the OASDI program.

Annual cost also includes: (1) the costs of vocational rehabilitation services furnished to disabled persons receiving cash benefits because of their disabilities, where such services contributed to their successful rehabilitation; and (2) net costs of the provisions of the Railroad Retirement Act that provide for a system of coordination and financial interchange between the Railroad Retirement program and the Social Security program. Under the financial interchange provisions, the Railroad Retirement program's Social Security Equivalent Benefit Account and the trust funds interchange amounts on an annual basis so that each trust fund is in the same position it would have been had railroad employment always been covered under Social Security.

The statements of the operations of the trust funds in this report do not include the net worth of facilities and other fixed capital assets, because the

[1] Periodically, benefit payments which were scheduled to be paid on January 3 were actually paid on December 31 of the preceding year as required by the statutory provision included in the 1977 Social Security Amendments for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. Such advance payments have occurred about every 7 years, first for benefits scheduled for January 3, 1982. The most recent such accelerated payment affected benefits scheduled to be paid on January 3, 2021. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year without regard to the accelerated payments described above.

value of fixed capital assets is not available in the form of a financial asset redeemable for the payment of benefits or administrative costs. As a result of this unavailability, the actuarial status of the trust funds does not take these assets into account.

Table VI.A1.— Operations of the OASI Trust Fund, Calendar Years 1937-2024
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
1937[g]	$0.8	$0.8	—	—	[h]	[h]	[h]	—	—	$0.8	$0.8	—
1938[g]	.4	.4	—	—	[h]	[h]	[h]	—	—	.4	1.1	7,660
1939[g]	.6	.6	—	—	[h]	[h]	[h]	—	—	.6	1.7	8,086
1940	.4	.3	—	—	[h]	$0.1	[h]	[h]	—	.3	2.0	2,781
1941	.8	.8	—	—	$0.1	.1	$0.1	[h]	—	.7	2.8	1,782
1942	1.1	1.0	—	—	.1	.2	.1	[h]	—	.9	3.7	1,737
1943	1.3	1.2	—	—	.1	.2	.2	[h]	—	1.1	4.8	1,891
1944	1.4	1.3	—	—	.1	.2	.2	[h]	—	1.2	6.0	2,025
1945	1.4	1.3	—	—	.1	.3	.3	[h]	—	1.1	7.1	1,975
1946	1.4	1.3	—	—	.2	.4	.4	[h]	—	1.0	8.1	1,704
1947	1.7	1.6	[h]	—	.2	.5	.5	[h]	—	1.2	9.4	1,592
1948	2.0	1.7	[h]	—	.3	.6	.6	$0.1	—	1.4	10.7	1,542
1949	1.8	1.7	[h]	—	.1	.7	.7	.1	—	1.1	11.8	1,487
1950	2.9	2.7	[h]	—	.3	1.0	1.0	.1	—	1.9	13.7	1,156
1951	3.8	3.4	[h]	—	.4	2.0	1.9	.1	—	1.8	15.5	698
1952	4.2	3.8	—	—	.4	2.3	2.2	.1	—	1.9	17.4	681
1953	4.4	3.9	—	—	.4	3.1	3.0	.1	—	1.3	18.7	564
1954	5.6	5.2	—	—	.4	3.7	3.7	.1	[h]	1.9	20.6	500
1955	6.2	5.7	—	—	.5	5.1	5.0	.1	[h]	1.1	21.7	405
1956	6.7	6.2	—	—	.5	5.8	5.7	.1	[h]	.9	22.5	371
1957	7.4	6.8	—	—	.6	7.5	7.3	.2	[h]	-.1	22.4	300
1958	8.1	7.6	—	—	.6	8.6	8.3	.2	$0.1	-.5	21.9	259
1959	8.6	8.1	—	—	.5	10.3	9.8	.2	.3	-1.7	20.1	212
1960	11.4	10.9	—	—	.5	11.2	10.7	.2	.3	.2	20.3	180
1961	11.8	11.3	—	—	.5	12.4	11.9	.2	.3	-.6	19.7	163
1962	12.6	12.1	—	—	.5	14.0	13.4	.3	.4	-1.4	18.3	141
1963	15.1	14.5	—	—	.5	14.9	14.2	.3	.4	.1	18.5	123
1964	16.3	15.7	—	—	.6	15.6	14.9	.3	.4	.6	19.1	118
1965	16.6	16.0	—	—	.6	17.5	16.7	.3	.4	-.9	18.2	109
1966	21.3	20.6	$0.1	—	.6	19.0	18.3	.3	.4	2.3	20.6	96
1967	24.0	23.1	.1	—	.8	20.4	19.5	.4	.5	3.7	24.2	101
1968	25.0	23.7	.4	—	.9	23.6	22.6	.5	.4	1.5	25.7	103
1969	29.6	27.9	.4	—	1.2	25.2	24.2	.5	.5	4.4	30.1	102
1970	32.2	30.3	.4	—	1.5	29.8	28.8	.5	.6	2.4	32.5	101
1971	35.9	33.7	.5	—	1.7	34.5	33.4	.5	.6	1.3	33.8	94
1972	40.1	37.8	.5	—	1.8	38.5	37.1	.7	.7	1.5	35.3	88
1973	48.3	46.0	.4	—	1.9	47.2	45.7	.6	.8	1.2	36.5	75
1974	54.7	52.1	.4	—	2.2	53.4	51.6	.9	.9	1.3	37.8	68
1975	59.6	56.8	.4	—	2.4	60.4	58.5	.9	1.0	-.8	37.0	63
1976	66.3	63.4	.6	—	2.3	67.9	65.7	1.0	1.2	-1.6	35.4	54
1977	72.4	69.6	.6	—	2.2	75.3	73.1	1.0	1.2	-2.9	32.5	47
1978	78.1	75.5	.6	—	2.0	83.1	80.4	1.1	1.6	-5.0	27.5	39
1979	90.3	87.9	.6	—	1.8	93.1	90.6	1.1	1.4	-2.9	24.7	30
1980	105.8	103.5	.5	—	1.8	107.7	105.1	1.2	1.4	-1.8	22.8	23
1981	125.4	122.6	.7	—	2.1	126.7	123.8	1.3	1.6	-1.3	21.5	18
1982	125.2	123.7	.7	—	.8	142.1	138.8	1.5	1.8	[i] .6	22.1	15
1983	150.6	138.3	5.5	—	6.7	153.0	149.2	1.5	2.3	-2.4	19.7	14
1984	169.3	159.5	4.7	$2.8	2.3	161.9	157.8	1.6	2.4	7.4	27.1	[j] 20
1985	184.2	175.1	4.0	3.2	1.9	171.2	167.2	1.6	2.3	[i] 8.7	35.8	[j] 24
1986	197.4	189.1	1.8	3.4	3.1	181.0	176.8	1.6	2.6	[i] 3.2	39.1	[j] 28
1987	210.7	201.1	1.7	3.3	4.7	187.7	183.6	1.5	2.6	23.1	62.1	[j] 30
1988	240.8	227.7	2.1	3.4	7.6	200.0	195.5	1.8	2.8	40.7	102.9	[j] 41
1989	264.7	248.1	2.1	2.4	12.0	212.5	208.0	1.7	2.8	52.2	155.1	[j] 59

Table VI.A1.— Operations of the OASI Trust Fund, Calendar Years 1937-2024 (Cont.)
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
1990 . .	$286.7	$266.1	-$0.7	$4.8	$16.4	$227.5	$223.0	$1.6	$3.0	$59.1	$214.2	[j]78
1991 . .	299.3	272.5	.1	5.9	20.8	245.6	240.5	1.8	3.4	53.7	267.8	87
1992 . .	311.2	281.1	-.1	5.9	24.3	259.9	254.9	1.8	3.1	51.3	319.1	103
1993 . .	323.3	290.9	[h]	5.3	27.0	273.1	267.8	2.0	3.4	50.2	369.3	117
1994 . .	328.3	293.3	[h]	5.0	29.9	284.1	279.1	1.6	3.4	44.1	413.5	130
1995 . .	342.8	304.7	-.2	5.5	32.8	297.8	291.6	2.1	4.1	45.0	458.5	139
1996 . .	363.7	321.6	[h]	6.5	35.7	308.2	302.9	1.8	3.6	55.5	514.0	149
1997 . .	397.2	349.9	[h]	7.4	39.8	322.1	316.3	2.1	3.7	75.1	589.1	160
1998 . .	424.8	371.2	[h]	9.1	44.5	332.3	326.8	1.9	3.7	92.5	681.6	177
1999 . .	457.0	396.4	[h]	10.9	49.8	339.9	334.4	1.8	3.7	117.2	798.8	201
2000 . .	490.5	421.4	[h]	11.6	57.5	358.3	352.7	2.1	3.5	132.2	931.0	223
2001 . .	518.1	441.5	[h]	11.9	64.7	377.5	372.3	2.0	3.3	140.6	1,071.5	247
2002 . .	539.7	455.2	.4	12.9	71.2	393.7	388.1	2.1	3.5	146.0	1,217.5	272
2003 . .	543.8	456.1	[h]	12.5	75.2	406.0	399.8	2.6	3.6	137.8	1,355.3	300
2004 . .	566.3	472.8	[h]	14.6	79.0	421.0	415.0	2.4	3.6	145.3	1,500.6	322
2005 . .	604.3	506.9	-.3	13.8	84.0	441.9	435.4	3.0	3.6	162.4	1,663.0	340
2006 . .	642.2	534.8	[h]	15.6	91.8	461.0	454.5	3.0	3.5	181.3	1,844.3	361
2007 . .	675.0	560.9	[h]	17.2	97.0	495.7	489.1	3.1	3.6	179.3	2,023.6	372
2008 . .	695.5	574.6	[h]	15.6	105.3	516.2	509.3	3.2	3.6	179.3	2,202.9	392
2009 . .	698.2	570.4	[h]	19.9	107.9	564.3	557.2	3.4	3.7	133.9	2,336.8	390
2010 . .	677.1	544.8	2.0	22.1	108.2	584.9	577.4	3.5	3.9	92.2	2,429.0	400
2011 . .	698.8	482.4	87.8	22.2	106.5	603.8	596.2	3.5	4.1	95.0	2,524.1	402
2012 . .	731.1	503.9	97.7	26.7	102.8	645.5	637.9	3.4	4.1	85.6	2,609.7	391
2013 . .	743.8	620.8	4.2	20.7	98.1	679.5	672.1	3.4	3.9	64.3	2,674.0	384
2014 . .	769.4	646.2	.4	28.0	94.8	714.2	706.8	3.1	4.3	55.2	2,729.2	374
2015 . .	801.6	679.5	.3	30.6	91.2	750.5	742.9	3.4	4.3	51.0	2,780.3	364
2016 . .	797.5	678.8	.1	31.6	87.0	776.4	768.6	3.5	4.3	21.1	2,801.3	358
2017 . .	825.6	706.5	[h]	35.9	83.2	806.7	798.7	3.7	4.3	19.0	2,820.3	347
2018 . .	831.0	715.9	[h]	34.5	80.7	853.5	844.9	3.8	4.8	-22.4	2,797.9	330
2019 . .	917.9	805.1	[h]	34.9	77.9	911.4	902.8	3.7	4.9	6.5	2,804.3	307

Table VI.A1.— Operations of the OASI Trust Fund, Calendar Years 1937-2024 (Cont.)
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
2020 . .	$968.3	$856.0	[h]	$39.0	$73.3	$961.0	$952.4	$3.7	$4.8	$7.4	$2,811.7	292
2021 . .	942.9	838.2	[h]	37.2	67.5	1,001.9	993.1	4.0	4.8	-59.1	2,752.6	281
2022 . .	1,056.7	945.9	$0.2	47.1	63.5	1,097.5	1,088.1	4.0	5.3	-40.7	2,711.9	251
2023 . .	1,166.9	1,054.1	[h]	49.8	63.0	1,237.3	1,227.4	4.4	5.6	-70.4	2,641.5	219
2024 . .	1,224.0	1,105.6	.2	54.4	63.7	1,327.2	1,316.4	4.9	5.9	-103.2	2,538.3	199

[a] Beginning in 1979, benefit payments scheduled to be paid on January 3 of a given year were paid on December 31 of the preceding year as required by the statutory provision included in the 1977 Social Security Amendments for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. Such advance payments have occurred about every 7 years, first for benefits scheduled for January 3, 1982. For comparability with other historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment in each year without regard to the accelerated payments described above.

[b] Represents reserves at the beginning of a year as a percentage of cost during the year. The table shows no ratio for 1937 because no reserves existed at the beginning of the year.

[c] Includes adjustments for prior calendar years.

[d] Includes net reimbursements from the General Fund of the Treasury to the OASI Trust Fund for: (1) the cost of noncontributory wage credits for military service before 1957; (2) the cost in 1971-82 of deemed wage credits for military service performed after 1956; (3) the cost of benefits to certain uninsured persons who attained age 72 before 1968; (4) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; (5) the cost in 2009-17 of excluding certain self-employment earnings from SECA taxes under Public Law 110-246; and (6) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Also includes transfers of a portion of proceeds from loan repayments as authorized under Public Law 116-136.

[e] Net interest includes net profits or losses on marketable investments. Beginning in 1967, the trust fund pays administrative expenses on an estimated basis, with a final adjustment including interest made in the following fiscal year. Net interest includes the amounts of these interest adjustments. The 1970 report describes the accounting for administrative expenses for years prior to 1967. Beginning in October 1973, figures include relatively small amounts of gifts to the fund. Net interest for 1983-86 reflects payments for interest on amounts owed under the interfund borrowing provisions. During 1983-90, net interest reflects interest reimbursements paid from the trust fund to the General Fund on advance tax transfers.

[f] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, net benefit amounts include reimbursements paid from the General Fund to the trust fund for unnegotiated benefit checks. Excluding the portion attributable to vocational rehabilitation services and unnegotiated benefit checks, amounts are the same as benefits scheduled under law at that time for all historical years.

[g] Operations prior to 1940 are for the Old-Age Reserve Account established by the original Social Security Act. The 1939 Amendments transferred the reserves of the Account to the OASI Trust Fund effective January 1, 1940.

[h] Between -$50 million and $50 million.

[i] Reflects interfund borrowing of $17.5 billion by the OASI Trust Fund from the DI and HI Trust Funds in 1982 and the subsequent repayment of those loans in 1985 ($4.4 billion) and 1986 ($13.2 billion).

[j] Reserves used for the trust fund ratio calculation include January advance tax transfers.

Note: Components may not sum to totals because of rounding.

Table VI.A2.— Operations of the DI Trust Fund, Calendar Years 1957-2024
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
1957 . .	$0.7	$0.7	—	—	[g]	$0.1	$0.1	[g]	—	$0.6	$0.6	—
1958 . .	1.0	1.0	—	—	[g]	.3	.2	[g]	—	.7	1.4	249
1959 . .	.9	.9	—	—	[g]	.5	.5	[g]	[g]	.4	1.8	284
1960 . .	1.1	1.0	—	—	$0.1	.6	.6	[g]	[g]	.5	2.3	304
1961 . .	1.1	1.0	—	—	.1	1.0	.9	$0.1	[g]	.1	2.4	239
1962 . .	1.1	1.0	—	—	.1	1.2	1.1	.1	[g]	-.1	2.4	206
1963 . .	1.2	1.1	—	—	.1	1.3	1.2	.1	[g]	-.1	2.2	183
1964 . .	1.2	1.2	—	—	.1	1.4	1.3	.1	[g]	-.2	2.0	159
1965 . .	1.2	1.2	—	—	.1	1.7	1.6	.1	[g]	-.4	1.6	121
1966 . .	2.1	2.0	[g]	—	.1	1.9	1.8	.1	[g]	.1	1.7	82
1967 . .	2.4	2.3	[g]	—	.1	2.1	1.9	.1	[g]	.3	2.0	83
1968 . .	3.5	3.3	[g]	—	.1	2.5	2.3	.1	[g]	1.0	3.0	83
1969 . .	3.8	3.6	[g]	—	.2	2.7	2.6	.1	[g]	1.1	4.1	111
1970 . .	4.8	4.5	[g]	—	.3	3.3	3.1	.2	[g]	1.5	5.6	126
1971 . .	5.0	4.6	$0.1	—	.4	4.0	3.8	.2	[g]	1.0	6.6	140
1972 . .	5.6	5.1	.1	—	.4	4.8	4.5	.2	[g]	.8	7.5	140
1973 . .	6.4	5.9	.1	—	.5	6.0	5.8	.2	[g]	.5	7.9	125
1974 . .	7.4	6.8	.1	—	.5	7.2	7.0	.2	[g]	.2	8.1	110
1975 . .	8.0	7.4	.1	—	.5	8.8	8.5	.3	[g]	-.8	7.4	92
1976 . .	8.8	8.2	.1	—	.4	10.4	10.1	.3	[g]	-1.6	5.7	71
1977 . .	9.6	9.1	.1	—	.3	11.9	11.5	.4	[g]	-2.4	3.4	48
1978 . .	13.8	13.4	.1	—	.3	13.0	12.6	.3	[g]	.9	4.2	26
1979 . .	15.6	15.1	.1	—	.4	14.2	13.8	.4	[g]	1.4	5.6	30
1980 . .	13.9	13.3	.1	—	.5	15.9	15.5	.4	[g]	-2.0	3.6	35
1981 . .	17.1	16.7	.2	—	.2	17.7	17.2	.4	[g]	-.6	3.0	21
1982 . .	22.7	22.0	.2	—	.5	18.0	17.4	.6	[g]	[h] -.4	2.7	17
1983 . .	20.7	18.0	1.1	—	1.6	18.2	17.5	.6	[g]	2.5	5.2	15
1984 . .	17.3	15.5	.4	$0.2	1.2	18.5	17.9	.6	[g]	-1.2	4.0	[i]35
1985 . .	19.3	17.0	1.2	.2	.9	19.5	18.8	.6	[g]	[h]2.4	6.3	[i]27
1986 . .	19.4	18.2	.2	.2	.8	20.5	19.9	.6	$0.1	[h]1.5	7.8	[i]38
1987 . .	20.3	19.5	.2	[g]	.6	21.4	20.5	.8	.1	-1.1	6.7	[i]44
1988 . .	22.7	21.8	.2	.1	.6	22.5	21.7	.7	.1	.2	6.9	[i]38
1989 . .	24.8	23.8	.2	.1	.7	23.8	22.9	.8	.1	1.0	7.9	[i]38
1990 . .	28.8	28.4	-.6	.1	.9	25.6	24.8	.7	.1	3.2	11.1	[i]40
1991 . .	30.4	29.1	[g]	.2	1.1	28.6	27.7	.8	.1	1.8	12.9	39
1992 . .	31.4	30.1	[g]	.2	1.1	32.0	31.1	.8	.1	-.6	12.3	40
1993 . .	32.3	31.2	[g]	.3	.8	35.7	34.6	1.0	.1	-3.4	9.0	35
1994 . .	52.8	51.4	[g]	.3	1.2	38.9	37.7	1.0	.1	14.0	22.9	23
1995 . .	56.7	54.4	-.2	.3	2.2	42.1	40.9	1.1	.1	14.6	37.6	55
1996 . .	60.7	57.3	[g]	.4	3.0	45.4	44.2	1.2	[g]	15.4	52.9	83
1997 . .	60.5	56.0	[g]	.5	4.0	47.0	45.7	1.3	.1	13.5	66.4	113
1998 . .	64.4	59.0	[g]	.6	4.8	49.9	48.2	1.6	.2	14.4	80.8	133
1999 . .	69.5	63.2	[g]	.7	5.7	53.0	51.4	1.5	.1	16.5	97.3	152
2000 . .	77.9	71.1	-.8	.7	6.9	56.8	55.0	1.6	.2	21.1	118.5	171
2001 . .	83.9	74.9	[g]	.8	8.2	61.4	59.6	1.7	[g]	22.5	141.0	193
2002 . .	87.4	77.3	[g]	.9	9.2	67.9	65.7	2.0	.2	19.5	160.5	208
2003 . .	88.1	77.4	[g]	.9	9.7	73.1	70.9	2.0	.2	15.0	175.4	219
2004 . .	91.4	80.3	[g]	1.1	10.0	80.6	78.2	2.2	.2	10.8	186.2	218
2005 . .	97.4	86.1	[g]	1.1	10.3	88.0	85.4	2.3	.3	9.4	195.6	212
2006 . .	102.6	90.8	[g]	1.2	10.6	94.5	91.7	2.3	.4	8.2	203.8	207
2007 . .	109.9	95.2	[g]	1.4	13.2	98.8	95.9	2.5	.4	11.1	214.9	206
2008 . .	109.8	97.6	[g]	1.3	11.0	109.0	106.0	2.5	.4	.9	215.8	197
2009 . .	109.3	96.9	[g]	2.0	10.5	121.5	118.3	2.7	.4	-12.2	203.5	178

Table VI.A2.— Operations of the DI Trust Fund, Calendar Years 1957-2024 (Cont.)
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
2010 . .	$104.0	$92.5	$0.4	$1.9	$9.3	$127.7	$124.2	$3.0	$0.5	-$23.6	$179.9	159
2011 . .	106.3	81.9	14.9	1.6	7.9	132.3	128.9	2.9	.5	-26.1	153.9	136
2012 . .	109.1	85.6	16.5	.6	6.4	140.3	136.9	2.9	.5	-31.2	122.7	110
2013 . .	111.2	105.4	.7	.4	4.7	143.4	140.1	2.8	.6	-32.2	90.4	86
2014 . .	114.9	109.7	.1	1.7	3.4	145.1	141.7	2.9	.4	-30.2	60.2	62
2015 . .	118.6	115.4	g	1.1	2.1	146.6	143.4	2.8	.4	-28.0	32.3	41
2016 . .	160.0	157.4	g	1.2	1.4	145.9	142.8	2.8	.4	14.1	46.3	22
2017 . .	171.0	167.1	g	2.0	1.9	145.8	142.8	2.8	.2	25.1	71.5	32
2018 . .	172.3	169.2	g	.5	2.6	146.8	143.7	2.9	.2	25.6	97.1	49
2019 . .	143.9	139.4	g	1.6	2.9	147.9	145.1	2.7	.1	-4.0	93.1	66
2020 . .	149.7	145.3	g	1.7	2.8	146.3	143.6	2.6	.1	3.5	96.6	64
2021 . .	145.5	142.4	g	.5	2.6	142.6	140.1	2.5	.1	2.8	99.4	68
2022 . .	165.1	160.7	g	1.6	2.8	146.5	143.6	2.7	.2	18.6	118.0	68
2023 . .	183.8	179.0	g	.9	3.8	154.8	151.9	2.8	.1	29.0	147.0	76
2024 . .	193.8	187.7	g	.7	5.4	157.6	155.0	2.5	.1	36.2	183.2	93

[a] Beginning in 1979, benefit payments scheduled to be paid on January 3 of a given year were paid on December 31 of the preceding year as required by the statutory provision included in the 1977 Social Security Amendments for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. Such advance payments have occurred about every 7 years, first for benefits scheduled for January 3, 1982. For comparability with other historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment in each year without regard to the accelerated payments described above.

[b] Represents reserves at the beginning of a year as a percentage of cost during the year. The table shows no ratio for 1957 because no reserves existed at the beginning of the year.

[c] Includes adjustments for prior calendar years.

[d] Includes net reimbursements from the General Fund of the Treasury to the DI Trust Fund for: (1) the cost of noncontributory wage credits for military service before 1957; (2) the cost in 1971-82 of deemed wage credits for military service performed after 1956; (3) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; (4) the cost in 2009-17 of excluding certain self-employment earnings from SECA taxes under Public Law 110-246; and (5) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96.

[e] Net interest includes net profits or losses on marketable investments. Beginning in 1967, the trust fund pays administrative expenses on an estimated basis, with a final adjustment including interest made in the following fiscal year. Net interest includes the amounts of these interest adjustments. The 1970 report describes the accounting for administrative expenses for years prior to 1967. Beginning in July 1974, figures include relatively small amounts of gifts to the fund. Net interest for 1983-86 reflects payments for interest on amounts owed under the interfund borrowing provisions. During 1983-90, net interest reflects interest reimbursements paid from the trust fund to the General Fund on advance tax transfers.

[f] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, net benefit amounts include reimbursements paid from the General Fund to the trust fund for unnegotiated benefit checks. Excluding the portion attributable to vocational rehabilitation services and unnegotiated benefit checks, amounts are the same as benefits scheduled under law at that time for all historical years.

[g] Between -$50 million and $50 million.

[h] Reflects interfund borrowing by the OASI Trust Fund from the DI Trust Fund in 1982 of $5.1 billion and the subsequent repayment of that loan in 1985 ($2.5 billion) and 1986 ($2.5 billion).

[i] Reserves used for the trust fund ratio calculation include January advance tax transfers.

Note: Components may not sum to totals because of rounding.

Table VI.A3.— Operations of the Combined OASI and DI Trust Funds, Calendar Years 1957-2024
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
1957 . . .	$8.1	$7.5	—	—	$0.6	$7.6	$7.4	$0.2	[g]	$0.5	$23.0	298
1958	9.1	8.5	—	—	.6	8.9	8.6	.2	$0.1	.2	23.2	259
1959 . . .	9.5	8.9	—	—	.6	10.8	10.3	.2	.3	-1.3	22.0	215
1960 . . .	12.4	11.9	—	—	.6	11.8	11.2	.2	.3	.6	22.6	186
1961 . . .	12.9	12.3	—	—	.6	13.4	12.7	.3	.3	-.5	22.2	169
1962 . . .	13.7	13.1	—	—	.6	15.2	14.5	.3	.4	-1.5	20.7	146
1963 . . .	16.2	15.6	—	—	.6	16.2	15.4	.3	.4	[g]	20.7	128
1964 . . .	17.5	16.8	—	—	.6	17.0	16.2	.4	.4	.5	21.2	122
1965 . . .	17.9	17.2	—	—	.7	19.2	18.3	.4	.5	-1.3	19.8	110
1966 . . .	23.4	22.6	$0.1	—	.7	20.9	20.1	.4	.5	2.5	22.3	95
1967 . . .	26.4	25.4	.1	—	.9	22.5	21.4	.5	.5	3.9	26.3	99
1968 . . .	28.5	27.0	.4	—	1.0	26.0	25.0	.6	.5	2.5	28.7	101
1969 . . .	33.3	31.5	.5	—	1.3	27.9	26.8	.6	.5	5.5	34.2	103
1970 . . .	37.0	34.7	.5	—	1.8	33.1	31.9	.6	.6	3.9	38.1	103
1971 . . .	40.9	38.3	.5	—	2.0	38.5	37.2	.7	.6	2.4	40.4	99
1972 . . .	45.6	42.9	.5	—	2.2	43.3	41.6	.9	.7	2.3	42.8	93
1973 . . .	54.8	51.9	.5	—	2.4	53.1	51.5	.8	.8	1.6	44.4	80
1974 . . .	62.1	58.9	.5	—	2.7	60.6	58.6	1.1	.9	1.5	45.9	73
1975 . . .	67.6	64.3	.5	—	2.9	69.2	67.0	1.2	1.0	-1.5	44.3	66
1976 . . .	75.0	71.6	.7	—	2.7	78.2	75.8	1.2	1.2	-3.2	41.1	57
1977 . . .	82.0	78.7	.7	—	2.5	87.3	84.7	1.4	1.2	-5.3	35.9	47
1978 . . .	91.9	88.9	.8	—	2.3	96.0	93.0	1.4	1.6	-4.1	31.7	37
1979 . . .	105.9	103.0	.7	—	2.2	107.3	104.4	1.5	1.5	-1.5	30.3	30
1980 . . .	119.7	116.7	.7	—	2.3	123.5	120.6	1.5	1.4	-3.8	26.5	25
1981 . . .	142.4	139.4	.8	—	2.2	144.4	141.0	1.7	1.6	-1.9	24.5	18
1982 . . .	147.9	145.7	.9	—	1.4	160.1	156.2	2.1	1.8	[h] .2	24.8	15
1983 . . .	171.3	156.3	6.7	—	8.3	171.2	166.7	2.2	2.3	.1	24.9	14
1984 . . .	186.6	175.0	5.2	$3.0	3.4	180.4	175.7	2.3	2.4	6.2	31.1	[i]21
1985 . . .	203.5	192.1	5.2	3.4	2.7	190.6	186.1	2.2	2.4	[h]11.1	42.2	[i]24
1986 . . .	216.8	207.4	1.9	3.7	3.9	201.5	196.7	2.2	2.7	[h] 4.7	46.9	[i]29
1987 . . .	231.0	220.6	1.9	3.2	5.3	209.1	204.1	2.4	2.6	21.9	68.8	[i]31
1988 . . .	263.5	249.5	2.3	3.4	8.2	222.5	217.1	2.5	2.9	41.0	109.8	[i]41
1989 . . .	289.4	271.9	2.3	2.5	12.7	236.2	230.9	2.4	2.9	53.2	163.0	[i]57
1990 . . .	315.4	294.5	-1.3	5.0	17.2	253.1	247.8	2.3	3.0	62.3	225.3	[i]75
1991 . . .	329.7	301.6	.1	6.1	21.9	274.2	268.2	2.6	3.5	55.5	280.7	82
1992 . . .	342.6	311.3	-.1	6.1	25.4	291.9	286.0	2.7	3.2	50.7	331.5	96
1993 . . .	355.6	322.0	.1	5.6	27.9	308.8	302.4	3.0	3.4	46.8	378.3	107
1994 . . .	381.1	344.7	[g]	5.3	31.1	323.0	316.8	2.7	3.5	58.1	436.4	117
1995 . . .	399.5	359.1	-.4	5.8	35.0	339.8	332.6	3.1	4.1	59.7	496.1	128
1996 . . .	424.5	378.9	[g]	6.8	38.7	353.6	347.0	3.0	3.6	70.9	567.0	140
1997 . . .	457.7	406.0	[g]	7.9	43.8	369.1	362.0	3.4	3.7	88.6	655.5	154
1998 . . .	489.2	430.2	[g]	9.7	49.3	382.3	375.0	3.5	3.8	106.9	762.5	171
1999 . . .	526.6	459.6	[g]	11.6	55.5	392.9	385.8	3.3	3.8	133.7	896.1	194
2000 . . .	568.4	492.5	-.8	12.3	64.5	415.1	407.6	3.8	3.7	153.3	1,049.4	216
2001 . . .	602.0	516.4	[g]	12.7	72.9	438.9	431.9	3.7	3.3	163.1	1,212.5	239
2002 . . .	627.1	532.5	.4	13.8	80.4	461.7	453.8	4.2	3.6	165.4	1,378.0	263
2003 . . .	631.9	533.5	[g]	13.4	84.9	479.1	470.8	4.6	3.7	152.8	1,530.8	288
2004 . . .	657.7	553.0	[g]	15.7	89.0	501.6	493.3	4.5	3.8	156.1	1,686.8	305
2005 . . .	701.8	592.9	-.3	14.9	94.3	529.9	520.7	5.3	3.9	171.8	1,858.7	318
2006 . . .	744.9	625.6	[g]	16.9	102.4	555.4	546.2	5.3	3.8	189.5	2,048.1	335
2007 . . .	784.9	656.1	[g]	18.6	110.2	594.5	584.9	5.5	4.0	190.4	2,238.5	345
2008 . . .	805.3	672.1	[g]	16.9	116.3	625.1	615.3	5.7	4.0	180.2	2,418.7	358
2009 . . .	807.5	667.3	[g]	21.9	118.3	685.8	675.5	6.2	4.1	121.7	2,540.3	353

Table VI.A3.— Operations of the Combined OASI and DI Trust Funds, Calendar Years 1957-2024 (Cont.)
[Dollar amounts in billions]

Calendar year	Income					Cost				Reserves[a]		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c]	Net interest[e]	Total[a]	Benefit payments[a f]	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
2010 . .	$781.1	$637.3	$2.4	$23.9	$117.5	$712.5	$701.6	$6.5	$4.4	$68.6	$2,609.0	357
2011 . .	805.1	564.2	102.7	23.8	114.4	736.1	725.1	6.4	4.6	69.0	2,677.9	354
2012 . .	840.2	589.5	114.3	27.3	109.1	785.8	774.8	6.3	4.7	54.4	2,732.3	341
2013 . .	855.0	726.2	4.9	21.1	102.8	822.9	812.3	6.2	4.5	32.1	2,764.4	332
2014 . .	884.3	756.0	.5	29.6	98.2	859.2	848.5	6.1	4.7	25.0	2,789.5	322
2015 . .	920.2	794.9	.3	31.6	93.3	897.1	886.3	6.2	4.7	23.0	2,812.5	311
2016 . .	957.5	836.2	.1	32.8	88.4	922.3	911.4	6.2	4.7	35.2	2,847.7	305
2017 . .	996.6	873.6	[g]	37.9	85.1	952.5	941.5	6.5	4.5	44.1	2,891.8	299
2018 . .	1,003.4	885.1	[g]	35.0	83.3	1,000.2	988.6	6.7	4.9	3.1	2,894.9	289
2019 . .	1,061.8	944.5	[g]	36.5	80.8	1,059.3	1,047.9	6.4	4.9	2.5	2,897.4	273
2020 . .	1,118.1	1,001.3	[g]	40.7	76.1	1,107.2	1,095.9	6.3	5.0	10.9	2,908.3	262
2021 . .	1,088.3	980.6	[g]	37.6	70.1	1,144.6	1,133.2	6.5	4.9	-56.3	2,852.0	254
2022 . .	1,221.8	1,106.6	.2	48.6	66.4	1,243.9	1,231.7	6.7	5.5	-22.1	2,829.9	229
2023 . .	1,350.7	1,233.1	[g]	50.7	66.9	1,392.1	1,379.3	7.2	5.6	-41.4	2,788.5	203
2024 . .	1,417.8	1,293.3	.2	55.1	69.1	1,484.8	1,471.4	7.4	5.9	-67.0	2,721.5	188

[a] Beginning in 1979, benefit payments scheduled to be paid on January 3 of a given year were paid on December 31 of the preceding year as required by the statutory provision included in the 1977 Social Security Amendments for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. Such advance payments have occurred about every 7 years, first for benefits scheduled for January 3, 1982. For comparability with other historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment in each year without regard to the accelerated payments described above.

[b] Represents reserves at the beginning of a year as a percentage of cost during the year.

[c] Includes adjustments for prior calendar years.

[d] Includes net reimbursements from the General Fund of the Treasury to the OASI and DI Trust Funds for: (1) the cost of noncontributory wage credits for military service before 1957; (2) the cost in 1971-82 of deemed wage credits for military service performed after 1956; (3) the cost of benefits to certain uninsured persons who attained age 72 before 1968; (4) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; (5) the cost in 2009-17 of excluding certain self-employment earnings from SECA taxes under Public Law 110-246; and (6) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Also includes transfers of a portion of proceeds from loan repayments as authorized under Public Law 116-136.

[e] Net interest includes net profits or losses on marketable investments. Beginning in 1967, the trust funds pay administrative expenses on an estimated basis, with a final adjustment including interest made in the following fiscal year. Net interest includes the amounts of these interest adjustments. The 1970 report describes the accounting for administrative expenses for years prior to 1967. Beginning in October 1973, figures include relatively small amounts of gifts to the funds. Net interest for 1983-86 reflects payments for interest on amounts owed under the interfund borrowing provisions. During 1983-90, net interest reflects interest reimbursements paid from the trust funds to the General Fund on advance tax transfers.

[f] Beginning in 1966, includes payments for vocational rehabilitation services furnished to disabled persons receiving benefits because of their disabilities. Beginning in 1983, net benefit amounts include reimbursements paid from the General Fund to the trust funds for unnegotiated benefit checks. Excluding the portion attributable to vocational rehabilitation services and unnegotiated benefit checks, amounts are the same as benefits scheduled under law at that time for all historical years.

[g] Between -$50 million and $50 million.

[h] Reflects interfund borrowing by the OASI Trust Fund from the HI Trust Fund in 1982 of $12.4 billion and the subsequent repayment of that loan in 1985 ($1.8 billion) and 1986 ($10.6 billion).

[i] Reserves used for the trust fund ratio calculation include January advance tax transfers.

Note: Components may not sum to totals because of rounding.

Tables VI.A4 and VI.A5 show the total reserves of the OASI Trust Fund and the DI Trust Fund, respectively, at the end of calendar years 2023 and 2024. The tables show the invested reserves by interest rate and year of maturity. Bonds issued to the trust funds in 2024 had an interest rate of 4.625 percent, compared with an interest rate of 3.875 percent for bonds issued in 2023.

Table VI.A4.—OASI Trust Fund Reserves, End of Calendar Years 2023 and 2024
[In thousands]

	December 31, 2023	December 31, 2024
Obligations sold only to the trust funds (special issue securities):		
Certificates of indebtedness:		
4.250 percent, 2025	—	$47,567,402
4.375 percent, 2025	—	11,878,570
4.500 percent, 2024	$36,573,136	—
4.500 percent, 2025	—	93,606,618
4.750 percent, 2024	56,753,861	—
5.000 percent, 2024	76,550,727	—
Bonds:		
0.750 percent, 2025	14,931,408	—
0.750 percent, 2026-33	119,451,256	119,451,256
1.375 percent, 2025	6,693,020	—
1.375 percent, 2026	6,693,019	6,693,019
1.375 percent, 2027	173,240,401	173,240,401
1.500 percent, 2025	12,696,179	—
1.500 percent, 2026-32	88,873,260	88,873,260
1.500 percent, 2033	12,696,179	12,696,179
1.750 percent, 2025	4,908,185	—
1.750 percent, 2026-27	9,816,372	9,816,372
1.750 percent, 2028	178,148,587	178,148,587
1.875 percent, 2025	2,320,956	—
1.875 percent, 2026-27	4,641,912	4,641,912
1.875 percent, 2028-30	6,962,865	6,962,865
1.875 percent, 2031	188,111,583	188,111,583
2.000 percent, 2025	3,655,628	—
2.000 percent, 2026-29	14,622,516	14,622,516
2.000 percent, 2030	185,790,628	185,790,628
2.250 percent, 2025	5,582,927	—
2.250 percent, 2026-27	11,165,852	11,165,852
2.250 percent, 2028	5,582,927	5,582,927
2.250 percent, 2029	183,731,514	183,731,514
2.250 percent, 2030-31	3,193,030	3,193,030
2.250 percent, 2032	189,708,097	189,708,097
2.250 percent, 2033	12,818,538	12,818,538
2.250 percent, 2034	177,899,339	177,899,339
2.500 percent, 2025	5,971,787	—
2.500 percent, 2026	166,547,382	166,547,382
2.875 percent, 2025	160,575,595	—
2.875 percent, 2032	1	1
2.875 percent, 2033	176,889,560	176,889,560
3.000 percent, 2025	17,266,433	—
3.000 percent, 2026-28	51,799,299	51,799,299
3.000 percent, 2029-32	69,065,728	69,065,728
3.000 percent, 2033	17,266,433	17,266,433
3.875 percent, 2025	22,773,972	—
3.875 percent, 2026-28	68,321,913	68,321,913
3.875 percent, 2029-32	91,095,888	91,095,888
4.625 percent, 2025	—	16,470,786
4.625 percent, 2026-29	—	65,883,148
4.625 percent, 2030-32	—	49,412,358
4.625 percent, 2033	—	39,244,758
Total investments	2,641,387,893	2,538,197,719
Undisbursed balances[a]	102,173	87,170
Total reserves	2,641,490,066	2,538,284,889

[a] A positive balance represents a situation where the invested securities of the OASI Trust Fund that were redeemed to make cash payments exceeded actual program cash payments; in this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Amounts of special issue securities are at par value. The trust fund purchases and redeems special issue securities at par value. The table groups equal amounts that mature in two or more years at a given interest rate.

Table VI.A5.—DI Trust Fund Reserves, End of Calendar Years 2023 and 2024
[In thousands]

	December 31, 2023	December 31, 2024
Obligations sold only to the trust funds (special issue securities):		
Certificates of indebtedness:		
4.250 percent, 2025	—	$10,394,774
4.375 percent, 2025	—	5,310,101
4.500 percent, 2024	$10,742,256	—
4.500 percent, 2025	—	3,307,699
5.000 percent, 2024	4,877,644	—
Bonds:		
0.750 percent, 2025	479,473	—
0.750 percent, 2026	479,473	479,473
0.750 percent, 2027-29	1,438,422	1,438,422
0.750 percent, 2030-34	2,397,365	2,397,365
0.750 percent, 2035	5,348,270	5,348,270
1.500 percent, 2025	140,878	—
1.500 percent, 2026-29	563,512	563,512
1.500 percent, 2030-35	845,274	845,274
1.500 percent, 2036	5,489,148	5,489,148
2.250 percent, 2025	1,244,679	—
2.250 percent, 2026	1,244,680	1,244,680
2.250 percent, 2027-32	7,468,074	7,468,074
2.250 percent, 2033-34	9,737,594	9,737,594
2.875 percent, 2025	3,624,119	—
2.875 percent, 2026-32	25,368,826	25,368,826
3.000 percent, 2025	1,492,254	—
3.000 percent, 2026-29	5,969,016	5,969,016
3.000 percent, 2030-35	8,953,518	8,953,518
3.000 percent, 2036	1,492,254	1,492,254
3.000 percent, 2037	6,981,402	6,981,402
3.875 percent, 2025	2,395,177	—
3.875 percent, 2026-37	28,742,124	28,742,124
3.875 percent, 2038	9,376,579	9,376,579
4.625 percent, 2025-29	—	10,940,705
4.625 percent, 2030-33	—	8,752,568
4.625 percent, 2034-38	—	10,940,705
4.625 percent, 2039	—	11,564,720
Total investments	146,892,011	183,106,803
Undisbursed balances[a]	80,988	74,563
Total reserves	146,972,999	183,181,366

[a] A positive balance represents a situation where the invested securities of the DI Trust Fund that were redeemed to make cash payments exceeded actual program cash payments; in this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Amounts of special issue securities are at par value. The trust fund purchases and redeems special issue securities at par value. The table groups equal amounts that mature in two or more years at a given interest rate.

B. HISTORY OF ACTUARIAL STATUS ESTIMATES

This appendix chronicles the history of the long-range OASDI actuarial balance and the year of combined OASI and DI Trust Fund reserve depletion since 1982 under the intermediate assumptions. The actuarial balance is the principal summary measure of actuarial status for the long-range period as a whole. The year of trust fund reserve depletion is also critical, as it indicates the year by which legislative action would be needed in order to maintain timely payment of scheduled benefits.

The 1983 report was the last report for which the actuarial balance was positive for the OASDI program. The two basic components of actuarial balance are the summarized income rate and the summarized cost rate, both of which are expressed as percentages of taxable payroll over the period. Section IV.B.4 defines the summarized income rate, summarized cost rate, and actuarial balance in detail. For any given period, the actuarial balance includes the difference between the present value of non-interest income for the period and the present value of the cost for the period, each divided by the present value of taxable payroll for all years in the period. The computation of the actuarial balance also includes:

- In the reports for 1988 and later, the amount of the trust fund reserves on hand at the beginning of the valuation period; and
- In the reports for 1991 and later, the present value of a target trust fund reserve equal to 100 percent of the annual cost to be reached and maintained at the end of the valuation period.

Reports of 1973-87 used the average-cost method, a simpler method which approximates the results of the present-value approach for computing the actuarial balance. Under the average-cost method, the sum of the annual cost rates over the 75-year projection period was divided by the total number of years, 75, to obtain the average cost rate per year. A similar computation produced the average income rate. The actuarial balance was the difference between the average income rate and the average cost rate.

When the 1973 report introduced the average-cost method, the financing of the program was more nearly on a pay-as-you-go basis over the long-range. Also, the long-range demographic and economic assumptions in that report produced an annual rate of growth in total taxable payroll which was about the same as the annual rate at which the trust funds earned interest. In either circumstance (i.e., pay-as-you-go financing, where the annual income rate is the same as the annual cost rate, or an annual rate of growth in total taxable payroll equal to the annual interest rate), the average-cost method produces

the same result as the present-value method. However, by 1988, neither of these circumstances still existed.

After the 1977 and 1983 Social Security Amendments, projections indicated substantial increases in the trust fund reserves continuing well into the 21st century. These laws changed the program's financing from essentially pay-as-you-go to partial advance funding through the 75-year period. Also, for the reports from 1973 through 1987, long-range fertility rates and average real wage growth assumptions were gradually reduced, resulting in an annual rate of growth in taxable payroll that was significantly lower than the assumed interest rate by 1987. As a result of the difference between this rate of growth and the assumed interest rate, the results of the average-cost method and the present-value method began to diverge in the reports for 1973 through 1987, and by 1988 they were quite different. While the average-cost method reflected most of the effects of assumed interest rates, it no longer reflected all interest effects. The present-value method, by contrast, accurately reflects the implications of assumed interest rates. As a result, the 1988 report reintroduced the present-value method of calculating the actuarial balance.

A positive actuarial balance indicates that estimated income (plus starting reserves, beginning with the 1988 report) is more than sufficient to meet estimated trust fund obligations (plus the ending target fund, beginning with the 1991 report) for the period as a whole. Even with a positive actuarial balance, it is possible for reserves to become temporarily depleted within the long-range period. An actuarial balance of zero indicates that the estimated income (plus starting reserves, beginning with the 1988 report) exactly matches estimated trust fund obligations (plus the ending target fund, beginning with the 1991 report) for the period as a whole. A negative actuarial balance indicates that estimated income (plus starting reserves, beginning with the 1988 report) is insufficient to meet estimated trust fund obligations (plus the ending target fund, beginning with the 1991 report) for the entire period.

Table VI.B1 contains the long-range OASDI actuarial balances, summarized income rates, and summarized cost rates for the 1982 report through the current report. The reports presented these values on the basis of the intermediate assumptions, which recent reports refer to as alternative II and reports from 1982 to 1990 referred to as alternative II-B.

Table VI.B1.—Long-Range OASDI Actuarial Balances and Trust Fund Reserve Depletion Dates as Shown in the Trustees Reports for 1982-2025 under Intermediate Assumptions[a]

[As a percentage of taxable payroll]

Year of report	Summarized income rate	Summarized cost rate	Actuarial balance[b]	Change from previous year[c]	Year of combined trust fund reserve depletion
1982	12.27	14.09	-1.82	[d]	1983
1983	12.87	12.84	+.02	+1.84	[e]
1984	12.90	12.95	-.06	-.08	[e]
1985	12.94	13.35	-.41	-.35	2049
1986	12.96	13.40	-.44	-.03	2051
1987	12.89	13.51	-.62	-.18	2051
1988	12.94	13.52	-.58	+.04	2048
1989	13.02	13.72	-.70	-.13	2046
1990	13.04	13.95	-.91	-.21	2043
1991	13.11	14.19	-1.08	-.17	2041
1992	13.16	14.63	-1.46	-.38	2036
1993	13.21	14.67	-1.46	[d]	2036
1994	13.24	15.37	-2.13	-.66	2029
1995	13.27	15.44	-2.17	-.04	2030
1996	13.33	15.52	-2.19	-.02	2029
1997	13.37	15.60	-2.23	-.03	2029
1998	13.45	15.64	-2.19	+.04	2032
1999	13.49	15.56	-2.07	+.12	2034
2000	13.51	15.40	-1.89	+.17	2037
2001	13.58	15.44	-1.86	+.03	2038
2002	13.72	15.59	-1.87	-.01	2041
2003	13.78	15.70	-1.92	-.04	2042
2004	13.84	15.73	-1.89	+.03	2042
2005	13.87	15.79	-1.92	-.04	2041
2006	13.88	15.90	-2.02	-.09	2040
2007	13.92	15.87	-1.95	+.06	2041
2008	13.94	15.63	-1.70	+.26	2041
2009	14.02	16.02	-2.00	-.30	2037
2010	14.01	15.93	-1.92	+.08	2037
2011	14.02	16.25	-2.22	-.30	2036
2012	14.02	16.69	-2.67	-.44	2033
2013	13.88	16.60	-2.72	-.05	2033
2014	13.89	16.77	-2.88	-.16	2033
2015	13.86	16.55	-2.68	+.20	2034
2016	13.84	16.50	-2.66	+.02	2034
2017	13.84	16.67	-2.83	-.17	2034
2018	13.84	16.69	-2.84	-.02	2034
2019	13.81	16.60	-2.78	+.06	2035
2020	13.85	17.06	-3.21	-.43	2035

Table VI.B1.—Long-Range OASDI Actuarial Balances and Trust Fund Reserve Depletion Dates as Shown in the Trustees Reports for 1982-2025 under Intermediate Assumptions[a] (Cont.)
[As a percentage of taxable payroll]

Year of report	Summarized income rate	Summarized cost rate	Actuarial balance[b]	Change from previous year[c]	Year of combined trust fund reserve depletion
2021	13.78	17.31	-3.54	-0.32	2034
2022	13.78	17.20	-3.42	+.12	2035
2023	13.78	17.38	-3.61	-.19	2034
2024	13.80	17.30	-3.50	+.11	2035
2025	13.79	17.61	-3.82	-.33	2034

[a] The 1982-90 reports referred to the intermediate assumptions as alternative II-B; the 1991 and later reports refer to the intermediate assumptions as alternative II.
[b] The definition and method of calculating the actuarial balance were changed in 1988 and 1991. See text for details.
[c] A detailed year-by-year breakdown of the reasons for the changes in the actuarial balance since the 1983 Trustees Report may be found in Actuarial Note 2025.8 at www.ssa.gov/OACT/NOTES/ran8/.
[d] Between -0.005 and 0.005 percent of taxable payroll.
[e] Not projected to become depleted during the 75-year projection period.

Note: Components may not sum to totals because of rounding.

For several of the years included in the table, significant legislative changes or definitional changes affected the actuarial balance. The Social Security Amendments of 1983 account for the largest single change shown in the table: the actuarial balance of -1.82 for the 1982 report improved to +0.02 for the 1983 report. In 1985, the actuarial balance changed largely because of an adjustment made to the method for estimating the age distribution of immigrants.

Rebenchmarking of the National Income and Product Accounts and changes in demographic assumptions contributed to the change in the actuarial balance for 1987. Various changes in assumptions and methods for the 1988 report had roughly offsetting effects on the actuarial balance. In 1989 and 1990, changes in economic assumptions accounted for most of the changes in the actuarial balance.

In 1991, the effect of legislation, changes in economic assumptions, and the introduction of the cost of reaching and maintaining an ending target trust fund level combined to produce the change in the actuarial balance. In 1992, changes in disability assumptions and the method for projecting average benefit levels accounted for most of the change in the actuarial balance. In 1993, numerous small changes in assumptions and methods had offsetting effects on the actuarial balance. In 1994, changes in the real wage assumptions, disability rates, and the earnings sample used for projecting average benefit levels accounted for most of the change in the actuarial balance. In 1995, numerous small changes had largely offsetting effects on the actuarial bal-

ance, including a substantial reallocation of the payroll tax rate, which reduced the OASI actuarial balance, but increased the DI actuarial balance.

In 1996, a change in the method of projecting dually-entitled beneficiaries produced a large increase in the actuarial balance, which almost totally offset decreases produced by changes in the valuation period and in the demographic and economic assumptions. Various changes in assumptions and methods for the 1997 report had roughly offsetting effects on the actuarial balance. In 1998, increases caused by changes in the economic assumptions, although partially offset by decreases produced by changes in the valuation period and in the demographic assumptions, accounted for most of the changes in the actuarial balance. In 1999, increases caused by changes in the economic assumptions (related to improvements in the CPI by the Bureau of Labor Statistics) accounted for most of the changes in the actuarial balance. For the 2000 report, changes in economic assumptions and methodology caused increases in the actuarial balance, although reductions in the balance caused by the change in valuation period and changes in demographic assumptions partially offset these increases.

For the 2001 report, increases caused by changes in the demographic starting values, although partially offset by a decrease produced by the change in the valuation period, accounted for most of the changes in the actuarial balance. For the 2002 report, changes in the valuation period and the demographic assumptions—both decreases in the actuarial balance—were offset by changes in the economic assumptions, while an increase due to disability assumptions was slightly more than offset by a decrease due to changes in the projection methods and data. For the 2003 report, an increase due to the change in program assumptions was more than offset by decreases due to the change in valuation period and changes in demographic assumptions. In the 2004 report, increases due to changing the method of projecting benefit levels for higher earners more than offset decreases in the actuarial balance arising from the change in the valuation period and the net effect of other changes in programmatic data and methods. For the 2005 report, an increase due to changing the method of projecting future average benefit levels was more than offset by decreases due to changes in the valuation period, updated starting values for the economic assumptions, and other methodological changes.

In 2006, decreases in the actuarial balance due to the change in the valuation period, a reduction in the ultimate annual real interest rate, and improvements in calculating mortality for disabled workers, were greater in aggregate than increases in the actuarial balance due to changes in demographic starting values and the ultimate total fertility rate, as well as other program-

matic data and method changes. For the 2007 report, increases in the actuarial balance arising from revised disability incidence rate assumptions, improvements in average benefit level projections, and changes in near-term economic projections, more than offset decreases in the balance due to the valuation period change and updated historical mortality data. For the 2008 report, the large increase in the actuarial balance was primarily due to changes in immigration projection methods and assumptions. These changes more than offset the decreases in the actuarial balance due to the change in the valuation period and the lower starting and ultimate mortality rates. In 2009, changes in starting values and near-term economic assumptions due to the economic recession, faster ultimate rates of decline in death rates for ages 65-84, and the change in the valuation period accounted for most of the large decrease in the actuarial balance. Legislative changes, in particular the estimated effects of the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010, were the main reason for the increase in the actuarial balance for the 2010 report. The change in the valuation period partially offset this increase; there were also changes in several assumptions, methods, and recent data which had largely offsetting effects.

For the 2011 report, changes in mortality projections, due to new starting values and revised methods, were the most significant of several factors contributing to the increase in the deficit. In 2012, changes in economic assumptions and starting values accounted for about half of the decrease in actuarial balance. Other factors worsening the actuarial balance were the change in valuation period, changes to starting demographic values, changes to ultimate disability incidence assumptions, and methodology changes and data updates. For the 2013 report, the change in valuation period accounted for the entire net change in the actuarial balance. The effects of substantially lower death rates for 2009 than previously projected and the American Taxpayer Relief Act of 2012 (which lowered the Federal marginal income tax rates) were offset by updates of program-specific data and methodology improvements. In 2014, changes in economic data and assumptions accounted for the majority of the net change in the actuarial balance. Other factors worsening the actuarial balance were the change in the valuation period and various methodology improvements and data updates. For the 2015 report, methodological improvements and updates of programmatic data accounted for the majority of the net increase in the actuarial balance. Also increasing the actuarial balance were a lower ultimate average real wage growth assumption and changes in near-term economic assumptions. These increases were offset somewhat by the change in the valuation period and updates to historical and near-term projected birth rates.

For the 2016 report, the actuarial balance increased primarily due to the effects of the Bipartisan Budget Act of 2015 and improvements made to immigration methods. The most notable immigration change was a revision to the method for projecting emigration of the never-authorized population to reflect lower rates of emigration for those who have resided here longer. These increases in the actuarial balance were largely offset by the effects of changes in ultimate economic assumptions, including a lower real interest rate and a lower annual increase in the rate of price inflation. In 2017, the change in the valuation period and various methodology improvements accounted for most of the net reduction in the actuarial balance. Other economic factors also contributed to worsening the actuarial balance, including a lower real wage growth assumption and an assumed weaker recovery from the recent recession. These reductions were offset somewhat by lower estimated disability incidence rates over the short-range period. For the 2018 report, incorporating the effects of lower-than-expected birth rates, lower near-term fertility assumptions, and the change in the valuation period decreased the actuarial balance. Offsetting these factors to a large degree were the effects of higher-than-expected death rates and several methods improvements, most notably an update to the sample used to project average benefit levels for newly-entitled worker beneficiaries. For the 2019 report, the actuarial balance increased primarily due to higher-than-expected death rates and lower near-term and ultimate disability incidence rate assumptions. Partially offsetting these factors were the effects of a lower ultimate real interest rate assumption and the change in the valuation period. For the 2020 report, the actuarial balance decreased primarily due to the following factors. First, the repeal of the Affordable Care Act's excise tax on employer-sponsored group health insurance premiums reduced projected earnings as a share of employee compensation, having a significant negative financial effect on the trust funds. In addition, lower assumed values for the ultimate total fertility rate, the ultimate rate of price inflation, and the ultimate real interest rate, as compared to the rates assumed for the 2019 report, decreased the actuarial balance.

In 2021, the actuarial balance decreased due to the change in the valuation period and three main additional factors. First, economic assumptions were updated to reflect experience during and following the COVID-19 pandemic. In particular, the levels of productivity and potential GDP were assumed to be roughly 1 percent lower beginning with the second quarter of 2020. Second, the data and methodology used for projecting average benefit levels were updated and improved. Third, data and estimates provided by the Office of Tax Analysis at the Department of the Treasury indicated lower near-term and ultimate levels of taxation of benefits.

For the 2022 report, the actuarial balance increased primarily due to a decrease in the assumed ultimate disability incidence rate, incorporating recent economic data, and changes in near-term economic assumptions. In particular, employment, earnings, and GDP following the 2020 recession recovered much faster than had been assumed in the 2021 report. These disability and economic factors were partially offset by the change in the valuation period and updates for recent demographic data.

In 2023, the actuarial balance decreased primarily due to the change in the valuation period, recent economic experience, and changes in near-term economic assumptions. In particular, the level of potential GDP was assumed to be about 3.0 percent lower by 2026 and for all years thereafter. This shift was made as the Trustees lowered the levels of GDP and total economy labor productivity in response to recent economic developments, including higher-than-expected inflation rates and lower-than-expected output growth.

In 2024, the actuarial balance increased primarily due to changes in economic factors and the lower assumed ultimate disability incidence rate. This increase in the actuarial balance was partially offset by the lower assumed ultimate total fertility rate.

Section IV.B.6 describes changes affecting the actuarial balance shown for the 2025 report.

C. FISCAL YEAR HISTORICAL AND PROJECTED TRUST FUND OPERATIONS THROUGH 2034

Tables VI.C1, VI.C2, and VI.C3 contain details of the fiscal year 2024 operations of the OASI, DI, and the combined OASI and DI Trust Funds, respectively. The fiscal year for the U.S. Government is the 12-month period ending September 30. Fiscal year 2024 is the most recent fiscal year for which complete information is available. The descriptions of the values in these tables are similar to the corresponding descriptions and values in the calendar year operations tables in section III.A. Please see that section for a description of the various items of income and cost.

Table VI.C1.—Operations of the OASI Trust Fund, Fiscal Year 2024
[In millions]

Total reserves, September 30, 2023		$2,673,786
Income:		
Net payroll tax contributions:		
Payroll tax contributions[a]	$1,101,407	
Payments from the General Fund of the Treasury for payroll tax contributions subject to refund	-4,468	
Net payroll tax contributions[a]		1,096,939
Reimbursements from the General Fund:		
Reimbursements for reductions in payroll tax contributions due to P.L.s 111-312, 112-78, and 112-96[a]	[b]	
Reimbursements for payroll tax credits due to P.L. 98-21[a]	[b]	
Net General Fund reimbursements[a]		[b]
Income based on taxation of benefit payments:		
Withheld from benefit payments to nonresident aliens	299	
All other, not subject to withholding[a]	52,837	
Total income from taxation of benefits[a]		53,136
Investment income and interest adjustments:		
Interest on investments	62,898	
Interest adjustments[c]	-4	
Total investment income and interest adjustments		62,894
Gifts		[b]
Total income		1,212,969
Cost:		
Benefit payments:		
Monthly benefits and lump-sum death payments[d]	1,293,838	
Reimbursement from the General Fund for unnegotiated checks	-73	
Payment for costs of vocational rehabilitation services for disabled beneficiaries	16	
Net benefit payments[d]		1,293,782
Financial interchange with the Railroad Retirement "Social Security Equivalent Benefit Account"		5,860
Administrative expenses:		
Costs incurred by:		
Social Security Administration	4,110	
Department of the Treasury	667	
Net offsetting income from miscellaneous receipts and other adjustments	28	
Miscellaneous reimbursements from the General Fund [e]	-6	
Net administrative expenses		4,798
Total cost		1,304,440
Net change in reserves		-91,471
Total invested reserves	2,582,205	
Undisbursed balances[f]	110	
Total reserves, September 30, 2024		2,582,315

[a] Includes adjustments for prior years.
[b] Between -$0.5 and $0.5 million.
[c] Includes: (1) interest on adjustments in the allocation of administrative expenses between the trust fund and the General Fund account for the Supplemental Security Income program, (2) interest arising from the revised allocation of administrative expenses among the trust funds, and (3) interest on certain reimbursements to the trust fund.
[d] Includes net reductions for the recovery of overpayments.
[e] Reimbursements for costs incurred in performing certain legislatively mandated activities not directly related to administering the OASI program.
[f] A positive balance represents a situation where the invested securities of the OASI Trust Fund that were redeemed to make cash payments exceeded actual program cash payments. In this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Components may not sum to totals because of rounding.

Table VI.C2.—Operations of the DI Trust Fund, Fiscal Year 2024
[In millions]

Total reserves, September 30, 2023		$142,917
Income:		
Net payroll tax contributions:		
Payroll tax contributions[a]	$187,046	
Payments from the General Fund of the Treasury for payroll tax contributions subject to refund	-759	
Net payroll tax contributions[a]		186,287
Reimbursements from the General Fund:		
Reimbursements for reductions in payroll tax contributions due to P.L.s 111-312, 112-78, and 112-96[a]	[b]	
Reimbursements for payroll tax credits due to P.L. 98-21[a]	[b]	
Net General Fund reimbursements[a]		[b]
Income based on taxation of benefit payments:		
Withheld from benefit payments to nonresident aliens	4	
All other, not subject to withholding[a]	610	
Total income from taxation of benefits[a]		614
Investment income and interest adjustments:		
Interest on investments	4,522	
Interest adjustments[c]	10	
Total investment income and interest adjustments		4,531
Gifts		[b]
Total income		191,432
Cost:		
Benefit payments:		
Monthly benefits[d]	153,844	
Reimbursement from the General Fund for unnegotiated checks	-34	
Payment for costs of vocational rehabilitation services for disabled beneficiaries	83	
Net benefit payments[d]		153,893
Financial interchange with the Railroad Retirement "Social Security Equivalent Benefit Account"		74
Administrative expenses:		
Costs incurred by:		
Social Security Administration	2,414	
Department of the Treasury	112	
Demonstration projects	[b]	
Miscellaneous reimbursements from the General Fund[e]	-3	
Net administrative expenses		2,524
Total cost		156,490
Net change in reserves		34,942
Total invested reserves	177,775	
Undisbursed balances[f]	84	
Total reserves, September 30, 2024		177,858

[a] Includes adjustments for prior years.
[b] Between -$0.5 and $0.5 million.
[c] Includes: (1) interest on adjustments in the allocation of administrative expenses between the trust fund and the General Fund account for the Supplemental Security Income program, (2) interest arising from the revised allocation of administrative expenses among the trust funds, and (3) interest on certain reimbursements to the trust fund.
[d] Includes net reductions for the recovery of overpayments.
[e] Reimbursements for costs incurred in performing certain legislatively mandated activities not directly related to administering the DI program.
[f] A positive balance represents a situation where the invested securities of the DI Trust Fund that were redeemed to make cash payments exceeded actual program cash payments. In this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Components may not sum to totals because of rounding.

Table VI.C3.—Operations of the Combined OASI and DI Trust Funds, Fiscal Year 2024
[In millions]

Total reserves, September 30, 2023		$2,816,703
Income:		
Net payroll tax contributions:		
Payroll tax contributions[a]	$1,288,452	
Payments from the General Fund of the Treasury for payroll tax contributions subject to refund	-5,227	
Net payroll tax contributions[a]		1,283,226
Reimbursements from the General Fund:		
Reimbursements for reductions in payroll tax contributions due to P.L.s 111-312, 112-78, and 112-96[a]	[b]	
Reimbursements for payroll tax credits due to P.L. 98-21[a]	[b]	
Net General Fund reimbursements[a]		[b]
Income based on taxation of benefit payments:		
Withheld from benefit payments to nonresident aliens	302	
All other, not subject to withholding[a]	53,447	
Total income from taxation of benefits[a]		53,749
Investment income and interest adjustments:		
Interest on investments	67,420	
Interest adjustments[c]	6	
Total investment income and interest adjustments		67,426
Gifts		[b]
Total income		1,404,401
Cost:		
Benefit payments:		
Monthly benefits and lump-sum death payments[d]	1,447,683	
Reimbursement from the General Fund for unnegotiated checks	-107	
Payment for costs of vocational rehabilitation services for disabled beneficiaries	99	
Net benefit payments[d]		1,447,674
Financial interchange with the Railroad Retirement "Social Security Equivalent Benefit Account"		5,933
Administrative expenses:		
Costs incurred by:		
Social Security Administration	6,524	
Department of the Treasury	778	
Net offsetting income from miscellaneous receipts and other adjustments	28	
Demonstration projects	[b]	
Miscellaneous reimbursements from the General Fund[e]	-9	
Net administrative expenses		7,322
Total cost		1,460,930
Net change in reserves		-56,529
Total invested reserves	2,759,980	
Undisbursed balances[f]	194	
Total reserves, September 30, 2024		2,760,174

[a] Includes adjustments for prior years.
[b] Between -$0.5 and $0.5 million.
[c] Includes: (1) interest on adjustments in the allocation of administrative expenses between the trust funds and the General Fund account for the Supplemental Security Income program, (2) interest arising from the revised allocation of administrative expenses among the trust funds, and (3) interest on certain reimbursements to the trust funds.
[d] Includes net reductions for the recovery of overpayments.
[e] Reimbursements for costs incurred in performing certain legislatively mandated activities not directly related to administering the OASI and DI programs.
[f] A positive balance represents a situation where the invested securities of the combined OASI and DI Trust Funds that were redeemed to make cash payments exceeded actual program cash payments. In this situation, this excess amount will be used to partially offset future redemption of additional invested securities.

Note: Components may not sum to totals because of rounding.

Tables VI.C4, VI.C5, and VI.C6 show estimates of the operations and status of the OASI, DI, and the hypothetical combined OASI and DI Trust Funds, respectively, during fiscal years 2020 through 2034.

Table VI.C4.—Operations of the OASI Trust Fund, Fiscal Years 2020-2034[a]
[Dollar amounts in billions]

Fiscal year	Income					Cost				Reserves		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c e]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
Historical data:												
2020	$955.6	$841.7	[f]	$37.9	$76.0	$948.7	$940.2	$3.7	$4.8	$6.9	$2,811.2	296
2021	936.0	831.1	[f]	34.3	70.5	991.4	982.7	3.9	4.8	-55.4	2,755.8	284
2022	1,041.1	929.0	[f]	47.0	65.1	1,073.3	1,063.9	4.0	5.3	-32.2	2,723.6	257
2023	1,152.2	1,039.0	$0.2	49.8	63.3	1,202.1	1,192.1	4.3	5.6	-49.8	2,673.8	227
2024	1,213.0	1,096.9	[f]	53.1	62.9	1,304.4	1,293.8	4.8	5.9	-91.5	2,582.3	205
Intermediate:												
2025	1,220.8	1,099.7	.2	57.2	63.7	1,410.7	1,400.5	4.5	5.7	-189.9	2,392.4	183
2026	1,294.0	1,163.7	[f]	71.2	59.1	1,500.3	1,489.7	4.6	6.1	-206.4	2,186.0	159
2027	1,349.4	1,213.5	.2	79.4	56.4	1,586.5	1,575.6	4.8	6.1	-237.1	1,948.9	138
2028	1,415.4	1,277.7	.4	85.4	51.9	1,679.2	1,668.2	4.9	6.1	-263.8	1,685.1	116
2029	1,468.0	1,331.0	[f]	91.8	45.2	1,773.4	1,762.2	5.1	6.1	-305.4	1,379.7	95
2030	1,524.0	1,387.6	[f]	99.1	37.3	1,869.3	1,857.9	5.3	6.1	-345.3	1,034.4	74
2031	1,579.2	1,444.2	[f]	107.1	27.8	1,966.9	1,955.4	5.4	6.1	-387.7	646.7	53
2032	1,632.9	1,501.0	[f]	115.4	16.5	2,065.3	2,053.6	5.6	6.1	-432.4	214.2	31
2033	[g]	1,579.6	[f]	124.1	[g]	2,164.1	2,152.2	5.8	6.2	[g]	[g]	10
2034	[g]	1,636.0	[f]	133.1	[g]	2,263.7	2,251.6	5.9	6.2	[g]	[g]	[g]
Low-cost:												
2025	1,231.3	1,109.7	.2	57.2	64.1	1,410.1	1,399.9	4.5	5.7	-178.8	2,403.5	183
2026	1,350.7	1,217.9	[f]	71.2	61.5	1,501.0	1,490.4	4.6	6.0	-150.4	2,253.2	160
2027	1,423.8	1,281.1	.2	79.6	62.9	1,592.0	1,581.2	4.8	6.0	-168.2	2,085.0	142
2028	1,519.2	1,369.9	.4	86.0	62.8	1,691.9	1,680.8	5.0	6.0	-172.6	1,912.4	123
2029	1,602.6	1,448.6	[f]	92.9	61.2	1,794.2	1,782.8	5.3	6.1	-191.5	1,720.8	107
2030	1,693.9	1,534.1	[f]	100.6	59.1	1,898.9	1,887.3	5.5	6.1	-205.0	1,515.8	91
2031	1,788.1	1,622.3	[f]	109.2	56.6	2,006.5	1,994.6	5.8	6.1	-218.4	1,297.4	76
2032	1,883.4	1,712.2	[f]	118.3	52.9	2,116.0	2,103.8	6.1	6.2	-232.6	1,064.7	61
2033	2,004.4	1,829.6	[f]	127.8	47.0	2,227.3	2,214.8	6.3	6.2	-222.9	841.8	48
2034	2,103.0	1,924.2	[f]	137.6	41.3	2,341.1	2,328.3	6.6	6.2	-238.0	603.8	36
High-cost:												
2025	1,205.4	1,084.2	.2	57.2	63.7	1,411.5	1,401.3	4.5	5.7	-206.1	2,376.2	183
2026	1,204.0	1,076.1	[f]	71.2	56.7	1,500.2	1,489.4	4.6	6.1	-296.2	2,080.0	158
2027	1,259.8	1,130.0	.2	79.0	50.6	1,579.7	1,568.7	4.8	6.2	-319.9	1,760.1	132
2028	1,308.3	1,180.7	.4	84.7	42.5	1,664.9	1,653.8	4.9	6.2	-356.6	1,403.4	106
2029	1,341.5	1,217.6	[f]	90.7	33.2	1,751.5	1,740.4	5.0	6.1	-410.0	993.4	80
2030	1,375.3	1,254.5	[f]	97.5	23.3	1,839.4	1,828.2	5.1	6.1	-464.1	529.3	54
2031	1,404.2	1,288.0	[f]	105.0	11.2	1,928.2	1,917.0	5.1	6.1	-524.0	5.3	27
2032	[g]	1,319.8	[f]	112.7	[g]	2,016.7	2,005.4	5.2	6.1	[g]	[g]	[h]
2033	[g]	1,368.5	[f]	120.7	[g]	2,104.4	2,093.0	5.3	6.1	[g]	[g]	[g]
2034	[g]	1,396.3	[f]	128.8	[g]	2,191.9	2,180.4	5.4	6.1	[g]	[g]	[g]

[a] The OASI Trust Fund reserves become depleted in fiscal year 2033 under the intermediate assumptions and in fiscal year 2032 under the high-cost assumptions. For any period during which reserves would be depleted, scheduled benefits could not be paid in full on a timely basis, income from taxing benefits would be less than would apply to scheduled benefits, and interest on trust fund reserves would be negligible.
[b] Represents reserves at the beginning of a year (which are identical to reserves at the end of the prior year shown in the "Amount at end of year" column) as a percentage of cost for the year.
[c] Includes adjustments for prior years.
[d] Includes net reimbursements from the General Fund of the Treasury to the OASI Trust Fund for: (1) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; and (2) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Also includes transfers of a portion of proceeds from repayments of loans authorized under Public Law 116-136.
[e] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in law.
[f] Between -$50 million and $50 million.
[g] When the fund reserves are depleted, values under current law would reflect permissible expenditures only, which would be less than the full cost of paying scheduled benefits shown in this table.
[h] Less than 0.5 percent.

Note: Components may not sum to totals because of rounding.

Table VI.C5.—Operations of the DI Trust Fund, Fiscal Years 2020-2034
[Dollar amounts in billions]

Fiscal year	Income					Cost				Reserves		Trust fund ratio at start of year[a]
	Total	Net payroll tax contributions[b]	GF reimbursements[c]	Taxation of benefits[b,d]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
Historical data:												
2020 . .	$147.4	$142.9	[e]	$1.7	$2.8	$146.7	$144.1	$2.5	$0.1	$0.7	$97.1	66
2021 . .	144.4	141.2	[e]	.5	2.7	143.4	140.7	2.5	.1	1.0	98.1	68
2022 . .	162.0	157.8	[e]	1.5	2.7	145.4	142.5	2.8	.2	16.6	114.7	67
2023 . .	180.7	176.5	[e]	1.0	3.2	152.5	149.6	2.8	.1	28.2	142.9	75
2024 . .	191.4	186.3	[e]	.6	4.5	156.5	153.9	2.5	.1	34.9	177.9	91
Intermediate:												
2025 . .	194.5	186.7	[e]	1.5	6.2	166.0	163.4	2.7	[e]	28.4	206.3	107
2026 . .	207.1	197.6	[e]	1.9	7.6	178.2	175.4	2.8	[e]	28.9	235.2	116
2027 . .	217.0	206.1	[e]	2.1	8.8	188.2	185.3	2.9	[e]	28.8	264.0	125
2028 . .	229.3	217.0	[e]	2.2	10.2	192.3	189.3	2.9	.1	37.0	301.0	137
2029 . .	240.1	226.0	[e]	2.2	11.9	194.6	191.5	3.0	.1	45.5	346.5	155
2030 . .	251.8	235.6	[e]	2.3	13.9	197.3	194.0	3.1	.1	54.6	401.0	176
2031 . .	264.0	245.2	[e]	2.4	16.3	202.6	199.2	3.2	.1	61.4	462.4	198
2032 . .	276.5	254.9	[e]	2.5	19.0	209.5	206.1	3.3	.2	66.9	529.4	221
2033 . .	292.9	268.2	[e]	2.7	22.0	217.7	214.1	3.4	.2	75.3	604.6	243
2034 . .	305.9	277.8	[e]	2.9	25.2	226.8	223.1	3.5	.2	79.2	683.8	267
Low-cost:												
2025 . .	196.3	188.5	[e]	1.5	6.4	163.8	161.1	2.7	[e]	32.5	210.4	109
2026 . .	216.9	206.8	[e]	1.9	8.3	172.8	170.1	2.8	[e]	44.1	254.5	122
2027 . .	230.4	217.6	[e]	2.0	10.8	180.1	177.2	2.9	[e]	50.3	304.8	141
2028 . .	248.6	232.6	[e]	2.1	13.9	182.3	179.3	3.0	[e]	66.3	371.1	167
2029 . .	265.9	246.0	[e]	2.1	17.8	183.0	179.9	3.1	.1	82.9	453.9	203
2030 . .	285.3	260.5	[e]	2.1	22.7	184.0	180.7	3.2	.1	101.3	555.2	247
2031 . .	306.1	275.5	[e]	2.2	28.4	187.4	184.0	3.3	.1	118.7	674.0	296
2032 . .	328.2	290.7	[e]	2.3	35.1	192.4	188.9	3.4	.1	135.8	809.8	350
2033 . .	356.0	310.7	[e]	2.5	42.8	198.8	195.1	3.5	.2	157.2	967.0	407
2034 . .	381.0	326.7	[e]	2.6	51.7	206.4	202.5	3.6	.2	174.7	1,141.6	469
High-cost:												
2025 . .	191.9	184.1	[e]	1.5	6.2	168.4	165.7	2.7	[e]	23.5	201.4	106
2026 . .	191.7	182.7	[e]	2.0	7.0	183.6	180.8	2.8	[e]	8.1	209.4	110
2027 . .	201.3	191.9	[e]	2.2	7.2	195.9	193.0	2.9	.1	5.4	214.8	107
2028 . .	210.1	200.5	[e]	2.3	7.3	201.5	198.5	2.9	.1	8.6	223.4	107
2029 . .	216.6	206.8	[e]	2.4	7.5	205.0	201.9	3.0	.1	11.7	235.0	109
2030 . .	223.3	213.0	[e]	2.4	7.8	208.9	205.6	3.1	.1	14.4	249.5	113
2031 . .	229.5	218.7	[e]	2.6	8.3	215.7	212.4	3.2	.2	13.9	263.3	116
2032 . .	235.5	224.1	[e]	2.7	8.6	224.0	220.6	3.2	.2	11.4	274.7	118
2033 . .	244.2	232.4	[e]	2.9	8.9	233.6	230.0	3.3	.2	10.7	285.4	118
2034 . .	249.4	237.1	[e]	3.1	9.2	243.7	240.1	3.4	.3	5.7	291.1	117

[a] Represents reserves at the beginning of a year (which are identical to reserves at the end of the prior year shown in the "Amount at end of year" column) as a percentage of cost for the year.
[b] Includes adjustments for prior years.
[c] Includes net reimbursements from the General Fund of the Treasury to the DI Trust Fund for: (1) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; and (2) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96.
[d] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in law.
[e] Between -$50 million and $50 million.

Note: Components may not sum to totals because of rounding.

Table VI.C6.—Operations of the Combined OASI and DI Trust Funds, Fiscal Years 2020-2034[a]
[Dollar amounts in billions]

Fiscal year	Income					Cost				Reserves		Trust fund ratio at start of year[b]
	Total	Net payroll tax contributions[c]	GF reimbursements[d]	Taxation of benefits[c e]	Net interest	Total	Scheduled benefits	Administrative costs	RRB interchange	Net change during year	Amount at end of year	
Historical data:												
2020. .	$1,103.0	$984.6	[f]	$39.6	$78.8	$1,095.4	$1,084.3	$6.2	$5.0	$7.5	$2,908.2	265
2021. .	1,080.4	972.3	[f]	34.8	73.3	1,134.8	1,123.4	6.4	4.9	-54.4	2,853.9	256
2022. .	1,203.1	1,086.9	[f]	48.5	67.7	1,218.6	1,206.4	6.8	5.5	-15.5	2,838.3	234
2023. .	1,332.9	1,215.5	$0.2	50.8	66.5	1,354.6	1,341.8	7.1	5.6	-21.6	2,816.7	210
2024. .	1,404.4	1,283.2	[f]	53.7	67.4	1,460.9	1,447.7	7.3	5.9	-56.5	2,760.2	193
Intermediate:												
2025. .	1,415.3	1,286.4	.2	58.7	70.0	1,576.8	1,563.9	7.2	5.7	-161.5	2,598.7	175
2026. .	1,501.0	1,361.3	[f]	73.1	66.6	1,678.5	1,665.1	7.4	6.0	-177.5	2,421.2	155
2027. .	1,566.4	1,419.5	.2	81.5	65.2	1,774.7	1,760.9	7.6	6.1	-208.3	2,212.9	136
2028. .	1,644.7	1,494.6	.4	87.6	62.1	1,871.5	1,857.5	7.9	6.1	-226.8	1,986.1	118
2029. .	1,708.1	1,557.0	[f]	94.0	57.0	1,968.0	1,953.7	8.1	6.2	-259.9	1,726.1	101
2030. .	1,775.8	1,623.2	[f]	101.4	51.3	2,066.5	2,051.9	8.4	6.2	-290.7	1,435.5	84
2031. .	1,843.1	1,689.5	[f]	109.5	44.2	2,169.5	2,154.6	8.6	6.2	-326.3	1,109.1	66
2032. .	1,909.3	1,755.9	[f]	118.0	35.5	2,274.8	2,259.6	8.9	6.3	-365.5	743.6	49
2033. .	1,997.9	1,847.8	[f]	126.9	23.2	2,381.8	2,366.3	9.1	6.4	-383.9	359.7	31
2034. .	[g]	1,913.8	[f]	136.0	[g]	2,490.5	2,474.7	9.4	6.4	[g]	[g]	14
Low-cost:												
2025. .	1,427.6	1,298.2	.2	58.6	70.5	1,573.9	1,561.0	7.2	5.7	-146.3	2,613.9	175
2026. .	1,567.6	1,424.7	[f]	73.1	69.8	1,673.9	1,660.5	7.4	6.0	-106.2	2,507.7	156
2027. .	1,654.2	1,498.7	.2	81.7	73.7	1,772.1	1,758.4	7.6	6.0	-117.9	2,389.8	142
2028. .	1,767.8	1,602.6	.4	88.1	76.7	1,874.2	1,860.1	8.0	6.1	-106.3	2,283.4	128
2029. .	1,868.5	1,694.6	[f]	95.0	79.0	1,977.2	1,962.7	8.4	6.1	-108.7	2,174.8	115
2030. .	1,979.2	1,794.7	[f]	102.8	81.8	2,082.9	2,068.0	8.7	6.2	-103.7	2,071.0	104
2031. .	2,094.2	1,897.7	[f]	111.5	85.0	2,193.8	2,178.6	9.1	6.2	-99.7	1,971.4	94
2032. .	2,211.6	2,002.9	[f]	120.6	88.1	2,308.4	2,292.7	9.5	6.3	-96.9	1,874.5	85
2033. .	2,360.4	2,140.3	[f]	130.2	89.8	2,426.2	2,409.9	9.8	6.4	-65.8	1,808.8	77
2034. .	2,484.1	2,250.9	[f]	140.2	92.9	2,547.4	2,530.8	10.2	6.4	-63.4	1,745.4	71
High-cost:												
2025. .	1,397.2	1,268.4	.2	58.7	69.9	1,579.9	1,567.0	7.2	5.7	-182.6	2,577.5	175
2026. .	1,395.7	1,258.9	[f]	73.1	63.7	1,683.8	1,670.3	7.4	6.1	-288.1	2,289.4	153
2027. .	1,461.1	1,321.9	.2	81.2	57.8	1,775.6	1,761.7	7.6	6.3	-314.5	1,974.9	129
2028. .	1,518.3	1,381.2	.4	87.0	49.8	1,866.4	1,852.3	7.8	6.2	-348.1	1,626.8	106
2029. .	1,558.1	1,424.4	[f]	93.0	40.8	1,956.5	1,942.3	8.0	6.2	-398.4	1,228.5	83
2030. .	1,598.6	1,467.5	[f]	99.9	31.1	2,048.3	2,033.9	8.2	6.3	-449.7	778.8	60
2031. .	1,633.7	1,506.7	[f]	107.5	19.4	2,143.9	2,129.3	8.3	6.2	-510.2	268.6	36
2032. .	[g]	1,543.9	[f]	115.4	[g]	2,240.8	2,226.0	8.5	6.3	[g]	[g]	12
2033. .	[g]	1,600.9	[f]	123.6	[g]	2,338.0	2,323.0	8.6	6.3	[g]	[g]	[g]
2034. .	[g]	1,633.4	[f]	132.0	[g]	2,435.6	2,420.4	8.8	6.4	[g]	[g]	[g]

[a] The OASDI Trust Fund reserves become depleted in fiscal year 2034 under the intermediate assumptions and in fiscal year 2032 under the high-cost assumptions. For any period during which reserves would be depleted, scheduled benefits could not be paid in full on a timely basis, income from taxing benefits would be less than would apply to scheduled benefits, and interest on trust fund reserves would be negligible.
[b] Represents reserves at the beginning of a year (which are identical to reserves at the end of the prior year shown in the "Amount at end of year" column) as a percentage of cost for the year.
[c] Includes adjustments for prior years.
[d] Includes net reimbursements from the General Fund of the Treasury to the OASI and DI Trust Funds for: (1) the cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21; and (2) payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96. Also includes transfers of a portion of proceeds from repayments of loans authorized under Public Law 116-136.
[e] Revenue from taxation of benefits is the amount that would be assessed on benefit amounts scheduled in law.
[f] Between -$50 million and $50 million.
[g] When the fund reserves are depleted, values under current law would reflect permissible expenditures only, which would be less than the full cost of paying scheduled benefits shown in this table.

Note: Components may not sum to totals because of rounding.

D. LONG-RANGE SENSITIVITY ANALYSIS

This appendix presents estimates that illustrate the sensitivity of the long-range actuarial status of the OASDI program to changes in selected individual assumptions. The estimates based on the three alternative sets of assumptions, which were presented earlier in this report, illustrate the effects of varying all of the principal assumptions simultaneously, in order to portray a significantly more optimistic or pessimistic future. For each sensitivity analysis presented in this appendix, the intermediate alternative II projection is the reference point, and one assumption is varied within that alternative. The variation used for each individual assumption is the same as the level used for that assumption in the low-cost alternative I and high-cost alternative III projections.

Each table in this section shows the effects of changing a particular assumption on the OASDI summarized income rates, summarized cost rates, and actuarial balances for 25-year, 50-year, and 75-year valuation periods. Each table also shows the effects on the annual balance for 2099 and on the year of combined trust fund reserve depletion. Following each table is a discussion of the estimated changes in cost rates. The change in each of the actuarial balances is approximately equal to the change in the corresponding cost rate, but in the opposite direction. This appendix does not discuss income rates following each table because income rates vary only slightly due primarily to the changes in assumptions that affect revenue from taxation of benefits as a percentage of taxable payroll.

1. Total Fertility Rate

Table VI.D1 shows selected measures of OASDI actuarial status on the basis of alternative II with three different assumptions for the future paths of total fertility rates. These assumptions are described in section V.A.1. Under the Trustees' assumptions, the ultimate total fertility rate is 1.6, 1.9, and 2.1 children per woman for alternatives III, II, and I, respectively. The ultimate total fertility rate is reached in 2050.

Table VI.D1.—Sensitivity of OASDI Measures to Fertility Assumptions
[As a percentage of taxable payroll]

Valuation period	Ultimate total fertility rate[a] [b] 1.6	1.9	2.1
Summarized income rate:			
25-year: 2025-49	14.24	14.24	14.24
50-year: 2025-74	13.91	13.88	13.86
75-year: 2025-99	13.85	13.79	13.75
Summarized cost rate:			
25-year: 2025-49	16.89	16.91	16.92
50-year: 2025-74	17.56	17.28	17.10
75-year: 2025-99	18.34	17.61	17.15
Actuarial balance:			
25-year: 2025-49	-2.65	-2.67	-2.67
50-year: 2025-74	-3.65	-3.40	-3.24
75-year: 2025-99	-4.49	-3.82	-3.40
Annual balance for 2099	-7.39	-4.84	-3.46
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The total fertility rate for any year is the average number of children that would be born to a woman if she were to experience, at each age of her life, the birth rate observed in, or assumed for, the selected year, and if she were to survive the entire childbearing period. The ultimate total fertility rate is reached in 2050 under all three alternatives.
[b] The total fertility rates used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

For the 25-year period, the cost rate for the three fertility assumptions varies by only about 0.03 percent of taxable payroll. In contrast, the 75-year cost rate varies over a wide range, decreasing from 18.34 percent to 17.15 percent, as the ultimate total fertility rate increases from 1.6 for alternative III to 2.1 for alternative I. Similarly, while the 25-year actuarial balance varies by only 0.02 percent of taxable payroll, the 75-year actuarial balance varies over a much wider range, from -4.49 percent to -3.40 percent.

During the 25-year period, the effects of the very slight increases in the working-age population on tax income resulting from higher fertility (than that experienced in an alternative scenario) are more than offset by the effects of decreases in female labor force participation and increases in the number of child beneficiaries. Therefore, 25-year program cost as a percentage of taxable payroll increases slightly with higher fertility. For the 75-year long-range period, however, changes in fertility have a relatively greater effect on the working-age population than on the beneficiary population. As a result, an increase in fertility significantly reduces the cost rate. Each increase of 0.1 in the ultimate total fertility rate increases (improves) the long-range actuarial balance by about 0.22 percent of taxable payroll.

2. Death Rates

Table VI.D2 shows selected measures of OASDI actuarial status on the basis of alternative II with three different assumptions about future reductions in death rates for the period from 2034 to 2099. These assumptions are described in section V.A.2. Under the Trustees' assumptions, the age-sex-adjusted death rates[1] decline at average annual rates of 0.28 percent, 0.73 percent, and 1.21 percent for alternatives I, II, and III, respectively.

Table VI.D2.—Sensitivity of OASDI Measures to Death-Rate Assumptions
[As a percentage of taxable payroll]

Valuation period	Average annual death-rate reduction[a] [b]		
	0.28 percent	0.73 percent	1.21 percent
Summarized income rate:			
25-year: 2025-49	14.24	14.24	14.24
50-year: 2025-74	13.86	13.88	13.90
75-year: 2025-99	13.75	13.79	13.83
Summarized cost rate:			
25-year: 2025-49	16.69	16.91	17.18
50-year: 2025-74	16.77	17.28	17.87
75-year: 2025-99	16.85	17.61	18.44
Actuarial balance:			
25-year: 2025-49	-2.45	-2.67	-2.94
50-year: 2025-74	-2.91	-3.40	-3.97
75-year: 2025-99	-3.10	-3.82	-4.61
Annual balance for 2099	-3.32	-4.84	-6.31
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The average annual death-rate reduction is the average annual geometric rate of decline in the age-sex-adjusted death rate for the period from 2034 to 2099.
[b] The death-rate reductions used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

The variation in cost for the 25-year period is less pronounced than the variation for the 75-year period because decreases in death rates have cumulative effects. The 25-year cost rate increases from 16.69 percent (for an average annual death-rate reduction of 0.28 percent from 2034 to 2099) to 17.18 percent (for an average annual death-rate reduction of 1.21 percent from 2034 to 2099). The 75-year cost rate increases from 16.85 percent to 18.44 percent. The actuarial balance decreases from -2.45 percent to -2.94 percent for the 25-year period, and from -3.10 percent to -4.61 percent for the 75-year period.

Lower death rates raise both the income (through increased taxable payroll) and the cost of the OASDI program. The relative increase in cost, however,

[1] Based on the enumerated total population as of April 1, 2010, if that population were to experience the death rates by age and sex for the selected year.

exceeds the relative increase in taxable payroll. For any given year, reductions in the death rates for people who are age 62 and over (ages at which death rates are the highest) increase the number of retired-worker beneficiaries (and, therefore, the amount of retirement benefits paid) without adding significantly to the number of covered workers (and, therefore, to the taxable payroll). Reductions in death rates for people between ages 50 and 61 result in significant increases to the taxable payroll. However, those increases are not large enough to offset the sum of the additional future retirement benefits once they retire and the disability benefits paid to additional beneficiaries at these pre-retirement ages, which are ages of high disability incidence. At ages under 50, death rates are so low that even substantial reductions in death rates do not result in significant increases in the numbers of covered workers or beneficiaries. Consequently, if death rates decline by about the same relative amount for all ages, the cost increases faster than the rate of growth in payroll, which results in higher cost rates and lower actuarial balances. Each additional 0.1-percentage-point increase in the average annual rate of decline in the death rate decreases (worsens) the long-range actuarial balance by about 0.16 percent of taxable payroll.

3. Immigration

Table VI.D3 shows selected measures of OASDI actuarial status under alternative II with three different assumptions about the magnitude of total net immigration (sum of net lawful permanent resident immigration and net temporary or unlawfully present immigration). See section V.A.3 for more information on immigration assumptions and methods. Under the Trustees' assumptions, total net annual immigration averages 833,000 persons, 1,253,000 persons, and 1,696,000 persons for the period 2035 through 2099 under alternatives III, II, and I, respectively.

Table VI.D3.—Sensitivity of OASDI Measures to Total Net Immigration Assumptions
[As a percentage of taxable payroll]

Valuation period	Average annual total net immigration[a] [b]		
	833,000	1,253,000	1,696,000
Summarized income rate:			
25-year: 2025-49	14.28	14.24	14.20
50-year: 2025-74	13.92	13.88	13.84
75-year: 2025-99	13.84	13.79	13.74
Summarized cost rate:			
25-year: 2025-49	17.19	16.91	16.62
50-year: 2025-74	17.68	17.28	16.89
75-year: 2025-99	18.11	17.61	17.14
Actuarial balance:			
25-year: 2025-49	-2.91	-2.67	-2.42
50-year: 2025-74	-3.76	-3.40	-3.05
75-year: 2025-99	-4.28	-3.82	-3.40
Annual balance for 2099	-5.72	-4.84	-4.12
Year of combined trust fund reserve depletion	2034	2034	2034

[a] Average annual total net immigration is the annual total net immigration to the Social Security area, including both LPR immigration and temporary or unlawfully present immigration, averaged for 2035 through 2099.
[b] The total net immigration assumptions used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

For all three periods, when total net immigration increases, the cost rate decreases. For the 25-year period, the cost rate decreases from 17.19 percent of taxable payroll (for an average annual total net immigration level of 833,000 persons for 2035 through 2099) to 16.62 percent (for an average annual total net immigration level of 1,696,000 persons for 2035 through 2099). For the 50-year period, it decreases from 17.68 percent to 16.89 percent, and for the 75-year period, it decreases from 18.11 percent to 17.14 percent. The actuarial balance increases from -2.91 percent to -2.42 percent for the 25-year period, from -3.76 percent to -3.05 percent for the 50-year period, and from -4.28 percent to -3.40 percent for the 75-year period.

The cost rate decreases with an increase in total net immigration because immigration occurs at relatively young ages, thereby increasing the numbers of covered workers earlier than the numbers of beneficiaries. Increasing average annual total net immigration by 100,000 persons increases (improves) the long-range actuarial balance by about 0.10 percent of taxable payroll.

4. Real Wage Growth

Table VI.D4 shows selected measures of OASDI actuarial status on the basis of alternative II with three different assumptions about the real growth rate in

the average annual wage in OASDI covered employment. Under the Trustees' assumptions, the average annual real growth rate in the average wage in covered employment from 2034 to 2099 is 0.53 percent, 1.13 percent, and 1.73 percent under alternatives III, II, and I, respectively.

Table VI.D4.—Sensitivity of OASDI Measures to Real Wage Growth Assumptions
[As a percentage of taxable payroll]

Valuation period	Average annual real wage growth[a b]		
	0.53	1.13	1.73
Summarized income rate:			
25-year: 2025-49	14.35	14.24	14.13
50-year: 2025-74	14.02	13.88	13.74
75-year: 2025-99	13.95	13.79	13.64
Summarized cost rate:			
25-year: 2025-49	17.74	16.91	16.08
50-year: 2025-74	18.50	17.28	16.09
75-year: 2025-99	18.98	17.61	16.27
Actuarial balance:			
25-year: 2025-49	-3.40	-2.67	-1.95
50-year: 2025-74	-4.48	-3.40	-2.35
75-year: 2025-99	-5.03	-3.82	-2.64
Annual balance for 2099	-6.94	-4.84	-3.01
Year of combined trust fund reserve depletion	2033	2034	2035

[a] The average annual real wage growth is the average annual real growth rate in the average wage in OASDI covered employment from 2034 to 2099.
[b] The real wage growth assumptions used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

For the 25-year period, the cost rate decreases from 17.74 percent (for a real growth rate in the average wage in OASDI covered employment of 0.53 percent) to 16.08 percent (for a real growth rate of 1.73 percent). For the 50-year period, it decreases from 18.50 percent to 16.09 percent, and for the 75-year period it decreases from 18.98 percent to 16.27 percent. The actuarial balance increases from -3.40 percent to -1.95 percent for the 25-year period, from -4.48 percent to -2.35 percent for the 50-year period, and from -5.03 percent to -2.64 percent for the 75-year period.

The cost rate decreases with increasing real wage growth. Higher wages increase taxable payroll immediately, but they increase benefit levels only gradually as new beneficiaries become entitled. In addition, cost-of-living adjustments (COLA) to benefits depend not on changes in wages, but on changes in prices. Each 0.1-percentage-point increase in real wage growth increases (improves) the long-range actuarial balance by about 0.20 percent of taxable payroll.

5. Consumer Price Index

Table VI.D5 shows selected measures of OASDI actuarial status on the basis of alternative II with three different assumptions about the rate of increase for the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI). Under the Trustees' assumptions, the annual increase in the CPI is 3.00 percent, 2.40 percent, and 1.80 percent under alternatives I, II, and III, respectively. These ultimate rates of increase are reached by 2027 under all three alternatives.

Table VI.D5.—Sensitivity of OASDI Measures to CPI-Increase Assumptions
[As a percentage of taxable payroll]

Valuation period	Ultimate annual increase in CPI[a]		
	3.00	2.40	1.80
Summarized income rate:			
25-year: 2025-49	14.22	14.24	14.26
50-year: 2025-74	13.87	13.88	13.89
75-year: 2025-99	13.77	13.79	13.80
Summarized cost rate:			
25-year: 2025-49	16.81	16.91	17.01
50-year: 2025-74	17.15	17.28	17.42
75-year: 2025-99	17.46	17.61	17.77
Actuarial balance:			
25-year: 2025-49	-2.58	-2.67	-2.75
50-year: 2025-74	-3.28	-3.40	-3.53
75-year: 2025-99	-3.69	-3.82	-3.97
Annual balance for 2099	-4.67	-4.84	-5.03
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The CPI assumptions used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

For all three periods, the cost rate increases when the assumed rates of increase in the CPI are smaller. For the 25-year period, the cost rate increases from 16.81 percent (for a CPI increase of 3.00 percent) to 17.01 percent (for a CPI increase of 1.80 percent). For the 50-year period, it increases from 17.15 percent to 17.42 percent, and for the 75-year period, it increases from 17.46 percent to 17.77 percent. The actuarial balance decreases from -2.58 percent to -2.75 percent for the 25-year period, from -3.28 percent to -3.53 percent for the 50-year period, and from -3.69 percent to -3.97 percent for the 75-year period.

The time lag between the effects of the CPI changes on taxable payroll and on scheduled benefits explains these patterns. When the rate of increase in the CPI is greater and real wage growth is constant, then: (1) the effect on taxable payroll due to a greater rate of increase in average wages occurs immediately and (2) the effect on benefits due to a larger COLA occurs with

a lag of about 1 year. As a result of these effects, the higher taxable payrolls have a stronger effect than the higher benefits, which results in lower cost rates. Each 0.1-percentage-point decrease in the rate of the change in the CPI decreases (worsens) the long-range actuarial balance by about 0.02 percent of taxable payroll.

6. Real Interest Rate

Table VI.D6 shows selected measures of OASDI actuarial status under alternative II with three different assumptions about the annual real interest rate (compounded semiannually) for special public-debt obligations issuable to the trust funds. Under the Trustees' assumptions, the ultimate annual real interest rate is 1.8 percent, 2.3 percent, and 2.8 percent under alternatives III, II, and I, respectively. These ultimate rates are reached by 2042 under all three alternatives. In each case, the ultimate annual increase in the CPI is 2.40 percent, which is consistent with alternative II. Therefore, the ultimate annual yields are 4.2, 4.8, and 5.3 percent, respectively.

Table VI.D6.—Sensitivity of OASDI Measures to Real Interest Rate Assumptions
[As a percentage of taxable payroll]

Valuation period	Ultimate annual real interest rate[a] [b]		
	1.8 percent	2.3 percent	2.8 percent
Summarized income rate:			
25-year: 2025-49	14.20	14.24	14.28
50-year: 2025-74	13.84	13.88	13.92
75-year: 2025-99	13.74	13.79	13.83
Summarized cost rate:			
25-year: 2025-49	16.96	16.91	16.85
50-year: 2025-74	17.39	17.28	17.18
75-year: 2025-99	17.76	17.61	17.47
Actuarial balance:			
25-year: 2025-49	-2.76	-2.67	-2.58
50-year: 2025-74	-3.55	-3.40	-3.26
75-year: 2025-99	-4.01	-3.82	-3.64
Annual balance for 2099	-4.84	-4.84	-4.84
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The annual real interest rate is the effective annual yield on reserves held by the trust funds divided by the annual rate of growth in the CPI.
[b] The real interest rate assumptions used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

For the 25-year period, the cost rate decreases with increasing real interest rates from 16.96 percent (for an ultimate real interest rate of 1.8 percent) to 16.85 percent (for an ultimate real interest rate of 2.8 percent). For the 50-year period, it decreases from 17.39 percent to 17.18 percent and, for the 75-year period, it decreases from 17.76 percent to 17.47 percent. The actuar-

ial balance increases from -2.76 percent to -2.58 percent for the 25-year period, from -3.55 percent to -3.26 percent for the 50-year period, and from -4.01 percent to -3.64 percent for the 75-year period. A relatively higher real interest rate has the effect of discounting more distant future years relatively more. To the extent that annual cost rates and annual deficits are larger in later years, a higher interest rate decreases the summarized rates, and a lower interest rate increases the summarized rates. Each 0.1-percentage-point increase in the real interest rate increases (improves) the long-range actuarial balance by about 0.04 percent of taxable payroll.

7. Taxable Ratio

Table VI.D7 shows selected measures of OASDI actuarial status under alternative II with three different assumptions about the ratio of taxable payroll to OASDI covered earnings (the taxable ratio). Note that covered earnings are the sum of wages and net self-employment earnings covered by Social Security, and taxable payroll is essentially the amount of covered earnings subject to the Social Security payroll tax up to the contribution and benefit base ($176,100 for 2025). Under the Trustees' assumptions, the taxable ratio at the end of the short-range period (2034) is 81.0 percent, 82.5 percent, and 84.0 percent under alternatives III, II, and I, respectively.[1]

Table VI.D7.—Sensitivity of OASDI Measures to Taxable Ratio Assumptions
[As a percentage of taxable payroll]

Valuation period	Taxable ratio in 2034[a] [b]		
	81.0 percent	82.5 percent	84.0 percent
Summarized income rate:			
25-year: 2025-49	14.27	14.24	14.21
50-year: 2025-74	13.90	13.88	13.86
75-year: 2025-99	13.80	13.79	13.77
Summarized cost rate:			
25-year: 2025-49	17.14	16.91	16.67
50-year: 2025-74	17.51	17.28	17.06
75-year: 2025-99	17.81	17.61	17.42
Actuarial balance:			
25-year: 2025-49	-2.88	-2.67	-2.46
50-year: 2025-74	-3.60	-3.40	-3.20
75-year: 2025-99	-4.01	-3.82	-3.65
Annual balance for 2099	-4.96	-4.84	-4.73
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The taxable ratio is the ratio of taxable payroll to OASDI covered earnings. These concepts are described in further detail in section V.C.6 of this report.
[b] The taxable ratio assumptions used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

[1] The taxable ratio drifts down slightly after 2034, to 80.7, 82.3, and 84.0 percent for 2099 under alternatives III, II, and I, respectively, as self-employment income (which has a lower percent taxable than wages) becomes an increasing share of total earnings.

Because the combined employee-employer tax rate of 12.4 percent is unchanged across all alternatives, the income rate changes a relatively small amount as the taxable ratio increases, due to changes in taxation of benefits and the initial fund as a percentage of taxable payroll.

For the 25-year period, the cost rate decreases with increasing taxable ratios, from 17.14 percent (for a taxable ratio in 2034 of 81.0 percent) to 16.67 percent (for a taxable ratio in 2034 of 84.0 percent). For the 50-year period, it decreases from 17.51 percent to 17.06 percent and, for the 75-year period, it decreases from 17.81 percent to 17.42 percent. The actuarial balance increases from -2.88 percent to -2.46 percent for the 25-year period, from -3.60 percent to -3.20 percent for the 50-year period, and from -4.01 percent to -3.65 percent for the 75-year period.

The cost rate decreases with an increase in taxable payroll because the increase in taxable payroll occurs immediately. The increase in benefit amounts occurs much more gradually as new beneficiaries become entitled. In addition, the change in the taxable ratio does not affect COLAs or the national average wage index. Each 1.0 percentage-point increase in the taxable ratio in 2034 increases (improves) the long-range actuarial balance by about 0.12 percent of taxable payroll.

8. Disability Incidence Rates

Table VI.D8 shows selected measures of OASDI actuarial status on the basis of alternative II with three different assumptions about future disability incidence rates. Under the Trustees' assumptions, the ultimate age-sex-adjusted[1] incidence rate is 3.7, 4.6, and 5.5 awards per thousand exposed for alternatives I, II, and III, respectively. These ultimate rates are reached by 2034 under all three alternatives. Under the Trustees' assumptions, incidence rates by age and sex for all three alternatives vary during the early years of the projection period before reaching their long-term average values.

[1] Age-sex-adjusted to the disability-exposed population as of the year 2000.

Table VI.D8.—Sensitivity of OASDI Measures to Disability Incidence Assumptions
[As a percentage of taxable payroll]

Valuation period	Ultimate disability incidence rate[a] 3.7	4.6	5.5
Summarized income rate:			
25-year: 2025-49	14.23	14.24	14.25
50-year: 2025-74	13.87	13.88	13.89
75-year: 2025-99	13.77	13.79	13.80
Summarized cost rate:			
25-year: 2025-49	16.61	16.91	17.19
50-year: 2025-74	16.94	17.28	17.62
75-year: 2025-99	17.25	17.61	17.97
Actuarial balance:			
25-year: 2025-49	-2.38	-2.67	-2.94
50-year: 2025-74	-3.07	-3.40	-3.73
75-year: 2025-99	-3.48	-3.82	-4.17
Annual balance for 2099	-4.42	-4.84	-5.36
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The disability incidence rates used for this analysis are consistent with those assumed for the three alternative scenarios. All other assumptions used for this analysis are from alternative II.

For the 25-year period, the cost rate increases with increasing disability incidence rates, from 16.61 percent (for the relatively low rates assumed for alternative I) to 17.19 percent (for the relatively high rates assumed for alternative III). For the 50-year period, it increases from 16.94 percent to 17.62 percent, and for the 75-year period, it increases from 17.25 percent to 17.97 percent. The actuarial balance decreases from -2.38 percent to -2.94 percent for the 25-year period, from -3.07 percent to -3.73 percent for the 50-year period, and from -3.48 percent to -4.17 percent for the 75-year period. Each increase in the ultimate disability incidence rate of 0.1 award per thousand exposed decreases (worsens) the long-range actuarial balance by about 0.04 percent of taxable payroll.

9. Disability Termination Rates

Table VI.D9 shows selected measures of OASDI actuarial status on the basis of alternative II with three different assumptions about future disability termination rates, including deaths and recoveries.

Under the Trustees' assumptions, death termination rates for disabled-worker beneficiaries for all three alternatives decline throughout the long-range period. The age-sex-adjusted death termination rate[1] of 26.3 deaths per thousand disabled-worker beneficiaries in 2024 declines to 21.4, 12.2, and 6.1

[1] Age-sex-adjusted to the disabled-worker population as of the year 2000.

deaths per thousand in 2099 for alternatives I, II, and III, respectively. These levels are about 19 percent, 54 percent, and 77 percent lower, respectively, than the level in 2024. For this sensitivity analysis, total population death rates by age and sex are assumed to be the same as those used for the alternative II assumptions.

The age-sex-adjusted recovery termination rate[1] used for this analysis averages 13.0 recoveries per thousand disabled-worker beneficiaries for the alternative I assumptions, 10.8 recoveries per thousand disabled-worker beneficiaries for the alternative II assumptions, and 8.6 recoveries per thousand disabled-worker beneficiaries for the alternative III assumptions, for the period 2035 through 2099.

Table VI.D9.—Sensitivity of OASDI Measures to Disability Termination Assumptions
[As a percentage of taxable payroll]

Valuation period	Disability termination rates (death; recovery)[a] 21.4; 13.0	12.2; 10.8	6.1; 8.6
Summarized income rate:			
25-year: 2025-49	14.24	14.24	14.24
50-year: 2025-74	13.88	13.88	13.88
75-year: 2025-99	13.78	13.79	13.79
Summarized cost rate:			
25-year: 2025-49	16.85	16.91	16.95
50-year: 2025-74	17.21	17.28	17.34
75-year: 2025-99	17.53	17.61	17.68
Actuarial balance:			
25-year: 2025-49	-2.61	-2.67	-2.71
50-year: 2025-74	-3.33	-3.40	-3.46
75-year: 2025-99	-3.74	-3.82	-3.89
Annual balance for 2099	-4.70	-4.84	-5.01
Year of combined trust fund reserve depletion	2034	2034	2034

[a] The disability termination rates used for this analysis are consistent with those assumed for the three alternative scenarios. The disability termination death rates are the rates for 2099. The disability termination recovery rates are the average rates for 2035 through 2099. All other assumptions used for this analysis are from alternative II.

For the 25-year period, the cost rate increases with decreasing disability termination rates, from 16.85 percent (for the relatively high termination rates assumed for alternative I) to 16.95 percent (for the relatively low termination rates assumed for alternative III). For the 50-year period, it increases from 17.21 percent to 17.34 percent, and for the 75-year period, it increases from 17.53 percent to 17.68 percent. The actuarial balance decreases from -2.61 percent to -2.71 percent for the 25-year period, from -3.33 percent to -3.46 percent for the 50-year period, and from -3.74 percent to -3.89 percent for the 75-year period.

[1] Age-sex-adjusted to the disabled-worker population as of the year 2000.

E. STOCHASTIC PROJECTIONS AND UNCERTAINTY

Significant uncertainty surrounds the estimates under the intermediate assumptions, especially for a period as long as 75 years. This appendix presents stochastic projections, a way to illustrate the uncertainty of these estimates. The stochastic projections supplement the traditional methods of examining such uncertainty.

1. Background

The Trustees have traditionally shown estimates using the low-cost and high-cost sets of specified assumptions to illustrate the potential implications of uncertainty. These low-cost and high-cost estimates provide a range of possible outcomes for the projections. However, they do not provide an indication of the probability that actual future experience will be inside or outside this range. This appendix presents the results of a stochastic model that estimates a probability distribution of future outcomes of the financial status of the combined OASI and DI Trust Funds. This model was introduced in the 2003 report and enhanced in the 2021 report to include parameter uncertainty for the expected mean for the key variables described in the next section.

2. Stochastic Methodology

Other sections of this report provide estimates of the financial status of the combined OASI and DI Trust Funds using a scenario-based model. For the scenario-based model, the Trustees use three alternative scenarios (low-cost, intermediate, and high-cost) that use specific assumptions for key variables. In general, the Trustees assume that each of these variables will reach an ultimate value at a specific point during the long-range period, and will maintain that value throughout the remainder of the period. The three alternative scenarios assume separate, specified values for each of these variables. Chapter V contains more details about each of these assumptions.

This appendix presents estimates of the probability that key measures of OASDI solvency will fall in certain ranges, based on 5,000 independent stochastic simulations. Each simulation allows key variables to vary throughout the long-range period. These key variables include total fertility rates, changes in mortality rates, new arrival lawful permanent resident (LPR) immigration levels, temporary or unlawfully present immigration levels, rates of adjustment of status (from temporary or unlawfully present to LPR), rates of legal emigration (from the population of citizens and LPRs), changes in the Consumer Price Index, changes in average real wages, unemployment rates, trust fund real yield rates, and disability incidence and recovery rates.

The fluctuation of each variable over time is simulated using historical data and standard time-series techniques. Generally, each variable is modeled using an equation that: (1) captures a relationship between current and prior years' values of the variable, and (2) introduces random variation based on variation observed in the historical period. For some variables, the equations also reflect relationships with other variables. The equations contain parameters that are estimated using historical data for periods from about 25 years to over 100 years, depending on the nature and quality of the available data. Each time-series equation is designed so that, in the absence of random variation over time, the value of the variable for each year equals its value for the intermediate scenario.[1]

For each equation in a given simulation, the stochastic model assigns random variation to (1) year-by-year error term values and (2) simulation-specific mean term levels that provide variation in the central tendency across simulations. Each simulation produces estimates for all key variables and for the overall financial status of the combined OASI and DI Trust Funds. This appendix shows the distribution of results from 5,000 simulations of the model.

Readers should interpret the results from this model with an understanding of the model's limitations. Results are sensitive to equation specifications, degrees of interdependence among variables, and the historical periods used for estimating model coefficients. For some variables, recent historical variation may not provide a realistic representation of the potential variation for the future. Also, results would differ if additional variables (such as labor force participation rates, retirement rates, marriage rates, and divorce rates) were also allowed to vary randomly. Time-series modeling reflects only what occurred in the historical period. Future uncertainty exists not only for the underlying central tendency but also for the frequency and size of occasional longer-term shifts in the central tendency. Many experts predict, and history suggests, that the future will likely bring substantial shifts that are not fully reflected in the historical period used for the current model. As a result, readers should understand that the true range of uncertainty might be larger than indicated in this appendix.

3. Stochastic Results

This section illustrates the results for the stochastic simulations of two fundamental measures of actuarial status: annual cost rates and trust fund ratios.

[1] More detail on this model is available at www.ssa.gov/OACT/NOTES/pdf_studies/study128.pdf.

The latter measure is highlighted in section II.D of this report. Section 4 of this appendix follows with a comparison of stochastic results to results from the alternative scenarios for these and other measures, and an analysis of the differences.

Figure VI.E1 displays the probability distribution of the year-by-year OASDI cost rates (that is, cost as a percentage of taxable payroll). The range of the annual cost rates widens as the projections move further into the future, which reflects increasing uncertainty. The figure includes only the income rate for the intermediate scenario rather than the probability distribution of the year-by-year income rates, because there is relatively little variation in income rates across the 5,000 stochastic simulations. The two outermost cost rate lines in this figure indicate the range within which future annual cost rates are projected to occur 95 percent of the time. In other words, the current model estimates that there is a 2.5 percent probability that the cost rate for a given year will exceed the upper end of this range and a 2.5 percent probability that it will fall below the lower end of this range. Other lines in the figure delineate the range within which future annual cost rates are projected to occur 80 percent of the time and the median cost rate. The median (50th percentile) cost rate for each year is the rate for which half of the simulated outcomes are higher and half are lower for that year. These lines do not represent the results of individual stochastic simulations. Instead, for each given year, they represent the percentile distribution of annual cost rates based on all stochastic simulations for that year.

Figure VI.E1.—Long-Range OASI and DI Combined Cost Rates From Stochastic Modeling

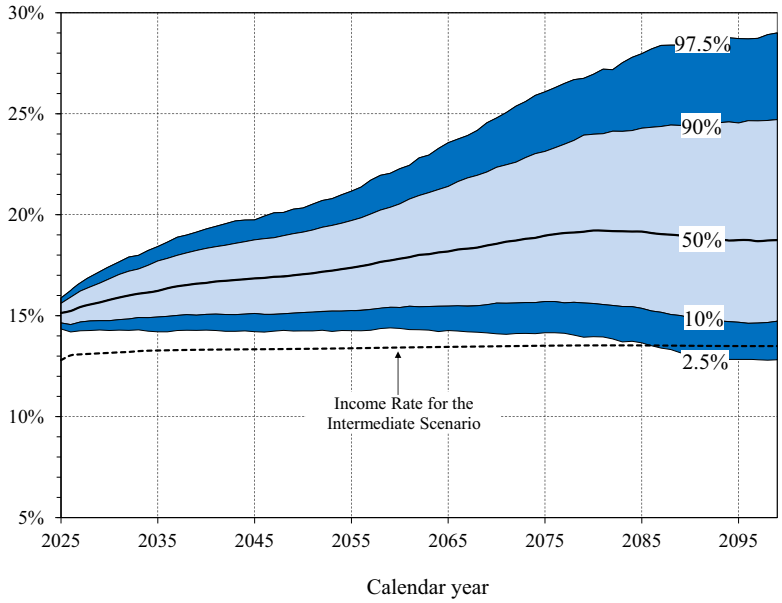
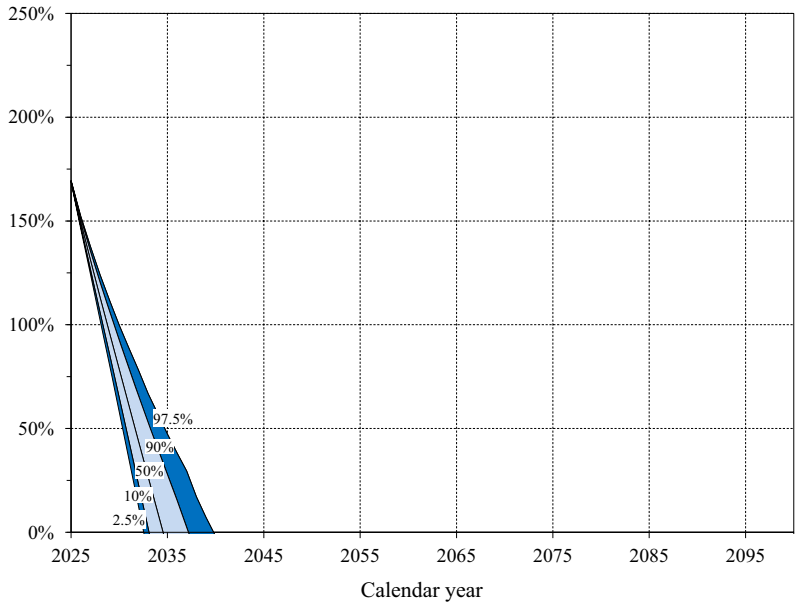


Figure VI.E2 presents the simulated probability distribution of the annual trust fund ratios for the combined OASI and DI Trust Funds. The lines in this figure display the median set (50th percentile) of estimated annual trust fund ratios and delineate the 95-percent and 80-percent ranges estimated for future annual trust fund ratios. Again, none of these lines represent the path of a single simulation. For each given year, they represent the percentile distribution of trust fund ratios based on all stochastic simulations for that year.

Figure VI.E2 shows that for 95 percent of the stochastic simulations, the trust fund reserve depletion year falls in the range from 2032 to 2039, early in the 75-year projection period. The figure also shows that there is a 50-percent probability of trust fund reserve depletion by the end of 2034 (the median reserve depletion year). The median reserve depletion date is in mid-2034; the reserve depletion date for the intermediate scenario is also in mid-2034.

Figure VI.E2.—Long-Range OASI and DI Combined Trust Fund Ratios From Stochastic Modeling



4. Comparison of Results: Stochastic to Low-Cost, Intermediate, and High-Cost Alternative Scenarios

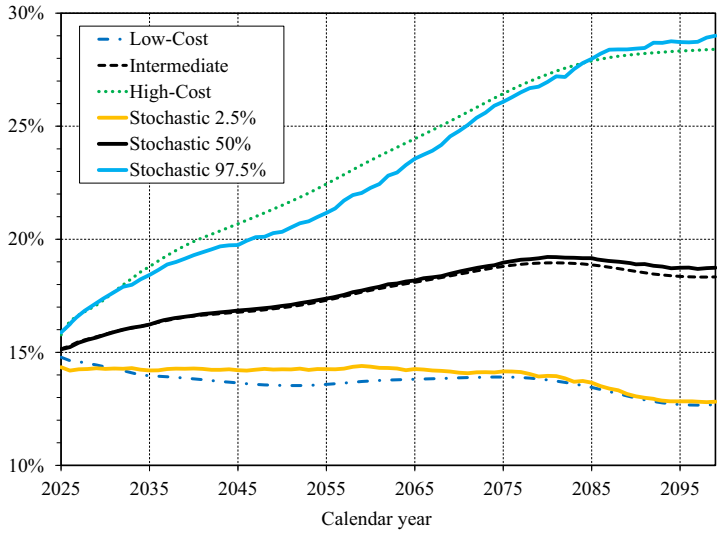
This section compares results from two different approaches for illustrating ranges of uncertainty in measures of trust fund actuarial status. One approach uses results from the low-cost, intermediate, and high-cost alternative scenarios. The other approach uses distributions of results from the stochastic simulations. Each of these approaches provides insights into uncertainty. Comparing the results requires an understanding of fundamental differences in the approaches.

One fundamental difference relates to the presentation of distributional results. Figure VI.E3 shows projected OASDI annual cost rates for the low-cost, intermediate, and high-cost alternative scenarios along with the annual cost rates at the 2.5th percentile, 50th percentile, and 97.5th percentile for the stochastic simulations. While all values on each line for the alternative scenarios are results from a single specified scenario, the values on each stochastic line may be results from different simulations for different years. The one stochastic simulation (from the 5,000 simulations) that yields results

closest to a particular percentile for one projected year may yield results that are distant from that percentile in another projected year.

Results for both the set of alternative scenarios and the set of stochastic simulations suggest that the range of potential cost rates above the central levels (those for the intermediate scenario and for the stochastic median, respectively) is larger than the range below these central results. The difference between the central results and the higher cost levels (the high-cost alternative scenario and the upper end of the 95-percent stochastic simulation range, respectively) is about 1.6 to 1.8 times as large as the difference between the central and lower cost levels for both models by the end of the projection period.

Figure VI.E3.—OASI and DI Combined Cost Rates: Comparison of Stochastic to Low-Cost, Intermediate, and High-Cost Alternative Scenarios
[As a percentage of taxable payroll]



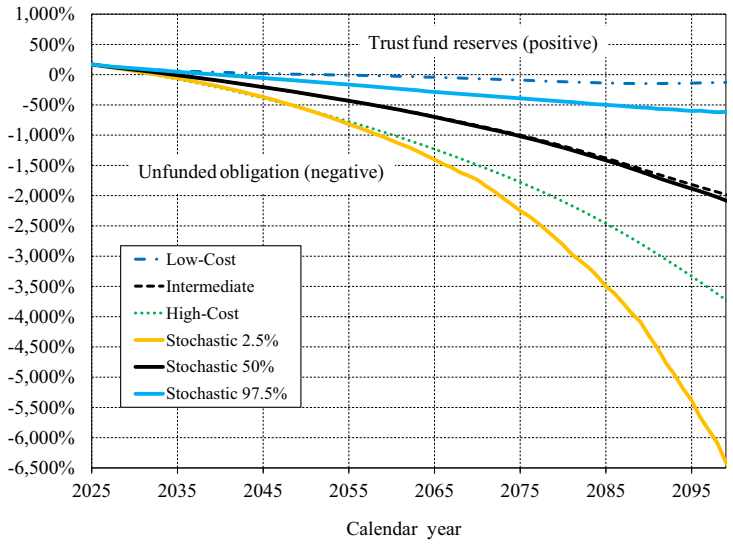
Another fundamental difference between the alternative scenarios and the stochastic simulations is the method of assigning values for assumptions. For the alternative scenarios, specific values are assigned for each of the key demographic, economic, and program-specific variables. The high-cost alternative scenario uses parameter values that increase estimated annual cost as a percentage of payroll, while the low-cost alternative scenario uses parameter values that decrease annual cost as a percentage of payroll. (One parameter,

the interest rate, has no effect on annual cost as a percentage of payroll for either the alternative scenarios or the stochastic simulations.) In contrast, the stochastic method independently assigns random variation to each of the key demographic, economic, and program-specific variables for each year in each of the 5,000 stochastic simulations. The assigned values for different variables result in varying, and often offsetting, effects on projected cost as a percentage of payroll, with some tending toward higher cost and some tending toward lower cost. This difference tends to narrow the range of cost as a percentage of payroll across the 95-percent stochastic simulation range, relative to the range for the alternative scenarios.

It is important to understand that, in general, the stochastic model's 95-percent range for a summary measure of trust fund finances would tend to be narrower than the range produced for the low-cost and high-cost alternative scenarios, even if the stochastic model's 95-percent range for annual cost rates were identical to the range defined by the low-cost and high-cost scenarios. This is true because summary measures of trust fund finances depend on cost rates for many years, and the probability that annual cost rates, on average for individual stochastic simulations, will be at least as low (high) as the 2.5th (97.5th) percentile line is significantly lower than 2.5 percent. As a result, the relationship between the ranges presented for annual cost rates and summary measures of trust fund finances is fundamentally different for the stochastic model than it is for the low-cost and high-cost alternative scenarios.

Figure VI.E4 compares the ranges of trust fund (unfunded obligation) ratios for the alternative scenarios to the 95-percent range of the stochastic simulations. This figure extends figure VI.E2 to show unfunded obligation ratios, expressed as negative values below the zero percent line. An unfunded obligation ratio is the ratio of the unfunded obligation accumulated through the beginning of the year to the cost for that year.

Figure VI.E4.—OASI and DI Combined Trust Fund (Unfunded Obligation) Ratios: Comparison of Stochastic to Low-Cost, Intermediate, and High-Cost Alternative Scenarios[a]
[Trust fund reserves (unfunded obligation) as a percentage of annual cost]



[a] An unfunded obligation, shown as a negative value in this figure, is equivalent to the amount the trust funds would need to have borrowed to date in order to pay all scheduled benefits (on a timely basis) after trust fund reserves are depleted. Note that current law does not permit the trust funds to borrow.

As mentioned above, a summary measure that accumulates annual values tends to smooth the kind of annual fluctuations that occur in stochastic simulations. Therefore, one might expect the stochastic range for trust fund (unfunded obligation) ratios to be narrower and fall within the range seen across the high-cost and low-cost alternative scenarios, as it does for the actuarial balance measure (as shown in table VI.E1, below). But this is not the case, largely due to the way interest rates are assigned.

For the stochastic model, real interest rates for each simulation are assigned to be essentially independent of other variables, so the rate for compounding of trust fund reserves (unfunded obligations) is essentially uncorrelated with the level of cost as a percentage of payroll. On the other hand, real interest rates are assigned to be higher for the low-cost alternative scenario and lower for the high-cost alternative scenario. High interest rates raise the level of the positive trust fund ratio in the low-cost alternative scenario somewhat, but this effect is limited because the magnitude of reserves is small. However, low interest rates substantially reduce the magnitude of the unfunded obligation ratio for the high-cost alternative scenario because the magnitude of

unfunded obligations is relatively large. As a result, the trust fund (unfunded obligation) ratios are shifted, albeit unevenly, higher (or less negative) for both the high-cost and low-cost alternative scenarios relative to those of the stochastic simulations.

This interest rate effect on the alternative scenarios is not as evident for some other summary measures of actuarial status, such as the actuarial balance. Because the actuarial balance reflects the cumulative effects of interest in both its numerator and denominator, the interest rate effect is much less pronounced. In contrast, cumulative interest affects only the numerator of the trust fund (unfunded obligation) ratio. There is also no significant interest rate effect on the trust fund depletion date.

Other factors also contribute, to varying degrees, to the difference in ranges between the results of the alternative scenarios and the stochastic simulations. The contrasts in results and methods do not mean that either approach to illustrating ranges of uncertainty is superior to the other. The ranges are different and explainable.

Table VI.E1 displays long-range actuarial estimates for the combined OASDI program using the two methods of illustrating uncertainty: alternative scenarios and stochastic simulations. The table shows scenario-based estimates for the intermediate, low-cost, and high-cost assumptions. It also shows stochastic estimates for the median (50th percentile) and for the 80-percent and 95-percent ranges. Each individual stochastic estimate in the table is the level at that percentile from the distribution of the 5,000 simulations. For each given percentile, the values in the table for each long-range actuarial measure are generally from different stochastic simulations.

The median stochastic estimates displayed in table VI.E1 are similar to the intermediate scenario-based estimates. The median estimate of the long-range actuarial balance is -3.80 percent of taxable payroll, about 0.02 percentage point higher (less negative) than projected in the intermediate scenario. The median estimate for the open-group unfunded obligation is $24.8 trillion, about $0.3 trillion less than the estimate in the intermediate scenario. The median first projected year for which cost exceeds non-interest income (as it did in 2010 through 2024), and remains in excess of non-interest income throughout the remainder of the long-range period, is 2025. This is the same year as projected in the intermediate scenario. The median projected date at which trust fund reserves first become depleted is in mid-2034; the reserve depletion date for the intermediate scenario is also in mid-2034. The median estimates of the annual cost rate for the 75th year of the projection period are 18.74 percent of taxable payroll and 6.21 percent of gross

domestic product (GDP). The comparable estimates in the intermediate scenario are 18.34 percent of payroll and 6.08 percent of GDP.

For three measures in table VI.E1 (the actuarial balance, the first projected year cost exceeds non-interest income and remains in excess through 2099, and the first year trust fund reserves become depleted), the 95-percent stochastic range falls within the range defined by the low-cost and high-cost scenarios. For the remaining three measures (the open-group unfunded obligation, the annual cost in the 75th year as a percentage of taxable payroll, and the annual cost in the 75th year as a percentage of GDP), one or both of the bounds of the 95-percent stochastic range fall outside the range defined by the low-cost and high-cost scenarios.

Table VI.E1.—Long-Range Estimates Relating to the Actuarial Status of the Combined OASDI Program
[Comparison of scenario-based and stochastic results]

	Traditional scenario-based model			Stochastic model				
				Median	80-percent range		95-percent range	
	Interme-diate	Low-cost	High-cost	50th percentile	10th percentile	90th percentile	2.5th percentile	97.5th percentile
Actuarial balance	-3.82	-0.33	-8.60	-3.80	-5.73	-2.22	-7.00	-1.36
Open-group unfunded obligation (in trillions)	$25.1	$1.5	$46.5	$24.8	$12.4	$46.3	$7.6	$62.9
First projected year cost exceeds non-interest income and remains in excess through 2099	2025	[a]	2025	2025	2025	2025	2025	[b]
First year trust fund reserves become depleted [c]	2034	2051	2032	2034	2033	2037	2032	2039
Annual cost in 75th year (percent of taxable payroll)	18.34	12.69	28.40	18.74	14.72	24.71	12.82	29.00
Annual cost in 75th year (percent of GDP)	6.08	4.63	8.57	6.21	4.90	8.12	4.28	9.47

[a] Cost is projected to exceed non-interest income for a temporary period, before falling below non-interest income by the end of the projection period.
[b] Cost does not exceed non-interest income in 2099.
[c] For some stochastic simulations, the first year in which trust fund reserves become depleted does not indicate a permanent depletion of reserves.

F. INFINITE HORIZON PROJECTIONS

Another measure of trust fund financial status is the infinite horizon unfunded obligation, which takes account of all past and future annual balances, even those after the next 75 years. The extension of the time period past 75 years assumes that the current law for the OASDI program and the demographic and economic trends used for the 75-year projection continue indefinitely.

Table VI.F1 shows that the OASDI open-group unfunded obligation over the infinite horizon is $72.8 trillion in present value, which is $47.7 trillion larger than for the 75-year period. The $47.7 trillion increment reflects a significant financing gap projected for OASDI for years after 2099 into perpetuity. Of course, the degree of uncertainty associated with estimates increases substantially for years further in the future.

The $72.8 trillion infinite horizon open-group unfunded obligation is equal to 5.2 percent of taxable payroll or 1.6 percent of GDP over the same period. These relative measures of the unfunded obligation over the infinite horizon express its magnitude in relation to the resources potentially available to finance the shortfall.

The summarized shortfalls for the 75-year period and through the infinite horizon both reflect annual cash-flow shortfalls for all years after trust fund reserve depletion. The annual shortfalls after trust fund reserve depletion rise slowly and reflect increases in life expectancy. The summarized shortfalls over the infinite horizon, as percentages of taxable payroll and GDP, are larger than the shortfalls for the 75-year period.

To illustrate the magnitude of the projected infinite horizon shortfall, consider that it could be eliminated with additional revenue equivalent to an immediate increase in the combined payroll tax rate from 12.4 percent to about 17.6 percent,[1] or with cost reductions equivalent to an immediate and permanent reduction in benefits for all current and future beneficiaries by about 29.4 percent.

[1] While an increase in the payroll tax rate would cause some behavioral changes in earnings and ensuing changes in benefit levels, such changes are not included in the calculations because they are assumed to have roughly offsetting effects on OASDI actuarial status over the infinite horizon.

Table VI.F1.—Unfunded OASDI Obligations Through the Infinite Horizon and the 75-Year Projection Period, Based on Intermediate Assumptions
[Present values as of January 1, 2025; dollar amounts in trillions]

		Expressed as a percentage of future payroll and GDP	
	Present value	Taxable payroll	GDP
Unfunded obligation through the infinite horizon[a]	$72.8	5.2	1.6
Unfunded obligation through 2099[b]	25.1	3.6	1.3

[a] Present value of future cost less future non-interest income, reduced by the amount of trust fund reserves at the beginning of 2025. Expressed as a percentage of payroll and GDP for the period 2025 through the infinite horizon.
[b] Present value of future cost less future non-interest income through 2099, reduced by the amount of trust fund reserves at the beginning of 2025. Expressed as a percentage of payroll and GDP for the period 2025 through 2099.

Notes:
1. The present values of future taxable payroll for 2025-99 and for 2025 through the infinite horizon are $689.6 trillion and $1,399.5 trillion, respectively.
2. The present values of GDP for 2025-99 and for 2025 through the infinite horizon are $2,001.2 trillion and $4,507.7 trillion, respectively. Present values of GDP shown in the Medicare Trustees Report differ slightly due to the use of discount rates that are specific to each program's trust fund holdings.

Last year, the Trustees projected that the infinite horizon unfunded obligation was $62.8 trillion in present value discounted to January 1, 2024. If the assumptions, methods, and starting values had not changed, moving the valuation date forward by 1 year to January 1, 2025 would have discounted future values by 1 year less, thus increasing the measured unfunded obligation by about $1.6 trillion, to $64.3 trillion. The net effects of changes in assumptions, methods, law, and starting values increased the infinite horizon unfunded obligation by $8.4 trillion. This net increase occurred for a variety of reasons, including the implementation of the Social Security Fairness Act, the extension in the assumed year the ultimate total fertility rate is reached, and the reduction in the ultimate assumption for the ratio of total labor compensation to GDP. See section IV.B.6 for details regarding changes in law, data, methods, and assumptions.

Compared to last year's report, the unfunded obligation over the infinite horizon in this year's report increased by 0.7 percentage point as a share of taxable payroll and by 0.2 percentage point as a share of GDP. The unfunded obligation over the 75-year projection period increased by 0.3 percentage point as a share of taxable payroll and by 0.1 percentage point as a share of GDP.

a. Unfunded Obligations for Past, Current, and Future Participants

Table VI.F2 separates the components of the infinite horizon unfunded obligation (with the exception of General Fund reimbursements) among past, current, and future participants. The table does not separate past General

Fund reimbursements among participants because there is no clear basis for attributing the reimbursements across generations.

Past participants are defined as those no longer alive as of the valuation date. Current participants are those age 15 and older as of 2025. Future participants are those under age 15 or not yet born.

The excess of the present value of cost for past and current participants over the present value of dedicated tax income for past and current participants produces an unfunded obligation for past and current participants of $52.9 trillion. Table VI.F2 also shows an unfunded obligation of $52.2 trillion for past and current participants, including past and future General Fund reimbursements. Future participants are scheduled to pay dedicated taxes of $20.6 trillion less into the system than the cost of their scheduled benefits ($141.3 trillion of dedicated tax income as compared to $161.9 trillion of cost). The unfunded obligation for all participants through the infinite horizon thus equals $72.8 trillion.

Making Social Security solvent over the infinite horizon requires some combination of increased revenue or reduced benefits for current and future participants amounting to $72.8 trillion in present value, 5.2 percent of future taxable payroll, or 1.6 percent of future GDP.

Table VI.F2.—Present Values Through the Infinite Horizon for Various Categories of Program Participants, Based on Intermediate Assumptions

[Present values as of January 1, 2025; dollar amounts in trillions]

		Expressed as a percentage of future payroll and GDP	
	Present value	Taxable payroll	GDP
Present value of past cost	$83.2	5.9	1.8
Less present value of past dedicated tax income	85.2	6.1	1.9
Plus present value of future cost for current participants	102.8	7.3	2.3
Less present value of future dedicated tax income for current participants	47.8	3.4	1.1
Equals unfunded obligation for past and current participants excluding General Fund reimbursements	52.9	3.8	1.2
Less present value of past General Fund reimbursements[a]	.7	.1	[b]
Less present value of future General Fund reimbursements through the infinite horizon[a]	[c]	[d]	[b]
Equals unfunded obligation for past and current participants including General Fund reimbursements	52.2	3.7	1.2
Plus present value of cost for future participants through the infinite horizon	161.9	11.6	3.6
Less present value of dedicated tax income for future participants through the infinite horizon	141.3	10.1	3.1
Equals unfunded obligation for all participants through the infinite horizon	72.8	5.2	1.6

[a] Distribution of General Fund reimbursements among past, current, and future participants cannot be determined.

[b] Less than 0.05 percent of GDP.

[c] Less than $50 billion.

[d] Less than 0.05 percent of taxable payroll.

Notes:

1. The present value of future taxable payroll for 2025 through the infinite horizon is $1,399.5 trillion.
2. The present value of GDP for 2025 through the infinite horizon is $4,507.7 trillion.
3. Components may not sum to totals because of rounding.

G. ESTIMATES FOR OASDI AND HI, SEPARATE AND COMBINED

In this appendix, the Trustees present long-range actuarial estimates for the OASDI and Hospital Insurance (HI) programs both separately and on a combined basis. These estimates facilitate analysis of the adequacy of the income and reserves of these programs relative to their cost under current law. This appendix does not include estimates for the Supplementary Medical Insurance (SMI) program because adequate financing is guaranteed in the law and because the SMI program is not financed through a payroll tax. For more information on Medicare estimates, please see the 2025 Medicare Trustees Report.

The information in this appendix on combined operations, while significant, should not obscure the analysis of the financial status of the individual trust funds, which are legally separate and cannot be commingled. In addition, the factors which determine the costs of the OASI, DI, and HI programs differ substantially.

1. Estimates as a Percentage of Taxable Payroll

Comparing cost and income rates for the OASDI and HI programs as percentages of taxable payroll requires a note of caution. The taxable payrolls for the HI program are larger than those for the OASDI program because: (1) a larger maximum taxable amount was established for the HI program in 1991, with the maximum eliminated altogether for the HI program in 1994; (2) larger proportions of Federal, State, and local government employees are covered under the HI program; and (3) the earnings of railroad workers are included directly in the HI taxable payroll but are not included in the OASDI taxable payroll. (Railroad worker contributions for the equivalent of OASDI benefits are accounted for in a net interchange that occurs annually between the OASDI and Railroad Retirement programs.) As a result, the HI taxable payroll is 25 percent larger than the OASDI taxable payroll on average over the long-range period.

As with the OASI and DI Trust Funds, income to the HI Trust Fund comes primarily from contributions paid by employees, employers, and self-employed persons. Table VI.G1 shows the OASDI and HI contribution rates that are authorized in the Federal Insurance Contributions Act.

Table VI.G1.—Payroll Tax Contribution Rates for the OASDI and HI Programs
[In percent]

Calendar years	Employees and employers, combined[a]		Employees only	Self employed[b]		
	OASDI up to base[c]	HI all earnings[d]	HI over limit[e]	OASDI up to base[c]	HI all earnings[d]	HI over limit[e]
1966	7.70	0.70	—	5.80	0.35	—
1967	7.80	1.00	—	5.90	.50	—
1968	7.60	1.20	—	5.80	.60	—
1969-70	8.40	1.20	—	6.30	.60	—
1971-72	9.20	1.20	—	6.90	.60	—
1973	9.70	2.00	—	7.00	1.00	—
1974-77	9.90	1.80	—	7.00	.90	—
1978	10.10	2.00	—	7.10	1.00	—
1979-80	10.16	2.10	—	7.05	1.05	—
1981	10.70	2.60	—	8.00	1.30	—
1982-83	10.80	2.60	—	8.05	1.30	—
1984[f]	11.40	2.60	—	11.40	2.60	—
1985[f]	11.40	2.70	—	11.40	2.70	—
1986-87[f]	11.40	2.90	—	11.40	2.90	—
1988-89[f]	12.12	2.90	—	12.12	2.90	—
1990-2010[g]	12.40	2.90	—	12.40	2.90	—
2011-2012[h]	10.40	2.90	—	10.40	2.90	—
2013 and later	12.40	2.90	0.90	12.40	2.90	0.90

[a] Except as noted below, the combined employee/employer rate is divided equally between employees and employers.

[b] Beginning in 1990, self-employed persons receive a deduction, for purposes of computing their net earnings, equal to half of the combined OASDI and HI contributions that would be payable without regard to the contribution and benefit base. The OASDI contribution rate then applies to net earnings after this deduction, but subject to the OASDI base.

[c] The payroll tax on earnings for the OASDI program applies to annual earnings up to a contribution and benefit base indexed to the average wage level. The base is $176,100 for 2025.

[d] Prior to 1994, the payroll tax on earnings for the HI program applied to annual earnings up to a contribution base. The HI contribution base was eliminated beginning in 1994.

[e] Starting with Federal personal income tax returns for tax year 2013, earned income exceeding $200,000 for individual filers and $250,000 for married couples filing jointly is subject to an additional HI tax of 0.9 percent. These income limits are not indexed after 2013.

[f] In 1984 only, employees received an immediate credit of 0.3 percent of taxable wages against their OASDI payroll tax contributions. The self-employed received similar credits of 2.7 percent, 2.3 percent, and 2.0 percent against their combined OASDI and Hospital Insurance (HI) contributions on net earnings from self-employment in 1984, 1985, and 1986-89, respectively. The General Fund of the Treasury reimbursed the trust funds for these credits.

[g] Public Law 111-147 exempted most employers from paying the employer share of OASDI payroll tax on wages paid during the period March 19, 2010 through December 31, 2010 to certain qualified individuals hired after February 3, 2010. The General Fund of the Treasury reimbursed the trust funds for the payroll tax revenue forgone under this law.

[h] Public Law 111-312, Public Law 112-78, and Public Law 112-96 reduced the OASDI payroll tax rate for 2011 and 2012 by 2 percentage points for employees and for self-employed workers. The General Fund of the Treasury reimbursed the trust funds for the payroll tax revenue forgone under these laws.

Table VI.G2 shows the Trustees' estimates of annual income rates and cost rates for the OASDI program and the HI program under the intermediate, low-cost, and high-cost sets of assumptions described earlier in this report. The income rates reflect the payroll tax rates shown in table VI.G1, revenue from taxation of scheduled OASDI benefits for both the OASDI and HI

Trust Funds, and any reimbursements from the General Fund of the Treasury. For the HI program, the income rates also reflect: (1) the additional 0.9-percent tax on employees for relatively high earnings and the portion of total payroll to which the 0.9-percent rate applies, (2) premium revenues, and (3) monies from fraud and abuse control activities. Annual income and cost rates indicate the cash-flow operation of the programs. Income rates exclude interest earned on trust fund reserves. Table VI.G2 also shows annual balances, which are the differences between annual income rates and cost rates.

The Trustees project that the OASDI and HI cost rates will rise generally above current levels under the intermediate and high-cost sets of assumptions. The greatest increase occurs from 2025 to about 2040 under the intermediate and high-cost assumptions for OASDI and the intermediate assumptions for HI, and from 2025 to 2060 under the high-cost assumptions for HI. Under the intermediate assumptions, the OASDI cost rate increases by 21 percent from its current level by 2099, while under the high-cost assumptions, the cost rate increases by 80 percent by 2099. For HI, cost rates increase by 33 percent and 175 percent from 2025 to 2099 under the intermediate and high-cost assumptions, respectively. Under the low-cost assumptions, the OASDI and HI cost rates decrease from 2025 to 2099 by 14 percent and 37 percent, respectively.

The Trustees project annual deficits for every year of the projection period under the intermediate and high-cost assumptions for the OASDI program and under the high-cost assumptions for the HI program. Under the intermediate assumptions, HI annual balances are projected to be positive for 2025 and 2026 and negative and decreasing for 2027 through 2042. Thereafter, HI annual balances mostly increase (become less negative) through the end of the projection period. Under the low-cost assumptions, OASDI annual balances are negative through 2087 and are positive and mostly increasing thereafter, reaching 0.46 percent of payroll for 2099. HI annual balances as a percentage of payroll are positive and generally increasing throughout the projection period under the low-cost assumptions, reaching 2.32 percent of HI taxable payroll by 2099.

Table VI.G2.—OASDI and HI Annual Income Rates, Cost Rates, and Balances, Calendar Years 2025-2100
[As a percentage of taxable payroll[a]]

	OASDI			HI		
Calendar year	Income rate	Cost rate[b]	Balance[b]	Income rate	Cost rate	Balance
Intermediate:						
2025	12.80	15.15	-2.35	3.45	3.40	0.05
2026	13.03	15.29	-2.25	3.53	3.50	.03
2027	13.08	15.48	-2.39	3.56	3.61	-.05
2028	13.11	15.59	-2.48	3.58	3.71	-.14
2029	13.14	15.69	-2.55	3.60	3.82	-.22
2030	13.16	15.80	-2.64	3.63	3.90	-.27
2031	13.18	15.91	-2.73	3.65	3.97	-.32
2032	13.20	16.00	-2.80	3.68	4.05	-.37
2033	13.24	16.07	-2.83	3.71	4.18	-.47
2034	13.27	16.15	-2.88	3.73	4.25	-.52
2035	13.28	16.23	-2.95	3.76	4.31	-.56
2040	13.32	16.60	-3.29	3.84	4.51	-.67
2045	13.34	16.77	-3.44	3.91	4.59	-.68
2050	13.36	16.97	-3.61	3.98	4.60	-.62
2055	13.39	17.30	-3.91	4.06	4.58	-.52
2060	13.42	17.74	-4.32	4.14	4.58	-.45
2065	13.45	18.10	-4.65	4.21	4.62	-.41
2070	13.48	18.46	-4.97	4.28	4.69	-.41
2075	13.51	18.80	-5.29	4.35	4.73	-.39
2080	13.53	18.96	-5.43	4.41	4.74	-.33
2085	13.53	18.87	-5.34	4.44	4.71	-.26
2090	13.51	18.58	-5.07	4.47	4.65	-.19
2095	13.50	18.36	-4.86	4.49	4.59	-.10
2100	13.50	18.35	-4.86	4.52	4.50	.02
Low-cost:						
2025	12.71	14.78	-2.07	3.45	3.28	.17
2026	13.11	14.63	-1.52	3.51	3.26	.25
2027	13.04	14.59	-1.55	3.53	3.30	.23
2028	13.05	14.51	-1.46	3.55	3.33	.22
2029	13.07	14.44	-1.37	3.57	3.36	.21
2030	13.08	14.35	-1.27	3.59	3.36	.23
2031	13.10	14.28	-1.18	3.61	3.36	.26
2032	13.11	14.19	-1.08	3.63	3.35	.28
2033	13.14	14.09	-.95	3.66	3.40	.26
2034	13.15	14.00	-.85	3.68	3.39	.29
2035	13.15	13.96	-.81	3.70	3.37	.33
2040	13.17	13.83	-.66	3.79	3.19	.60
2045	13.17	13.64	-.48	3.86	2.93	.93
2050	13.17	13.54	-.37	3.93	2.66	1.28
2055	13.18	13.58	-.40	4.01	2.42	1.59
2060	13.20	13.73	-.54	4.09	2.27	1.82
2065	13.21	13.81	-.60	4.15	2.18	1.97
2070	13.22	13.87	-.65	4.21	2.16	2.05
2075	13.22	13.91	-.69	4.26	2.17	2.10
2080	13.22	13.78	-.56	4.30	2.17	2.13
2085	13.20	13.45	-.25	4.33	2.15	2.17
2090	13.17	12.98	.19	4.34	2.13	2.21
2095	13.15	12.69	.46	4.36	2.10	2.26
2100	13.15	12.71	.44	4.39	2.06	2.34

Table VI.G2.—OASDI and HI Annual Income Rates, Cost Rates, and Balances, Calendar Years 2025-2100 (Cont.)
[As a percentage of taxable payroll[a]]

	OASDI			HI		
Calendar year	Income rate	Cost rate[b]	Balance[b]	Income rate	Cost rate	Balance
High-cost:						
2025	12.95	15.77	-2.82	3.47	3.59	-0.13
2026	12.92	16.38	-3.46	3.56	3.83	-.27
2027	13.14	16.65	-3.52	3.59	4.00	-.41
2028	13.17	16.86	-3.69	3.61	4.19	-.58
2029	13.20	17.09	-3.88	3.64	4.40	-.77
2030	13.24	17.36	-4.13	3.67	4.58	-.91
2031	13.28	17.68	-4.40	3.70	4.76	-1.06
2032	13.31	17.98	-4.67	3.73	4.94	-1.21
2033	13.36	18.27	-4.90	3.77	5.21	-1.44
2034	13.40	18.55	-5.16	3.80	5.40	-1.59
2035	13.41	18.79	-5.38	3.83	5.58	-1.76
2040	13.49	19.90	-6.41	3.93	6.45	-2.52
2045	13.54	20.69	-7.14	4.00	7.24	-3.23
2050	13.60	21.50	-7.91	4.08	8.00	-3.92
2055	13.66	22.44	-8.78	4.17	8.69	-4.52
2060	13.74	23.49	-9.75	4.26	9.30	-5.04
2065	13.81	24.45	-10.64	4.35	9.82	-5.48
2070	13.88	25.43	-11.55	4.44	10.21	-5.78
2075	13.95	26.44	-12.49	4.52	10.37	-5.85
2080	14.01	27.30	-13.28	4.60	10.38	-5.78
2085	14.06	27.89	-13.83	4.67	10.31	-5.65
2090	14.09	28.18	-14.10	4.72	10.20	-5.48
2095	14.10	28.33	-14.23	4.76	10.05	-5.29
2100	14.11	28.42	-14.31	4.79	9.86	-5.06

[a] The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning in 1994 and because HI covers all Federal civilian employees, all State and local government employees hired after April 1, 1986, and railroad employees.
[b] OASDI benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

Notes:
1. The income rate excludes interest income.
2. The Trustees show income and cost estimates generally on a cash basis for the OASDI program and on an incurred basis for the HI program.
3. Components may not sum to totals because of rounding.

Table VI.G3 shows summarized values over the 25-year, 50-year, and 75-year valuation periods. For each of those periods, the summarized income rates include beginning trust fund reserves, and the summarized cost rates include the cost of accumulating an ending fund reserve equal to 100 percent of annual cost at the end of the period.

Table VI.G3.—Summarized OASDI and HI Income Rates and Cost Rates for Valuation Periods,[a] Calendar Years 2025-2099
[As a percentage of taxable payroll[b]]

Valuation period	OASDI			HI		
	Income rate	Cost rate[c]	Actuarial balance	Income rate	Cost rate	Actuarial balance
Intermediate:						
25-year:						
2025-49	14.24	16.91	-2.67	3.83	4.41	-0.57
50-year:						
2025-74	13.88	17.28	-3.40	3.98	4.49	-.51
75-year:						
2025-99	13.79	17.61	-3.82	4.10	4.53	-.42
Low-cost:						
25-year:						
2025-49	14.02	14.53	-.51	3.79	3.29	.50
50-year:						
2025-74	13.64	14.12	-.48	3.94	2.80	1.13
75-year:						
2025-99	13.51	13.84	-.33	4.05	2.60	1.45
High-cost:						
25-year:						
2025-49	14.50	19.70	-5.20	3.91	6.07	-2.16
50-year:						
2025-74	14.19	21.37	-7.18	4.07	7.46	-3.39
75-year:						
2025-99	14.16	22.76	-8.60	4.21	8.07	-3.86

[a] Income rates include beginning trust fund reserves and cost rates include the cost of reaching an ending target trust fund equal to 100 percent of annual cost at the end of the period.
[b] The taxable payroll for HI is significantly larger than the taxable payroll for OASDI because the HI taxable maximum amount was eliminated beginning 1994 and because HI covers all Federal civilian employees, all State and local government employees hired after April 1, 1986, and railroad employees.
[c] OASDI benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

Note: Components may not sum to totals because of rounding.

The Trustees project that the OASDI and HI programs will each experience large actuarial deficits for the 25-year, 50-year, and 75-year valuation periods under the high-cost assumptions. Actuarial deficits under the intermediate assumptions are smaller than those for the high-cost assumptions for all three valuation periods. Under the low-cost assumptions, the OASDI program has relatively small actuarial deficits for all three valuation periods, while the HI program has positive actuarial balances for all three valuation periods.

2. Estimates as a Percentage of Gross Domestic Product

This section presents long-range projections of the operations of the combined Old-Age and Survivors Insurance and Disability Insurance (OASI and DI) Trust Funds and of the Hospital Insurance (HI) Trust Fund, expressed as a percentage of gross domestic product (GDP). While expressing fund operations as a percentage of taxable payroll is a very useful approach for assessing the financial status of the programs (see section IV.B.1), expressing them as a percentage of the total value of goods and services produced in the United States provides an additional perspective.

Table VI.G4 shows non-interest income, total cost, and the resulting balance of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, expressed as percentages of GDP on the basis of each of the three alternative sets of assumptions. Table VI.G4 also contains estimates of GDP. For OASDI, non-interest income consists of payroll tax contributions, proceeds from taxation of scheduled OASDI benefits, and any reimbursements from the General Fund of the Treasury. Cost consists of scheduled benefits, administrative expenses, financial interchange with the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. For HI, non-interest income consists of payroll tax contributions (including contributions from railroad employment), up to an additional 0.9 percent tax on earned income for relatively high earners, proceeds from taxation of scheduled OASDI benefits, premium revenues, monies from fraud and abuse control activities, and any reimbursements from the General Fund of the Treasury. Cost consists of outlays (benefits and administrative expenses) for beneficiaries. The Trustees show income and cost estimates generally on a cash basis for the OASDI program[1] and on an incurred basis for the HI program.

The Trustees project the OASDI annual balance (non-interest income less cost) as a percentage of GDP to be negative throughout the projection period under the intermediate and high-cost assumptions. Under the low-cost assumptions, the OASDI annual deficit as a percentage of GDP generally decreases from 2025 through 2051, slightly increases through 2074, and then decreases through 2087 before annual balances become positive for years 2088 and later. Under the intermediate assumptions, the OASDI annual deficits as a percentage of GDP decrease from 2025 to 2026, increase from 2026

[1] OASDI benefits paid for entitlement for a particular month are generally paid in the succeeding month. There are two primary exceptions to this general rule. First, payments can occur with a greater delay when a benefit award is made after the month of initial benefit entitlement. At the time of benefit award, benefits owed for months of prior entitlement are then also paid to the beneficiary. For the projections in this report, such retroactive payments are included in the period where they are paid (at time of award). Second, when benefit payments scheduled for January 3 are paid on the prior December 31, because January 3 falls on a Sunday, such payments are shown in this report for the period they were scheduled to be paid.

through 2080, and mostly decrease thereafter. Under the high-cost assumptions, OASDI annual deficits increase relatively rapidly through 2091 and then slightly decrease through the end of the projection period.

The Trustees project that the HI annual balance as a percentage of GDP will be positive and mostly increasing throughout the projection period, under the low-cost assumptions. Under the intermediate assumptions, HI annual balances are positive for years 2025 and 2026. After 2026, the HI annual balances are negative. The annual deficits increase through 2042 and then decline thereafter. Under the high-cost assumptions, the HI annual balance is negative for all years of the projection period, with annual deficits reaching a peak in 2073 and declining thereafter.

The combined OASDI and HI annual balance as a percentage of GDP is negative throughout the projection period under both the intermediate and high-cost assumptions. Under the low-cost assumptions, the combined OASDI and HI annual balance is negative through 2039 and then positive and rising thereafter. Under the intermediate assumptions, the combined OASDI and HI annual deficits generally increase through 2078 and then decline thereafter, reaching 1.61 percent of GDP by 2099. Under the high-cost assumptions, combined annual deficits rise to a peak of 6.54 percent in 2085 and decrease thereafter.

By 2099, the combined OASDI and HI annual balances as percentages of GDP range from a positive annual balance of 1.21 percent for the low-cost assumptions to an annual deficit of 6.29 percent for the high-cost assumptions. Annual balances differ by a much smaller amount for the tenth projection year, 2034, ranging from an annual deficit of 0.18 percent for the low-cost assumptions to an annual deficit of 2.48 percent for the high-cost assumptions.

The summarized long-range (75-year) actuarial balance as a percentage of GDP for the combined OASDI and HI programs varies among the three alternatives by a relatively large amount, from a positive actuarial balance of 0.53 percent under the low-cost assumptions to an actuarial deficit of 4.44 percent under the high-cost assumptions. The 25-year summarized actuarial balance varies by a smaller amount, from a positive actuarial balance of 0.04 percent of GDP to an actuarial deficit of 2.72 percent. Summarized rates are calculated on a present-value basis. They include the trust fund reserve balances on January 1, 2025 and the cost of reaching a target trust fund level equal to 100 percent of the following year's annual cost at the end of the period. (See section IV.B.4 for further explanation.)

Table VI.G4.—OASDI and HI Annual and Summarized Income, Cost, and Balance as a Percentage of GDP, Calendar Years 2025-2100

	Percentage of GDP									GDP in dollars
	OASDI			HI			Combined			
Calendar year	Income[a]	Cost[b]	Balance[b]	Income[a]	Cost	Balance	Income[a]	Cost[b]	Balance[b]	(billions)
Intermediate:										
2025	4.46	5.28	-0.82	1.51	1.49	0.02	5.97	6.76	-0.80	$30,480
2026	4.57	5.36	-.79	1.55	1.54	.01	6.12	6.90	-.78	31,754
2027	4.60	5.44	-.84	1.57	1.59	-.02	6.17	7.03	-.87	33,058
2028	4.63	5.50	-.87	1.58	1.64	-.06	6.21	7.14	-.93	34,455
2029	4.64	5.55	-.90	1.59	1.69	-.10	6.24	7.24	-1.00	35,907
2030	4.66	5.60	-.94	1.61	1.73	-.12	6.27	7.32	-1.06	37,377
2031	4.68	5.64	-.97	1.62	1.77	-.14	6.30	7.41	-1.11	38,903
2032	4.69	5.68	-.99	1.64	1.80	-.16	6.32	7.48	-1.16	40,497
2033	4.71	5.71	-1.01	1.65	1.86	-.21	6.36	7.58	-1.22	42,145
2034	4.72	5.74	-1.02	1.66	1.90	-.23	6.38	7.64	-1.26	43,836
2035	4.72	5.77	-1.05	1.67	1.92	-.25	6.39	7.69	-1.30	45,586
2040	4.70	5.86	-1.16	1.70	1.99	-.30	6.40	7.85	-1.46	55,363
2045	4.67	5.87	-1.20	1.72	2.01	-.30	6.39	7.89	-1.50	67,136
2050	4.64	5.90	-1.26	1.74	2.00	-.27	6.38	7.91	-1.53	81,378
2055	4.63	5.98	-1.35	1.76	1.98	-.23	6.38	7.96	-1.58	98,744
2060	4.61	6.10	-1.48	1.78	1.97	-.19	6.39	8.07	-1.68	119,893
2065	4.60	6.19	-1.59	1.80	1.98	-.18	6.40	8.17	-1.77	145,507
2070	4.59	6.28	-1.69	1.83	2.00	-.17	6.41	8.28	-1.86	176,236
2075	4.57	6.36	-1.79	1.85	2.01	-.16	6.42	8.37	-1.95	213,176
2080	4.56	6.38	-1.83	1.86	2.00	-.14	6.42	8.39	-1.97	258,141
2085	4.54	6.33	-1.79	1.87	1.98	-.11	6.40	8.31	-1.90	313,485
2090	4.51	6.20	-1.69	1.87	1.95	-.08	6.38	8.15	-1.77	381,790
2095	4.49	6.11	-1.62	1.87	1.91	-.04	6.36	8.02	-1.66	465,356
2100	4.47	6.08	-1.61	1.88	1.87	.01	6.35	7.95	-1.60	566,475
Summarized rates: [c]										
25-year:										
2025-49 . .	5.02	5.96	-.94	1.69	1.95	-.25	6.71	7.90	-1.19	
50-year:										
2025-74 . .	4.83	6.02	-1.18	1.74	1.96	-.22	6.57	7.98	-1.41	
75-year:										
2025-99 . .	4.75	6.07	-1.32	1.77	1.96	-.18	6.52	8.02	-1.50	
Low-cost:										
2025	4.46	5.18	-.73	1.51	1.44	.07	5.97	6.62	-.65	30,953
2026	4.63	5.17	-.54	1.55	1.44	.11	6.18	6.61	-.43	32,824
2027	4.64	5.19	-.55	1.57	1.47	.10	6.21	6.65	-.45	34,655
2028	4.67	5.20	-.52	1.58	1.48	.10	6.26	6.68	-.42	36,548
2029	4.70	5.20	-.49	1.60	1.50	.09	6.30	6.70	-.40	38,544
2030	4.73	5.19	-.46	1.61	1.51	.10	6.34	6.70	-.36	40,637
2031	4.76	5.19	-.43	1.62	1.51	.11	6.38	6.70	-.31	42,832
2032	4.78	5.18	-.40	1.64	1.51	.13	6.42	6.69	-.27	45,152
2033	4.81	5.16	-.35	1.65	1.53	.12	6.46	6.70	-.23	47,581
2034	4.83	5.14	-.31	1.66	1.53	.13	6.49	6.68	-.18	50,108
2035	4.83	5.13	-.30	1.67	1.52	.15	6.50	6.65	-.15	52,761
2040	4.82	5.06	-.24	1.70	1.44	.27	6.52	6.49	.03	68,138
2045	4.80	4.97	-.17	1.73	1.31	.42	6.52	6.28	.24	87,910
2050	4.78	4.91	-.13	1.76	1.19	.57	6.54	6.10	.44	113,690
2055	4.78	4.92	-.15	1.79	1.08	.71	6.56	6.00	.56	147,493
2060	4.78	4.97	-.19	1.82	1.01	.81	6.60	5.98	.62	191,638
2065	4.78	5.00	-.22	1.85	.97	.88	6.63	5.97	.66	248,819
2070	4.78	5.02	-.24	1.88	.96	.91	6.66	5.98	.68	322,268
2075	4.79	5.04	-.25	1.90	.97	.93	6.69	6.00	.69	417,048
2080	4.79	4.99	-.20	1.92	.97	.95	6.71	5.96	.75	540,899

Table VI.G4.—OASDI and HI Annual and Summarized Income, Cost, and Balance as a Percentage of GDP, Calendar Years 2025-2100 (Cont.)

	Percentage of GDP									GDP in dollars
	OASDI			HI			Combined			
Calendar year	Income[a]	Cost[b]	Balance[b]	Income[a]	Cost	Balance	Income[a]	Cost[b]	Balance[b]	(billions)
Low-cost (Cont.):										
2085	4.79	4.88	-0.09	1.93	0.96	0.97	6.72	5.84	0.88	$704,729
2090	4.79	4.72	.07	1.94	.95	.99	6.73	5.67	1.06	921,433
2095	4.79	4.62	.17	1.95	.94	1.01	6.74	5.56	1.18	1,204,430
2100	4.80	4.64	.16	1.97	.92	1.05	6.77	5.56	1.21	1,569,426
Summarized rates: [c]										
25-year:										
2025-49 . .	5.10	5.28	-.19	1.70	1.47	.22	6.79	6.76	.04	
50-year:										
2025-74 . .	4.95	5.12	-.18	1.76	1.25	.51	6.71	6.38	.33	
75-year:										
2025-99 . .	4.90	5.02	-.12	1.81	1.16	.65	6.72	6.19	.53	
High-cost:										
2025	4.47	5.45	-.98	1.50	1.55	-.05	5.97	7.00	-1.03	29,618
2026	4.46	5.66	-1.20	1.53	1.65	-.12	6.00	7.31	-1.31	30,162
2027	4.53	5.74	-1.21	1.55	1.73	-.18	6.08	7.47	-1.39	31,327
2028	4.55	5.82	-1.27	1.57	1.83	-.25	6.12	7.65	-1.53	32,445
2029	4.56	5.91	-1.34	1.59	1.93	-.34	6.15	7.83	-1.68	33,506
2030	4.58	6.01	-1.43	1.61	2.01	-.40	6.19	8.01	-1.83	34,482
2031	4.59	6.11	-1.52	1.62	2.09	-.47	6.22	8.20	-1.99	35,456
2032	4.60	6.21	-1.61	1.64	2.17	-.53	6.24	8.38	-2.14	36,458
2033	4.61	6.30	-1.69	1.66	2.29	-.63	6.27	8.59	-2.32	37,475
2034	4.61	6.39	-1.78	1.67	2.37	-.70	6.28	8.76	-2.48	38,504
2035	4.61	6.46	-1.85	1.68	2.45	-.77	6.29	8.91	-2.62	39,553
2040	4.59	6.77	-2.18	1.71	2.80	-1.10	6.30	9.57	-3.28	45,191
2045	4.56	6.97	-2.41	1.72	3.11	-1.39	6.28	10.08	-3.80	51,491
2050	4.53	7.17	-2.64	1.74	3.41	-1.67	6.27	10.58	-4.30	58,371
2055	4.51	7.41	-2.90	1.76	3.67	-1.91	6.27	11.07	-4.81	65,965
2060	4.49	7.67	-3.18	1.78	3.88	-2.11	6.27	11.56	-5.29	74,447
2065	4.47	7.91	-3.44	1.80	4.06	-2.26	6.26	11.97	-5.71	83,908
2070	4.44	8.14	-3.70	1.82	4.18	-2.37	6.26	12.32	-6.06	94,364
2075	4.42	8.38	-3.96	1.83	4.21	-2.37	6.26	12.59	-6.33	105,860
2080	4.40	8.56	-4.17	1.85	4.17	-2.32	6.24	12.73	-6.49	118,590
2085	4.37	8.66	-4.29	1.86	4.10	-2.24	6.22	12.76	-6.54	132,881
2090	4.33	8.66	-4.33	1.86	4.01	-2.16	6.19	12.67	-6.49	149,041
2095	4.29	8.62	-4.33	1.85	3.92	-2.06	6.14	12.53	-6.39	167,401
2100	4.25	8.56	-4.31	1.85	3.81	-1.96	6.10	12.36	-6.27	188,119
Summarized rates: [c]										
25-year:										
2025-49 . .	4.96	6.73	-1.78	1.70	2.64	-.94	6.65	9.37	-2.72	
50-year:										
2025-74 . .	4.75	7.15	-2.40	1.74	3.18	-1.45	6.48	10.33	-3.85	
75-year:										
2025-99 . .	4.65	7.48	-2.82	1.76	3.38	-1.62	6.42	10.86	-4.44	

[a] Income for individual years excludes interest on the trust funds. Interest is implicit in all summarized values.

[b] OASDI benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

[c] Summarized rates are calculated on a present-value basis. They include the value of the trust funds on January 1, 2025 and the cost of reaching a target trust fund level equal to 100 percent of annual cost at the end of the period.

Notes:
1. The Trustees show income and cost estimates generally on a cash basis for the OASDI program and on an incurred basis for the HI program.

2. Components may not sum to totals because of rounding.

Table VI.G5 displays annual ratios of OASDI taxable payroll to GDP. These ratios facilitate comparisons of trust fund operations expressed as percentages of taxable payroll and those expressed as percentages of GDP. HI taxable payroll is 25 percent larger than the OASDI taxable payroll on average over the long-range period; see section 1 of this appendix for a detailed description of the difference. For each year, the cost as a percentage of GDP is equal to the cost as a percentage of taxable payroll multiplied by the ratio of taxable payroll to GDP.

Table VI.G5.—Ratio of OASDI Taxable Payroll to GDP, Calendar Years 2025-2100

Calendar year	Intermediate	Low-cost	High-cost
2025	0.348	0.351	0.345
2026	.350	.353	.345
2027	.352	.356	.345
2028	.353	.358	.345
2029	.354	.360	.346
2030	.354	.362	.346
2031	.355	.363	.346
2032	.355	.365	.346
2033	.356	.366	.345
2034	.356	.368	.344
2035	.355	.367	.344
2040	.353	.366	.340
2045	.350	.364	.337
2050	.348	.363	.333
2055	.346	.362	.330
2060	.344	.362	.327
2065	.342	.362	.323
2070	.340	.362	.320
2075	.338	.362	.317
2080	.337	.362	.314
2085	.335	.363	.310
2090	.334	.364	.307
2095	.333	.364	.304
2100	.331	.365	.301

Projections of GDP reflect projected increases in U.S. employment, labor productivity, average hours worked, and the GDP price index (GDP deflator). Projections of taxable payroll reflect the components of growth in GDP along with assumed changes in the ratio of total labor compensation to GDP, the ratio of earnings to total labor compensation, the ratio of OASDI covered earnings to total earnings, and the ratio of taxable to total covered earnings.

Over the long-range period, the ratio of OASDI taxable payroll to GDP is projected to decline mostly due to a projected decline in the ratio of wages and salaries to employee compensation. Over the last six complete economic cycles, the ratio of wages and salaries to employee compensation declined at an average annual rate of 0.17 percent. Over the 65-year period ending in 2099, the ratio of wages and salaries to employee compensation is projected to remain the same for the low-cost assumptions and decline at an average annual rate of 0.10 and 0.20 percent for the intermediate and high-cost assumptions, respectively.

3. Estimates in Dollars

This section presents long-range projections, in dollars, of the operations of the combined OASI and DI Trust Funds and in some cases the HI Trust Fund. Comparing current dollar values over long periods of time is difficult because of the effect of inflation. In order to compare dollar values in a meaningful way, table VI.G6 provides several economic series or indices which can be used to adjust current dollars for changes in prices, wages, or other aspects of economic growth during the projection period. Any series of values can be adjusted by dividing the value for each year by the corresponding index value for the year.

One of the most common forms of standardization is price indexing, which uses some measure of change in the prices of consumer goods. The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W, hereafter referred to as CPI), published by the Bureau of Labor Statistics, Department of Labor, is one such price index. Consistent with the law, the Social Security Administration (SSA) uses this index to determine the annual cost-of-living increases for OASDI monthly benefits. The ultimate annual rate of increase in the CPI is assumed to be 3.0, 2.4, and 1.8 percent for the low-cost, intermediate, and high-cost sets of assumptions, respectively. Table VI.G7 provides CPI-indexed dollar values (those adjusted using the CPI in table VI.G6), which indicate the relative purchasing power of the values over time.

Wage indexing is another type of standardization. It combines the effects of price inflation and real wage growth. The wage index presented here is the national average wage index, as defined in section 209(k)(1) of the Social Security Act. SSA uses this index to annually adjust the contribution and benefit base and other earnings-related program amounts. The average wage is assumed to grow by an average rate of 4.8, 3.6, and 2.3 percent under the low-cost, intermediate, and high-cost assumptions, respectively, between 2034 and 2099. Wage-indexed values indicate the level of a series of values relative to the changing standard of living of workers over time.

The taxable payroll series is used as an index to adjust for the effects of changes in the number of workers and changes in the proportion of earnings that are taxable, as well as for the effects of price inflation and real wage growth. The OASDI taxable payroll consists of all earnings subject to OASDI taxation, with an adjustment for the lower effective tax rate on multiple-employer excess wages. A series of values, divided by the taxable payroll, indicates the percentage of payroll that each value represents, and thus

the extent to which the series of values increases or decreases as a percentage of payroll over time.

The GDP series is used as an index to adjust for the growth in the aggregate amount of goods and services produced in the United States. Values adjusted by GDP (see section 2 of this appendix) indicate their relative share of the total output of the economy. No direct assumption is made about growth in taxable payroll or GDP. These series reflect the basic demographic and economic assumptions, as discussed in sections V.A and V.B, respectively.

Discounting at the rate of interest is another way of standardizing current dollars. The compound effective trust fund interest factor shown in table VI.G6 uses the effective annual yield on all currently held securities in the combined OASI and DI Trust Funds. The reciprocal of the compound effective trust fund interest factor approximates the cumulative discount factor used to convert nominal dollar values to present values as of the start of the valuation period in order to create summarized values for this report.

Table VI.G6.—Selected Economic Variables, Calendar Years 2024-2100
[GDP and taxable payroll in billions]

Calendar year	Adjusted CPI[a]	Average wage index	Taxable payroll[b]	Gross domestic product	Compound effective trust fund interest factor[c]
Intermediate:					
2024	97.59	$69,472.44	$10,124	$29,170	0.9876
2025	100.00	72,255.52	10,621	30,480	1.0130
2026	102.49	75,264.81	11,129	31,754	1.0398
2027	104.95	78,304.32	11,627	33,058	1.0685
2028	107.47	81,522.64	12,159	34,455	1.0992
2029	110.05	84,736.18	12,696	35,907	1.1322
2030	112.69	88,030.45	13,239	37,377	1.1675
2031	115.40	91,479.46	13,798	38,903	1.2060
2032	118.17	95,090.94	14,380	40,497	1.2483
2033	121.00	98,856.61	14,987	42,145	1.2968
2034	123.91	102,670.10	15,594	43,836	1.3504
2035	126.88	106,494.41	16,205	45,586	1.4069
2040	142.86	127,479.70	19,532	55,363	1.7491
2045	160.84	152,129.95	23,507	67,136	2.2023
2050	181.09	180,927.92	28,300	81,378	2.7768
2055	203.89	214,968.38	34,124	98,744	3.5026
2060	229.56	255,531.48	41,196	119,893	4.4185
2065	258.46	304,175.68	49,733	145,507	5.5738
2070	291.00	362,245.73	59,930	176,236	7.0312
2075	327.64	431,340.48	72,131	213,176	8.8697
2080	368.89	513,717.41	86,933	258,141	11.1889
2085	415.33	611,929.46	105,104	313,485	14.1145
2090	467.62	729,094.57	127,477	381,790	17.8050
2095	526.49	868,266.52	154,754	465,356	22.4605
2100	592.78	1,033,686.26	187,614	566,475	28.3334
Low-cost:					
2024	97.37	69,522.54	10,159	29,199	.9876
2025	100.00	73,057.02	10,853	30,953	1.0132
2026	103.00	77,084.67	11,594	32,824	1.0410
2027	106.09	81,153.50	12,324	34,655	1.0721
2028	109.27	85,457.87	13,088	36,548	1.1071
2029	112.55	90,042.11	13,871	38,544	1.1463
2030	115.93	94,831.50	14,696	40,637	1.1904
2031	119.41	99,787.85	15,563	42,832	1.2402
2032	122.99	104,969.61	16,472	45,152	1.2965
2033	126.68	110,438.84	17,429	47,581	1.3597
2034	130.48	116,089.15	18,416	50,108	1.4299
2035	134.39	121,872.95	19,388	52,761	1.5061
2040	155.80	154,921.74	24,924	68,138	1.9779
2045	180.61	196,075.95	32,016	87,910	2.6223
2050	209.38	247,071.20	41,275	113,690	3.4889
2055	242.73	311,140.96	53,440	147,493	4.6434
2060	281.39	392,277.36	69,363	191,638	6.1800
2065	326.20	495,466.03	90,031	248,819	8.2251
2070	378.16	626,110.01	116,622	322,268	10.9470
2075	438.39	790,925.53	150,989	417,048	14.5696
2080	508.21	999,021.34	196,008	540,899	19.3909
2085	589.16	1,261,897.62	255,751	704,729	25.8077
2090	683.00	1,594,278.02	335,022	921,433	34.3480
2095	791.78	2,013,170.27	438,750	1,204,430	45.7144
2100	917.89	2,541,539.09	572,683	1,569,426	60.8422

Table VI.G6.—Selected Economic Variables, Calendar Years 2024-2100 (Cont.)
[GDP and taxable payroll in billions]

Calendar year	Adjusted CPI[a]	Average wage index	Taxable payroll[b]	Gross domestic product	Compound effective trust fund interest factor[c]
High-cost:					
2024	97.84	$69,390.16	$10,087	$29,148	0.9876
2025	100.00	70,350.14	10,229	29,618	1.0129
2026	101.85	71,937.84	10,420	30,162	1.0392
2027	103.68	74,514.96	10,803	31,327	1.0663
2028	105.55	77,112.55	11,199	32,445	1.0946
2029	107.45	79,514.34	11,582	33,506	1.1242
2030	109.38	81,759.43	11,930	34,482	1.1559
2031	111.35	83,972.40	12,262	35,456	1.1905
2032	113.36	86,260.19	12,596	36,458	1.2275
2033	115.40	88,606.27	12,932	37,475	1.2656
2034	117.47	90,915.95	13,258	38,504	1.3044
2035	119.59	93,165.64	13,601	39,553	1.3450
2040	130.75	104,973.96	15,379	45,191	1.5854
2045	142.94	118,094.74	17,341	51,491	1.8929
2050	156.28	132,584.85	19,458	58,371	2.2625
2055	170.86	148,620.74	21,766	65,965	2.7044
2060	186.80	166,491.01	24,318	74,447	3.2326
2065	204.23	186,630.01	27,136	83,908	3.8639
2070	223.29	209,250.67	30,211	94,364	4.6186
2075	244.12	234,614.43	33,547	105,860	5.5206
2080	266.89	263,190.70	37,196	118,590	6.5988
2085	291.80	295,362.85	41,252	132,881	7.8876
2090	319.02	331,604.32	45,798	149,041	9.4280
2095	348.78	372,280.32	50,919	167,401	11.2693
2100	381.32	417,897.27	56,644	188,119	13.4703

[a] CPI-W indexed to calendar year 2025.
[b] Total earnings subject to OASDI contribution rates, adjusted to reflect the lower effective contribution rates (compared to the combined employee-employer rate) that apply to multiple-employer "excess wages."
[c] For each alternative, incorporates the annual effective yield for all outstanding special public-debt obligations held by the trust fund, with a half-year's interest effect in each row. The effective yield for a period equals total interest earned during the period divided by the total exposure to interest on reserves and all income and cost items during the period. The reciprocals of the factors approximate the discounting/accumulation factors that are used to calculate summarized rates and balances in this report.

Table VI.G7 shows the operations of the combined OASI and DI Trust Funds in CPI-indexed 2025 dollars—that is, adjusted by the CPI indexing series as discussed above. The following items are presented in the table: (1) non-interest income, (2) interest income, (3) total income, (4) cost, and (5) reserves at the end of the year. Non-interest income consists of payroll tax contributions, income from taxation of scheduled OASDI benefits, and any reimbursements from the General Fund of the Treasury. Cost consists of scheduled benefits, administrative expenses, financial interchange with the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. Table VI.G7 shows trust fund operations under the intermediate, low-cost, and high-cost sets of assumptions.

Table VI.G7.—Operations of the Combined OASI and DI Trust Funds, in CPI-Indexed 2025 Dollars,[a] Calendar Year 2025 Through Year of Reserve Depletion
[In billions]

Calendar year	Non-interest income	Interest income	Total income	Cost[b]	Reserves at end of year[b]
Intermediate:					
2025	$1,359.2	$68.2	$1,427.4	$1,608.9	$2,540.0
2026	1,415.3	64.3	1,479.7	1,659.8	2,298.1
2027	1,449.5	60.5	1,510.0	1,714.6	2,039.7
2028	1,483.1	55.5	1,538.6	1,763.4	1,767.1
2029	1,515.4	49.2	1,564.7	1,810.1	1,480.3
2030	1,545.6	42.5	1,588.1	1,855.8	1,177.9
2031	1,576.5	34.7	1,611.2	1,902.6	859.0
2032	1,606.7	25.8	1,632.5	1,947.4	524.0
2033[c]	1,640.3	15.4	1,655.7	1,990.5	176.9
Low-cost:					
2025	1,379.4	69.7	1,449.2	1,604.6	2,566.1
2026	1,475.2	69.5	1,544.7	1,646.8	2,389.3
2027	1,514.8	70.6	1,585.4	1,694.5	2,210.6
2028	1,563.6	71.2	1,634.8	1,738.2	2,042.9
2029	1,611.2	71.4	1,682.5	1,779.5	1,886.3
2030	1,658.5	71.8	1,730.3	1,819.8	1,741.9
2031	1,707.3	72.2	1,779.5	1,860.8	1,609.9
2032	1,755.3	72.2	1,827.5	1,900.4	1,490.1
2033	1,807.3	71.9	1,879.2	1,938.6	1,387.2
2034	1,855.4	70.3	1,925.7	1,975.8	1,296.8
2035	1,897.3	67.2	1,964.6	2,014.6	1,208.9
2040	2,106.2	46.7	2,153.0	2,212.1	778.1
2045	2,333.9	26.7	2,360.7	2,418.4	394.9
2050[c]	2,596.0	9.0	2,605.0	2,668.7	60.4
High-cost:					
2025	1,324.6	67.3	1,391.9	1,613.4	2,500.0
2026	1,321.8	59.9	1,381.7	1,675.8	2,160.5
2027	1,368.6	51.9	1,420.5	1,735.0	1,807.8
2028	1,397.8	43.1	1,440.8	1,789.3	1,427.5
2029	1,423.4	33.6	1,456.9	1,841.7	1,017.4
2030	1,443.5	23.5	1,467.1	1,893.7	572.8
2031[c]	1,462.0	11.1	1,473.0	1,946.9	88.8

[a] CPI-indexed 2025 dollars equal current dollars adjusted by the CPI indexing series in table VI.G6.
[b] Benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.
[c] The combined OASI and DI Trust Funds become depleted in 2034 under the intermediate assumptions, in 2051 under the low-cost assumptions, and in 2032 under the high-cost assumptions, so estimates for later years are not shown.

Note: Components may not sum to totals because of rounding.

Figure VI.G1 compares annual cost with annual total income and annual non-interest income. The figure shows only the OASDI program under intermediate assumptions and presents values in CPI-indexed 2025 dollars, consistent with table VI.G7. The difference between the income values for each year is equal to the trust fund interest earnings. The figure illustrates that, under intermediate assumptions, annual cost exceeds both total income and non-interest income for 2025 through 2034, when trust fund reserves become depleted. Estimates after reserve depletion are not shown. For 2025 through

2033 (the year preceding the year of trust fund reserve depletion), annual cost is covered by drawing down combined trust fund reserves.

Figure VI.G1.—Estimated OASDI Income and Cost in CPI-Indexed 2025 Dollars, Based on Intermediate Assumptions
[In billions]

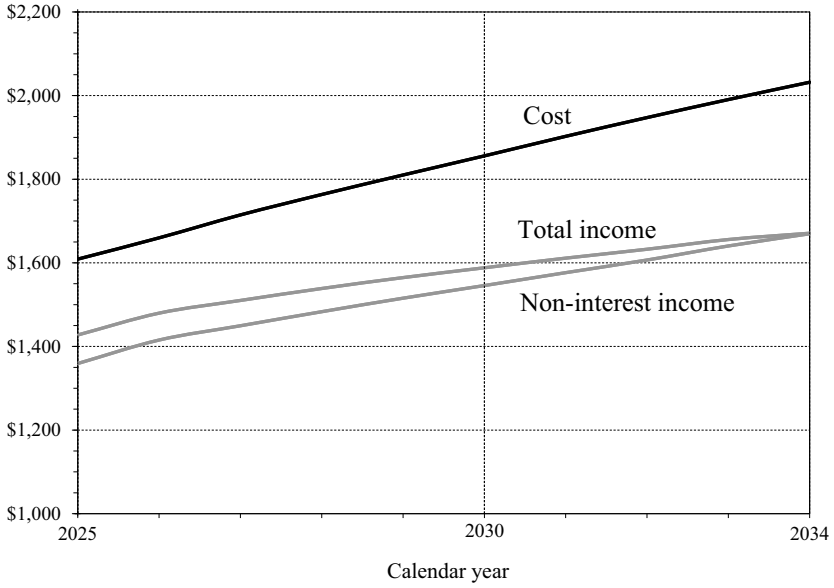


Table VI.G8 presents the operations of the combined OASI and DI Trust Funds in current, or nominal, dollars—that is, in dollars unadjusted for inflation. The following items are presented in the table: (1) non-interest income, (2) interest income, (3) total income, (4) cost, and (5) reserves at the end of the year. These estimates are presented using the intermediate, low-cost, and high-cost sets of demographic and economic assumptions to facilitate independent analysis.

Table VI.G8.—Operations of the Combined OASI and DI Trust Funds, in Current Dollars, Calendar Year 2025 Through Year of Reserve Depletion
[In billions]

Calendar year	Non-interest income	Interest income	Total income	Cost[a]	Reserves at end of year[a]
Intermediate:					
2025	$1,359.2	$68.2	$1,427.4	$1,608.9	$2,540.0
2026	1,450.6	65.9	1,516.6	1,701.1	2,355.4
2027	1,521.3	63.5	1,584.8	1,799.5	2,140.7
2028	1,593.9	59.6	1,653.6	1,895.2	1,899.1
2029	1,667.8	54.2	1,722.0	1,992.0	1,629.1
2030	1,741.8	47.9	1,789.7	2,091.4	1,327.4
2031	1,819.2	40.1	1,859.3	2,195.5	991.2
2032	1,898.6	30.5	1,929.1	2,301.2	619.2
2033[b]	1,984.8	18.6	2,003.5	2,408.6	214.1
Low-cost:					
2025	1,379.4	69.7	1,449.2	1,604.6	2,566.1
2026	1,519.5	71.6	1,591.1	1,696.2	2,460.9
2027	1,607.0	74.9	1,682.0	1,797.6	2,345.3
2028	1,708.6	77.8	1,786.4	1,899.4	2,232.3
2029	1,813.4	80.3	1,893.7	2,002.9	2,123.1
2030	1,922.6	83.2	2,005.9	2,109.6	2,019.4
2031	2,038.6	86.3	2,124.8	2,221.9	1,922.3
2032	2,158.8	88.8	2,247.6	2,337.2	1,832.6
2033	2,289.4	91.1	2,380.5	2,455.8	1,757.3
2034	2,420.9	91.7	2,512.6	2,578.0	1,692.0
2035	2,549.9	90.3	2,640.2	2,707.5	1,624.7
2040	3,281.4	72.8	3,354.3	3,446.4	1,212.2
2045	4,215.3	48.3	4,263.6	4,368.0	713.3
2050[b]	5,435.4	18.9	5,454.3	5,587.7	126.4
High-cost:					
2025	1,324.6	67.3	1,391.9	1,613.4	2,500.0
2026	1,346.3	61.0	1,407.3	1,706.8	2,200.5
2027	1,419.0	53.9	1,472.9	1,798.9	1,874.4
2028	1,475.3	45.5	1,520.8	1,888.6	1,506.7
2029	1,529.4	36.1	1,565.5	1,978.9	1,093.2
2030	1,579.0	25.8	1,604.7	2,071.4	626.6
2031[b]	1,628.0	12.3	1,640.3	2,168.0	98.9

[a] Benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

[b] The combined OASI and DI Trust Funds become depleted in 2034 under the intermediate assumptions, in 2051 under the low-cost assumptions, and in 2032 under the high-cost assumptions, so estimates for later years are not shown.

Note: Components may not sum to totals because of rounding.

Table VI.G9 presents values in CPI-indexed 2025 dollars—that is, adjusted by the CPI indexing series discussed at the beginning of this section. This table contains the annual non-interest income and cost of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, based on the intermediate, low-cost, and high-cost sets of assumptions. For OASDI, non-interest income consists of payroll tax contributions, proceeds from taxation of scheduled OASDI benefits, and any reimbursements from the General Fund of the Treasury. Cost consists of scheduled benefits, administrative expenses, financial interchange with the Railroad Retirement program, and payments for vocational rehabilitation

services for disabled beneficiaries. For HI, non-interest income consists of payroll tax contributions (including contributions from railroad employment), up to an additional 0.9 percent tax on earned income for relatively high earners, proceeds from the taxation of scheduled OASDI benefits, premium revenues, monies from fraud and abuse control activities, and any reimbursements from the General Fund of the Treasury. Total cost consists of scheduled benefits and administrative expenses. The Trustees show income and cost estimates generally on a cash basis for the OASDI program[1] and on an incurred basis for the HI program. Table VI.G9 also shows the annual balance, which equals the difference between non-interest income and cost.

[1] OASDI benefits paid for entitlement for a particular month are generally paid in the succeeding month. There are two primary exceptions to this general rule. First, payments can occur with a greater delay when a benefit award is made after the month of initial benefit entitlement. At the time of benefit award, benefits owed for months of prior entitlement are then also paid to the beneficiary. For the projections in this report, such retroactive payments are included in the period where they are paid (at time of award). Second, when benefit payments scheduled for January 3 are paid on the prior December 31, because January 3 falls on a Sunday, such payments are shown in this report for the period they were scheduled to be paid.

Table VI.G9.—OASDI and HI Annual Non-Interest Income, Cost, and Balance in CPI-Indexed 2025 Dollars,[a] Calendar Years 2025-2100
[In billions]

Calendar year	OASDI			HI			Combined		
	Non-interest income	Cost[b]	Balance[b]	Non-interest income	Cost	Balance	Non-interest income	Cost[b]	Balance[b]
Intermediate:									
2025	$1,359	$1,609	-$250	$460	$453	$7	$1,819	$2,062	-$243
2026	1,415	1,660	-244	480	477	4	1,896	2,137	-241
2027	1,449	1,715	-265	494	501	-7	1,943	2,216	-273
2028	1,483	1,763	-280	507	526	-19	1,990	2,290	-300
2029	1,515	1,810	-295	520	552	-32	2,036	2,362	-327
2030	1,546	1,856	-310	533	574	-40	2,079	2,429	-350
2031	1,576	1,903	-326	547	595	-48	2,123	2,498	-374
2032	1,607	1,947	-341	561	617	-56	2,168	2,564	-397
2033	1,640	1,991	-350	575	649	-74	2,216	2,639	-424
2034	1,669	2,032	-362	589	670	-82	2,258	2,702	-444
2035	1,696	2,073	-377	601	690	-89	2,296	2,763	-467
2040	1,821	2,270	-450	658	773	-115	2,479	3,043	-564
2045	1,949	2,452	-503	717	841	-124	2,666	3,292	-627
2050	2,087	2,652	-565	780	901	-121	2,867	3,553	-686
2055	2,240	2,895	-655	851	961	-110	3,091	3,856	-765
2060	2,409	3,184	-775	931	1,031	-101	3,340	4,216	-876
2065	2,589	3,483	-894	1,016	1,116	-100	3,605	4,599	-994
2070	2,777	3,801	-1,024	1,106	1,211	-105	3,883	5,012	-1,129
2075	2,975	4,139	-1,164	1,201	1,308	-106	4,176	5,447	-1,271
2080	3,188	4,467	-1,279	1,303	1,401	-99	4,491	5,868	-1,378
2085	3,423	4,775	-1,352	1,411	1,495	-83	4,834	6,270	-1,436
2090	3,683	5,064	-1,382	1,528	1,592	-64	5,211	6,656	-1,446
2095	3,967	5,396	-1,430	1,657	1,692	-35	5,623	7,088	-1,465
2100	4,271	5,809	-1,537	1,796	1,787	8	6,067	7,596	-1,529
Low-cost:									
2025	1,379	1,605	-225	468	446	23	1,848	2,050	-202
2026	1,475	1,647	-172	495	460	35	1,970	2,107	-137
2027	1,515	1,694	-180	513	479	34	2,028	2,173	-146
2028	1,564	1,738	-175	530	497	33	2,093	2,235	-142
2029	1,611	1,780	-168	547	515	32	2,158	2,294	-137
2030	1,658	1,820	-161	564	528	36	2,223	2,348	-125
2031	1,707	1,861	-154	583	541	41	2,290	2,402	-112
2032	1,755	1,900	-145	601	554	47	2,356	2,455	-98
2033	1,807	1,939	-131	620	576	44	2,427	2,515	-87
2034	1,855	1,976	-120	638	588	50	2,494	2,564	-70
2035	1,897	2,015	-117	656	598	59	2,554	2,612	-59
2040	2,106	2,212	-106	745	628	117	2,851	2,840	12
2045	2,334	2,418	-85	842	640	202	3,176	3,058	118
2050	2,596	2,669	-73	954	645	309	3,550	3,313	236
2055	2,902	2,990	-88	1,086	656	430	3,987	3,646	342
2060	3,253	3,386	-132	1,239	687	552	4,492	4,073	419
2065	3,645	3,811	-166	1,410	741	669	5,056	4,553	503
2070	4,076	4,277	-201	1,598	819	779	5,674	5,096	578
2075	4,554	4,790	-236	1,807	918	888	6,361	5,709	652
2080	5,098	5,314	-216	2,041	1,029	1,012	7,139	6,343	795
2085	5,729	5,838	-108	2,309	1,150	1,159	8,038	6,988	1,050
2090	6,459	6,367	92	2,617	1,285	1,332	9,076	7,652	1,424
2095	7,286	7,032	254	2,970	1,430	1,540	10,256	8,462	1,794
2100	8,205	7,930	275	3,371	1,580	1,792	11,576	9,509	2,067

Table VI.G9.—OASDI and HI Annual Non-Interest Income, Cost, and Balance in CPI-Indexed 2025 Dollars,[a] Calendar Years 2025-2100 (Cont.)
[In billions]

Calendar year	OASDI			HI			Combined		
	Non-interest income	Cost[b]	Balance[b]	Non-interest income	Cost	Balance	Non-interest income	Cost[b]	Balance[b]
High-cost:									
2025	$1,325	$1,613	-$289	$443	$459	-$16	$1,768	$2,073	-$305
2026	1,322	1,676	-354	454	489	-35	1,776	2,165	-389
2027	1,369	1,735	-366	469	523	-54	1,838	2,258	-420
2028	1,398	1,789	-392	483	562	-78	1,881	2,351	-470
2029	1,423	1,842	-418	496	601	-105	1,919	2,442	-523
2030	1,444	1,894	-450	507	633	-126	1,950	2,527	-576
2031	1,462	1,947	-485	517	665	-148	1,979	2,612	-633
2032	1,479	1,998	-519	527	698	-170	2,006	2,696	-690
2033	1,497	2,047	-550	538	743	-205	2,036	2,790	-755
2034	1,512	2,094	-582	548	778	-230	2,060	2,872	-812
2035	1,526	2,137	-612	556	811	-255	2,081	2,948	-867
2040	1,587	2,341	-754	590	968	-378	2,176	3,309	-1,133
2045	1,643	2,510	-867	621	1,121	-501	2,263	3,631	-1,367
2050	1,693	2,677	-984	650	1,273	-624	2,343	3,951	-1,608
2055	1,741	2,859	-1,118	679	1,416	-737	2,419	4,275	-1,855
2060	1,789	3,058	-1,269	709	1,548	-839	2,498	4,606	-2,108
2065	1,835	3,248	-1,414	739	1,669	-930	2,574	4,918	-2,344
2070	1,878	3,441	-1,563	768	1,768	-1,000	2,646	5,208	-2,563
2075	1,917	3,634	-1,717	796	1,825	-1,029	2,713	5,458	-2,746
2080	1,953	3,804	-1,851	821	1,853	-1,032	2,774	5,657	-2,882
2085	1,988	3,942	-1,955	845	1,867	-1,022	2,833	5,810	-2,977
2090	2,022	4,046	-2,024	867	1,875	-1,008	2,890	5,921	-3,032
2095	2,058	4,135	-2,077	890	1,880	-990	2,948	6,015	-3,067
2100	2,096	4,222	-2,126	913	1,877	-964	3,009	6,100	-3,091

[a] CPI-indexed 2025 dollars equal current dollars adjusted by the CPI indexing series in table VI.G6.
[b] OASDI benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

Note: Components may not sum to totals because of rounding.

Table VI.G10 shows values in current, or nominal, dollars—that is, in dollars unadjusted for inflation. This table presents the annual non-interest income, cost, and balance of the combined OASI and DI Trust Funds, of the HI Trust Fund, and of the combined OASI, DI, and HI Trust Funds, based on the intermediate, low-cost, and high-cost sets of assumptions.

Table VI.G10.—OASDI and HI Annual Non-Interest Income, Cost, and Balance in Current Dollars, Calendar Years 2025-2100
[In billions]

Calendar year	OASDI			HI			Combined		
	Non-interest income	Cost[a]	Balance[a]	Non-interest income	Cost	Balance	Non-interest income	Cost[a]	Balance[a]
Intermediate:									
2025	$1,359	$1,609	-$250	$460	$453	$7	$1,819	$2,062	-$243
2026	1,451	1,701	-251	492	489	4	1,943	2,190	-247
2027	1,521	1,800	-278	518	526	-8	2,039	2,326	-286
2028	1,594	1,895	-301	545	566	-21	2,139	2,461	-322
2029	1,668	1,992	-324	572	608	-35	2,240	2,600	-360
2030	1,742	2,091	-350	601	646	-45	2,343	2,738	-395
2031	1,819	2,196	-376	631	687	-56	2,450	2,882	-432
2032	1,899	2,301	-403	663	729	-66	2,561	3,030	-469
2033	1,985	2,409	-424	696	785	-89	2,681	3,194	-513
2034	2,069	2,518	-449	730	831	-101	2,798	3,348	-550
2035	2,151	2,630	-479	762	876	-113	2,914	3,506	-592
2040	2,601	3,243	-642	941	1,104	-164	3,541	4,348	-806
2045	3,135	3,943	-808	1,153	1,352	-199	4,287	5,295	-1,008
2050	3,780	4,803	-1,023	1,412	1,631	-219	5,192	6,434	-1,242
2055	4,568	5,903	-1,335	1,735	1,959	-224	6,303	7,862	-1,559
2060	5,530	7,309	-1,780	2,137	2,368	-231	7,666	9,677	-2,011
2065	6,691	9,001	-2,310	2,626	2,884	-258	9,317	11,886	-2,568
2070	8,081	11,061	-2,980	3,219	3,525	-306	11,300	14,585	-3,286
2075	9,747	13,562	-3,815	3,936	4,284	-349	13,682	17,846	-4,164
2080	11,760	16,479	-4,719	4,805	5,168	-364	16,565	21,647	-5,082
2085	14,217	19,833	-5,616	5,861	6,207	-347	20,078	26,040	-5,963
2090	17,221	23,682	-6,462	7,147	7,445	-298	24,368	31,127	-6,759
2095	20,884	28,411	-7,526	8,722	8,907	-186	29,606	37,318	-7,712
2100	25,321	34,432	-9,112	10,643	10,594	49	35,964	45,027	-9,063
Low-cost:									
2025	1,379	1,605	-225	468	446	23	1,848	2,050	-202
2026	1,519	1,696	-177	510	474	36	2,029	2,170	-141
2027	1,607	1,798	-191	544	508	36	2,151	2,306	-155
2028	1,709	1,899	-191	579	543	36	2,287	2,442	-155
2029	1,813	2,003	-190	615	580	36	2,429	2,582	-154
2030	1,923	2,110	-187	654	613	42	2,577	2,722	-145
2031	2,039	2,222	-183	696	646	49	2,734	2,868	-134
2032	2,159	2,337	-178	739	682	58	2,898	3,019	-121
2033	2,289	2,456	-166	785	730	56	3,075	3,186	-111
2034	2,421	2,578	-157	833	767	66	3,254	3,345	-91
2035	2,550	2,707	-158	882	803	79	3,432	3,511	-79
2040	3,281	3,446	-165	1,161	978	183	4,442	4,424	18
2045	4,215	4,368	-153	1,521	1,156	365	5,736	5,524	212
2050	5,435	5,588	-152	1,997	1,350	647	7,433	6,938	495
2055	7,043	7,257	-214	2,636	1,592	1,043	9,679	8,850	829
2060	9,154	9,526	-373	3,486	1,934	1,552	12,640	11,461	1,179
2065	11,891	12,432	-541	4,601	2,419	2,182	16,492	14,851	1,641
2070	15,414	16,175	-761	6,043	3,098	2,946	21,457	19,273	2,184
2075	19,966	21,000	-1,034	7,920	4,025	3,894	27,886	25,026	2,860
2080	25,908	27,008	-1,100	10,371	5,230	5,141	36,279	32,238	4,041
2085	33,755	34,393	-639	13,605	6,777	6,828	47,359	41,171	6,189
2090	44,115	43,489	626	17,876	8,777	9,099	61,991	52,266	9,725
2095	57,688	55,676	2,013	23,519	11,326	12,193	81,207	67,002	14,205
2100	75,309	72,785	2,524	30,946	14,500	16,446	106,255	87,286	18,970

Table VI.G10.—OASDI and HI Annual Non-Interest Income, Cost, and Balance in Current Dollars, Calendar Years 2025-2100 (Cont.)
[In billions]

Calendar year	OASDI			HI			Combined		
	Non-interest income	Cost[a]	Balance[a]	Non-interest income	Cost	Balance	Non-interest income	Cost[a]	Balance[a]
High-cost:									
2025	$1,325	$1,613	-$289	$443	$459	-$16	$1,768	$2,073	-$305
2026	1,346	1,707	-361	462	498	-35	1,809	2,205	-396
2027	1,419	1,799	-380	487	543	-56	1,906	2,342	-436
2028	1,475	1,889	-413	510	593	-83	1,986	2,482	-496
2029	1,529	1,979	-450	533	645	-113	2,062	2,624	-562
2030	1,579	2,071	-492	554	692	-138	2,133	2,764	-631
2031	1,628	2,168	-540	576	741	-165	2,204	2,909	-705
2032	1,676	2,265	-589	598	791	-193	2,274	3,056	-782
2033	1,728	2,362	-634	621	858	-237	2,349	3,220	-871
2034	1,776	2,460	-684	644	914	-270	2,420	3,374	-954
2035	1,824	2,556	-732	664	970	-305	2,489	3,526	-1,037
2040	2,074	3,061	-986	771	1,266	-495	2,846	4,326	-1,481
2045	2,348	3,587	-1,239	887	1,603	-716	3,235	5,190	-1,955
2050	2,646	4,184	-1,538	1,015	1,990	-974	3,661	6,174	-2,513
2055	2,974	4,885	-1,911	1,160	2,419	-1,259	4,134	7,304	-3,170
2060	3,341	5,712	-2,371	1,325	2,892	-1,567	4,666	8,604	-3,938
2065	3,747	6,634	-2,887	1,509	3,410	-1,900	5,256	10,044	-4,788
2070	4,193	7,682	-3,490	1,715	3,947	-2,232	5,907	11,629	-5,722
2075	4,680	8,871	-4,190	1,942	4,454	-2,512	6,622	13,325	-6,702
2080	5,213	10,153	-4,940	2,191	4,945	-2,753	7,404	15,097	-7,693
2085	5,801	11,504	-5,703	2,466	5,449	-2,983	8,266	16,953	-8,686
2090	6,451	12,907	-6,456	2,767	5,983	-3,216	9,218	18,890	-9,672
2095	7,179	14,423	-7,244	3,104	6,558	-3,453	10,284	20,981	-10,697
2100	7,992	16,101	-8,109	3,480	7,158	-3,678	11,472	23,259	-11,786

[a] OASDI benefit payments which were scheduled to be paid on January 3 for some past and future years were actually paid on December 31 as required by the statutory provision for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. For comparability with the values for historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment each year.

Note: Components may not sum to totals because of rounding.

H. ANALYSIS OF BENEFIT PAYMENTS FROM THE OASI TRUST FUND WITH RESPECT TO DISABLED BENEFICIARIES

(Required by section 201(c) of the Social Security Act)

Effective January 1957, the OASI Trust Fund pays monthly benefits to disabled children aged 18 and over of retired and deceased workers if the disability began before age 18. The age by which disability must have begun was later changed to age 22.

Effective February 1968, the OASI Trust Fund pays reduced monthly benefits to disabled widows and widowers at ages 50 and over. The requirements for the disability of the widow or widower were made less restrictive effective January 1991.

At the end of 2024, the OASI Trust Fund was providing monthly benefit payments to about 1.2 million people on the basis of their disabilities or the disabilities of children. This total includes approximately 20,000 mothers and fathers (wives or husbands under normal retirement age of retired-worker beneficiaries and widows or widowers of deceased insured workers) who met all other qualifying requirements and were receiving unreduced benefits solely because they had disabled-child beneficiaries (or disabled children aged 16 or 17) in their care. The 1.2 million people excludes disabled widows and widowers who are age 60 and older, because beginning at age 60, these beneficiaries are not required to be disabled to be eligible for a nondisabled aged widow or widower benefit. The aged widow or widower benefit they are eligible for is equal in amount to the disabled widow or widower benefit. Therefore, they are not receiving benefits solely because of a disability.

In calendar year 2024, the OASI Trust Fund paid a total of $15.8 billion in benefits to the people described above. Table VI.H1 shows OASI scheduled benefits for disability for selected calendar years during 1960 through 2024 and estimates for 2025 through 2034 based on the intermediate set of assumptions.

Table VI.H1.—Scheduled Benefit Payments From the OASI Trust Fund With Respect to Disabled Beneficiaries

[Beneficiaries in thousands; scheduled benefits in millions]

	Disabled beneficiaries, end of year			Amount of scheduled benefits[a] [b]		
Calendar year	Total	Children[c]	Widows-widowers[d]	Total	Children[c]	Widows-widowers[e]
Historical data:						
1960	117	117	—	$59	$59	—
1965	214	214	—	134	134	—
1970	316	281	36	301	260	$41
1975	435	376	58	664	560	104
1980	519	460	59	1,223	1,097	126
1985	594	547	47	2,072	1,885	187
1990	662	613	49	2,882	2,649	233
1995	772	681	91	4,202	3,672	531
2000	811	707	104	5,203	4,523	680
2005	836	728	108	6,449	5,556	834
2010	996	879	117	8,671	7,662	1,008
2015	1,096	972	124	10,640	9,528	1,109
2016	1,109	988	121	10,909	9,818	1,087
2017	1,124	1,006	117	11,222	10,156	1,061
2018	1,139	1,027	112	11,767	10,729	1,031
2019	1,144	1,041	103	12,148	11,152	983
2020	1,147	1,051	95	12,351	11,403	934
2021	1,136	1,050	86	12,453	11,578	861
2022	1,128	1,051	78	13,266	12,414	829
2023	1,126	1,057	70	14,587	13,746	821
2024	1,165	1,098	66	15,814	14,995	805
Estimates under the intermediate assumptions:						
2025	1,179	1,112	67	18,876	17,941	915
2026	1,197	1,127	69	17,318	16,426	873
2027	1,213	1,142	71	18,085	17,150	915
2028	1,228	1,157	71	18,824	17,859	945
2029	1,242	1,173	69	19,580	18,605	954
2030	1,254	1,188	65	20,338	19,388	929
2031	1,266	1,203	63	21,128	20,183	924
2032	1,279	1,216	63	21,956	20,996	939
2033	1,294	1,231	64	22,868	21,869	976
2034	1,307	1,244	63	23,769	22,747	999

[a] Beginning in 1966, includes payments for vocational rehabilitation services.

[b] Amounts for 2020 and 2021 are adjusted to include in 2021 operations those benefit payments regularly scheduled in the law to be paid on January 3, 2021, which were actually paid on December 31, 2020 as required by the statutory provision for early benefit payments when the normal delivery date is on a weekend or holiday. Such shifts in payments across calendar years have occurred in the past, including in 2016, and will occur periodically in the future whenever January 3rd falls on a Sunday. In order to provide a consistent perspective on trust fund operations over time, all trust fund operations in each year reflect the 12 months of benefits that are regularly scheduled for payment in that year.

[c] Also includes certain mothers and fathers (see text).

[d] In 1984 and later years, includes only disabled widows and widowers aged 50-59, because disabled widows and widowers age 60 and older are eligible for the same benefit as a nondisabled aged widow or widower. Therefore, they are not receiving benefits solely because of a disability.

[e] In 1983 and prior years, includes the offsetting effect of lower benefits payable to disabled widows and widowers who continued to receive benefits after attaining age 60 (62, for disabled widowers prior to 1973), compared to the higher nondisabled widow's and widower's benefits that would otherwise be payable. In 1984 and later years, includes only scheduled benefits to disabled widows and widowers aged 50-59 (see footnote d).

Note: Components may not sum to totals because of rounding.

Under the intermediate assumptions, estimated total scheduled benefits paid from the OASI Trust Fund with respect to disabled beneficiaries will increase from $18.9 billion in calendar year 2025 to $23.8 billion in calendar year 2034.

In calendar year 2024, benefit payments (including payments for vocational rehabilitation services) with respect to disabled persons from the OASI Trust Fund and from the DI Trust Fund (including payments from the DI fund to all children and spouses of disabled-worker beneficiaries) totaled $170.9 billion. Of this amount, $15.8 billion, or 9.3 percent, represented payments from the OASI Trust Fund. Table VI.H2 contains these and similar figures for selected calendar years during 1960 through 2024 and estimates for calendar years 2025 through 2034.

Table VI.H2.—Scheduled Benefit Payments[a] Under the OASDI Program With Respect to Disabled Beneficiaries
[Amounts in millions]

Calendar year	Total[b]	DI Trust Fund[b c]	OASI Trust Fund[b]	
			Amount[d]	Percentage of total
Historical data:				
1960	$627	$568	$59	9.4
1965	1,707	1,573	134	7.9
1970	3,386	3,085	301	8.9
1975	9,169	8,505	664	7.2
1980	16,738	15,515	1,223	7.3
1985	20,908	18,836	2,072	9.9
1990	27,717	24,835	2,882	10.4
1995	45,140	40,937	4,202	9.3
2000	60,204	55,001	5,203	8.6
2005	91,835	85,386	6,449	7.0
2010	132,916	124,245	8,671	6.5
2015	154,028	143,388	10,640	6.9
2016	153,709	142,800	10,909	7.1
2017	154,048	142,826	11,222	7.3
2018	155,526	143,760	11,767	7.6
2019	157,289	145,141	12,148	7.7
2020	155,933	143,582	12,351	7.9
2021	152,538	140,085	12,453	8.2
2022	156,861	143,595	13,266	8.5
2023	166,533	151,946	14,587	8.8
2024	170,864	155,049	15,814	9.3
Estimates under the intermediate assumptions:				
2025	185,411	166,534	18,876	10.2
2026	196,005	178,687	17,318	8.8
2027	205,469	187,384	18,085	8.8
2028	208,593	189,769	18,824	9.0
2029	211,569	191,989	19,580	9.3
2030	215,117	194,779	20,338	9.5
2031	222,023	200,895	21,128	9.5
2032	229,952	207,996	21,956	9.5
2033	239,180	216,312	22,868	9.6
2034	249,231	225,463	23,769	9.5

[a] Amounts for 2020 and 2021 are adjusted to include in 2021 operations those benefit payments regularly scheduled in the law to be paid on January 3, 2021, which were actually paid on December 31, 2020 as required by the statutory provision for early benefit payments when the normal delivery date is on a weekend or holiday. Such shifts in payments across calendar years have occurred in the past, including in 2016, and will occur periodically in the future whenever January 3rd falls on a Sunday. In order to provide a consistent perspective on trust fund operations over time, all trust fund operations in each year reflect the 12 months of benefits that are regularly scheduled for payment in that year.

[b] Beginning in 1966, includes payments for vocational rehabilitation services.

[c] Scheduled benefits paid to disabled workers and their eligible children and spouses.

[d] Scheduled benefits paid to disabled children aged 18 and over, mothers and fathers receiving a benefit based on the disability of a child in their care, and disabled widows and widowers aged 50-59. See text and footnotes d and e of table VI.H1 for more information.

Note: Components may not sum to totals because of rounding.

I. GLOSSARY

Actuarial balance. The difference between the summarized income rate and the summarized cost rate as a percentage of taxable payroll over a given valuation period.

Actuarial deficit. A negative actuarial balance.

Administrative expenses. Expenses incurred by the Social Security Administration and the Department of the Treasury in administering the OASDI program and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses are paid from the OASI and DI Trust Funds.

Advance tax transfers. Amounts representing the estimated total OASDI tax contributions for a given month. From May 1983 through November 1990, such amounts were credited to the OASI and DI Trust Funds at the beginning of each month. The trust funds reimbursed the General Fund of the Treasury for the associated loss of interest. Advance tax transfers are no longer made unless needed in order to pay benefits.

Alternatives I, II, or III. See "Assumptions."

Annual balance. The difference between the income rate and the cost rate for a given year.

Assumptions. Values related to future trends in key factors that affect the trust funds. Demographic assumptions include fertility, mortality, net immigration, marriage, and divorce. Economic assumptions include unemployment rates, average earnings, inflation, interest rates, and productivity. Program-specific assumptions include retirement patterns, and disability incidence and termination rates. This report presents three sets of demographic, economic, and program-specific assumptions:

- Alternative II is the intermediate set of assumptions, and represents the Trustees' best estimates of likely future demographic, economic, and program-specific conditions.
- Alternative I is a low-cost set of assumptions—it assumes relatively rapid economic growth, high inflation, and favorable (from the standpoint of program financing) demographic and program-specific conditions.
- Alternative III is a high-cost set of assumptions—it assumes relatively slow economic growth, low inflation, and unfavorable (from the standpoint of program financing) demographic and program-specific conditions.

See tables V.A2, V.B1, and V.B2.

Automatic cost-of-living benefit increase. The annual increase in benefits, effective for December, reflecting the increase, if any, in the cost of living. A benefit increase is applicable only after a beneficiary becomes eligible for

benefits. In general, the benefit increase equals the percentage increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) measured from the third quarter of the last year for which there was an increase to the third quarter of the current year. If there is no increase in the CPI-W, there is no cost-of-living benefit increase. See table V.C1.

Auxiliary benefits. Monthly benefits payable to a spouse or child of a retired or disabled worker, or to a survivor of a deceased worker.

Average indexed monthly earnings—AIME. The measure of lifetime earnings used in determining the primary insurance amount (PIA) for most workers who attain age 62, become disabled, or die after 1978. A worker's actual past earnings are adjusted by changes in the average wage index, in order to bring them up to their approximately equivalent value at the time of retirement or other eligibility for benefits.

Average wage index—AWI. A series that generally increases with the average amount of total wages per worker with any wages for each year after 1950, including wages in noncovered employment and wages in covered employment in excess of the OASDI contribution and benefit base. (See Title 20, Chapter III, section 404.211(c) of the Code of Federal Regulations for a more precise definition.) The average wage index is used to index the taxable earnings of most workers first becoming eligible for benefits in 1979 or later, and for automatic adjustments in the contribution and benefit base, bend points, earnings test exempt amounts, and other wage-indexed amounts. See tables V.C1 and VI.G6.

Award. An administrative determination that an individual is entitled to receive a specified type of OASDI benefit. Awards can represent not only new entrants to the benefit rolls but also persons already on the rolls who become entitled to a different type of benefit. Awards usually result in the immediate payment of benefits, although payments may be deferred or withheld depending on the individual's particular circumstances.

Baby boom. The period from the end of World War II (1946) through 1965 marked by unusually high birth rates.

Bend points. The dollar amounts defining the AIME or PIA brackets in the benefit formulas. For the bend points for years 1979 and later, see table V.C2.

Beneficiary. A person who has been awarded benefits on the basis of his or her own or another's earnings record. The benefits may be either in current-payment status or withheld.

Benefit award. See "Award."

Benefit conversion. See "Disability conversion."

Benefit payments. The amounts disbursed for OASI and DI benefits by the Department of the Treasury.

Benefit termination. See "Termination."

Best estimate assumptions. See "Assumptions."

Board of Trustees. A Board established by the Social Security Act to oversee the financial operations of the Federal Old-Age and Survivors Insurance Trust Fund and the Federal Disability Insurance Trust Fund. The Board is composed of 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. The President appoints and the Senate confirms the other two members to serve as public representatives. Also referred to as the "Board" or the "Trustees."

Cash flow. Actual or projected revenue (other than interest paid to the trust funds) and costs reflecting the levels of payroll tax contribution rates and benefits scheduled in the law. Net cash flow is the difference between noninterest income and cost.

Consumer Price Index—CPI. An official measure of inflation in consumer prices. In this report, CPI refers to the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). The Bureau of Labor Statistics, Department of Labor, publishes historical values for the CPI-W.

Contribution and benefit base. Annual dollar amount above which earnings in employment covered under the OASDI program are neither taxable nor creditable for benefit-computation purposes. (Also referred to as maximum contribution and benefit base, annual creditable maximum, taxable maximum, and maximum taxable.) See tables V.C1 and V.C6. See "Hospital Insurance (HI) contribution base."

Contributions. See "Payroll tax contributions."

Conversion. See "Disability conversion."

Cost. The cost shown for a year includes benefits scheduled for payment in the year (without regard to the ability to make the payments in full), administrative expenses, financial interchange with the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries.

Cost-of-living adjustment. See "Automatic cost-of-living benefit increase."

Cost rate. The cost rate for a year is the ratio of the cost of the program to the taxable payroll for the year.

Covered earnings. Wages or earnings from self-employment covered by the OASDI program.

Covered employment. All employment for which earnings are creditable for Social Security purposes. The program covers almost all employment. Some exceptions are:

- State and local government employees whose employer has not elected to be covered under Social Security and who are participating in an employer-provided pension plan.
- Current Federal civilian workers hired before 1984 who have not elected to be covered.
- Self-employed workers earning less than $400 in a calendar year.

Covered worker. A person who has earnings creditable for Social Security purposes based on services for wages in covered employment or income from covered self-employment.

CPI-indexed dollars. Amounts adjusted by the CPI to the value of the dollar in a particular year.

Creditable earnings. Wages or self-employment earnings posted to a worker's earnings record. Such earnings determine eligibility for benefits and the amount of benefits on that worker's record. The contribution and benefit base is the maximum amount of creditable earnings for each worker in a calendar year.

Current-cost financing. See "Pay-as-you-go financing."

Current dollars. Amounts expressed in nominal dollars with no adjustment for inflation.

Currently insured status. A worker is currently insured when he or she has accumulated six quarters of coverage during the 13-quarter period ending with the current quarter.

Current-payment status. Status of a beneficiary to whom a benefit is being paid for a given month (with or without deductions, provided the deductions add to less than a full month's benefit).

Deemed filing. Under certain circumstances, a person applying for or receiving either an aged-spouse benefit or a retired-worker benefit is required to also file for the other of these two types of benefits. For those first eligible for benefits before 2016, this requirement applies to any person under normal retirement age who is eligible for the other benefit as of the starting month for the first benefit. For those first eligible for benefits in 2016 and later, this requirement applies whenever the person is eligible for the other benefit. This can occur at any age, and in months after the starting month of the first benefit.

Deemed wage credit. See "Military service wage credits."

Delayed retirement credits. Increases in the benefit amount for certain individuals who did not receive benefits for months after attaining normal retirement age but before age 70. Delayed retirement credits apply to benefits for January of the year following the year they are earned or for the month of attainment of age 70, whichever comes first. See table V.C3.

Demographic assumptions. See "Assumptions."

Disability. For Social Security purposes, the inability to engage in any substantial gainful activity (see "Substantial gainful activity—SGA") 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 at ages 55 and over 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 benefit.

Disability conversion ratio. For a given year, the ratio of the number of disability conversions to the average number of disabled-worker beneficiaries at all ages during the year.

Disability conversion. Upon attainment of normal retirement age, a disabled-worker beneficiary is automatically converted to retired-worker status.

Disability incidence rate. The proportion of workers in a given year, insured for but not receiving disability benefits, who apply for and are awarded disability benefits.

Disability Insurance (DI) Trust Fund. See "Trust fund."

Disability insured status. A worker is disability insured if he or she is: (1) a fully insured worker who has accumulated 20 quarters of coverage during the 40-quarter period ending with the current quarter, (2) a fully insured worker aged 24-30 who has accumulated quarters of coverage during one-half of the quarters elapsed after the quarter of attainment of age 21 and up to and including the current quarter, or (3) a fully insured worker under age 24 who has accumulated six quarters of coverage during the 12-quarter period ending with the current quarter.

Disability prevalence rate. The proportion of persons insured for disability benefits who are disabled-worker beneficiaries in current-payment status.

Disability termination rate. The proportion of disabled-worker beneficiaries in a given year whose disability benefits terminate as a result of their recovery or death.

Disabled-worker benefit. A monthly benefit payable to a disabled worker under normal retirement age and insured for disability. Before November 1960, disability benefits were limited to disabled workers aged 50-64.

Dual entitlement. A person may be entitled to more than one benefit at the same time. For example, a person may be entitled as a retired worker on his or her own record and as a spouse on another record. However, a person's benefit amount can never exceed the highest single benefit to which that person is entitled. Some benefits are calculated independently with the larger benefit being paid or the smaller benefit being paid plus the excess amount of the larger one.

Earnings. Unless otherwise qualified, all wages from employment and net earnings from self-employment, whether or not they are taxable or covered.

Earnings test. The provision requiring the withholding of benefits if beneficiaries under normal retirement age have earnings in excess of certain exempt amounts. See table V.C1.

Economic assumptions. See "Assumptions."

Effective interest rate. See "Interest rate."

Excess wages. Wages in excess of the contribution and benefit base on which a worker initially makes payroll tax contributions, usually as a result of working for more than one employer during a year. Employee payroll taxes on excess wages are refundable to affected employees, while the employer taxes are not refundable.

Expenditures. Actual payments made or expected to be made under current law, including benefits paid or payable, administrative expenses, financial interchange with the Railroad Retirement program, and payments for vocational rehabilitation services for disabled beneficiaries. Includes only the portion of cost that is payable with the financing provisions in current law.

Exposed population. For any event (such as being awarded a benefit, or dying), the group that is exposed to the possibility of experiencing the event. For example, the exposed population for disabled worker awards (incidence) is the disability insured population less those already receiving benefits.

Federal Insurance Contributions Act—FICA. Provision authorizing payroll taxes on the wages of employed persons to provide for Old-Age, Survivors, and Disability Insurance, and for Hospital Insurance. Workers and their employers generally pay the tax in equal amounts.

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 financial position it would have been had railroad employment always been covered under Social Security.

Fiscal year. The accounting year of the United States Government. Starting in 1976, a fiscal year is the 12-month period ending September 30. For example, fiscal year 2025 began October 1, 2024, and will end September 30, 2025.

Full advance funding. A financing method in which contributions are established to match the full cost of future benefits as these costs are incurred through current service. Such financing methods also provide for amortization over a fixed period of any financial obligation that is incurred at the beginning of the program (or subsequent modification) as a result of granting credit for past service.

Fully insured status. A worker is fully insured when his or her total number of quarters of coverage is greater than or equal to the number of years elapsed after the year of attainment of age 21 (but not less than six). Once a worker has accumulated 40 quarters of coverage, he or she remains permanently fully insured.

General Fund of the Treasury. Funds held by the Treasury of the United States, other than income collected for a specific purpose (such as Social Security) and maintained in a separate account for that purpose.

General Fund reimbursements. Payments from the General Fund of the Treasury to the trust funds for specific items defined in the law, including:

- The cost of noncontributory wage credits for military service before 1957, and periodic adjustments of previous determinations.
- The cost in 1971-82 of deemed wage credits for military service performed after 1956.
- The cost of benefits to certain uninsured persons who attained age 72 before 1968.
- The cost of payroll tax credits provided to employees in 1984 and self-employed persons in 1984-89 by Public Law 98-21.
- The cost in 2009-17 of excluding certain self-employment earnings from SECA taxes under Public Law 110-246.
- Payroll tax revenue forgone under the provisions of Public Laws 111-147, 111-312, 112-78, and 112-96.

In addition, the General Fund transfers a portion of proceeds from repayments of loans authorized under Public Law 116-136. The General Fund also reimburses the trust funds for various other items, including interest on checks which are not negotiated 6 months after the month of issue and costs incurred in performing certain legislatively mandated activities not directly related to administering the OASI and DI programs.

Gross domestic product—GDP. The total dollar value of all goods and services produced by labor and property located in the United States, regardless of who supplies the labor or property.

Hospital Insurance (HI) contribution base. Annual dollar amount above which earnings in employment covered under the HI program are not taxable. (Also referred to as maximum contribution base, taxable maximum, and maximum taxable.) Beginning in 1994, the HI contribution base was eliminated.

High-cost assumptions. See "Assumptions."

Hospital Insurance (HI) Trust Fund. See "Trust fund."

Immigration. See "Lawful permanent resident (LPR) immigration" and "Temporary or unlawfully present immigration."

Income. Income for a given year is the sum of tax revenue on a cash basis (payroll tax contributions and income from the taxation of scheduled benefits), reimbursements from the General Fund of the Treasury, if any, and interest credited to the trust funds.

Income rate. Ratio of non-interest income to the OASDI taxable payroll for the year.

Infinite horizon. The period extending indefinitely into the future.

Inflation. An increase in the general price level of goods and services.

Insured status. The state or condition of having sufficient quarters of coverage to meet the eligibility requirements for retired-worker or disabled-worker benefits, or to permit the worker's spouse and children or survivors to establish eligibility for benefits in the event of his or her disability, retirement, or death. See "Quarter of coverage."

Interest. A payment in exchange for the use of money during a specified period.

Interest rate. Interest rates on new public-debt obligations issuable to Federal trust funds (see "Special public-debt obligation") are determined monthly. Such rates are equal to the average market yield on all outstanding marketable U.S. securities not due or callable until after 4 years from the date the rate is determined. See table V.B2 for historical and assumed future interest rates on new special-issue securities. The effective interest rate for a trust fund is the ratio of the interest earned by the fund over a given period of time to the average level of reserves held by the fund during the period. The effective rate of interest thus represents a measure of the overall average interest earnings on the fund's portfolio of investments. See table VI.G6 for projected compound effective trust fund interest factors.

Interfund borrowing. The borrowing of reserves by a trust fund (OASI, DI, or HI) from another trust fund when the first fund is in danger of depletion. The Social Security Act permitted interfund borrowing only during 1982 through 1987, and required all amounts borrowed to be repaid prior to the end of 1989. The only exercise of this authority occurred in 1982, when the OASI Trust Fund borrowed from the DI and HI Trust Funds. The final repayment of borrowed amounts occurred in 1986.

Intermediate assumptions. See "Assumptions."

Lawful permanent resident (LPR) immigration. The flow of persons who enter the Social Security area population and are granted LPR status, or who are already in the Social Security area population and adjust their status to become LPRs. Persons who enter the country with valid visas but without LPR status, such as temporary foreign workers and students, are not included in the LPR immigration category.

Legal emigration. The flow of lawful permanent residents and citizens who leave the Social Security area population.

Life expectancy. Average remaining number of years expected prior to death. Period life expectancy is calculated for a given year using the actual or expected death rates at each age for that year. Cohort life expectancy, sometimes referred to as generational life expectancy, is calculated for individuals at a specific age in a given year using actual or expected death rates from the years in which the individuals would actually reach each succeeding age if they survive.

Long-range. The first 75 projection years. The Trustees make long-range actuarial estimates for this period because it covers approximately the maximum remaining lifetime for virtually all current Social Security participants.

Low-cost assumptions. See "Assumptions."

Lump-sum death payment. A lump sum, generally $255, payable on the death of a fully or currently insured worker. The lump sum is payable to the surviving spouse of the worker, under most circumstances, or to the worker's children.

Maximum family benefit. The maximum monthly amount that can be paid on a worker's earnings record. Whenever the total of the individual monthly benefits payable to all the beneficiaries entitled on one earnings record exceeds the maximum, each dependent's or survivor's benefit is proportionately reduced. Benefits payable to divorced spouses or surviving divorced spouses are not reduced under the family maximum provision.

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 persons age 65 and over. In 1972, lawmakers extended coverage to persons receiving Social Security Disability Insurance payments for 2 years and persons 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, persons 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, Part A) and Supplementary Medical Insurance (SMI). The SMI Trust Fund is composed of 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.

Military service wage credits. Credits toward OASDI earnings records for benefit computation purposes, recognizing that military personnel receive non-wage compensation (such as food and shelter) in addition to their basic pay and other cash payments. Military personnel do not pay payroll taxes on these credits. 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 the contributory credits for basic pay, noncontributory wage credits of $300 were granted for each calendar quarter, from January 1957 through December 1977, in which a person received pay for military service. Noncontributory wage credits of $100 were granted for each $300 of military wages, up to a maximum credit of $1,200 per calendar year, from January 1978 through December 2001.

National average wage index—AWI. See "Average wage index—AWI."

Non-interest income. Non-interest income for a given year is the sum of tax revenue on a cash basis (payroll tax contributions and income from the taxation of scheduled benefits) and reimbursements from the General Fund of the Treasury, if any.

Nonresident alien beneficiary. An OASDI beneficiary who is not a U.S. citizen and who is living abroad while receiving benefits.

Normal retirement age—NRA. The age at which a person may first become entitled to retirement benefits without reduction based on age. For persons reaching age 62 before 2000, the normal retirement age is 65. It increases gradually to 67 for persons reaching age 62 in 2022 or later, beginning with an increase to 65 years and 2 months for persons reaching age 62 in 2000. See table V.C3.

Old-Age and Survivors Insurance (OASI) Trust Fund. See "Trust fund."

Old-law base. Amount the contribution and benefit base would have been if the 1977 amendments had not provided for ad hoc increases. The Social Security Amendments of 1972 provided for automatic annual indexing of the contribution and benefit base. The Social Security Amendments of 1977 specified ad hoc bases for 1978-81, with subsequent bases updated in accordance with the normal indexing procedure. See table V.C2.

Open-group unfunded obligation. See "Unfunded obligation."

Par value. The value printed on the face of a bond. For special issues held by the trust funds, par value is the redemption value at any time up to maturity.

Partial advance funding. A financing method in which contribution levels are established to provide a substantial accumulation of trust fund reserves, thereby generating interest income to the trust funds and reducing the need for contribution increases or cost reductions in periods when costs are relatively high or income is relatively low. The trust fund buildup under partial advance funding is smaller than it would be with full advance funding.

Pay-as-you-go financing. A financing method in which contribution levels are established with the intent to produce annual income levels required to

pay current benefits, with trust fund reserves built up only to the extent needed to prevent immediate depletion of the fund reserves by random fluctuations.

Payroll tax contributions. The amount based on a percent of earnings, up to an annual maximum, that must be paid by:

- employers and employees on wages from employment under the Federal Insurance Contributions Act,
- the self-employed on net earnings from self-employment under the Self-Employment Contributions Act, and
- States on the wages paid in 1986 and earlier to State and local government employees covered under the Social Security Act through voluntary agreements under section 218 of the act.

Also referred to as payroll taxes.

Present value. The interest-adjusted equivalent value, at the present time, of a stream of values (either positive or negative, past or future). Present value is used widely in calculations involving financial transactions over long periods of time to account for the time value of money, by discounting or accumulating these transactions at the rate of interest. Present-value calculations for this report use the effective yield on combined OASI and DI Trust Fund reserves.

Primary insurance amount—PIA. The monthly amount payable to a retired worker who begins to receive benefits at normal retirement age or, generally, to a disabled worker. This amount, which is typically related to the worker's average monthly wage or average indexed monthly earnings, is also used as a base for computing all types of benefits payable on an individual's earnings record.

Primary-insurance-amount formula. The mathematical formula relating the PIA to the AIME for workers who attain age 62, become disabled, or die after 1978. The PIA is equal to the sum of 90 percent of AIME up to the first bend point, plus 32 percent of AIME above the first bend point up to the second bend point, plus 15 percent of AIME in excess of the second bend point. Automatic benefit increases are applied beginning with the year of eligibility. See table V.C2 for historical and assumed future bend points and table V.C1 for historical and assumed future benefit increases.

Quarter of coverage. Basic unit of measurement for determining insured status. For 1978, a worker earned one quarter of coverage, up to four, for each $250 of that worker's annual covered earnings. After 1978, the $250 amount increases automatically with increases in the national average wage index. See table V.C2.

Railroad Retirement. A Federal insurance program, similar to Social Security, designed for workers in the railroad industry. The provisions of the Rail-

road Retirement Act provide for a system of coordination and financial interchange between the Railroad Retirement program and the Social Security program.

Reallocation of payroll tax rates. An increase in the payroll tax rate for either the OASI or DI Trust Fund, with a corresponding reduction in the rate for the other fund, so that the total OASDI payroll tax rate is not changed.

Recession. A period of adverse economic conditions, generally defined as two or more successive calendar quarters of negative real growth in gross domestic product.

Reserves. See "Trust fund reserves."

Retired-worker benefit. A monthly benefit payable to a fully insured retired worker aged 62 or older or to a person entitled under the transitionally insured status provision in the law.

Retirement earnings test. See "Earnings test."

Retirement eligibility age. The age, currently age 62, at which a fully insured individual first becomes eligible to receive retired-worker benefits.

Scheduled benefits. The level of benefits specified under current law.

Scenario-based model. A model with specified assumptions for and relationships among variables. Under such a model, any specified set of assumptions determines a single outcome directly reflecting the specifications.

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 Social Security payroll taxes on the net earnings of most self-employed persons.

Short-range. The first 10 projection years. The Social Security Act requires estimates for 5 years; the Trustees prepare estimates for an additional 5 years to help clarify trends that are only starting to develop in the mandated first 5-year period.

Social Security Act. Provisions of the law governing most operations of the Social Security program. The original Social Security Act is Public Law 74-271, enacted August 14, 1935. With subsequent amendments, the Social Security Act consists of 21 titles, of which three have been repealed. Title II of the Social Security Act authorizes the Old-Age, Survivors, and Disability Insurance program.

Social Security area population. The population composed of: (1) residents of the 50 States and the District of Columbia (adjusted for net census undercount); (2) civilian residents of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Northern Mariana Islands; (3) Federal civilian employees and persons in the U.S. Armed Forces abroad and their dependents; (4) non-citizens living abroad who are insured for Social Security benefits; and (5) all other U.S. citizens abroad.

Solvency. A program is solvent at a point in time if it is able to pay scheduled benefits when due with scheduled financing. For example, the OASDI program is solvent over any period for which the trust funds maintain a positive level of reserves.

Special public-debt obligation. Securities of the United States Government issued exclusively to the OASI, DI, HI, and SMI Trust Funds and other Federal trust funds. Section 201(d) of the Social Security Act provides that the public-debt obligations issued for purchase by the OASI and DI Trust Funds shall have maturities fixed with due regard for the needs of the funds. The usual practice has been to spread the holdings of special issues, as of each 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 value at any time and carry interest rates determined by law (see "Interest rate"). See tables VI.A4 and VI.A5 for a listing of the obligations held by the OASI and DI Trust Funds, respectively.

Stochastic model. A model used for projecting a probability distribution of potential outcomes. Such models allow for random variation in one or more variables through time. The random variation is generally based on fluctuations observed in historical data for a selected period. A large number of simulations, each of which reflects random variation in the variable(s), produce a distribution of potential outcomes.

Substantial gainful activity—SGA. The level of work activity used to establish disability. A finding of disability requires that a person be unable to engage in substantial gainful activity. A person who earns more than a certain monthly amount (net of impairment-related work expenses) is ordinarily considered to be engaging in SGA. The amount of monthly earnings considered as SGA depends on the nature of a person's disability. The Social Security Act specifies a higher SGA amount for statutorily blind individuals; Federal regulations specify a lower SGA amount for non-blind individuals. Both SGA amounts increase with increases in the national average wage index.

Summarized balance. The difference between the summarized income rate and the summarized cost rate, expressed as a percentage of GDP. The difference between the summarized income rate and cost rate as a percentage of taxable payroll is referred to as the actuarial balance.

Summarized cost rate. The ratio of the present value of cost to the present value of the taxable payroll (or GDP) for the years in a given period, expressed as a percentage. To evaluate the financial adequacy of the program, the summarized cost rate is adjusted to include the cost of reaching and maintaining a target trust fund level. A trust fund level of about 1 year's cost is considered to be an adequate reserve for unforeseen contingencies; therefore, the targeted trust fund ratio is 100 percent of annual cost. Accordingly, the adjusted summarized cost rate is equal to the ratio of: (1) the sum of the present value of the cost during the period plus the present value of the

targeted ending trust fund level to (2) the present value of the taxable payroll (or GDP) during the projection period.

Summarized income rate. The ratio of the present value of scheduled non-interest income to the present value of taxable payroll (or GDP) for the years in a given period, expressed as a percentage. To evaluate the financial adequacy of the program, the summarized income rate is adjusted to include reserves on hand at the beginning of the period. Accordingly, the adjusted summarized income rate equals the ratio of: (1) the sum of the trust fund reserve at the beginning of the period plus the present value of non-interest income during the period to (2) the present value of the taxable payroll (or GDP) for the years in the period.

Supplemental Security Income—SSI. A Federally administered program (often with State supplementation) of cash assistance for needy aged, blind, or disabled persons. The General Fund of the Treasury funds Federal expenditures for the SSI program. The Social Security Administration administers it.

Supplementary Medical Insurance (SMI) Trust Fund. See "Trust fund."

Survivor benefit. Benefit payable to a survivor of a deceased worker.

Sustainable solvency. Sustainable solvency for the financing of the program under a specified set of assumptions is achieved when the projected trust fund ratio is positive throughout the 75-year projection period and is either stable or rising at the end of the period.

Taxable earnings. Wages or self-employment income, in employment covered by the OASDI or HI programs, that is under the applicable annual maximum taxable limit. For 1994 and later, no maximum taxable limit applies to the HI program.

Taxable payroll. A weighted sum of taxable wages and taxable self-employment income. When multiplied by the combined employee-employer payroll tax rate, taxable payroll yields the total amount of payroll taxes incurred by employees, employers, and the self-employed for work during the period.

Taxable self-employment income. The maximum amount of net earnings from self-employment by an earner which, when added to any taxable wages, does not exceed the contribution and benefit base. For HI beginning in 1994, all net earnings from self-employment.

Taxable wages. See "Taxable earnings."

Taxation of benefits. Beginning in 1984, up to 50 percent of an individual's or a couple's OASDI benefits is potentially subject to Federal income taxation, depending on the circumstances. The revenue derived from this provision is allocated to the OASI and DI Trust Funds on the basis of the income taxes paid on the benefits from each fund. In 1994, the maximum percentage of benefits potentially subject to taxation was increased from 50 percent to

85 percent. The additional tax 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 tax contributions" and "Taxation of benefits."

Temporary or unlawfully present emigration. The flow of temporary or unlawfully present immigrants who leave the Social Security area population or who adjust their status to become LPRs. The stock of immigrants from which these emigrants are drawn includes temporary visa holders, those who entered the Social Security area lawfully on temporary visas but subsequently overstayed their visas, and those who entered the country illegally.

Temporary or unlawfully present immigration. The flow of persons who enter the Social Security area population and stay to the end of the year without being granted LPR status, such as foreign workers and students entering with temporary visas, and immigrants who enter the country illegally.

Termination. Cessation of payment because the beneficiary is no longer entitled to receive a specific type of benefit. For example, benefits might terminate as a result of the death of the beneficiary, the recovery of a disabled beneficiary, or the attainment of age 18 by a child beneficiary. In some cases, an individual may cease one benefit and this is not a termination because they become immediately entitled to another type of benefit, such as the conversion of a disabled-worker beneficiary at normal retirement age to a retired-worker beneficiary.

Test of long-range close actuarial balance. The conditions required to meet this test are:

- The trust fund satisfies the test of short-range financial adequacy; and
- The trust fund ratio stays above zero throughout the 75-year projection period, such that benefits would be payable in a timely manner throughout the period.

The Trustees apply the test to OASI, DI, and the combined OASDI program based on the intermediate set of assumptions.

Test of short-range financial adequacy. The conditions required to meet this test are:

- If the trust fund ratio is at least 100 percent at the beginning of the 10-year projection period, then it must remain at or above 100 percent throughout the entire projection period;
- If the ratio is initially less than 100 percent, then it must reach at least 100 percent within 5 years (without reserve depletion at any time during this period) and then remain at or above 100 percent throughout the remainder of the 10-year period.

The Trustees apply the test to OASI, DI, and the combined OASDI program based on the intermediate set of assumptions.

Total-economy productivity. The ratio of real GDP to hours worked by all workers. Also referred to as "labor productivity."

Total fertility rate. The sum of the single-year-of-age birth rates for girls and women aged 14 through 49, where the rate for age 14 includes births to girls aged 14 and under, and the rate for age 49 includes births to women aged 49 and over. The total fertility rate may be interpreted as the average number of children that would be born to a woman if she were to experience, at each age of her life, the birth rate observed in, or assumed for, a specified year, and if she were to survive the entire childbearing period.

Trust fund. Separate accounts in the United States Treasury which hold the payroll taxes received under the Federal Insurance Contributions Act and the Self-Employment Contributions Act; payroll taxes resulting from coverage of State and local government employees; any sums received under the financial interchange with the railroad retirement account; voluntary hospital and medical insurance premiums; and reimbursements or payments from the General Fund of the Treasury. As required by law, the Department of the Treasury invests funds not required to meet current expenditures in interest-bearing securities backed by the full faith and credit of the U.S. Government. The interest earned is also deposited in the trust funds.

- **Old-Age and Survivors Insurance (OASI).** The trust fund used for paying monthly benefits to retired-worker (old-age) beneficiaries, their spouses and children, and to survivors of deceased insured workers.
- **Disability Insurance (DI).** The trust fund used for paying monthly benefits to disabled-worker beneficiaries, their spouses and children, and for providing rehabilitation services to the disabled.
- **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.
- **Supplementary Medical Insurance (SMI).** The Medicare trust fund composed of 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 physicians' 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.

The trust funds are distinct legal entities which operate independently. Fund operations are sometimes combined on a hypothetical basis.

Trust fund ratio. A measure of trust fund adequacy. The reserves at the beginning of a year (equal to the reserves at the end of the prior year), which

do not include advance tax transfers, expressed as a percentage of the cost for the year. The trust fund ratio represents the proportion of a year's cost which could be paid solely with the reserves at the beginning of the year.

Trust fund reserve depletion. The point at which reserves in a trust fund are insufficient to pay scheduled benefits in full and on time.

Trust fund reserves. The cumulative excess of trust fund income over trust fund cost over all years to date. These reserves are held by the trust funds in the form of Treasury notes and bonds, other securities guaranteed by the Federal Government, certain Federally sponsored agency obligations, and cash.

Trustees. See "Board of Trustees."

Undisbursed balances. In general, refers to the cumulative differences between the actual cash payments for a month compared to security redemptions from the trust fund reserves made on a preliminary basis to cover such cash payments during the same month. On a monthly basis, the Social Security Administration (SSA) pays benefits and makes payments for other programmatic expenses associated with the trust funds. During each month, SSA draws cash from the trust funds on a preliminary basis, which results in Treasury redeeming invested securities to cover such payments. This monthly difference can be either positive or negative depending on net monthly activity, and is added to the balance from the end of the prior month.

A net positive undisbursed balance represents a situation where cumulative redemptions from the trust fund's securities are more than was needed to cover actual program cash payments through the end of the month. A net negative balance represents a situation where cumulative program cash payments exceeded the amount redeemed from the invested securities. A negative value requires future redemption of additional invested securities.

In addition, about every seven years, when January 3 falls on a Sunday, benefit payments scheduled to be paid on January 3rd are actually paid on December 31 of the preceding year, as required by the statutory provision included in the 1977 Social Security Amendments for early delivery of benefit payments when the normal payment delivery date is a Saturday, Sunday, or legal public holiday. Consistent with practice in prior reports and for comparability with other historical years and the projections in this report, all trust fund operations and reserves reflect the 12 months of benefits scheduled for payment in each year. Therefore, such advance payments are included as positive values in the undisbursed balance at the end of the calendar years in which the advance payments are made.

Unfunded obligation. A measure of the shortfall of trust fund income to fully cover program cost through a specified date after depletion of trust fund 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 through a specified date over

the sum of: (1) the value of trust fund reserves at the beginning of the valuation period; and (2) the present value of the projected non-interest income of the program through a specified date, assuming scheduled tax rates and benefit levels. This measure can apply for all participants through a specified date, i.e., the open group, or be limited to a specified subgroup of participants.

Unfunded obligation ratio. The unfunded obligation accumulated through the beginning of a year expressed as a percentage of the cost for the year.

Unnegotiated check. A check which has not been cashed 6 months after the end of the month in which the check was issued. When a check has been outstanding for a year, the Department of the Treasury administratively cancels the check and reimburses the issuing trust fund separately for the amount of the check and interest for the period the check was outstanding. The appropriate trust fund also receives an interest adjustment for the time the check was outstanding if it is cashed 6 to 12 months after the month of issue. If a check is presented for payment after it has been administratively canceled, a replacement check is issued.

Valuation period. A period of years which is considered as a unit for purposes of calculating the financial status of a trust fund.

Vocational rehabilitation (VR). Services provided to disabled persons to help them to return to gainful employment. VR services are designed to provide an individual with the training or other services that are needed to return to work, to begin working, or to enter a new line of work. The trust funds, and the General Fund in the case of individuals also receiving Supplemental Security Income disability benefits, reimburse the providers of such services only in those cases where the services contributed to the successful rehabilitation of the beneficiaries.

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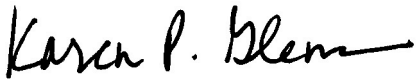
STATEMENT OF ACTUARIAL OPINION

It is my opinion that: (1) the techniques and methodology used herein to evaluate the actuarial status of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds are based upon sound principles of actuarial practice and are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting actuarial estimates are, individually and in the aggregate, reasonable for the purpose of evaluating the actuarial status of the trust funds, 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 this actuarial opinion.



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