10-2012

The 2012 Long-Term Projections for Social Security: Additional Information

Congressional Budget Office

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Abstract
[Excerpt] Each year, CBO prepares long-term projections of revenues and outlays for the Social Security program. The most recent set of 75-year projections was published in June 2012. This publication presents additional information about those projections, which were made on the basis of two scenarios: The first, CBO's extended baseline scenario, adheres closely to current law. For example, that scenario reflects the assumption that the cuts in individual income taxes enacted since 2001 and most recently extended in 2010 will expire as scheduled in 2012 and 2013. CBO also has developed an extended alternative fiscal scenario, which incorporates the assumptions that certain policies that have been in place for a number of years will be continued and that some provisions of law that might be difficult to sustain for a long period will be modified. Unless otherwise noted, the projections presented in the current analysis are based on the assumptions of the extended baseline scenario. In that scenario, income taxes, including the income taxes on Social Security benefits that are credited to the trust funds, are higher than they are in the extended alternative fiscal scenario.

Keywords
Social Security, projections, Congressional Budget Office, CBO, revenue, income tax

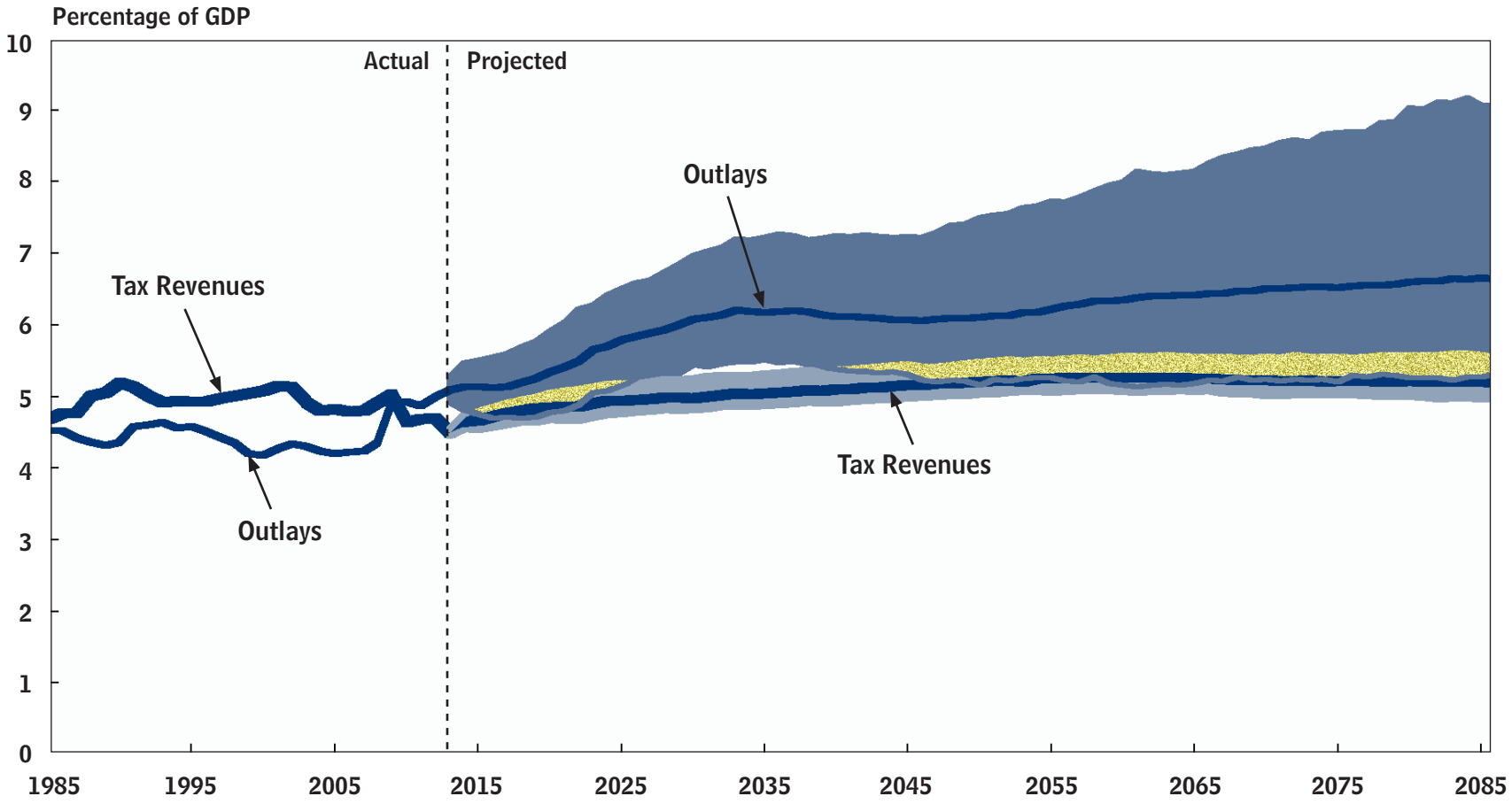
Comments

Suggested Citation
Congressional Budget Office. (2012). *The 2012 long-term projections for Social Security: Additional information*. Washington, DC: Author.

CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

CBO

The 2012 Long-Term Projections for Social Security: Additional Information



OCTOBER 2012

Notes and Definitions

Unless otherwise noted, all years referred to are calendar years. Numbers in the text and tables may not add up to totals because of rounding. Supplemental data are posted on CBO's Web site (www.cbo.gov).

For 2011 and 2012, the Social Security payroll tax on employees was reduced by 2 percentage points; the reduction in Social Security tax revenues is being made up by reimbursements from the Treasury's general fund. In this report, Social Security tax revenues include those reimbursements.

80 percent range of uncertainty: A range of uncertainty based on a distribution of 500 simulations from CBO's long-term model. Outcomes were above the range in 10 percent of the simulations, below the range in 10 percent, and within the range in 80 percent.

Median: The middle of the distribution. When the median outcome for a group of people (defined in this document by birth cohort and lifetime earnings category) is shown, the value is lower for half of the people in that group and higher for half of the group.

Present value: A single number that expresses a flow of current and future income or payments in terms of an equivalent lump sum received or paid today.

Cost rate: The present value of outlays for a period, plus the present value of a year's worth of benefits as a reserve at the end of the period, divided by the present value of the stream of gross domestic product or taxable payroll over the same period.

Income rate: The present value of tax revenues for a period, plus the trust funds' initial balance, divided by the present value of the stream of gross domestic product or taxable payroll over the same period.

Actuarial balance: The difference between the income rate and the cost rate.

Scheduled benefits: Full benefits as calculated under current law, regardless of the amounts available in the Social Security trust funds.

Payable benefits: Benefits as calculated under current law, reduced as necessary to make outlays equal the Social Security system's revenues. Upon exhaustion of the Social Security trust funds, the Social Security Administration would reduce all scheduled benefits such that outlays from the funds would equal revenues flowing into the funds.

Replacement rate: Annual benefits as a percentage of annual lifetime earnings.

List of Exhibits

The 2012 Long-Term Projections for Social Security: Additional Information

Social Security is the federal government's largest single program.[1] Of the 56 million people who currently receive Social Security benefits, about 70 percent are retired workers or their spouses and children, and another 11 percent are survivors of deceased workers; all of those beneficiaries receive payments through Old-Age and Survivors Insurance (OASI). The other 19 percent of beneficiaries are disabled workers or their spouses and children; they receive Disability Insurance (DI) benefits. The Congressional Budget Office (CBO) estimates that in fiscal year 2012, Social Security's outlays totaled $773 billion, one-fifth of federal spending; OASI payments accounted for about 82 percent of those outlays, and DI payments made up about 18 percent.

Social Security has two primary sources of tax revenues: payroll taxes and income taxes on benefits. Over the past decade, an average of 97 percent of tax revenues dedicated to Social Security was collected from a payroll tax of 12.4 percent levied on earnings and split evenly between workers and their employers at 6.2 percent apiece (except for self-employed workers, who pay the entire 12.4 percent tax on earnings themselves).[2] The payroll tax applies only to taxable earnings—earnings up to a maximum annual amount ($110,100 in 2012). Some Social Security benefits also are subject to taxation: In recent years, an average of 3 percent of Social Security's tax revenues has come from the income taxes that higher-income beneficiaries pay on their benefits. Tax revenues credited to the program totaled $726 billion in fiscal year 2012, CBO estimates.

Revenues from taxes, along with intragovernmental interest payments, are credited to Social Security's two trust funds—one for OASI and one for DI—and the program's benefits and administrative costs are paid from those funds. Although legally separate, the funds often are described collectively as the OASDI trust funds. In a given year, the sum of receipts to a fund along with the interest that is credited on previous balances, minus spending for benefits and administrative costs, constitutes that fund's surplus or deficit.

In calendar year 2010, for the first time since the enactment of the Social Security Amendments of 1983, annual outlays for the program exceeded annual tax revenues (that is, outlays exceeded total revenues excluding interest credited to the trust funds). In 2011, outlays exceeded tax revenues by 4 percent, and CBO projects that the gap will average about 10 percent of tax revenues over the next decade. As more members of the baby-boom generation enter retirement, outlays will increase relative to the size of the economy, whereas tax revenues will remain at an almost constant share of the economy. As a result, the gap will grow larger in the 2020s and will exceed 20 percent of revenues by 2030.

CBO projects that under current law, the DI trust fund will be exhausted in fiscal year 2016 and the OASI trust fund will be exhausted in 2038.[3] If a trust fund's balance falls to zero and current

1. For a description, see Congressional Budget Office, *Social Security Policy Options* (July 2010), "An Overview of Social Security," pp. 1–4. Social Security's financing and trust funds are discussed on pp. 3–5 of that study.

2. The worker's portion of the payroll tax was reduced by 2 percentage points for 2011 and 2012 (as was the tax on the self-employed), and the reduction in tax revenues is being made up by reimbursements from the U.S. Treasury's general fund. In this report, Social Security tax revenues include those reimbursements.

3. In Congressional Budget Office, *The 2012 Long-Term Budget Outlook* (June 2012), Chapter 4, that date was originally incorrectly reported as 2037.

revenues are insufficient to cover the benefits that are specified in law, the Social Security Administration does not have legal authority to pay full benefits when they are due. In 1994, legislation redirected revenues from the OASI trust fund to prevent the imminent exhaustion of the DI trust fund. In part because of that experience, it is a common analytical convention to consider the DI and OASI trust funds as combined. Thus, CBO projects, if some future legislation shifted resources from the OASI trust fund to the DI trust fund, the combined OASDI trust funds would be exhausted in 2034.

The amount of Social Security taxes paid by various groups of people differs, as do the benefits that different groups receive. For example, people with higher earnings pay more in Social Security payroll taxes than do lower-earning participants, and they also receive benefits that are larger (although not proportionately so). Because Social Security's benefit formula is progressive, replacement rates—annual benefits as a percentage of average annual lifetime earnings—are lower, on average, for workers who have had higher earnings. As another example, the amount of taxes paid and benefits received will be greater for people in later birth cohorts because they typically will have higher earnings over a lifetime, even after an adjustment for inflation, CBO projects.

About This Analysis

Each year, CBO prepares long-term projections of revenues and outlays for the Social Security program. The most recent set of 75-year projections was published in June 2012.[4] This publication presents additional information about those projections, which were made on the basis of two scenarios: The first, CBO's extended baseline scenario, adheres closely to current law. For example, that scenario reflects the assumption that the cuts in individual income taxes enacted since 2001 and most recently extended in 2010 will expire as scheduled in 2012 and 2013. CBO also has developed an extended alternative fiscal scenario, which incorporates the assumptions that certain policies that have been in place for a number of years will be continued and that some provisions of law that might be difficult to sustain for a long period will be modified. Unless otherwise noted, the projections presented in the current analysis are based on the assumptions of the extended baseline scenario. In that scenario, income taxes, including the income taxes on Social Security benefits that are credited to the trust funds, are higher than they are in the extended alternative fiscal scenario.[5]

Scheduled and Payable Benefits

CBO prepares two types of benefit projections. Benefits as calculated under the Social Security Act, regardless of the balances in the trust funds, are called scheduled benefits. However, the Social Security Administration has no legal authority to pay scheduled benefits when they are due if their amounts exceed the balances in the trust funds. Therefore, if the trust funds became exhausted, it appears that payments to current and new beneficiaries would need to be reduced to make the outlays from the funds equal the revenues flowing into the funds.[6] Benefits thus reduced are called payable benefits. In such a case, all receipts to the trust funds would be used, and the trust fund balances would remain essentially at zero. When presenting projections of Social Security's finances, CBO generally focuses on scheduled benefits because, by definition, the system would be fully financed if payable benefits were all that was disbursed.

4. See Congressional Budget Office, *The 2012 Long-Term Budget Outlook*. Some of the 75-year projections in that volume extended through fiscal year 2087 because CBO generally considers the projection period to begin in the next fiscal year (in this case, fiscal year 2013). In this report and in Chapter 4 ("Social Security") of *The 2012 Long-Term Budget Outlook*, the 75-year projection period consists of calendar years 2012 through 2086, matching the period used in Social Security Administration, *The 2012 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (April 2012), http://go.usa.gov/rKhw.

5. In this report, as in most of its publications, CBO makes budgetary projections under the assumption that economic conditions would be the same under both scenarios. In fact, alternative policies would lead to economic outcomes that are significantly different from those resulting from the policies embodied in current law. For discussion of the economic effects of different policies, see Congressional Budget Office, *An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022* (August 2012), Chapter 2; and *The 2012 Long-Term Budget Outlook*, Chapter 2.

6. See Christine Scott, *Social Security: What Would Happen If the Trust Funds Ran Out?* Report for Congress RL33514 (Congressional Research Service, August 2009), http://go.usa.gov/YYs5. As explained in that report, it is unclear how payments would be reduced. In its analysis, CBO assumes that each year after the trust funds became exhausted, each individual's annual benefit would be reduced by the same percentage.

Quantifying Uncertainty

To quantify the uncertainty in its Social Security projections, CBO, using its long-term model, created a distribution of outcomes from 500 simulations. In those simulations, the assumed values for most of the key demographic and economic factors that underlie the analysis—for example, fertility and mortality rates, interest rates, and the rate of growth of productivity—were varied on the basis of historical patterns of variation.[7] Several exhibits in this publication show the simulations' 80 percent range of uncertainty: That is, in 80 percent of the 500 simulations, the value in question fell within the range shown; in 10 percent of the simulations, the value was above that range; and in 10 percent, it was below. Long-term projections are necessarily uncertain, and that uncertainty is illustrated in this publication; nevertheless, the general conclusions of this analysis are unchanged under a variety of assumptions.

Changes in CBO's Long-Term Social Security Projections Since 2011

The shortfalls for Social Security that CBO is currently projecting are larger than those the agency projected a year ago.[8] The 75-year imbalance has increased from 1.58 percent to 1.95 percent of taxable payroll under the extended baseline scenario (see Exhibit 5), and from 2.00 percent to 2.40 percent of taxable payroll under the extended alternative fiscal scenario (see Exhibit 6).

When measured as a share of taxable payroll, long-term tax revenues are slightly lower than those projected in 2011, but long-term outlays are higher. Compared with last year's projections, the 75-year income rate—a measure of Social Security's tax revenues—is 0.6 percent lower under the extended baseline scenario and 0.7 percent lower under the extended alternative fiscal scenario, in both cases because revenues from income taxes on benefits are projected to be lower. The 75-year cost rate—a measure of outlays—is 2.0 percent higher under both scenarios. Outlays are a significantly higher share of taxable payroll during the coming decade—on average, 5 percent higher from 2012 through 2019—because of projected near-term economic weakness. Relative to last year's analysis, projections of outlays are similar for the 25 years beginning in 2020 but around 2 percent higher in later years, primarily because of greater assumed longevity.[9]

When measured as a share of gross domestic product (GDP), however, the projections of the income rate and the cost rate are both slightly higher than they were in last year's report. The projections for growth in health care costs are lower, so a larger share of compensation is projected to be paid as taxable earnings, rather than nontaxable health benefits.[10] Therefore, Social Security's taxable payroll is a larger share of GDP in this year's report, increasing both the income rate and cost rate as shares of GDP. The 75-year imbalance is greater as a share of GDP for the same reasons that it is greater as a share of taxable payroll. Under the extended baseline scenario, the imbalance rose from 0.58 percent of GDP to 0.73 percent; under the extended alternative fiscal scenario, it rose from 0.74 percent to 0.90 percent.

Related CBO Analyses

Further information about Social Security and CBO's projections is available in other CBO publications:

- Various approaches to changing the program are presented in *Social Security Policy Options* (July 2010) and in *Policy Options for the Social Security Disability Insurance Program* (July 2012).
- The current long-term projections are consistent with the 10-year baseline CBO published in *Updated Budget Projections: Fiscal Years 2012 to 2022* (March 2012). (Data in that report and in *The 2012 Long-Term Budget Outlook* (June 2012) generally are presented for fiscal years;

7. For more information, see Congressional Budget Office, *Quantifying Uncertainty in the Analysis of Long-Term Social Security Projections*, Background Paper (November 2005). The methodology used in this report differs slightly from the techniques described in that earlier publication.

8. See Congressional Budget Office, *CBO's 2011 Long-Term Projections for Social Security: Additional Information*.

9. CBO's 2011 Social Security projections incorporated demographic projections from the Social Security trustees' 2010 report; the current study uses the projections in the 2011 report, which, on the basis of more recent data, predicts greater longevity. See Social Security Administration, *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (May 2011), http://go.usa.gov/rkW5.

10. See Congressional Budget Office, *The 2012 Long-Term Budget Outlook*, p. 92.

this analysis, *Social Security Policy Options,* and *Policy Options for the Social Security Disability Insurance Program* use calendar year data.)

- The estimates of revenues and outlays for fiscal year 2012 are from CBO's current baseline, published in *An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022* (August 2012).

- The current projections update those published in *CBO's 2011 Long-Term Projections for Social Security: Additional Information* (August 2011). Differences in the two sets of projections result from newly available programmatic and economic data, updated assumptions about future economic trends, and improvements in models.

- The methodology used to develop the projections in this publication is described in *CBO's Long-Term Model: An Overview* (Background Paper, June 2009).

- The data underlying the figures in this report and expanded versions of some of the tables are available as supplemental material on CBO's Web site.

- The values used for the demographic and economic variables underlying the projections, are explained in a section, "CBO's Long-Term Economic Benchmark," in Chapter 2 of *The 2012 Long-Term Budget Outlook* (p. 31). (The projections are based on the demographic assumptions of the 2011 report of the Social Security trustees, except for the assumptions about immigration, which are CBO's.)[11]

- A graphic treatment of background information is presented in "CBO's 2011 Long-Term Projections for Social Security" (infographic, August 2011), which includes a summary of some of the agency's 2011 projections.

- Numerous other aspects of the program are addressed in various publications available on the "Retirement" page of CBO's Web site, www.cbo.gov. ◆

11. See Social Security Administration, *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (May 2011), http://go.usa.gov/rkW5.

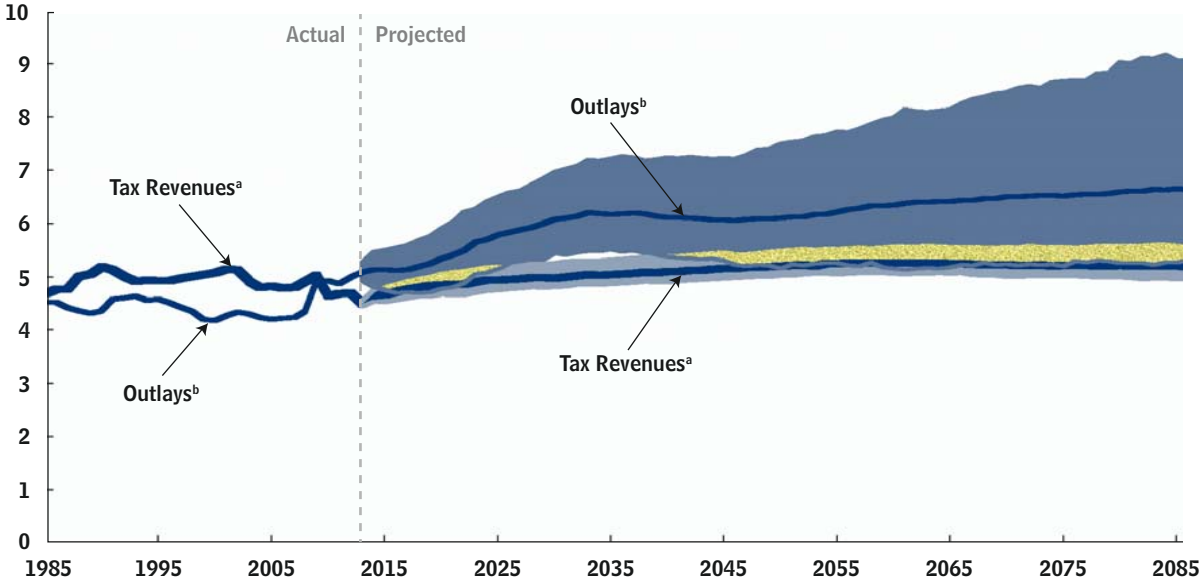
System Finances

The first part of this publication (Exhibits 1 through 8) examines Social Security's financial status from several vantage points. The fullest perspective is provided by projected streams of annual revenues and outlays. A more succinct analysis is given by measures that summarize the annual streams in a single number. The system's finances also are described by projecting what is called the trust fund ratio, the amount in the trust funds at the beginning of a year in proportion to the outlays in that year.

Exhibit 1.

Social Security Tax Revenues and Outlays, with Scheduled Benefits

(Percentage of gross domestic product)



Source: Congressional Budget Office.

Note: The lines indicate CBO's projections of expected outcomes. The shaded areas indicate the 80 percent range of uncertainty.

a. Includes payroll taxes and income taxes on benefits.

b. Includes scheduled benefits and administrative costs.

In 2011, Social Security's total outlays (benefits plus administrative costs) equaled 4.9 percent of the country's gross domestic product; tax revenues dedicated to the program equaled 4.7 percent of GDP. Most of Social Security's tax revenues come from payroll taxes, although a small portion comes from income taxes on benefits paid to higher-income beneficiaries. In addition to those tax revenues, the trust funds are credited with interest.

During the next few decades, the number of beneficiaries will increase as the baby-boom generation ages. In 2036, scheduled spending will be 6.2 percent of GDP, CBO estimates. Over the ensuing decade, spending will decline slightly, relative to the size of the economy, as people in the baby-boom generation die. Demographers generally predict that life expectancy will continue to rise and that birth rates will remain as they are now, so scheduled outlays are projected to resume their upward trajectory around 2050, reaching 6.6 percent of GDP in 2086.

The amount of tax revenues credited to the trust funds is projected to decline from 4.7 percent of GDP this year to 4.5 percent in 2013 as wages and other earnings decline as a share of the economy. Tax revenues are projected to return to 4.7 percent of GDP by 2015 as the economy recovers and then to rise slightly before stabilizing at about 5.2 percent in 2050. Two factors are important in creating that pattern. First, although people's total compensation will be nearly constant as a percentage of GDP in the long run, CBO projects, the share of compensation that workers receive as wages will rise from 81 percent in 2021 to 84 percent in about 2050 as the excise tax on high-premium health insurance plans causes some employers and workers to shift to less expensive plans. Subsequently, as the cost of health care continues to rise, the share of compensation received as wages will fall, returning

(Continued)

Exhibit 2.

Social Security Tax Revenues and Outlays, with Scheduled Benefits

(Percentage of gross domestic product)

	Actual	Projected		
	2011	2036	2061	2086
Tax Revenues	4.69	5.06	5.26	5.19
Outlays	4.87	6.19	6.37	6.63
Difference	-0.19	-1.13	-1.11	-1.45
		80 Percent Range of Uncertainty for CBO's Projections		
Tax Revenues		4.9 to 5.3	5.0 to 5.6	5.0 to 5.6
Outlays		5.5 to 7.3	5.1 to 8.1	5.3 to 9.1
Difference[a]		-2.0 to -0.5	-2.7 to 0.0	-3.6 to -0.3

Source: Congressional Budget Office.

Note: Tax revenues consist of payroll taxes and income taxes on benefits that are credited to the Social Security trust funds in the specified year. Outlays consist of scheduled benefits and administrative costs; scheduled benefits are benefits as calculated under the Social Security Act, regardless of the balances in the trust funds.

a. The differences displayed generally do not equal the difference between the outlays and revenues shown because the low and high values of the ranges (for tax revenues, outlays, and the difference) are drawn from different simulations.

(Continued)

to about its 2021 level by 2086. Second, when earnings inequality increases (and the distribution of earnings widens), as it has in recent decades, the taxable share of earnings declines because more earnings are above the maximum amount that is taxed for Social Security. CBO projects that earnings inequality will increase somewhat during the next few decades and that the share of earnings subject to the payroll tax, which has averaged around 85 percent in recent years, will decline to around 83 percent in 2036.

The uncertainty in CBO's projections is illustrated by the range of outcomes from a series of 500 simulations in which most of the key demographic and economic factors that underlie the analysis have been varied on the basis of historical patterns. Although CBO projects that Social Security's outlays will equal 6.2 percent of GDP in 2036, in 10 percent of the simulations, outlays in 2036 are below 5.5 percent of GDP, and in 10 percent, they exceed 7.3 percent of GDP. In most simulations, outlays in 2036 account for a much larger share of GDP than the 5.0 percent estimated for 2012. ◆

Exhibit 3.

Percentage of Simulations in Which Social Security Outlays Exceed Tax Revenues by Specified Percentages, with Scheduled Benefits

(Percent)

	By 0 Percent of GDP or More	By 1 Percent of GDP or More	By 2 Percent of GDP or More	By 3 Percent of GDP or More	By 4 Percent of GDP or More	By 5 Percent of GDP or More
2020	94	7	0	0	0	0
2030	100	59	5	0	0	0
2040	97	57	9	0	0	0
2050	92	48	11	1	0	0
2060	90	57	21	6	1	0
2070	92	62	27	10	3	0
2080	94	68	37	14	6	2

Source: Congressional Budget Office.

Notes: Tax revenues consist of payroll taxes and income taxes on benefits that are credited to the Social Security trust funds in the specified year. Outlays consist of scheduled benefits and administrative costs; scheduled benefits are benefits as calculated under the Social Security Act, regardless of the balances in the trust funds. This analysis is based on 500 simulations from CBO's long-term model.

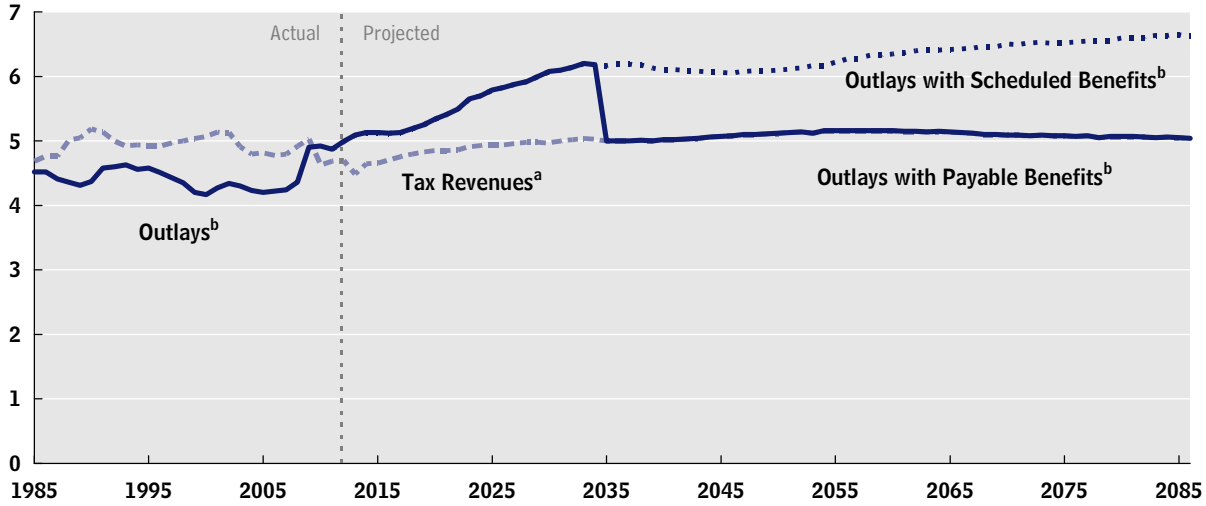
GDP = gross domestic product.

Another perspective on the uncertainty in projections of Social Security's finances involves the percentage of CBO's simulations in which total outlays exceed tax revenues by a given amount in a particular year. In the 500 simulations, most of the key demographic and economic factors that underlie the analysis vary on the basis of historical patterns. In almost every case, outlays equal or exceed tax revenues in 2030. Outlays are at least 1 percentage point greater than tax revenues (when both are measured as shares of GDP) in 59 percent of simulations for that year and at least 2 percentage points greater in 5 percent of the simulations. In later decades, projections of outlays are less certain. As a result, the percentage of simulations in which outlays equal or exceed tax revenues declines after 2030 but remains at or above 90 percent. The increase in uncertainty about outlays also causes a rise in the portion of simulations in which outlays exceed tax revenues (as shares of GDP) by at least 2 percentage points; that portion reaches 37 percent by 2080. ◆

Exhibit 4.

Social Security Tax Revenues and Outlays, with Scheduled and Payable Benefits

(Percentage of gross domestic product)



Source: Congressional Budget Office.

a. Includes payroll taxes and income taxes on benefits. Tax revenues shown are consistent with payable benefits and would decline slightly if the trust funds became exhausted because revenues from income taxes paid on benefits would decline.

b. Includes benefits and administrative costs.

The projected gap between outlays and revenues ultimately will eliminate the balance in the trust funds, and it appears that it would then be impossible, under current law, to pay the full amount of scheduled benefits when due. Payable benefits will equal scheduled benefits until the trust funds are exhausted; after that, they will equal the Social Security program's annual revenues. CBO projects that the trust funds will be exhausted in 2034. In the following year, revenues are projected to equal 81 percent of scheduled outlays. Thus, payable benefits will be 19 percent lower than scheduled benefits. The gap between scheduled and payable benefits will shrink slightly for the following decade, falling to 16 percent in 2050. It will then widen, and by 2086, payable benefits will be 24 percent smaller than scheduled benefits. ◆

Exhibit 5.

Summarized Financial Measures for Social Security Under the Extended Baseline Scenario, with Scheduled Benefits

	As a Percentage of GDP			As a Percentage of Taxable Payroll		
	Income Rate	Cost Rate	Actuarial Balance	Income Rate	Cost Rate	Actuarial Balance
			CBO's Projections			
25 Years (2012–2036)	5.56	5.84	-0.28	15.01	15.75	-0.75
50 Years (2012–2061)	5.40	5.96	-0.56	14.38	15.87	-1.49
75 Years (2012–2086)	5.35	6.08	-0.73	14.26	16.21	-1.95
			80 Percent Range of Uncertainty for CBO's Projections[a]			
25 Years (2012–2036)	5.4 to 5.8	5.4 to 6.3	-0.7 to 0.0	14.7 to 15.2	14.8 to 16.9	-1.8 to 0.1
50 Years (2012–2061)	5.2 to 5.6	5.5 to 6.6	-1.0 to -0.2	14.2 to 14.6	14.8 to 17.3	-2.8 to -0.5
75 Years (2012–2086)	5.2 to 5.6	5.6 to 6.8	-1.3 to -0.4	14.0 to 14.5	15.0 to 17.9	-3.5 to -0.9

Source: Congressional Budget Office.

Notes: Over the relevant periods, the income rate is the present value of annual tax revenues (plus the initial trust fund balance), and the cost rate is the present value of annual outlays (plus the present value of a year's worth of benefits as a reserve at the end of the period), each divided by the present value of GDP or taxable payroll. The actuarial balance is the difference between the income and cost rates.

GDP = gross domestic product.

a. The balances displayed generally do not equal the difference between the outlays and revenues shown because the low and high values of the ranges (for the income rate, the cost rate, and the actuarial balance) are drawn from different simulations.

To present the results of long-term projections succinctly, analysts often summarize scheduled outlays and revenues as a single number that covers a given period (for example, total outlays over 75 years). The data are summarized by computing the present value of outlays or tax revenues for a period and dividing that figure by the present value of the stream for GDP or taxable payroll over the same period. (Present value is a single number that expresses a flow of current and future income, or payments, in terms of an equivalent lump sum received or paid today. That computation uses the interest rate used to compute interest credited to the trust funds.) The income rate is the present value of annual noninterest revenues (including the initial trust fund balance), and the cost rate is the present value of annual outlays (including a target trust fund balance at the end of the period, which is traditionally the following year's projected outlays), each divided by the present value of GDP or taxable payroll. The actuarial balance is the difference between the income and cost rates.

This analysis focuses on CBO's extended baseline scenario, which adheres closely to current law. In that scenario, federal income taxes on benefits would increase over time, and the estimated 75-year actuarial balance would be -0.73 percent of GDP or -1.95 percent of taxable payroll. That means, for example, that if the Social Security payroll tax rate was increased immediately and permanently by 1.95 percentage points—from the current rate of 12.40 percent to 14.35 percent—or if scheduled benefits were reduced by an equivalent amount, then the trust funds' projected balance at the end of 2086 would equal projected outlays for 2087. ◆

Exhibit 6.

Summarized Financial Measures for Social Security Under the Extended Alternative Fiscal Scenario, with Scheduled Benefits

	As a Percentage of GDP			As a Percentage of Taxable Payroll		
	Income Rate	Cost Rate	Actuarial Balance	Income Rate	Cost Rate	Actuarial Balance
			CBO's Projections			
25 Years (2012–2036)	5.50	5.84	-0.34	14.84	15.75	-0.91
50 Years (2012–2061)	5.27	5.96	-0.68	14.05	15.87	-1.82
75 Years (2012–2086)	5.18	6.08	-0.90	13.81	16.21	-2.40
			80 Percent Range of Uncertainty for CBO's Projections[a]			
25 Years (2012–2036)	5.3 to 5.7	5.4 to 6.3	-0.7 to 0.0	14.6 to 15.1	14.8 to 16.9	-2.0 to -0.1
50 Years (2012–2061)	5.1 to 5.5	5.5 to 6.6	-1.2 to -0.3	13.8 to 14.3	14.8 to 17.3	-3.1 to -0.9
75 Years (2012–2086)	5.0 to 5.4	5.6 to 6.8	-1.5 to -0.5	13.6 to 14.0	15.0 to 17.9	-4.0 to -1.4

Source: Congressional Budget Office.

Notes: Over the relevant periods, the income rate is the present value of annual tax revenues (plus the initial trust fund balance), and the cost rate is the present value of annual outlays (plus the present value of a year's worth of benefits as a reserve at the end of the period), each divided by the present value of GDP or taxable payroll. The actuarial balance is the difference between the income and cost rates.

GDP = gross domestic product.

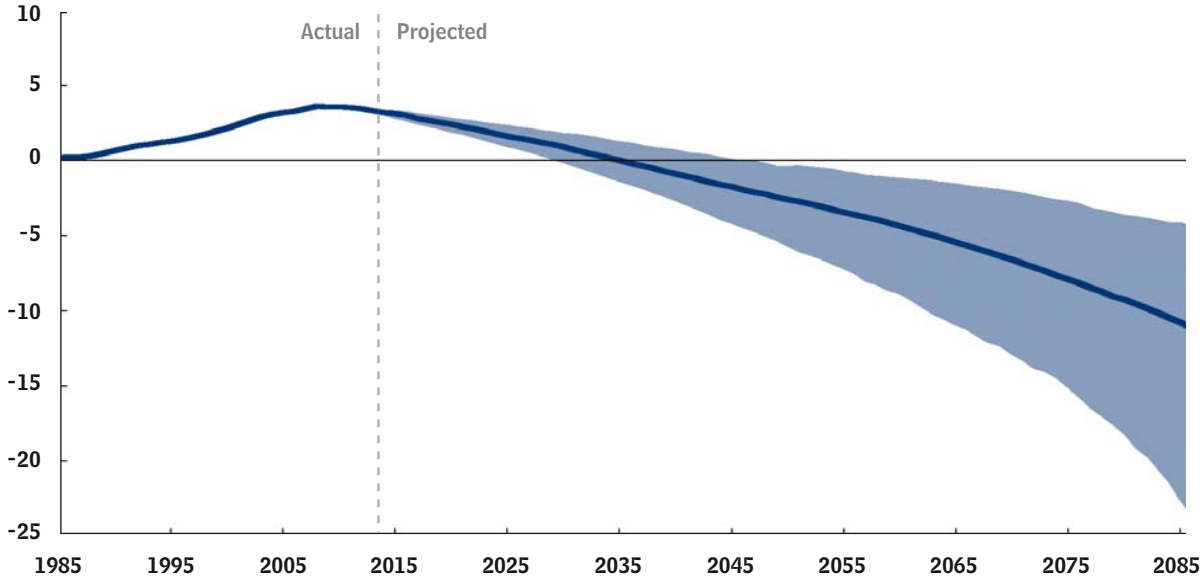
a. The balances displayed generally do not equal the difference between the outlays and revenues shown because the low and high values of the ranges (for the income rate, the cost rate, and the actuarial balance) are drawn from different simulations.

This publication focuses mostly on CBO's extended baseline scenario, which adheres closely to current law. CBO also has made long-term budget projections using an alternative fiscal scenario that incorporates the assumptions that certain policies that have been in place for a number of years will be continued and that some provisions of law that might be difficult to sustain for a long period will be modified. (Details of the two scenarios are outlined in Table 1-1 of *The 2012 Long-Term Budget Outlook*.)

The financial outlook for Social Security is less favorable under that scenario than it is under the extended baseline scenario (shown in Exhibit 5). Income taxes paid on benefits are assumed to be lower under the alternative fiscal scenario, resulting in lower revenues from the taxation of Social Security benefits and therefore a lower Social Security income rate. Under the alternative fiscal scenario, the 75-year income rate is 5.18 percent of GDP, compared with a rate of 5.35 percent under the extended baseline scenario. The cost rate is the same as under the extended baseline scenario. As a result, the 75-year actuarial deficit is larger: 0.90 percent of GDP or 2.40 percent of taxable payroll under the alternative fiscal scenario, compared with a deficit of 0.73 percent of GDP or 1.95 percent of taxable payroll under the extended baseline scenario. ◆

Exhibit 7.

Trust Fund Ratio, with Scheduled Benefits



Source: Congressional Budget Office.

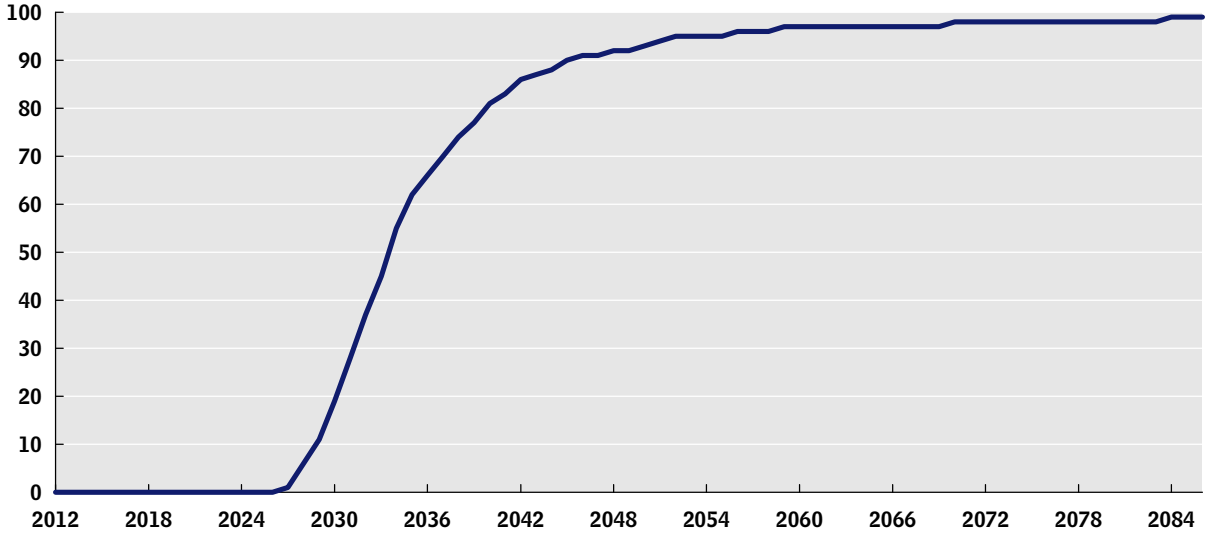
Note: The trust fund ratio is the ratio of the trust fund balance (the amount in the trust funds) at the beginning of a year to outlays in that year. Outlays consist of benefits and administrative costs. The trust funds are exhausted when the trust fund ratio reaches zero. Under current law, the trust funds cannot incur negative balances. The negative balances shown in this exhibit indicate a projected shortfall, reflecting the trust funds' inability to pay scheduled benefits out of current-law revenues. The dark line indicates CBO's projection of expected outcomes; the shaded area indicates the 80 percent range of uncertainty around the projection.

The trust fund ratio—the balance in the Social Security trust funds at the beginning of the year divided by the system's projected outlays for that year—indicates the proportion of a year's cost that could be paid with the funds available. The trust fund ratio for 2011 was 3.5, and CBO projects that it will fall to 3.4 this year. The rate of decline will accelerate in subsequent decades, and the ratio will reach zero in 2034, CBO projects. At that point, payments to current and new beneficiaries would need to be reduced to make the outlays and revenues equal.

The year in which the trust funds are exhausted could differ significantly from CBO's projection, however. In CBO's simulations, in which most of the key demographic and economic factors in the analysis were varied on the basis of historical patterns, the trust funds are exhausted in 2029 or earlier 10 percent of the time and in 2045 or later 10 percent of the time, (The shaded area in the figure shows the 80 percent range of uncertainty. The intersection between the shaded area and the horizontal line at zero, spanning the years between 2029 and 2045, corresponds to the 80 percent range of uncertainty about the year in which the trust funds will become exhausted.) The negative balances represent CBO's estimates of the cumulative amount of scheduled benefits that cannot be paid from the program's current-law revenues (expressed as a ratio to outlays in each year). ◆

Exhibit 8.

Percentage of Simulations That Show the Social Security Trust Funds Exhausted by a Particular Year



Source: Congressional Budget Office.

Note: The data are based on 500 simulations from CBO's long-term model.

An alternative way to consider uncertainty is to examine the percentage of simulations in which the trust funds are exhausted by a specific year. In those simulations, most of the key demographic and economic factors that underlie the analysis were varied on the basis of historical patterns. In 19 percent of CBO's simulations, the funds are exhausted by 2030. In 81 percent of the simulations, the trust funds are exhausted by 2040. ◆

Distribution of Benefits

In the second part of this publication (Exhibits 9 through 16), CBO examines the program's effects on people by grouping Social Security participants according to various characteristics and presenting the average taxes and benefits for those groups. In its analysis, CBO divided people into groups by the decade in which they were born and by the quintile of their lifetime household earnings.[1] For example, one 10-year cohort consists of people born in the 1940s, and the highest earnings quintile consists of the top fifth of earners. CBO's modeling approach produces estimates for individuals; household status is used only to place people into earnings groups.

In this part of the analysis, benefits are calculated net of income taxes paid on benefits by higher-income recipients and credited to the Social Security trust funds.[2] Median values are estimated for each group: Estimates for half of the people in the group are lower, and estimates for half are higher.

Most retired and disabled workers receive Social Security benefits on the basis of their own work history. This publication first presents measures of those benefits that do not include benefits received by dependents or survivors who are entitled to them on the basis of another person's work history. Then, for a more comprehensive perspective on the distribution of Social Security benefits, this analysis presents measures of the total amount of Social Security payroll taxes that each participant pays over his or her lifetime as well as the total Social Security benefits—including payments received as a worker's dependent or as a survivor—that each receives over a lifetime.

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1. Each person who lives at least to age 45 is ranked by lifetime household earnings. Lifetime earnings for someone who is single in all years equal the present value of his or her real (inflation-adjusted) earnings over a lifetime. In any year that a person is married, the earnings measure is a function of his or her earnings plus those of his or her spouse (adjusted for economies of scale in household consumption). A person's lifetime earnings consist of the present value of those annual amounts. To compute present values in Social Security analyses, CBO uses a real discount rate of 3.0 percent, which equals the long-term rate used to compute interest for the Social Security trust funds.

2. In this part of the analysis, benefits are not reduced by the portion of those income taxes that is credited to Medicare's Hospital Insurance Trust Fund.

Exhibit 9.

Median Initial Benefits for Retired Workers, with Scheduled and Payable Benefits

(Thousands of 2012 dollars)

10-Year Birth Cohort	All Retired Workers		Lowest Quintile of Lifetime Household Earnings		Middle Quintile of Lifetime Household Earnings		Highest Quintile of Lifetime Household Earnings	
	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable
				All				
1940s	16	16	9	9	18	18	23	23
1960s	18	18	11	11	20	20	29	29
1980s	22	19	14	12	24	20	37	32
2000s	30	23	18	15	32	26	50	40
				Men				
1940s	20	20	10	10	21	21	25	25
1960s	21	21	11	11	22	22	31	31
1980s	25	21	15	13	26	23	39	34
2000s	33	27	20	16	35	28	53	42
				Women				
1940s	13	13	8	8	13	13	18	18
1960s	15	15	10	10	17	17	25	25
1980s	19	16	13	11	21	18	33	28
2000s	26	21	17	14	29	23	45	35

Source: Congressional Budget Office.

Note: Initial annual benefits are computed for all individuals who are eligible to claim retirement benefits at age 62 and who have not yet claimed any other benefit. All workers are assumed to claim benefits at age 65. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

Future retired workers are projected to receive higher initial annual Social Security benefits than today's beneficiaries receive—whether those benefits are scheduled or payable (net of income taxes paid on the benefits and adjusted for the effects of inflation).

CBO considered a hypothetical benefit amount: the median initial benefit among workers if everyone claimed benefits at age 65, based on earnings through age 61. The median initial scheduled benefit rises over time because of growth in average earnings. However, the effect of growing earnings will be partly offset for several cohorts by the scheduled rise in the full retirement age, from 65 for people born before 1938 to 67 for those born after 1959. The effect is equivalent to a reduction in benefits at any age at which benefits are claimed. Once the older retirement age is in place, the median initial benefit will grow at about the same rate as median earnings.

When the trust funds are exhausted, payable benefits will fall, but then they will rise again as earnings (and therefore tax revenues) grow. Although payable initial benefits are lower than scheduled initial benefits for people born in 1970 and later, they will be higher than current initial benefits, CBO projects.

Projected benefits are lower for women than for men in all cohorts (because women have lower average earnings) although the gap narrows (as a share of men's benefits) for later cohorts as men's and women's earnings become more equal. For the 1940s cohort, projected initial benefits for women are about 35 percent below those for men, but for the 1980s cohort and later groups, they are about 20 percent below those for men. ◆

Exhibit 10.

Median Initial Replacement Rates for Retired Workers, with Scheduled and Payable Benefits

(Percent)

10-Year Birth Cohort	All Retired Workers		Lowest Quintile of Lifetime Household Earnings		Middle Quintile of Lifetime Household Earnings		Highest Quintile of Lifetime Household Earnings	
	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable
				All				
1940s	43	43	70	70	42	42	29	29
1960s	43	43	68	68	41	41	27	27
1980s	44	38	71	60	43	36	28	24
2000s	43	34	69	55	42	33	25	20
				Men				
1940s	40	40	61	61	38	38	23	23
1960s	39	39	63	63	39	39	22	22
1980s	41	35	66	56	40	34	23	19
2000s	41	32	65	51	39	32	21	17
				Women				
1940s	48	48	77	77	47	47	39	39
1960s	47	47	72	72	44	44	34	34
1980s	48	41	72	62	46	39	34	29
2000s	47	37	71	57	44	35	32	26

Source: Congressional Budget Office.

Note: The average initial replacement rate is a worker's initial benefit as a percentage of a worker's average annual lifetime earnings. (To compute lifetime earnings, past earnings are adjusted for average growth in economywide earnings.) Replacement rates are computed for all individuals who are eligible to claim retirement benefits at age 62 and who have not yet claimed any other benefit. All workers are assumed to claim benefits at age 65. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

Initial replacement rates—initial annual benefits net of income taxes paid on those benefits as a percentage of average annual lifetime earnings—provide a perspective on retired workers' benefits that is different from that provided by looking simply at dollar amounts.

Several factors affect the patterns. First, the progressive nature of Social Security's benefit formula results in replacement rates that are higher for workers within a birth cohort who have had lower earnings. Second, with payable benefits, the replacement rate will drop noticeably at all earnings amounts for people in the cohorts that first receive benefits after the trust funds are exhausted.

Third, the scheduled increase in the full retirement age will, in the absence of other changes, lower the replacement rate for future beneficiaries (for any chosen age for claiming benefits) compared with the rate for people who are claiming benefits now. However, because of other factors, such as changes in the relative earnings levels of different groups, the median replacement rates for the cohorts shown in the exhibit are generally stable. People in later cohorts, however, are expected to collect benefits for a longer time as life expectancy increases.

Fourth, because women tend to have lower lifetime earnings, their average replacement rates are higher than men's are, especially for earlier birth cohorts. The difference between the rates for women and men in the highest quintile is large, in part because that group includes many women who spend time out of the labor force or who work part time. In contrast, most men in households with high earnings are employed full time. ◆

Exhibit 11.

Median Present Value of Lifetime Benefits for Retired Workers, with Scheduled and Payable Benefits

(Thousands of 2012 dollars)

10-Year Birth Cohort	All Retired Workers		Lowest Quintile of Lifetime Household Earnings		Middle Quintile of Lifetime Household Earnings		Highest Quintile of Lifetime Household Earnings	
	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable
				All				
1940s	141	140	63	63	167	165	280	278
1960s	214	193	117	108	241	215	385	343
1980s	273	225	157	131	299	246	507	421
2000s	383	295	219	170	430	332	710	553
				Men				
1940s	142	142	55	55	195	195	333	331
1960s	239	216	122	112	270	242	432	383
1980s	297	244	165	137	320	264	560	466
2000s	415	320	230	179	460	355	760	597
				Women				
1940s	140	139	72	72	153	151	217	213
1960s	194	174	113	103	217	194	323	289
1980s	252	208	149	124	285	233	435	361
2000s	355	274	209	163	405	302	620	482

Source: Congressional Budget Office.

Note: Benefits are the present value of all retired-worker benefits received. To calculate their present value, benefits are adjusted for inflation (to produce constant dollars) and discounted to age 62. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

CBO calculates lifetime retirement benefits as the present value, discounted to the year in which the beneficiary turns 62, of all retired-worker benefits that a worker receives from the program. CBO estimates that real median lifetime benefits (both scheduled and payable, adjusted for inflation) for each birth cohort will be greater than those for the preceding cohort, because benefits increase with earnings and earnings are expected to continue to rise over time. For example, real median scheduled lifetime benefits for people born in the 2000s will be more than two-and-a-half times those for people born in the 1940s; real median payable lifetime benefits for the 2000s cohort will be more than double.

The projected trends in median *lifetime* retirement benefits differ from the trends in median *initial* benefits for two reasons. First, as life expectancy increases, people will collect benefits for longer periods, so scheduled lifetime benefits will grow faster than scheduled initial benefits. Second, although cohorts that begin to receive benefits before the trust funds are exhausted will collect their scheduled initial benefits, some members of those cohorts will still be receiving benefits when the trust funds are exhausted. At that point, payable benefits will decline, and the payable lifetime benefits for those recipients will be less than their scheduled lifetime benefits.

Lifetime benefits are lower for women than for men, although the gap is smaller than it is for initial benefits because women live longer, on average, and thus tend to collect benefits for a longer time. ◆

Exhibit 12.

Median Benefits and Initial Replacement Rates for Disabled Workers, with Scheduled and Payable Benefits

10-Year Birth Cohort	Initial Benefits (Thousands of 2012 dollars)		Initial Replacement Rate[a] (Percent)		Present Value of Lifetime Benefits[b] (Thousands of 2012 dollars)	
	Scheduled	Payable	Scheduled	Payable	Scheduled	Payable
All Disabled Workers						
1940s	13	13	48	48	245	245
1960s	15	15	53	52	238	230
1980s	19	17	55	49	313	273
2000s	26	22	54	44	492	391
Workers Whose Disability Begins Before Age 40						
1940s	*	*	*	*	*	*
1960s	9	9	61	61	339	337
1980s	12	12	62	61	443	429
2000s	17	15	59	52	669	574
Workers Whose Disability Begins Between Ages 40 and 54						
1940s	*	*	*	*	*	*
1960s	14	14	53	53	248	245
1980s	18	16	56	53	293	259
2000s	24	20	55	46	486	399
Workers Whose Disability Begins Between Age 55 and the Full Retirement Age						
1940s	15	15	48	48	232	231
1960s	18	18	50	50	214	203
1980s	23	19	51	43	299	250
2000s	32	25	51	41	456	354

Source: Congressional Budget Office.

Notes: Initial annual benefits and replacement rates are computed for all individuals who are projected to receive Disability Insurance worker benefits. All values are net of income taxes paid on benefits and credited to the Social Security trust funds.

* = no data are available for people who died before 1984.

a. Initial annual benefits as a percentage of average annual lifetime earnings.

b. The present value of all disability benefits received plus retired-worker benefits received after the full retirement age. To calculate present value, benefits are adjusted for inflation (to produce constant dollars) and discounted to age 62.

The projected trends for initial benefits for disabled workers are similar to those for retired workers (shown in Exhibit 9): Future beneficiaries are likely to receive higher real initial benefits than today's beneficiaries receive. However, the scheduled increase in the full retirement age—which will effectively reduce annual benefits for retired workers—will have no direct effect on people who receive disability benefits because they can receive those benefits in any year before they reach the full retirement age. Thus, CBO projects that real initial disability benefits (scheduled and payable) will increase more rapidly than retirement benefits will.

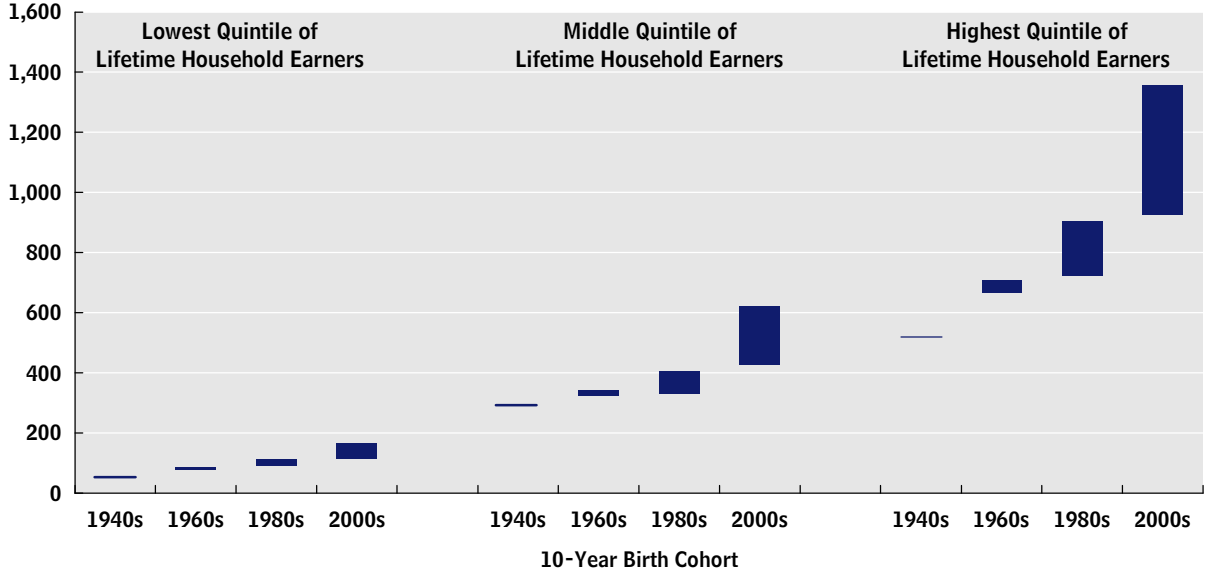
Initial replacement rates tend to be higher for disabled workers than for retired workers (shown in Exhibit 10) because their earnings tend to be lower. For the same reason, workers who become disabled at earlier ages tend to have lower benefits, but higher replacement rates, than do those who become disabled when they are older.

The median present value of lifetime benefits paid to disabled beneficiaries—including the retirement benefits they receive after reaching the full retirement age—is greater than the present value of lifetime benefits paid to retired workers (shown in Exhibit 11) for two reasons. First, disabled beneficiaries are younger when they begin to collect benefits, so they receive benefits for a longer period, on average, than retired workers do. Second, because benefits are received at younger ages, their present value is greater. As with retirement benefits, projected lifetime disability benefits are generally greater for each birth cohort than for the preceding one. ◆

Exhibit 13.

Lifetime Social Security Payroll Taxes

(Thousands of 2012 dollars)



Source: Congressional Budget Office.

Note: Ranges indicate the 80 percent range of uncertainty around each projection. The distribution of lifetime household earners includes only people who live to at least age 45. Payroll taxes consist of the employer's and employee's shares combined. To calculate present value, amounts are adjusted for inflation (to produce constant dollars) and discounted to age 62.

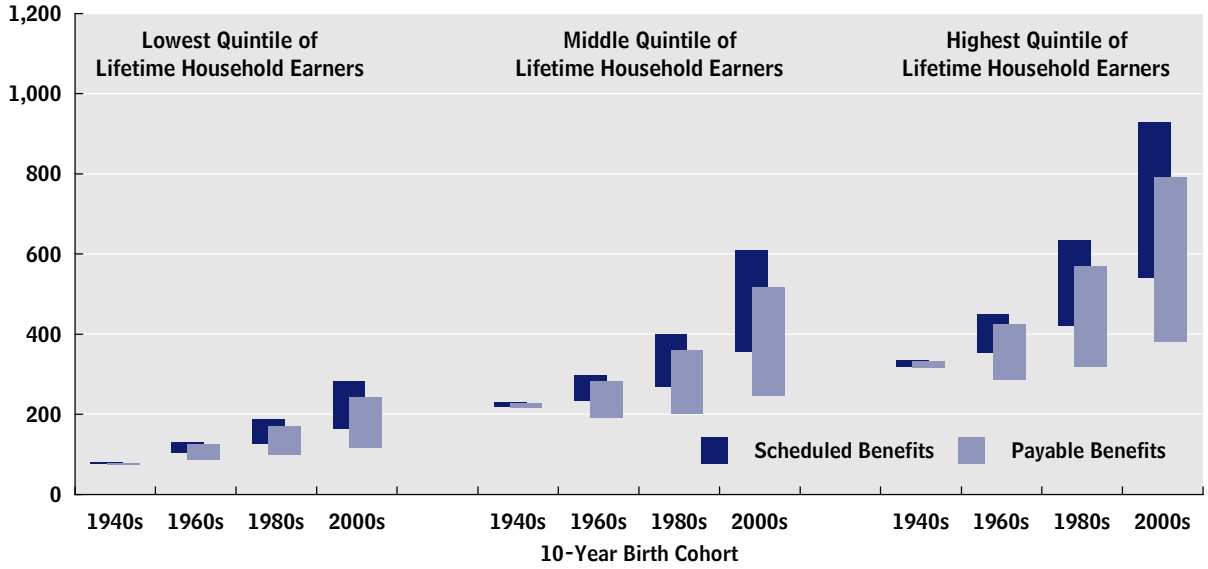
Payroll taxes are a fixed share of taxable earnings, so people with higher earnings generally pay more in payroll taxes. (In this analysis, payroll taxes comprise all Social Security payroll taxes levied on individual earnings, including the shares paid by employers and by employees. Taxable earnings exclude individuals' earnings above a threshold that increases over time with average earnings—the so-called taxable maximum, which this year is $110,100.) Because workers in later birth cohorts will have higher average taxable earnings, even when adjusted for inflation, CBO projects that they will pay more in payroll taxes.

In dollar terms, uncertainty about projected taxes is greatest for workers in the highest quintile of lifetime earners. (CBO's estimates are based on 500 simulations in which most of the key demographic and economic factors that underlie the analysis were varied on the basis of historical patterns.) However, when the range of uncertainty for lifetime payroll taxes paid is measured as a percentage of median lifetime payroll taxes paid for each quintile and birth cohort, the range is approximately equal for all quintiles. ◆

Exhibit 14.

Lifetime Social Security Benefits, with Scheduled and Payable Benefits

(Thousands of 2012 dollars)



Source: Congressional Budget Office.

Note: Ranges indicate the 80 percent range of uncertainty around each projection. The distribution of lifetime household earners includes only people who live to at least age 45. Payroll taxes consist of the employer's and employee's shares combined. To calculate present value, amounts are adjusted for inflation (to produce constant dollars) and discounted to age 62.

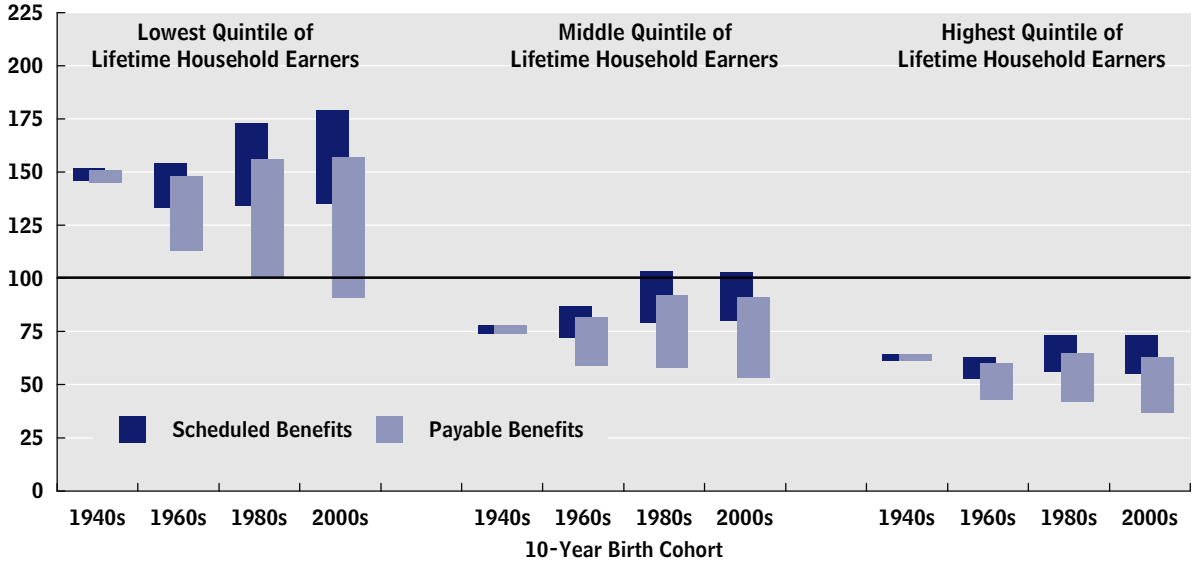
Projected increases in real earnings and in life expectancy lead to projected increases in real lifetime Social Security benefits over time. Benefits shown in this exhibit include almost all payments—those based on the recipient's own work history as well as most benefits the individual receives as another worker's dependent or survivor—net of income taxes paid on benefits by higher-income recipients and credited to the Social Security trust funds. (Because there are insufficient data on benefits received by young widows and children for years before 1984, those benefits are excluded from this measure.) Payable lifetime benefits are lower than scheduled lifetime benefits, but they follow a similar pattern over time. Benefits are substantially higher for people in groups with higher lifetime household earnings.

In dollar terms, uncertainty about projected benefits is greatest for workers in the highest quintile of lifetime earners. (CBO's estimates are based on 500 simulations in which most of the key demographic and economic factors that underlie the analysis were varied on the basis of historical patterns.) However, when the range of uncertainty for lifetime benefits is measured as a percentage of median lifetime benefits for each quintile and birth cohort, the range is approximately equal for all quintiles. ◆

Exhibit 15.

Lifetime Social Security Benefit-to-Tax Ratios, with Scheduled and Payable Benefits

(Lifetime benefits as a percentage of lifetime payroll taxes)



Source: Congressional Budget Office.

Note: Ranges indicate the 80 percent range of uncertainty around each projection. The distribution of lifetime household earners includes only people who live to at least age 45. Payroll taxes consist of the employer's and employee's shares combined. To calculate present value, amounts are adjusted for inflation (to produce constant dollars) and discounted to age 62.

The present value of total net benefits received over a lifetime (see Exhibit 14) can be compared with the present value of total payroll taxes paid over a lifetime (see Exhibit 13) by computing a ratio. A benefit-to-tax ratio of 150 percent, for example, indicates that benefits are 50 percent greater than taxes on a present-value basis.

The first generations of Social Security participants, who were born before the 1940s, received more in benefits than they paid in taxes. However, for people born in the 1940s or later who have household earnings in the second quintile or above, the present value of taxes will be, on average, more than the present value of scheduled benefits. Also, taxes are projected to be insufficient to pay for scheduled benefits, so benefit-to-tax ratios for payable benefits generally will be lower than for scheduled benefits. (If the program is to be self-supporting, then total taxes must equal total benefits on a present-value basis over the life of the program, and current and future participants must pay more in taxes than they receive in benefits to offset the larger benefit-to-tax ratios of earlier generations.)

Benefit-to-tax ratios are lower for people with higher household earnings, in part because the benefit formula is progressive and in part because those with lower earnings are more likely to receive disability benefits, dependent benefits, or both. Those effects are partially offset by the longer average life expectancy of higher earners (see Congressional Budget Office, *Is Social Security Progressive?* December 2006).

The uncertainty about benefit-to-tax ratios is greatest for workers in the lowest quintile of lifetime earners. However, when the uncertainty range is compared with the median ratio for each quintile and birth cohort, it is approximately equal for all quintiles. ◆

Exhibit 16.

Percentage of Simulations in Which Payable Benefits Exceed Specified Percentages of Scheduled Benefits

(Percent)

10-Year Birth Cohort	Payable Benefits as a Percentage of Scheduled Benefits[a]									
	99 or More	95 or More	90 or More	85 or More	80 or More	75 or More	70 or More	65 or More	60 or More	55 or More
	Initial Benefits									
1940s	100	100	100	100	100	100	100	100	100	100
1960s	56	74	87	97	99	100	100	100	100	100
1980s	9	16	31	49	70	87	96	99	100	100
2000s	8	15	23	34	46	63	78	88	95	98
	Lifetime Benefits[b]									
1940s	51	100	100	100	100	100	100	100	100	100
1960s	6	22	52	81	96	100	100	100	100	100
1980s	3	11	29	53	77	92	99	100	100	100
2000s	1	8	17	30	49	68	85	93	99	99

Source: Congressional Budget Office.

Note: Analysis is based on a distribution of 500 simulations from CBO's long-term model.

a. The sum of all payable benefits for everyone in a 10-year birth cohort divided by the sum of scheduled benefits for everyone in that cohort.

b. Lifetime benefits are calculated as the present value of all benefits received by everyone in a cohort during his or her lifetime.

CBO's analysis indicates that payable benefits are more likely to fall short of specified percentages of scheduled benefits for later birth cohorts. For its analysis, CBO created a distribution of outcomes from 500 simulations in which most of the key demographic and economic factors that underlie the analysis were varied on the basis of historical patterns. In all of the simulations, the 1940s cohort receives payable initial benefits that are at least 99 percent of the amount of scheduled initial benefits. However, the 1980s cohort does so in only 9 percent of the simulations. In 96 percent of the simulations, the 1980s cohort receives payable initial benefits that are at least 70 percent of the amount of scheduled initial benefits.

The exhaustion of the trust funds could occur after a group has begun collecting benefits, so the odds that a beneficiary's payable lifetime benefits will be as large as—or nearly as large as—scheduled lifetime benefits are generally lower than the corresponding odds for initial benefits. For instance, although payable initial benefits equal at least 99 percent of scheduled initial benefits in every simulation for the 1940s cohort, in only 51 percent of the simulations does the same occur for lifetime benefits, although any reduction in lifetime benefits for this group is likely to be small. Similarly, the 1940s cohort receives payable lifetime benefits that equal at least 95 percent of scheduled lifetime benefits in almost all of CBO's simulations. But the 1980s cohort receives payable lifetime benefits that equal at least 95 percent of scheduled lifetime benefits in only 11 percent of the simulations. ◆

About This Document

This Congressional Budget Office (CBO) publication provides additional information about long-term projections of the Social Security program's finances that were included in *The 2012 Long-Term Budget Outlook* (June 2012). Those projections, which cover the 75-year period spanning 2012 to 2087, and the additional information presented in this document update projections CBO prepared last year and reported in *CBO's 2011 Long-Term Projections for Social Security: Additional Information*.

The analysis was prepared by Noah Meyerson, Xiaotong Niu, Charles Pineles-Mark, Jonathan Schwabish, Michael Simpson, and Julie Topoleski of CBO's Long-Term Analysis Unit under the supervision of Joyce Manchester.

Kate Kelly edited the document, and Maureen Costantino and Jeanine Rees prepared it for publication. The report is available on the agency's Web site (www.cbo.gov).

Douglas W. Elmendorf
Director

October 2012