



RESEARCH REPORT

Social Security & Medicare Lifetime Benefits and Taxes: 2022

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The report's calculations are based on a model originally developed at the Urban Institute in 1992. We update the model annually to use the most recent Social Security and Medicare Trustees demographic and economic assumptions. Many other people have contributed to the model's development and updates over the years including Jon Bakija, Gordon Mermin, Adam Carasso, Stephanie Rennane, Caleb Quakenbush, and Erald Kolasi.

Executive Summary

This report presents updated figures in 2022 dollars for the lifetime benefits earned and the lifetime taxes paid by hypothetical workers participating in Social Security and Medicare. It uniquely allows comparisons across a century of past and projected future beneficiaries starting with those who turned 65 from 1960 to 2060.

For a single male earning average wages every year and retiring in 2020 at age 65, lifetime Social Security and Medicare benefits would equal about \$608,000 and, for a couple with one average earner and one low-wage earner, about \$1,177,000. Those amounts rise and fall for other hypothetical households as their incomes rise and fall relative to average wages. Benefits also are scheduled to increase significantly for future retirees, rising with real wages in the case of Social Security and with higher health care costs and new health services in the case of Medicare.

As in our 2021 report, lifetime Social Security and Medicare taxes are still scheduled to be significantly lower than lifetime Social Security and Medicare benefits for most workers in future decades. This is partly because the Medicare component of the payroll tax was designed to cover hospital costs but not doctor, outpatient, and other services costs (and even those hospital costs are starting to rise well above the revenues required to fund them).

Given the near-term depletion of Social Security (expected in 2034) and Medicare hospital insurance trust funds (expected in 2028), these data allow policy makers to visualize how much scheduled lifetime Social Security and health benefits:

- increase on a lifetime and annual basis;
- vary among people with different earnings and marriage histories; and
- vary across several decades of cohorts.

They also make clear that reforms could scale back the rate of growth of benefit increases and still allow lifetime benefits to increase significantly for each cohort of future retirees. Simultaneously, the tables reveal how much lifetime Social Security taxes:

- Cover the cost of lifetime benefits that each cohort receives; and
- vary among different cohorts and people with different earnings and marriage histories.

Social Security & Medicare Lifetime Benefits and Taxes: 2021

Social Security and Medicare are central to the federal government's numerous social safety initiatives. About 65 million people received \$1.145 trillion in benefits from the Old Age, Survivors, and Disability Insurance program in 2021 (Board of Trustees, Federal Old-Age and Survivors Insurance Trust Funds 2022). In the same year, Medicare paid benefits totaling \$839 billion on behalf of 64 million beneficiaries (Board of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds 2022). The two programs have an enormous social and economic impact, particularly in financing vital health care and keeping millions of people out of poverty during their years of retirement.

In this report, we focus on how much hypothetical workers with specific income profiles and belonging to different retirement cohorts receive in lifetime and annual benefits and how much they pay out in lifetime taxes. We discourage people from using our data to draw simplistic conclusions about whether individuals got their "moneys' worth" out of the current system. Social Security and Medicare, after all, operate primarily as pay-as-you-go systems, meaning that most taxes are not invested but simply used to pay benefits for current beneficiaries. In years when the trust funds approach zero, as right before the 1983 reform and now, almost all, all, or more than all current tax collections go out immediately to pay benefits. But, even in years when income exceeds expenditures, as when the baby boom generation was most fully employed and had not yet started retiring, the trust fund buildup was only a small percentage of current revenue collections and a tiny fraction of rising liabilities.

Though each generation's taxes go to support the benefits of their parents' and grandparents' generations, this does not answer the question of what a new generation of retirees is owed by its own children and grandchildren. If fewer workers are around to support each retiree, then the tax rate from Social Security or other sources on those children and grandchildren must rise relative to what current and past beneficiaries had to pay. Contrasting scheduled lifetime benefits to taxes, however, does offer a systematic way to compare how the system operates across generations and can inform judgments as to whether different cohorts and types of households are treated fairly and efficiently by America's old-age systems. It also reveals how each generation might share in any increased burden from the reduced benefits or increased taxes required to bring those systems into balance and keep them there.

Results and Discussion

The following tables show the expected present value at age 65 of benefits received in retirement and taxes paid over a career for households with different wage and marriage histories. The underlying data come from the 2022 Social Security and Medicare trustees' reports and supplemental data published by the Social Security Administration and Centers for Medicare & Medicaid Services (CMS).

In calculating expected present values, we use gender-adjusted probabilities to account for chance of death after age 65 and a discount rate of 2 percent plus inflation. This discount rate is above what is paid by many private annuities today but is close to a long-term real rate of return on bonds. When lifetime Social Security and Medicare benefits exceed lifetime Social Security and Medicare taxes, as is true for most households, the value of benefits from those programs becomes greater than the value of an annuity that the household would have been able to purchase with their lifetime taxes.

For Medicare lifetime benefits, we use an alternative 2022 cost scenario from CMS that overrides a "current law" scenario where CMS assumes that Medicare reimbursement rates would decline relative to what private health insurance pays. If Medicare's reimbursement of health providers falls too low, providers might stop accepting Medicare, which could threaten beneficiaries' health and financial security. The CMS alternative scenario that we use effectively assumes that policymakers would act to prevent this from happening, as they have done in the past.

Changes from the last analysis we performed in 2021 are modest; the largest adjustment derives from presenting results in 2022 versus 2021 dollars. COVID-19 also affected Medicare spending and led to some slowdown in individuals seeking of services other than for the pandemic itself. Other changes derive from updated mortality figures and one more year of historic data on the growth in average earnings and inflation.

As expected based on our 2021 analysis, we project that both lifetime benefits and taxes continue to increase for future workers and retirees, with differences in lifetime benefits and taxes among households at different levels of income identified in each table. Benefit growth rates, designed to grow as earnings increase, have stagnated a bit recently because of modest growth in those earnings subject to Social Security tax, and because of the scheduled increase in the full retirement age that phases in for cohorts reaching age 62 between 2000 and 2022.

The numbers presented are averages for hypothetical workers with specific work and marriage histories and longevity characteristics. Lifetime benefits and taxes experienced by specific households in the economy will vary based on several factors, including earnings patterns, health, and choices about

marriage, divorce, children, and retirement. The greater average expected lifetime benefits of women compared with men with the same earnings profile stem from longer life expectancies for women.

Real lifetime benefits grow more generous over time as real wages grow, people live longer, and real health costs increase. Many single adults with average earnings retiring in 2020 will receive well over \$600,000 in lifetime benefits (table 2 for males, table 6 for females). A couple with one earner at average wages and one at low wages will receive about \$1.2 million in lifetime benefits (table 14).

While Social Security annual benefits have grown over time as wages have risen, lifetime Social Security and Medicare benefits reach this level largely because an average individual retiring in 2020 is projected to live close to two decades at age 65 (over four years longer than an individual retiring in 1960). The longer-living spouse of a couple, both aged 65, will live close to three decades. The growth in health benefits per household derives from both more years of benefits as individuals live longer and significant real (inflation-adjusted) increases in the levels of services and goods provided over time and their related costs.

Under scheduled law, millennials who retire around 2060 are scheduled to receive nearly twice the benefits of baby boomers retiring in 2020: \$1.2 million for an average income single male (table 2), \$1.3 million for an average income single female (table 6), and \$2.4 million for a two-earner couple where one spouse has average and one low earnings (table 14). While fiscal imbalances in Social Security, Medicare, and the rest of the federal budget may make this schedule of benefits hard to maintain, the numbers reveal substantial room for reformers to provide higher real levels of benefits over time even if they pare down the growth rate in benefits.

Lifetime benefits scheduled for some high-income couples by 2060 can exceed \$2.8 million (table 16). In addition, those estimates for higher-income retirees are probably low given the simplifying assumptions of a similar mortality rate for all men, and, separately, for all women in given cohorts. After all, mortality rates tend to fall as income rises (Isaacs et al. 2021; Waldron 2007, 2013). By the same token, the estimates for lower-income earners are probably too high. Unfortunately, we do not have enough data to adjust for mortality by income for the hundred years of cohorts in these tables. However, researchers at the Urban Institute conducted a related study to try to understand the effect of mortality on benefit levels (Steuerle, Cosic, and Quakenbush 2019). See the discussion in the appendix.

As for lifetime Social Security taxes, they too are rising in real terms; lifetime Social Security taxes recently have started to exceed benefits for some households at higher income levels. Lifetime Medicare benefits at all income levels, however, are still far in excess of anything that could be covered

by the Medicare or hospital insurance (HI) tax component of the payroll tax for all the household examples in this study. At very high income levels, an extra 0.9 percent Medicare tax on earnings and a higher insurance premium in retirement could lead a few to pay in more tax than they receive in benefits.

Because existing revenue shortfalls in Social Security and Medicare must be covered somehow, these tables allow reformers also to compare the extent to which benefit cuts and revenue increases within those programs might be allocated across generations and among different income groups.

Reform efforts often start out by looking at one parameter at time, such as annual benefits or the benefit rate structure. The advantage of looking at lifetime benefits and taxes is that it more holistically makes clearer the choices that are being made for any given level of lifetime benefits. Thus, it demonstrates choices such as between granting more years of benefits or higher annual benefits, more costly health insurance or higher cash benefits, and higher taxes on future workers or lower benefit growth rates for future retirees.

Tables

TABLE 1

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes

Single male with low earnings (\$28,200 in 2022 dollars)

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	7,700	95,000	18,000	113,000	10,000	0	10,000
1965	8,100	105,000	32,000	137,000	17,000	0	17,000
1970	9,200	121,000	46,000	167,000	25,000	1,000	26,000
1975	10,800	135,000	62,000	197,000	37,000	2,000	39,000
1980	11,800	158,000	79,000	237,000	50,000	5,000	55,000
1985	11,100	147,000	99,000	246,000	62,000	8,000	70,000
1990	11,000	154,000	120,000	274,000	77,000	12,000	89,000
1995	11,800	167,000	143,000	310,000	94,000	16,000	110,000
2000	12,000	177,000	164,000	341,000	110,000	21,000	131,000
2005	13,200	201,000	186,000	387,000	125,000	27,000	152,000
2010	13,800	205,000	202,000	407,000	138,000	33,000	171,000
2015	13,700	205,000	221,000	426,000	147,000	38,000	185,000
2020	14,000	217,000	250,000	467,000	155,000	41,000	196,000
2025	13,900	221,000	289,000	510,000	165,000	45,000	210,000
2030	15,000	242,000	330,000	572,000	175,000	48,000	223,000
2035	16,000	263,000	374,000	637,000	184,000	50,000	234,000
2040	17,000	283,000	417,000	700,000	194,000	53,000	247,000
2045	18,100	304,000	460,000	764,000	204,000	56,000	260,000
2050	19,100	324,000	507,000	831,000	215,000	59,000	274,000
2055	20,100	346,000	558,000	904,000	229,000	63,000	292,000
2060	21,300	369,000	615,000	984,000	246,000	67,000	313,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

TABLE 2

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes
Single male with average earnings (\$62,600 in 2022 dollars)

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	11,700	143,000	18,000	161,000	22,000	0	22,000
1965	12,400	162,000	32,000	194,000	37,000	0	37,000
1970	14,400	189,000	46,000	235,000	56,000	2,000	58,000
1975	17,300	216,000	62,000	278,000	82,000	5,000	87,000
1980	19,600	262,000	79,000	341,000	111,000	11,000	122,000
1985	18,400	244,000	99,000	343,000	139,000	17,000	156,000
1990	18,200	254,000	120,000	374,000	172,000	26,000	198,000
1995	19,400	275,000	143,000	418,000	209,000	36,000	245,000
2000	19,800	292,000	164,000	456,000	244,000	47,000	291,000
2005	21,800	331,000	186,000	517,000	278,000	60,000	338,000
2010	22,800	338,000	202,000	540,000	306,000	74,000	380,000
2015	22,600	338,000	221,000	559,000	327,000	84,000	411,000
2020	23,100	358,000	250,000	608,000	344,000	91,000	435,000
2025	22,900	365,000	289,000	654,000	367,000	99,000	466,000
2030	24,800	400,000	330,000	730,000	389,000	106,000	495,000
2035	26,500	434,000	374,000	808,000	408,000	112,000	520,000
2040	28,100	467,000	417,000	884,000	432,000	119,000	551,000
2045	29,800	501,000	460,000	961,000	454,000	125,000	579,000
2050	31,500	535,000	507,000	1,042,000	479,000	132,000	611,000
2055	33,200	571,000	558,000	1,129,000	510,000	140,000	650,000
2060	35,100	610,000	615,000	1,225,000	546,000	150,000	696,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 3

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Single male with high earnings (\$100,200 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	13,000	159,000	18,000	177,000	30,000	0	30,000
1965	13,600	177,000	32,000	209,000	46,000	0	46,000
1970	16,300	214,000	46,000	260,000	71,000	2,000	73,000
1975	20,200	253,000	62,000	315,000	105,000	7,000	112,000
1980	24,500	328,000	79,000	407,000	150,000	15,000	165,000
1985	23,100	306,000	99,000	405,000	191,000	26,000	217,000
1990	23,100	322,000	120,000	442,000	241,000	40,000	281,000
1995	24,900	352,000	143,000	495,000	299,000	55,000	354,000
2000	25,600	379,000	164,000	543,000	357,000	73,000	430,000
2005	28,700	436,000	186,000	622,000	417,000	93,000	510,000
2010	30,100	447,000	202,000	649,000	474,000	115,000	589,000
2015	30,000	447,000	221,000	668,000	518,000	133,000	651,000
2020	30,600	473,000	250,000	723,000	550,000	146,000	696,000
2025	30,200	482,000	289,000	771,000	587,000	159,000	746,000
2030	32,700	529,000	330,000	859,000	623,000	169,000	792,000
2035	35,000	574,000	374,000	948,000	653,000	179,000	832,000
2040	37,200	617,000	417,000	1,034,000	691,000	190,000	881,000
2045	39,400	662,000	460,000	1,122,000	727,000	200,000	927,000
2050	41,700	708,000	507,000	1,215,000	766,000	213,000	979,000
2055	43,900	755,000	558,000	1,313,000	815,000	229,000	1,044,000
2060	46,400	806,000	615,000	1,421,000	873,000	247,000	1,120,000

Source: Authors' calculations.**Note:** The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 4

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Single male with maximum taxable earnings (\$142,800 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	13,000	159,000	18,000	177,000	33,000	0	33,000
1965	13,600	177,000	32,000	209,000	51,000	0	51,000
1970	16,300	214,000	46,000	260,000	76,000	2,000	78,000
1975	20,300	254,000	62,000	316,000	111,000	8,000	119,000
1980	24,900	333,000	79,000	412,000	158,000	16,000	174,000
1985	24,100	319,000	99,000	418,000	208,000	30,000	238,000
1990	24,700	344,000	120,000	464,000	279,000	50,000	329,000
1995	27,200	385,000	143,000	528,000	364,000	72,000	436,000
2000	28,700	424,000	164,000	588,000	452,000	97,000	549,000
2005	33,000	501,000	186,000	687,000	548,000	128,000	676,000
2010	35,500	528,000	202,000	730,000	645,000	161,000	806,000
2015	36,200	541,000	221,000	762,000	734,000	191,000	925,000
2020	37,300	576,000	250,000	826,000	815,000	218,000	1,033,000
2025	36,800	588,000	289,000	877,000	893,000	242,000	1,135,000
2030	40,000	646,000	330,000	976,000	953,000	259,000	1,212,000
2035	42,800	701,000	374,000	1,075,000	1,003,000	275,000	1,278,000
2040	45,500	754,000	417,000	1,171,000	1,061,000	295,000	1,356,000
2045	48,200	810,000	460,000	1,270,000	1,121,000	316,000	1,437,000
2050	50,900	865,000	507,000	1,372,000	1,180,000	339,000	1,519,000
2055	53,600	922,000	558,000	1,480,000	1,253,000	366,000	1,619,000
2060	56,600	983,000	615,000	1,598,000	1,340,000	397,000	1,737,000

Source: Authors' calculations.**Note:** The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 5

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Single female with low earnings (\$28,200 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	7,800	123,000	28,000	151,000	10,000	0	10,000
1965	8,200	140,000	47,000	187,000	17,000	0	17,000
1970	9,400	159,000	65,000	224,000	25,000	1,000	26,000
1975	11,100	175,000	84,000	259,000	37,000	2,000	39,000
1980	11,800	194,000	103,000	297,000	50,000	5,000	55,000
1985	11,100	176,000	124,000	300,000	62,000	8,000	70,000
1990	11,000	180,000	145,000	325,000	77,000	12,000	89,000
1995	11,800	192,000	167,000	359,000	94,000	16,000	110,000
2000	12,000	199,000	188,000	387,000	110,000	21,000	131,000
2005	13,200	225,000	211,000	436,000	125,000	27,000	152,000
2010	13,800	228,000	229,000	457,000	138,000	33,000	171,000
2015	13,700	228,000	253,000	481,000	147,000	38,000	185,000
2020	14,000	242,000	286,000	528,000	155,000	41,000	196,000
2025	13,900	245,000	328,000	573,000	165,000	45,000	210,000
2030	15,000	268,000	373,000	641,000	175,000	48,000	223,000
2035	16,000	290,000	419,000	709,000	184,000	50,000	234,000
2040	17,000	311,000	466,000	777,000	194,000	53,000	247,000
2045	18,100	333,000	513,000	846,000	204,000	56,000	260,000
2050	19,100	355,000	563,000	918,000	215,000	59,000	274,000
2055	20,100	378,000	618,000	996,000	229,000	63,000	292,000
2060	21,300	402,000	679,000	1,081,000	246,000	67,000	313,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 6

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes
Single female with average earnings (\$62,600 in 2022 dollars)

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	11,900	187,000	28,000	215,000	22,000	0	22,000
1965	12,700	216,000	47,000	263,000	37,000	0	37,000
1970	14,900	251,000	65,000	316,000	56,000	2,000	58,000
1975	17,900	283,000	84,000	367,000	82,000	5,000	87,000
1980	19,600	323,000	103,000	426,000	111,000	11,000	122,000
1985	18,400	292,000	124,000	416,000	139,000	17,000	156,000
1990	18,200	298,000	145,000	443,000	172,000	26,000	198,000
1995	19,400	316,000	167,000	483,000	209,000	36,000	245,000
2000	19,800	329,000	188,000	517,000	244,000	47,000	291,000
2005	21,800	370,000	211,000	581,000	278,000	60,000	338,000
2010	22,800	377,000	229,000	606,000	306,000	74,000	380,000
2015	22,600	377,000	253,000	630,000	327,000	84,000	411,000
2020	23,100	399,000	286,000	685,000	344,000	91,000	435,000
2025	22,900	405,000	328,000	733,000	367,000	99,000	466,000
2030	24,800	443,000	373,000	816,000	389,000	106,000	495,000
2035	26,500	479,000	419,000	898,000	408,000	112,000	520,000
2040	28,100	513,000	466,000	979,000	432,000	119,000	551,000
2045	29,800	550,000	513,000	1,063,000	454,000	125,000	579,000
2050	31,500	586,000	563,000	1,149,000	479,000	132,000	611,000
2055	33,200	623,000	618,000	1,241,000	510,000	140,000	650,000
2060	35,100	664,000	679,000	1,343,000	546,000	150,000	696,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 7

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Single female with high earnings (\$100,200 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	13,300	209,000	28,000	237,000	30,000	0	30,000
1965	14,000	237,000	47,000	284,000	46,000	0	46,000
1970	17,000	286,000	65,000	351,000	71,000	2,000	73,000
1975	21,300	336,000	84,000	420,000	105,000	7,000	112,000
1980	24,500	403,000	103,000	506,000	150,000	15,000	165,000
1985	23,100	366,000	124,000	490,000	191,000	26,000	217,000
1990	23,100	378,000	145,000	523,000	241,000	40,000	281,000
1995	24,900	404,000	167,000	571,000	299,000	55,000	354,000
2000	25,600	426,000	188,000	614,000	357,000	73,000	430,000
2005	28,700	487,000	211,000	698,000	417,000	93,000	510,000
2010	30,100	498,000	229,000	727,000	474,000	115,000	589,000
2015	30,000	499,000	253,000	752,000	518,000	133,000	651,000
2020	30,600	528,000	286,000	814,000	550,000	146,000	696,000
2025	30,200	535,000	328,000	863,000	587,000	159,000	746,000
2030	32,700	586,000	373,000	959,000	623,000	169,000	792,000
2035	35,000	633,000	419,000	1,052,000	653,000	179,000	832,000
2040	37,200	679,000	466,000	1,145,000	691,000	190,000	881,000
2045	39,400	727,000	513,000	1,240,000	727,000	200,000	927,000
2050	41,700	774,000	563,000	1,337,000	766,000	213,000	979,000
2055	43,900	824,000	618,000	1,442,000	815,000	229,000	1,044,000
2060	46,400	877,000	679,000	1,556,000	873,000	247,000	1,120,000

Source: Authors' calculations.**Note:** The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 8

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Single female with maximum taxable earnings (\$142,800 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	13,300	209,000	28,000	237,000	33,000	0	33,000
1965	14,000	237,000	47,000	284,000	51,000	0	51,000
1970	17,000	286,000	65,000	351,000	76,000	2,000	78,000
1975	21,400	337,000	84,000	421,000	111,000	8,000	119,000
1980	24,900	410,000	103,000	513,000	158,000	16,000	174,000
1985	24,100	382,000	124,000	506,000	208,000	30,000	238,000
1990	24,700	404,000	145,000	549,000	279,000	50,000	329,000
1995	27,200	441,000	167,000	608,000	364,000	72,000	436,000
2000	28,700	477,000	188,000	665,000	452,000	97,000	549,000
2005	33,000	560,000	211,000	771,000	548,000	128,000	676,000
2010	35,500	588,000	229,000	817,000	645,000	161,000	806,000
2015	36,200	603,000	253,000	856,000	734,000	191,000	925,000
2020	37,300	643,000	286,000	929,000	815,000	218,000	1,033,000
2025	36,800	652,000	328,000	980,000	893,000	242,000	1,135,000
2030	40,000	715,000	373,000	1,088,000	953,000	259,000	1,212,000
2035	42,800	774,000	419,000	1,193,000	1,003,000	275,000	1,278,000
2040	45,500	830,000	466,000	1,296,000	1,061,000	295,000	1,356,000
2045	48,200	889,000	513,000	1,402,000	1,121,000	316,000	1,437,000
2050	50,900	947,000	563,000	1,510,000	1,180,000	339,000	1,519,000
2055	53,600	1,006,000	618,000	1,624,000	1,253,000	366,000	1,619,000
2060	56,600	1,070,000	679,000	1,749,000	1,340,000	397,000	1,737,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 9

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married one-earner couple with low earnings (\$28,200 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	11,600	177,000	45,000	222,000	10,000	0	10,000
1965	12,100	200,000	80,000	280,000	17,000	0	17,000
1970	13,800	227,000	112,000	339,000	25,000	1,000	26,000
1975	16,200	250,000	146,000	396,000	37,000	2,000	39,000
1980	17,700	288,000	183,000	471,000	50,000	5,000	55,000
1985	16,700	264,000	223,000	487,000	62,000	8,000	70,000
1990	16,500	272,000	266,000	538,000	77,000	12,000	89,000
1995	17,700	291,000	310,000	601,000	94,000	16,000	110,000
2000	17,900	304,000	352,000	656,000	110,000	21,000	131,000
2005	19,800	343,000	397,000	740,000	125,000	27,000	152,000
2010	20,700	349,000	431,000	780,000	138,000	33,000	171,000
2015	20,600	349,000	474,000	823,000	147,000	38,000	185,000
2020	21,000	370,000	536,000	906,000	155,000	41,000	196,000
2025	20,800	375,000	618,000	993,000	165,000	45,000	210,000
2030	22,500	410,000	703,000	1,113,000	175,000	48,000	223,000
2035	24,100	444,000	793,000	1,237,000	184,000	50,000	234,000
2040	25,600	477,000	882,000	1,359,000	194,000	53,000	247,000
2045	27,100	510,000	973,000	1,483,000	204,000	56,000	260,000
2050	28,600	544,000	1,070,000	1,614,000	215,000	59,000	274,000
2055	30,200	579,000	1,176,000	1,755,000	229,000	63,000	292,000
2060	31,900	617,000	1,294,000	1,911,000	246,000	67,000	313,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 10

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married one-earner couple with average earnings (\$62,600 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	17,500	267,000	45,000	312,000	22,000	0	22,000
1965	18,500	306,000	80,000	386,000	37,000	0	37,000
1970	21,700	356,000	112,000	468,000	56,000	2,000	58,000
1975	25,900	401,000	146,000	547,000	82,000	5,000	87,000
1980	29,400	478,000	183,000	661,000	111,000	11,000	122,000
1985	27,600	437,000	223,000	660,000	139,000	17,000	156,000
1990	27,300	450,000	266,000	716,000	172,000	26,000	198,000
1995	29,200	480,000	310,000	790,000	209,000	36,000	245,000
2000	29,600	503,000	352,000	855,000	244,000	47,000	291,000
2005	32,700	566,000	397,000	963,000	278,000	60,000	338,000
2010	34,100	576,000	431,000	1,007,000	306,000	74,000	380,000
2015	34,000	577,000	474,000	1,051,000	327,000	84,000	411,000
2020	34,700	610,000	536,000	1,146,000	344,000	91,000	435,000
2025	34,300	620,000	618,000	1,238,000	367,000	99,000	466,000
2030	37,100	678,000	703,000	1,381,000	389,000	106,000	495,000
2035	39,700	733,000	793,000	1,526,000	408,000	112,000	520,000
2040	42,200	786,000	882,000	1,668,000	432,000	119,000	551,000
2045	44,700	842,000	973,000	1,815,000	454,000	125,000	579,000
2050	47,200	898,000	1,070,000	1,968,000	479,000	132,000	611,000
2055	49,800	955,000	1,176,000	2,131,000	510,000	140,000	650,000
2060	52,700	1,018,000	1,294,000	2,312,000	546,000	150,000	696,000

Source: Authors' calculations.**Note:** The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 11

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married one-earner couple with high earnings (\$100,200 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	19,500	297,000	45,000	342,000	30,000	0	30,000
1965	20,300	335,000	80,000	415,000	46,000	0	46,000
1970	24,500	402,000	112,000	514,000	71,000	2,000	73,000
1975	30,400	469,000	146,000	615,000	105,000	7,000	112,000
1980	36,700	598,000	183,000	781,000	150,000	15,000	165,000
1985	34,600	548,000	223,000	771,000	191,000	26,000	217,000
1990	34,600	570,000	266,000	836,000	241,000	40,000	281,000
1995	37,300	615,000	310,000	925,000	299,000	55,000	354,000
2000	38,400	652,000	352,000	1,004,000	357,000	73,000	430,000
2005	43,000	745,000	397,000	1,142,000	417,000	93,000	510,000
2010	45,100	762,000	431,000	1,193,000	474,000	115,000	589,000
2015	44,900	763,000	474,000	1,237,000	518,000	133,000	651,000
2020	45,900	807,000	536,000	1,343,000	550,000	146,000	696,000
2025	45,300	818,000	618,000	1,436,000	587,000	159,000	746,000
2030	49,100	896,000	703,000	1,599,000	623,000	169,000	792,000
2035	52,500	969,000	793,000	1,762,000	653,000	179,000	832,000
2040	55,800	1,040,000	882,000	1,922,000	691,000	190,000	881,000
2045	59,200	1,113,000	973,000	2,086,000	727,000	200,000	927,000
2050	62,500	1,187,000	1,070,000	2,257,000	766,000	212,000	978,000
2055	65,900	1,263,000	1,176,000	2,439,000	815,000	226,000	1,041,000
2060	69,600	1,346,000	1,294,000	2,640,000	873,000	243,000	1,116,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 12

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married one-earner couple with maximum taxable earnings (\$142,800 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	19,500	297,000	45,000	342,000	33,000	0	33,000
1965	20,300	335,000	80,000	415,000	51,000	0	51,000
1970	24,500	402,000	112,000	514,000	76,000	2,000	78,000
1975	30,400	470,000	146,000	616,000	111,000	8,000	119,000
1980	37,300	608,000	183,000	791,000	158,000	16,000	174,000
1985	36,200	572,000	223,000	795,000	208,000	30,000	238,000
1990	37,000	609,000	266,000	875,000	279,000	50,000	329,000
1995	40,700	671,000	310,000	981,000	364,000	72,000	436,000
2000	43,000	730,000	352,000	1,082,000	452,000	97,000	549,000
2005	49,500	857,000	397,000	1,254,000	548,000	128,000	676,000
2010	53,300	900,000	431,000	1,331,000	645,000	161,000	806,000
2015	54,300	922,000	474,000	1,396,000	734,000	191,000	925,000
2020	55,900	983,000	536,000	1,519,000	815,000	218,000	1,033,000
2025	55,300	998,000	618,000	1,616,000	893,000	242,000	1,135,000
2030	60,000	1,094,000	703,000	1,797,000	953,000	259,000	1,212,000
2035	64,200	1,185,000	793,000	1,978,000	1,003,000	274,000	1,277,000
2040	68,200	1,271,000	882,000	2,153,000	1,061,000	292,000	1,353,000
2045	72,400	1,362,000	973,000	2,335,000	1,121,000	312,000	1,433,000
2050	76,400	1,451,000	1,070,000	2,521,000	1,180,000	332,000	1,512,000
2055	80,400	1,542,000	1,176,000	2,718,000	1,253,000	357,000	1,610,000
2060	84,900	1,642,000	1,294,000	2,936,000	1,340,000	387,000	1,727,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 13

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married couple with two low earners (\$56,400 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	15,600	215,000	45,000	260,000	20,000	0	20,000
1965	16,300	244,000	80,000	324,000	33,000	0	33,000
1970	18,600	280,000	112,000	392,000	51,000	2,000	53,000
1975	21,900	310,000	146,000	456,000	74,000	5,000	79,000
1980	23,600	352,000	183,000	535,000	100,000	9,000	109,000
1985	22,300	324,000	223,000	547,000	125,000	16,000	141,000
1990	22,100	334,000	266,000	600,000	155,000	23,000	178,000
1995	23,600	358,000	310,000	668,000	188,000	32,000	220,000
2000	23,900	376,000	352,000	728,000	219,000	42,000	261,000
2005	26,500	425,000	397,000	822,000	250,000	54,000	304,000
2010	27,600	433,000	431,000	864,000	275,000	66,000	341,000
2015	27,400	433,000	474,000	907,000	294,000	75,000	369,000
2020	28,100	459,000	536,000	995,000	309,000	82,000	391,000
2025	27,700	466,000	618,000	1,084,000	330,000	89,000	419,000
2030	30,000	511,000	703,000	1,214,000	350,000	95,000	445,000
2035	32,100	553,000	793,000	1,346,000	367,000	100,000	467,000
2040	34,100	594,000	882,000	1,476,000	388,000	107,000	495,000
2045	36,200	637,000	973,000	1,610,000	409,000	113,000	522,000
2050	38,200	679,000	1,070,000	1,749,000	431,000	119,000	550,000
2055	40,300	724,000	1,176,000	1,900,000	459,000	126,000	585,000
2060	42,500	772,000	1,294,000	2,066,000	491,000	135,000	626,000

Source: Authors' calculations.

Notes: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

TABLE 14

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married couple with one average earner and one low earner (\$90,800 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	19,500	285,000	45,000	330,000	32,000	0	32,000
1965	20,600	326,000	80,000	406,000	53,000	0	53,000
1970	23,900	379,000	112,000	491,000	81,000	3,000	84,000
1975	28,400	426,000	146,000	572,000	119,000	8,000	127,000
1980	31,300	500,000	183,000	683,000	161,000	15,000	176,000
1985	29,600	458,000	223,000	681,000	201,000	25,000	226,000
1990	29,200	471,000	266,000	737,000	250,000	37,000	287,000
1995	31,200	504,000	310,000	814,000	303,000	51,000	354,000
2000	31,700	528,000	352,000	880,000	353,000	68,000	421,000
2005	35,000	595,000	397,000	992,000	403,000	87,000	490,000
2010	36,500	606,000	431,000	1,037,000	443,000	107,000	550,000
2015	36,400	606,000	474,000	1,080,000	474,000	121,000	595,000
2020	37,200	641,000	536,000	1,177,000	498,000	133,000	631,000
2025	36,700	652,000	618,000	1,270,000	532,000	144,000	676,000
2030	39,700	713,000	703,000	1,416,000	564,000	153,000	717,000
2035	42,500	771,000	793,000	1,564,000	591,000	162,000	753,000
2040	45,200	827,000	882,000	1,709,000	626,000	172,000	798,000
2045	47,900	886,000	973,000	1,859,000	658,000	181,000	839,000
2050	50,600	945,000	1,070,000	2,015,000	694,000	192,000	886,000
2055	53,400	1,006,000	1,176,000	2,182,000	739,000	204,000	943,000
2060	56,400	1,072,000	1,294,000	2,366,000	791,000	219,000	1,010,000

Source: Authors' calculations.**Note:** The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 15

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes

Married couple with two average earners (\$125,200 in 2022 dollars)

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	23,500	325,000	45,000	370,000	45,000	0	45,000
1965	25,100	376,000	80,000	456,000	74,000	0	74,000
1970	29,400	442,000	112,000	554,000	112,000	4,000	116,000
1975	35,200	500,000	146,000	646,000	164,000	11,000	175,000
1980	39,100	585,000	183,000	768,000	222,000	21,000	243,000
1985	36,800	535,000	223,000	758,000	278,000	34,000	312,000
1990	36,400	552,000	266,000	818,000	344,000	52,000	396,000
1995	38,900	591,000	310,000	901,000	417,000	71,000	488,000
2000	39,500	621,000	352,000	973,000	487,000	93,000	580,000
2005	43,600	701,000	397,000	1,098,000	556,000	119,000	675,000
2010	45,500	715,000	431,000	1,146,000	611,000	147,000	758,000
2015	45,300	715,000	474,000	1,189,000	653,000	167,000	820,000
2020	46,300	757,000	536,000	1,293,000	688,000	183,000	871,000
2025	45,800	771,000	618,000	1,389,000	733,000	199,000	932,000
2030	49,500	843,000	703,000	1,546,000	778,000	212,000	990,000
2035	53,000	913,000	793,000	1,706,000	816,000	223,000	1,039,000
2040	56,200	980,000	882,000	1,862,000	863,000	237,000	1,100,000
2045	59,600	1,051,000	973,000	2,024,000	908,000	251,000	1,159,000
2050	63,000	1,121,000	1,070,000	2,191,000	958,000	266,000	1,224,000
2055	66,400	1,194,000	1,176,000	2,370,000	1,019,000	286,000	1,305,000
2060	70,200	1,273,000	1,294,000	2,567,000	1,091,000	310,000	1,401,000

Source: Authors' calculations.

Note: The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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TABLE 16

Expected Present Value of Lifetime Social Security and Medicare Benefits and Taxes*Married couple with one high earner and one average earner (\$162,800 in 2022 dollars)*

Year cohort turns age 65	First year Social Security benefit	Lifetime Benefits			Lifetime Taxes		
		Social Security	Medicare (net of premiums)	Total	Social Security	Medicare	Total
1960	24,900	347,000	45,000	392,000	52,000	0	52,000
1965	26,300	396,000	80,000	476,000	83,000	0	83,000
1970	31,200	474,000	112,000	586,000	127,000	4,000	131,000
1975	38,100	549,000	146,000	695,000	187,000	13,000	200,000
1980	44,000	678,000	183,000	861,000	261,000	26,000	287,000
1985	41,500	621,000	223,000	844,000	330,000	43,000	373,000
1990	41,300	645,000	266,000	911,000	413,000	65,000	478,000
1995	44,300	695,000	310,000	1,005,000	508,000	90,000	598,000
2000	45,400	735,000	352,000	1,087,000	600,000	119,000	719,000
2005	50,500	837,000	397,000	1,234,000	695,000	153,000	848,000
2010	52,800	856,000	431,000	1,287,000	779,000	189,000	968,000
2015	52,600	857,000	474,000	1,331,000	845,000	216,000	1,061,000
2020	53,800	906,000	536,000	1,442,000	894,000	238,000	1,132,000
2025	53,100	921,000	618,000	1,539,000	953,000	258,000	1,211,000
2030	57,500	1,008,000	703,000	1,711,000	1,012,000	275,000	1,287,000
2035	61,500	1,091,000	793,000	1,884,000	1,061,000	290,000	1,351,000
2040	65,300	1,171,000	882,000	2,053,000	1,122,000	310,000	1,432,000
2045	69,300	1,255,000	973,000	2,228,000	1,181,000	330,000	1,511,000
2050	73,200	1,338,000	1,070,000	2,408,000	1,245,000	354,000	1,599,000
2055	77,200	1,425,000	1,176,000	2,601,000	1,325,000	384,000	1,709,000
2060	81,500	1,519,000	1,294,000	2,813,000	1,419,000	420,000	1,839,000

Source: Authors' calculations.**Note:** The calculations assume scheduled benefits are paid after trust fund assets are depleted.

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Appendix

Basic Data and Assumptions

Data

Program rules, economic projections, and mortality assumptions are taken from the 2022 annual reports of the Social Security and Medicare trustees and from supplemental data provided in the Social Security Bulletin and the Centers for Medicare & Medicaid Services actuaries. Our assumptions come from the intermediate scenarios provided in the trustees' report, except for Medicare benefits as described below.

Work and Earnings Histories

Following Social Security's use of hypothetical workers, individuals start working at age 22 and work continuously until they retire on their 65th birthdays. Their wage levels are set according to the Social Security Administration's national average wage index.¹ An average worker earns the average wages of all workers as adjusted annually by the national wage index in every year of work, while low-earning workers earn 45 percent of the index and high-earning workers earn 160 percent of the index each year. A maximum taxable worker earns the maximum taxable wage for Social Security taxes every year.² The national average wage index was estimated as \$60,576 in 2021. Each hypothetical worker stays at the same earnings level relative to the index in each year, except for the worker earning the maximum taxable wage, which, although indexed currently, has also changed with legislation.

We use the Social Security definition of average wage because of its common use as a standard in many Social Security publications. Many workers have varied labor force participation over their careers, and the average wage is calculated only for people who have earnings that year. Because many individuals have some years with zero earnings because of childcare, unemployment or other circumstances, they would have lower average lifetime earnings than the person who earned the average wage every year.

We examined this phenomenon in a recent report (Steuerle, Cosic, and Quakenbush, 2019) using the DYNASIM microsimulation model that allowed us to examine the distribution of taxes and benefits

for the population. Unfortunately, we have no reliable historical and projected data to perform that type of analysis over long periods such as the hundred years included in this report. Accordingly, hypothetical households remain most useful for making like-to-like and easy-to-understand comparisons of people in similar circumstances over a large part of history and scheduled future. A comparison of results from these two methods in that 2019 report showed that the largest impact of assuming a constant work history and retirement was to overstate lifetime taxes paid but only modestly overstate lifetime benefits. These differences reflect the fact that Social Security only counts 35 years of earnings in determining retired worker benefits. Furthermore, spousal and survivor benefits are additions that require no earnings or taxes by those spouses nor reduction in annual benefit by the worker on whose earnings those additional benefits are determined. For presentational purposes, therefore, we often suggest that users of this report use the couple with one average earner and one low earner as roughly representing lifetime benefits for some typical average couple.

Marriage

Spouses in the calculations for couples are assumed to be the same age and marry at age 24. Couples are married continuously throughout their careers and retirement. Therefore, no divorce benefits are included in the calculation of lifetime benefits. Because real-life spouses often differ by age, our projections of total years of benefit for the same-aged couple will generally be lower than the total years of benefits for couples of different ages. For the same reason, we also modestly understate the years of survivorship and availability of survivor benefits. We also include no child benefits in these calculations.

Mortality

All individuals are assumed to live to age 65. After age 65, we apply sex-adjusted mortality probabilities to retirees receiving benefits to arrive at expected values of benefits received. These values come from cohort life tables provided by the Social Security Administration to the Urban Institute and used in the 2022 trustees report. They do not include adjustments for income or other factors (e.g., a female worker with high lifetime earnings is assumed to have the same life expectancy as a female worker with low lifetime earnings). Because women on average have longer life expectancies than men, expected lifetime benefits for women are higher than for men with identical earnings histories.

Discount Rates

The model applies a 2 percent real (inflation-adjusted) discount rate for both benefits and taxes. Assuming a higher discount rate would lead to estimates of higher lifetime taxes and lower lifetime benefits, while a lower discount rate would lead to lower lifetime taxes and higher lifetime benefits. We use the Social Security Administration's historical and projected series for the consumer price index for urban wage earners and clerical workers to adjust all numbers for inflation.

Calculating Lifetime Taxes

Included Taxes

Workers pay payroll taxes every year they earn wages. Calculated lifetime taxes include contributions for the retirement portion of Social Security (OASI) and for the hospital insurance (HI) portion of Medicare, also known as Part A. Medicare taxes also include the 0.9 percent "surtax" paid by individual workers earning \$200,000 or more and married couples earning more than \$250,000 combined that took effect in 2013. Those minimum earnings levels are not adjusted for inflation and only a few high earners in the distant future pay the surtax at the earnings levels examined in our study.

By statute, the payroll tax, except for the HI surtax, is split evenly between workers and employers, with each paying 5.3 percent for the OASI tax and 1.45 percent for the HI tax (tax rates varied before 2019).³ These two taxes comprise most of the 7.65 percent OASDHI tax usually referred to as the Social Security tax, but exclude the 0.9 percent disability (DI) portion. However, a standard economic assumption is that in the long run, employers pass the employer portion of this payroll tax onto workers by slowing wage growth or offering fewer fringe benefits. Therefore, we assume that workers pay both the employer and employee shares of the payroll tax.

We do not adjust for the temporary provision in the Tax Cuts and Jobs Act of 2017 for a 20 percent deduction for the income of individuals arising from income from "passthrough" arrangements as partnerships, self-employment, and Subchapter S corporations, because it was designed as a deduction only against income, not Social Security taxes.

Excluded Taxes

We exclude disability insurance payroll taxes because our model includes no calculation of disability insurance benefits. We also exclude the partial income taxation of Social Security benefits, as this would require additional assumptions about people's non-Social Security income after age 65. Also, this income mingles with other income subject to tax. While the Treasury formally makes transfers to the Social Security trust fund on the liberal assumption that this income gets stacked last at the marginal (not average) tax rate, such an assumption for all government programs would lead to a substantial overstatement of the total tax paid by individuals for all government services and benefits received.

For related reasons, such as how to determine who eventually pays for Social Security and non-Social Security debt, we exclude both transfers from the general fund used to finance non-HI Medicare benefits and any shortfalls in trust fund obligations. Our examples only extend to the maximum per-worker Social Security taxable earnings level (\$147,000 in 2022, scheduled to rise to 160,200 in 2023); workers with earnings above that level pay additional HI tax with no corresponding increase in benefits.

Calculating Expected Lifetime Benefits

Social Security Benefits

The model calculates a first-year Social Security benefit based on rules in effect for a cohort at the time of retirement. Because all workers are assumed to retire at age 65, retirees born after 1937 and turning 65 in 2002 receive a phased-in reduction in annual benefits for retiring before the full retirement age. The choice of age 65 as the age of retirement has only a modest effect on the calculation of lifetime benefits for each cohort. That is, the annual penalty reduction for early retirement is designed to be roughly actuarially neutral, so this has only a small effect on lifetime benefits (i.e., the reduction for early retirement roughly offsets the gain from collecting benefits for additional years). In years after age 65, benefits are increased by the cost-of-living adjustment assumed in the Social Security trustees' reports and discounted back to age 65 using the 2 percent real discount rate.

Medicare Benefits

To calculate annual Medicare benefits, the model uses average Medicare expenditures per Medicare enrollee for both HI and supplemental medical insurance (parts A, B, and D). As with Social Security

lifetime benefits, the stream of Medicare benefits is adjusted for probability of dying each year after age 65 and discounted using the 2 percent real rate back to age 65.

In reality, the distribution of both annual and lifetime Medicare expenditures is highly uneven, though less so in the latter case, with most expenditures in any given year focused on a relatively small number of high-cost people. However, the estimates here should be considered as rough estimates of the insurance cost of Medicare, calculated as the average cost of providing those benefits across the beneficiary population. In addition, average expenditures normally increase with age, as those just turning 65 are on average healthier than those at more advanced ages. The lifetime value of health benefits would thus be higher if we had provided an age-adjusted measure of insurance value (Steuerle and Quakenbush 2012).

Medicare Premiums

To account for premiums paid for enrollees in Medicare parts B and D, we subtract average premiums from average Medicare expenditures to calculate benefits net of premiums. Higher premiums for high-income beneficiaries—formally labeled an “income related monthly adjustment amount (IRMAA)” —are not included here since they generally do not apply to people with incomes at the levels shown. A couple who pays IRMAA in 2021 would have received substantial income from continued work, required minimum distributions from their retirement accounts, or other sources that raise modified adjusted gross income on their 2021 income tax returns above \$176,000. Over time, more households become subject to the income-based premium adjustments because the income thresholds were not indexed to inflation until 2020 and because real wages will rise over time, pushing more households above the thresholds (Cubanski and Neuman 2017).

Medicare Cost Scenario

Lifetime Medicare benefits are estimated using an “illustrative alternative scenario” published by CMS actuaries (Shatto and Clemens 2022). Before the 2015 trustees’ reports, the intermediate current law scenario assumed that deep cuts in physician payment rates scheduled in law would take effect, resulting in lower projected Medicare expenditures. In reality, Congress prevented most of these cuts, which could have resulted in fewer service providers accepting Medicare. The CMS actuaries produce a supplemental analysis with the Medicare trustees’ report each year to illustrate cost effects, assuming

that physician payment rates would not be cut and that several other cost-reducing measures, many introduced in the Affordable Care Act, would not be fully implemented. This alternative scenario formed the basis of our updates from 2012 forward.

The Medicare Access and CHIP Reauthorization Act of 2015 introduced a permanent adjustment to the formulas used to calculate physician reimbursement rates so these periodic “doc fixes” would no longer be required. However, the CMS actuaries report that under the new formulas, reimbursement rates for physicians accepting Medicare will continue to fall over time relative to the reimbursement rate of private insurance, and this decline may not be sustainable over the long run. The actuaries’ illustrative scenario, used here, assumes these provisions are scaled back over time, resulting in higher projected Medicare expenditures and therefore higher estimated lifetime benefits.

Notes

- ¹ Social Security average wage index is available on the Social Security Administration website: <https://www.ssa.gov/oact/cola/AWI.html> and <https://www.ssa.gov/OACT/TR/2021/index.html> (table VI.G6).
- ² Social Security contribution and benefit base (taxable maximum) is available on the Social Security Administration website: <https://www.ssa.gov/oact/cola/cbb.html> and https://www.ssa.gov/OACT/TR/2021/V_C_prog.html#1047210.
- ³ Historic OASDI tax rates are available on the Social Security Administration website: <https://www.ssa.gov/oact/progdata/oasdiRates.html>.

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