

REPLACEMENT RATES FOR HYPOTHETICAL RETIRED WORKERS

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Introduction

Adequacy and equity of Social Security benefits are major policy considerations for the program. One measure of adequacy is the percentage of pre-retirement earnings that Social Security benefits replace, or the “replacement rate”. The numerator of this replacement rate is well established as the Social Security benefit. One indicator of equity is the degree of variation in replacement rates across different career-average earnings levels and birth cohorts.

In this note, we use the average of the highest 35 years of earnings, wage-indexed to the year before retirement, as the replacement rate denominator. Because Social Security serves a large population of workers with career earnings patterns that vary greatly, we believe the denominator used in this note is the most appropriate choice for measuring the adequacy of Social Security retirement benefits. For a full analysis of this and other possible concepts of replacement rates, see Actuarial Note Number 155 at:

http://www.ssa.gov/OACT/NOTES/pdf_notes/note155.pdf.

We base all calculations on the intermediate assumptions of the 2020 Trustees Report.

Social Security Benefits

The Social Security benefit formula¹ uses wage-indexed earnings in computing the primary insurance amount (PIA). For a retired worker starting benefits at any age, the PIA formula:

- Indexes annual earnings for those years when the worker is younger than age 60 using changes in the national average wage index (AWI) between each year of younger age and age 60;
- Averages the highest 35 years of these indexed earnings and unindexed earnings at age 60 and over, and converts this average to a monthly

amount, called average indexed monthly earnings (AIME);

- Applies factors of 90 percent, 32 percent, and 15 percent to specified portions of the AIME in a progressive manner, resulting in higher portions of earnings replaced for those with lower AIMEs; and
- Applies cost-of-living increases for each year after age 62.

The retired-worker benefit payable at any age is the PIA adjusted for early or delayed retirement.

The AIME calculation reflects a worker’s career-average earnings level adjusted for changes in the standard of living over the worker’s career, which is consistent with a wage-indexed denominator for the replacement rate measure.

Earnings Patterns for Hypothetical Workers

Our analysis includes five hypothetical workers with different pre-retirement career-average earnings levels. Four of the hypothetical workers in the tables assume the earnings history of workers following scaled-earnings patterns² and reflect very low, low, medium, and high career-average levels of pre-retirement earnings starting at age 21. The fifth hypothetical worker assumes the earnings history of a steady maximum earner starting at age 22. The scaled-earnings patterns are derived from earnings experienced by insured workers in years 1997 through 2016. The earnings levels differ by age, reflecting both the likelihood of having earnings at each age, and the average earnings levels for those who have earnings. The career-average level of earnings for each scaled earner case targets a specific percent of the AWI. For the scaled very low, low, medium, and high earners, the career-average earnings level is about 25 percent, 45 percent, 100 percent, and 160 percent of the AWI, respectively (\$13,910, \$25,039, \$55,642, and \$89,027, respectively, for 2020). The steady maximum earner has earnings at or above the contribution and benefit base (\$137,700 for 2020) for

¹ Prior to the 1977 Amendments to the Social Security Act, the benefit formula differed. Historical benefit levels reflect the benefit formula in effect at the time.

² Actuarial Note Number 2020.3 has more details on scaled-earnings patterns. See www.ssa.gov/OACT/NOTES/ran3/an2020-3.pdf.

each year starting at age 22 through the year prior to retirement.

Results

Tables A through D show benefit and replacement rate information for the five different pre-retirement earnings levels. Each table shows the Social Security benefit in wage-indexed 2020 dollars and as a percent of career average earnings (the replacement rate measure in this note). The denominator of this replacement rate is the average of the highest 35 years of earnings for these hypothetical workers, wage-indexed to the year before retirement.³ This calculation is very similar to the current-law AIME calculation, except that the AIME calculation wage-indexes earnings to age 60 rather than to the year before retirement. The calculations in these tables are wage-indexed to the year before retirement to provide a closer comparison of pre-retirement earnings and post-retirement benefit levels.

Tables A through C show benefit amounts and replacement rates for retirement at 62, at 65, and at normal retirement age (NRA) for the hypothetical workers born in 1954 and selected subsequent years. In comparing across tables, benefit levels and replacement rates are lowest at age 62 and highest at NRA. This occurs because an actuarial reduction applies to the monthly benefit for those retiring before NRA. For example, for an NRA of 67 (applicable to workers born in 1960 or later), individuals retiring at exact age 62 would have a 30 percent reduction in benefits, and those retiring at age 65 would have a $13\frac{1}{3}$ percent reduction. Table D

³ In table D, in order to calculate the career-average earnings for birth cohorts where individuals attain age 21 before 1951, we use national average earnings from 1937 to 1950 in SSA's employee operations manual, available at <http://policy.ssa.gov/poms.nsf/lnx/0201701200>. For years prior to 1937, we use the 1937 national average earnings level.

shows benefit amounts and replacement rates for retirement at 62,⁴ at 65, and at normal retirement age (NRA) for selected hypothetical workers born between 1875 and 1950.

Tables A through C show current-law scheduled benefits and payable benefits in separate panels. Current-law scheduled benefits are those specified in the law. However, when the trust fund reserves become depleted, current law prescribes that expenditures cannot exceed current income. Because the projected date that the combined OASI and DI Trust Fund reserves become depleted is 2035 and projected income will not fully finance scheduled benefits after that date, the tables include "payable benefits", where scheduled benefits are reduced such that current-law income is sufficient to pay benefits for that year.⁵

Tables A through C also include current-law scheduled and payable benefits in CPI-indexed 2020 dollars.⁶ The current-law scheduled benefits column shows a general increase over time in the purchasing power of Social Security benefits, which would be necessary for retirees across generations to maintain a similar standard of living.

⁴ The Social Security Act extended retirement benefits beginning at age 62 to female workers effective November 1956 and to male workers effective August 1961.

⁵ The payable benefits replacement rates in Tables A through C for retired workers retiring in the OASDI reserve depletion year (2035) are computed by summing the monthly benefits for that year before and after trust fund reserve depletion and dividing that sum by the worker's career average earnings.

⁶ A CPI-indexed 2020 dollar adjustment uses the adjusted CPI indexing series in table VI.G6 of the 2020 Trustees Report. See: www.ssa.gov/OACT/TR/2020/lr6g6.html.

Table A—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers^a in their First Year of Benefit Receipt at Age 62
(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^c	Year attain age 62	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2020 dollars ^b	
		Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Current-Law Scheduled Benefits	Payable Benefits
Scaled very low earnings: (Career-average earnings for 2019 equal \$13,396^f)							
1954	2016	\$8,293	60.5	\$8,293	60.5	\$7,894	\$7,894
1955	2017	8,201	61.2	8,201	61.2	7,908	7,908
1956	2018	7,919	59.2	7,919	59.2	7,716	7,716
1957	2019	7,848	58.4	7,848	58.4	7,754	7,754
1958	2020	7,779	58.1	7,779	58.1	7,779	7,779
1960	2022	7,453	56.0	7,453	56.0	7,726	7,726
1965	2027	7,520	56.3	7,520	56.3	8,359	8,359
1970	2032	7,551	56.4	7,551	56.4	8,943	8,943
1975	2037	7,557	56.5	5,916	44.2	9,502	7,439
1980	2042	7,569	56.5	5,886	43.9	10,059	7,823
1985	2047	7,580	56.6	5,921	44.2	10,607	8,285
1990	2052	7,566	56.5	5,906	44.1	11,177	8,724
1995	2057	7,568	56.5	5,851	43.7	11,816	9,135
2000	2062	7,564	56.5	5,752	43.0	12,493	9,501
2005	2067	7,569	56.5	5,651	42.2	13,209	9,862
2010	2072	7,570	56.5	5,548	41.4	13,952	10,225
2015	2077	7,571	56.5	5,486	40.9	14,734	10,676
2020	2082	7,573	56.5	5,502	41.0	15,556	11,301
2025	2087	7,571	56.5	5,552	41.4	16,418	12,041
Scaled low earnings: (Career-average earnings for 2019 equal \$24,112^f)							
1954	2016	10,833	43.9	10,833	43.9	10,312	10,312
1955	2017	10,725	44.5	10,725	44.5	10,342	10,342
1956	2018	10,358	43.0	10,358	43.0	10,092	10,092
1957	2019	10,262	42.4	10,262	42.4	10,139	10,139
1958	2020	10,171	42.2	10,171	42.2	10,171	10,171
1960	2022	9,754	40.7	9,754	40.7	10,111	10,111
1965	2027	9,828	40.9	9,828	40.9	10,924	10,924
1970	2032	9,864	41.0	9,864	41.0	11,684	11,684
1975	2037	9,876	41.0	7,732	32.1	12,417	9,722
1980	2042	9,898	41.0	7,697	31.9	13,155	10,230
1985	2047	9,907	41.1	7,739	32.1	13,863	10,828
1990	2052	9,891	41.0	7,720	32.0	14,610	11,404
1995	2057	9,889	41.0	7,646	31.7	15,440	11,937
2000	2062	9,889	41.0	7,521	31.2	16,332	12,421
2005	2067	9,894	41.0	7,387	30.6	17,266	12,891
2010	2072	9,895	41.0	7,252	30.0	18,239	13,367
2015	2077	9,897	41.0	7,171	29.7	19,260	13,956
2020	2082	9,899	41.1	7,192	29.9	20,333	14,772
2025	2087	9,896	41.0	7,258	30.1	21,460	15,738
Scaled medium earnings: (Career-average earnings for 2019 equal \$53,582^f)							
1954	2016	17,836	32.5	17,836	32.5	16,978	16,978
1955	2017	17,663	32.9	17,663	32.9	17,032	17,032
1956	2018	17,057	31.9	17,057	31.9	16,620	16,620
1957	2019	16,903	31.4	16,903	31.4	16,701	16,701
1958	2020	16,736	31.2	16,736	31.2	16,736	16,736
1960	2022	16,046	30.1	16,046	30.1	16,634	16,634
1965	2027	16,177	30.3	16,177	30.3	17,981	17,981
1970	2032	16,247	30.4	16,247	30.4	19,244	19,244
1975	2037	16,257	30.4	12,728	23.8	20,441	16,004
1980	2042	16,291	30.4	12,669	23.6	21,651	16,838
1985	2047	16,306	30.4	12,737	23.7	22,817	17,822
1990	2052	16,283	30.4	12,710	23.7	24,053	18,774
1995	2057	16,282	30.4	12,588	23.5	25,421	19,654
2000	2062	16,278	30.4	12,380	23.1	26,885	20,446
2005	2067	16,288	30.4	12,161	22.7	28,425	21,223
2010	2072	16,288	30.4	11,937	22.3	30,023	22,003
2015	2077	16,292	30.4	11,805	22.0	31,705	22,973

Table A—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers^a in their First Year of Benefit Receipt at Age 62 (Cont.)

(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^c	Year attain age 62	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2020 dollars ^b	
		Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Current-Law Scheduled Benefits	Payable Benefits
2020	2082	\$16,294	30.4	\$11,838	22.1	\$33,469	\$24,315
2025	2087	16,289	30.4	11,946	22.3	35,324	25,906
Scaled high earnings: (Career-average earnings for 2019 equal \$85,732^f)							
1954	2016	23,684	27.0	23,684	27.0	22,545	22,545
1955	2017	23,446	27.3	23,446	27.3	22,608	22,608
1956	2018	22,652	26.5	22,652	26.5	22,072	22,072
1957	2019	22,450	26.1	22,450	26.1	22,182	22,182
1958	2020	22,230	25.9	22,230	25.9	22,230	22,230
1960	2022	21,310	25.0	21,310	25.0	22,090	22,090
1965	2027	21,481	25.1	21,481	25.1	23,876	23,876
1970	2032	21,569	25.2	21,569	25.2	25,547	25,547
1975	2037	21,584	25.2	16,899	19.7	27,140	21,249
1980	2042	21,627	25.2	16,819	19.6	28,742	22,352
1985	2047	21,649	25.2	16,910	19.7	30,293	23,662
1990	2052	21,621	25.2	16,876	19.7	31,937	24,928
1995	2057	21,616	25.2	16,712	19.5	33,749	26,092
2000	2062	21,611	25.2	16,435	19.2	35,693	27,145
2005	2067	21,622	25.2	16,144	18.8	37,734	28,173
2010	2072	21,624	25.2	15,847	18.5	39,857	29,210
2015	2077	21,629	25.2	15,672	18.3	42,091	30,499
2020	2082	21,631	25.2	15,715	18.3	44,432	32,280
2025	2087	21,626	25.2	15,860	18.5	46,895	34,392
Steady maximum earnings: (Career-average earnings for 2019 equal \$132,048^f)							
1954	2016	28,697	21.4	28,697	21.4	27,317	27,317
1955	2017	28,456	21.7	28,456	21.7	27,439	27,439
1956	2018	27,542	20.9	27,542	20.9	26,837	26,837
1957	2019	27,325	20.6	27,325	20.6	26,999	26,999
1958	2020	27,076	20.5	27,076	20.5	27,076	27,076
1960	2022	25,988	19.7	25,988	19.7	26,940	26,940
1965	2027	26,244	19.8	26,244	19.8	29,170	29,170
1970	2032	26,379	19.8	26,379	19.8	31,244	31,244
1975	2037	26,389	19.9	20,660	15.6	33,181	25,979
1980	2042	26,463	19.9	20,580	15.5	35,170	27,351
1985	2047	26,471	19.9	20,677	15.5	37,041	28,933
1990	2052	26,395	19.9	20,602	15.5	38,988	30,432
1995	2057	26,373	19.9	20,389	15.4	41,176	31,834
2000	2062	26,358	19.9	20,045	15.1	43,533	33,107
2005	2067	26,381	19.9	19,696	14.9	46,038	34,373
2010	2072	26,383	19.9	19,336	14.6	48,630	35,639
2015	2077	26,393	19.9	19,124	14.4	51,363	37,217
2020	2082	26,398	19.9	19,178	14.5	54,222	39,392
2025	2087	26,388	19.9	19,353	14.6	57,223	41,966

^a The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2020.3 at www.ssa.gov/OACT/NOTES/ran3/an2020-3.pdf for more information.

^b CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^c Born on January 2nd of year.

^d Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^e Computed using nominal dollars.

^f Average of highest 35 years of wage-indexed earnings through the year prior to retirement. The value is for retirement in 2020. Thus, the annual earnings used for this average are wage-indexed to 2019.

Table B—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers^a in their First Year of Benefit Receipt at Age 65
(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^c	Year attain age 65	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2020 dollars ^b	
		Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Current-Law Scheduled Benefits	Payable Benefits
Scaled very low earnings: (Career-average earnings for 2019 equal \$13,439^f)							
1954	2019	\$9,851	73.0	\$9,851	73.0	\$9,733	\$9,733
1955	2020	9,859	73.4	9,859	73.4	9,859	9,859
1956	2021	9,464	71.1	9,464	71.1	9,650	9,650
1957	2022	9,267	69.4	9,267	69.4	9,606	9,606
1958	2023	9,211	68.8	9,211	68.8	9,683	9,683
1960	2025	8,894	66.4	8,894	66.4	9,608	9,608
1965	2030	8,981	66.9	8,981	66.9	10,383	10,383
1970	2035	9,046	67.4	7,231	§53.9	11,109	8,880
1975	2040	9,075	67.5	7,062	52.5	11,804	9,186
1980	2045	9,117	67.8	7,109	52.9	12,497	9,745
1985	2050	9,115	67.8	7,123	53.0	13,171	10,292
1990	2055	9,096	67.7	7,066	52.6	13,889	10,789
1995	2060	9,089	67.7	6,960	51.8	14,677	11,240
2000	2065	9,093	67.7	6,841	50.9	15,525	11,680
2005	2070	9,100	67.7	6,715	50.0	16,411	12,110
2010	2075	9,103	67.7	6,617	49.2	17,335	12,601
2015	2080	9,106	67.8	6,599	49.1	18,305	13,266
2020	2085	9,108	67.8	6,653	49.5	19,325	14,116
2025	2090	9,102	67.7	6,696	49.8	20,398	15,007
Scaled low earnings: (Career-average earnings for 2019 equal \$24,191^f)							
1954	2019	12,897	53.1	12,897	53.1	12,743	12,743
1955	2020	12,901	53.3	12,901	53.3	12,901	12,901
1956	2021	12,389	51.7	12,389	51.7	12,632	12,632
1957	2022	12,131	50.4	12,131	50.4	12,575	12,575
1958	2023	12,055	50.0	12,055	50.0	12,673	12,673
1960	2025	11,642	48.3	11,642	48.3	12,577	12,577
1965	2030	11,754	48.7	11,754	48.7	13,589	13,589
1970	2035	11,844	49.0	9,467	§39.2	14,545	11,626
1975	2040	11,876	49.1	9,242	38.2	15,447	12,021
1980	2045	11,938	49.3	9,309	38.4	16,364	12,760
1985	2050	11,933	49.3	9,325	38.5	17,243	13,474
1990	2055	11,904	49.2	9,247	38.2	18,176	14,119
1995	2060	11,896	49.2	9,110	37.7	19,211	14,712
2000	2065	11,902	49.2	8,955	37.0	20,321	15,288
2005	2070	11,913	49.3	8,790	36.4	21,482	15,852
2010	2075	11,915	49.3	8,661	35.8	22,691	16,495
2015	2080	11,919	49.3	8,637	35.7	23,960	17,364
2020	2085	11,922	49.3	8,708	36.0	25,294	18,476
2025	2090	11,913	49.3	8,765	36.3	26,698	19,642
Scaled medium earnings: (Career-average earnings for 2019 equal \$53,757^f)							
1954	2019	21,256	39.4	21,256	39.4	21,003	21,003
1955	2020	21,269	39.6	21,269	39.6	21,269	21,269
1956	2021	20,438	38.4	20,438	38.4	20,839	20,839
1957	2022	20,006	37.4	20,006	37.4	20,738	20,738
1958	2023	19,883	37.1	19,883	37.1	20,901	20,901
1960	2025	19,212	35.8	19,212	35.8	20,755	20,755
1965	2030	19,389	36.1	19,389	36.1	22,417	22,417
1970	2035	19,532	36.4	15,612	§29.1	23,986	19,173
1975	2040	19,588	36.4	15,243	28.3	25,478	19,827
1980	2045	19,684	36.6	15,349	28.5	26,981	21,039
1985	2050	19,680	36.6	15,378	28.6	28,436	22,220
1990	2055	19,630	36.5	15,249	28.4	29,974	23,284
1995	2060	19,618	36.5	15,024	28.0	31,682	24,262
2000	2065	19,624	36.5	14,764	27.5	33,506	25,208
2005	2070	19,643	36.5	14,495	26.9	35,422	26,139
2010	2075	19,646	36.5	14,281	26.5	37,413	27,196

Table B—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers^a in their First Year of Benefit Receipt at Age 65 (Cont.)

(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^c	Year attain age 65	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2020 dollars ^b	
		Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Current-Law Scheduled Benefits	Payable Benefits
2015	2080	\$19,654	36.6	\$14,243	26.5	\$39,510	\$28,633
2020	2085	19,657	36.6	14,359	26.7	41,707	30,465
2025	2090	19,643	36.5	14,451	26.9	44,020	32,386
Scaled high earnings: (Career-average earnings for 2019 equal \$86,011^f)							
1954	2019	28,158	32.6	28,158	32.6	27,822	27,822
1955	2020	28,182	32.8	28,182	32.8	28,182	28,182
1956	2021	27,069	31.8	27,069	31.8	27,600	27,600
1957	2022	26,496	31.0	26,496	31.0	27,466	27,466
1958	2023	26,325	30.7	26,325	30.7	27,674	27,674
1960	2025	25,428	29.7	25,428	29.7	27,470	27,470
1965	2030	25,664	29.9	25,664	29.9	29,671	29,671
1970	2035	25,855	30.1	20,666	§24.1	31,751	25,379
1975	2040	25,931	30.2	20,179	23.5	33,729	26,247
1980	2045	26,058	30.3	20,319	23.6	35,718	27,852
1985	2050	26,051	30.3	20,356	23.7	37,642	29,414
1990	2055	25,987	30.2	20,187	23.5	39,681	30,824
1995	2060	25,968	30.2	19,886	23.1	41,937	32,115
2000	2065	25,979	30.2	19,545	22.7	44,355	33,370
2005	2070	26,004	30.2	19,189	22.3	46,894	34,604
2010	2075	26,007	30.2	18,905	22.0	49,527	36,002
2015	2080	26,017	30.3	18,855	22.0	52,303	37,905
2020	2085	26,024	30.3	19,009	22.1	55,215	40,332
2025	2090	26,003	30.2	19,131	22.2	58,275	42,874
Steady maximum earnings: (Career-average earnings for 2019 equal \$132,048^f)							
1954	2019	34,290	25.9	34,290	25.9	33,881	33,881
1955	2020	34,349	26.0	34,349	26.0	34,349	34,349
1956	2021	33,033	25.2	33,033	25.2	33,682	33,682
1957	2022	32,346	24.6	32,346	24.6	33,531	33,531
1958	2023	32,150	24.3	32,150	24.3	33,797	33,797
1960	2025	31,091	23.5	31,091	23.5	33,587	33,587
1965	2030	31,429	23.6	31,429	23.6	36,337	36,337
1970	2035	31,678	23.8	25,321	§19.0	38,902	31,095
1975	2040	31,757	23.9	24,713	18.6	41,306	32,144
1980	2045	31,933	23.9	24,900	18.6	43,771	34,131
1985	2050	31,899	24.0	24,926	18.8	46,093	36,018
1990	2055	31,777	23.9	24,685	18.6	48,522	37,692
1995	2060	31,727	23.9	24,297	18.3	51,238	39,238
2000	2065	31,727	24.0	23,870	18.1	54,170	40,755
2005	2070	31,763	24.0	23,438	17.7	57,279	42,267
2010	2075	31,772	24.0	23,095	17.4	60,505	43,982
2015	2080	31,785	24.0	23,035	17.4	63,898	46,308
2020	2085	31,794	24.0	23,224	17.5	67,457	49,274
2025	2090	31,766	24.0	23,371	17.7	71,189	52,375

^a The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2020.3 at www.ssa.gov/OACT/NOTES/ran3/an2020-3.pdf for more information.

^b CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^c Born on January 2nd of year.

^d Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^e Computed using nominal dollars.

^f Average of highest 35 years of wage-indexed earnings through the year prior to retirement. The value is for retirement in 2020. Thus, the annual earnings used for this average are wage-indexed to 2019.

[§] Under the 2020 OASDI Trustees Report, the combined OASDI Trust Fund reserves are projected to become depleted in 2035. If that were to occur under the Payable Benefits scenario, full benefits would be paid up to the month of reserve depletion and partial benefits would be paid thereafter. The Payable Benefits replacement rates for workers retiring in 2035 are computed by summing the 2035 monthly benefits before and after reserve depletion and dividing that sum by the worker’s career average earnings.

Table C—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers^a in their First Year of Benefit Receipt at Normal Retirement Age (NRA)
(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^c	Year attain NRA	Age at retirement	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2020 dollars ^b	
			Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Current-Law Scheduled Benefits	Payable Benefits
Scaled very low earnings: (Career-average earnings for 2019 equal \$13,439^f)								
1954	2020	66:0	\$10,375	77.2	\$10,375	77.2	\$10,375	\$10,375
1955	2021	66:2	10,519	78.4	10,519	78.4	10,683	10,683
1956	2022	66:4	10,315	76.2	10,315	76.2	10,608	10,608
1957	2023	66:6	10,282	75.3	10,282	75.3	10,681	10,681
1958	2024	66:8	10,383	75.6	10,383	75.6	10,890	10,890
1960	2027	67:0	9,976	74.5	9,976	74.5	11,089	11,089
1965	2032	67:0	10,117	75.4	10,117	75.4	11,982	11,982
1970	2037	67:0	10,195	75.9	7,982	59.4	12,820	10,037
1975	2042	67:0	10,252	76.3	7,973	59.3	13,625	10,596
1980	2047	67:0	10,311	76.7	8,054	59.9	14,428	11,270
1985	2052	67:0	10,294	76.6	8,035	59.8	15,206	11,869
1990	2057	67:0	10,267	76.4	7,938	59.1	16,030	12,393
1995	2062	67:0	10,257	76.4	7,801	58.1	16,941	12,884
2000	2067	67:0	10,267	76.4	7,665	57.0	17,917	13,377
2005	2072	67:0	10,277	76.5	7,532	56.1	18,943	13,883
2010	2077	67:0	10,281	76.5	7,449	55.4	20,007	14,497
2015	2082	67:0	10,286	76.5	7,473	55.6	21,129	15,350
2020	2087	67:0	10,286	76.5	7,543	56.1	22,304	16,357
2025	2092	67:0	10,276	76.5	7,554	56.2	23,541	17,305
Scaled low earnings: (Career-average earnings for 2019 equal \$24,191^f)								
1954	2020	66:0	13,562	56.1	13,562	56.1	13,562	13,562
1955	2021	66:2	13,759	57.0	13,759	57.0	13,974	13,974
1956	2022	66:4	13,510	55.4	13,510	55.4	13,894	13,894
1957	2023	66:6	13,461	54.8	13,461	54.8	13,983	13,983
1958	2024	66:8	13,601	55.0	13,601	55.0	14,265	14,265
1960	2027	67:0	13,072	54.2	13,072	54.2	14,529	14,529
1965	2032	67:0	13,247	54.8	13,247	54.8	15,690	15,690
1970	2037	67:0	13,350	55.2	10,453	43.2	16,787	13,143
1975	2042	67:0	13,419	55.5	10,436	43.2	17,835	13,870
1980	2047	67:0	13,494	55.8	10,540	43.6	18,882	14,749
1985	2052	67:0	13,475	55.7	10,518	43.5	19,905	15,537
1990	2057	67:0	13,439	55.6	10,390	43.0	20,983	16,222
1995	2062	67:0	13,426	55.5	10,211	42.2	22,175	16,864
2000	2067	67:0	13,439	55.6	10,034	41.5	23,453	17,510
2005	2072	67:0	13,452	55.6	9,859	40.7	24,795	18,171
2010	2077	67:0	13,458	55.6	9,751	40.3	26,190	18,977
2015	2082	67:0	13,464	55.7	9,782	40.5	27,657	20,093
2020	2087	67:0	13,464	55.7	9,874	40.8	29,197	21,413
2025	2092	67:0	13,452	55.6	9,889	40.9	30,816	22,653
Scaled medium earnings: (Career-average earnings for 2019 equal \$53,757^f)								
1954	2020	66:0	22,374	41.6	22,374	41.6	22,374	22,374
1955	2021	66:2	22,695	42.3	22,695	42.3	23,049	23,049
1956	2022	66:4	22,283	41.1	22,283	41.1	22,917	22,917
1957	2023	66:6	22,198	40.6	22,198	40.6	23,060	23,060
1958	2024	66:8	22,435	40.8	22,435	40.8	23,530	23,530
1960	2027	67:0	21,572	40.3	21,572	40.3	23,978	23,978
1965	2032	67:0	21,859	40.7	21,859	40.7	25,891	25,891
1970	2037	67:0	22,025	41.0	17,244	32.1	27,694	21,683
1975	2042	67:0	22,131	41.2	17,211	32.0	29,413	22,874
1980	2047	67:0	22,256	41.4	17,384	32.3	31,142	24,325
1985	2052	67:0	22,222	41.4	17,346	32.3	32,825	25,621
1990	2057	67:0	22,163	41.2	17,135	31.9	34,603	26,752
1995	2062	67:0	22,143	41.2	16,840	31.3	36,572	27,813
2000	2067	67:0	22,164	41.2	16,548	30.8	38,680	28,879
2005	2072	67:0	22,184	41.3	16,258	30.3	40,890	29,967
2010	2077	67:0	22,193	41.3	16,081	29.9	43,189	31,294

Table C—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers^a in their First Year of Benefit Receipt at Normal Retirement Age (NRA) (Cont.)
(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^c	Year attain NRA	Age at retirement	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2020 dollars ^b	
			Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Wage-indexed 2020 dollars ^d	Percent of career-average earnings ^e	Current-Law Scheduled Benefits	Payable Benefits
2015	2082	67:0	\$22,204	41.3	\$16,131	30.0	\$45,608	\$33,134
2020	2087	67:0	22,203	41.3	16,283	30.3	48,147	35,310
2025	2092	67:0	22,182	41.3	16,306	30.4	50,816	37,356
Scaled high earnings: (Career-average earnings for 2019 equal \$86,011^f)								
1954	2020	66:0	29,636	34.5	29,636	34.5	29,636	29,636
1955	2021	66:2	30,060	35.0	30,060	35.0	30,529	30,529
1956	2022	66:4	29,492	34.0	29,492	34.0	30,332	30,332
1957	2023	66:6	29,386	33.6	29,386	33.6	30,527	30,527
1958	2024	66:8	29,695	33.8	29,695	33.8	31,145	31,145
1960	2027	67:0	28,535	33.3	28,535	33.3	31,716	31,716
1965	2032	67:0	28,922	33.7	28,922	33.7	34,256	34,256
1970	2037	67:0	29,147	33.9	22,820	26.5	36,650	28,695
1975	2042	67:0	29,292	34.1	22,780	26.5	38,929	30,274
1980	2047	67:0	29,460	34.2	23,012	26.7	41,223	32,200
1985	2052	67:0	29,412	34.2	22,957	26.7	43,445	33,911
1990	2057	67:0	29,334	34.1	22,679	26.4	45,800	35,409
1995	2062	67:0	29,306	34.1	22,288	25.9	48,403	36,811
2000	2067	67:0	29,334	34.1	21,901	25.5	51,192	38,221
2005	2072	67:0	29,362	34.1	21,519	25.0	54,121	39,664
2010	2077	67:0	29,374	34.2	21,284	24.8	57,164	41,420
2015	2082	67:0	29,389	34.2	21,351	24.8	60,366	43,856
2020	2087	67:0	29,387	34.2	21,552	25.1	63,726	46,736
2025	2092	67:0	29,359	34.1	21,582	25.1	67,257	49,442
Steady maximum earnings: (Career-average earnings for 2019 equal \$132,048^f)								
1954	2020	66:0	36,201	27.4	36,201	27.4	36,201	36,201
1955	2021	66:2	36,753	27.8	36,753	27.8	37,327	37,327
1956	2022	66:4	36,095	27.0	36,095	27.0	37,122	37,122
1957	2023	66:6	35,983	26.7	35,983	26.7	37,381	37,381
1958	2024	66:8	36,371	26.8	36,371	26.8	38,147	38,147
1960	2027	67:0	35,139	26.5	35,139	26.5	39,057	39,057
1965	2032	67:0	35,648	26.8	35,648	26.8	42,223	42,223
1970	2037	67:0	35,938	27.0	28,137	21.1	45,188	35,379
1975	2042	67:0	36,093	27.1	28,069	21.1	47,968	37,304
1980	2047	67:0	36,320	27.2	28,370	21.2	50,822	39,697
1985	2052	67:0	36,231	27.2	28,280	21.2	53,518	41,773
1990	2057	67:0	36,083	27.2	27,896	21.0	56,336	43,555
1995	2062	67:0	36,021	27.2	27,394	20.7	59,492	45,244
2000	2067	67:0	36,037	27.2	26,906	20.3	62,891	46,955
2005	2072	67:0	36,077	27.2	26,440	19.9	66,497	48,734
2010	2077	67:0	36,094	27.2	26,153	19.7	70,240	50,895
2015	2082	67:0	36,114	27.2	26,237	19.8	74,180	53,892
2020	2087	67:0	36,112	27.2	26,484	19.9	78,308	57,430
2025	2092	67:0	36,075	27.2	26,520	20.0	82,643	60,753

^a The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2020.3 at www.ssa.gov/OACT/NOTES/ran3/an2020-3.pdf for more information.

^b CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^c Born on January 2nd of year.

^d Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^e Computed using nominal dollars.

^f Average of highest 35 years of wage-indexed earnings through the year prior to retirement. The value is for retirement in 2020. Thus, the annual earnings used for this average are wage-indexed to 2019.

**Table D—Historical Benefits and Replacement Rates for Hypothetical Retired Workers^a
in their First Year of Benefit Receipt**
(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^b	Year attain age 65	Benefit Amounts for Workers Retiring at 62		Benefit Amounts for Workers Retiring at 65		Benefit Amounts for Workers Retiring at NRA			
		Wage-indexed 2020 dollars ^c	Percent of career-average earnings ^d	Wage-indexed 2020 dollars ^c	Percent of career-average earnings ^d	NRA	Wage-indexed 2020 dollars ^c	Percent of career-average earnings ^d	
Scaled very low earnings:									
1875	1940	e	e	\$5,587	42.0	65:0	\$5,587	42.0	
1880	1945	e	e	3,413	25.7	65:0	3,413	25.7	
1885	1950	e	e	5,074	37.3	65:0	5,074	37.3	
1890	1955	e	e	9,674	72.7	65:0	9,674	72.7	
1895	1960	e	e	9,498	71.0	65:0	9,498	71.0	
1900	1965	\$7,222	54.7	9,053	66.3	65:0	9,053	66.3	
1905	1970	6,585	50.1	9,480	71.5	65:0	9,480	71.5	
1910	1975	7,597	60.2	10,766	83.2	65:0	10,766	83.2	
1915	1980	8,899	68.0	11,632	91.1	65:0	11,632	91.1	
1920	1985	8,466	64.4	10,068	75.5	65:0	10,068	75.5	
1925	1990	8,546	65.6	10,653	80.1	65:0	10,653	80.1	
1930	1995	8,493	64.4	10,725	80.2	65:0	10,725	80.2	
1935	2000	8,340	63.7	9,497	72.0	65:0	9,497	72.0	
1940	2005	8,664	63.1	10,390	77.4	65:6	10,968	80.3	
1945	2010	7,947	59.9	10,382	76.4	66:0	10,814	80.2	
1950	2015	8,161	60.7	9,842	73.2	66:0	10,422	75.8	
Scaled low earnings:									
1875	1940	e	e	7,357	30.8	65:0	7,357	30.8	
1880	1945	e	e	6,276	26.2	65:0	6,276	26.2	
1885	1950	e	e	7,874	32.2	65:0	7,874	32.2	
1890	1955	e	e	12,152	50.8	65:0	12,152	50.8	
1895	1960	e	e	11,331	47.0	65:0	11,331	47.0	
1900	1965	8,583	36.1	10,893	44.3	65:0	10,893	44.3	
1905	1970	8,015	33.9	11,279	47.3	65:0	11,279	47.3	
1910	1975	9,547	42.0	13,925	59.8	65:0	13,925	59.8	
1915	1980	11,413	48.5	15,318	66.7	65:0	15,318	66.7	
1920	1985	12,322	52.1	14,682	61.1	65:0	14,682	61.1	
1925	1990	11,236	47.9	13,971	58.4	65:0	13,971	58.4	
1930	1995	11,150	47.0	14,056	58.4	65:0	14,056	58.4	
1935	2000	10,901	46.2	12,431	52.4	65:0	12,431	52.4	
1940	2005	11,338	45.9	13,598	56.3	65:6	14,359	58.4	
1945	2010	10,380	43.5	13,587	55.5	66:0	14,164	58.3	
1950	2015	10,666	44.1	12,882	53.2	66:0	13,648	55.1	
Scaled medium earnings:									
1875	1940	e	e	12,758	24.0	65:0	12,758	24.0	
1880	1945	e	e	8,808	16.5	65:0	8,808	16.5	
1885	1950	e	e	10,367	19.1	65:0	10,367	19.1	
1890	1955	e	e	15,994	30.1	65:0	15,994	30.1	
1895	1960	e	e	15,830	29.6	65:0	15,830	29.6	
1900	1965	12,940	24.5	16,112	29.5	65:0	16,112	29.5	
1905	1970	12,402	23.6	17,431	32.9	65:0	17,431	32.9	
1910	1975	15,053	29.9	21,448	41.5	65:0	21,448	41.5	
1915	1980	18,565	35.6	25,439	50.0	65:0	25,439	50.0	
1920	1985	18,479	35.2	22,085	41.5	65:0	22,085	41.5	
1925	1990	18,580	35.7	23,124	43.5	65:0	23,124	43.5	
1930	1995	18,297	34.7	23,184	43.3	65:0	23,184	43.3	
1935	2000	17,951	34.3	20,514	38.9	65:0	20,514	38.9	
1940	2005	18,656	34.0	22,427	41.8	65:6	23,669	43.3	
1945	2010	17,102	32.2	22,431	41.3	66:0	23,373	43.3	
1950	2015	17,561	32.7	21,239	39.5	66:0	22,504	40.9	
Scaled high earnings:									
1875	1940	e	e	15,319	18.0	65:0	15,319	18.0	
1880	1945	e	e	10,928	12.8	65:0	10,928	12.8	
1885	1950	e	e	12,620	14.5	65:0	12,620	14.5	
1890	1955	e	e	19,921	24.1	65:0	19,921	24.1	
1895	1960	e	e	19,662	24.9	65:0	19,662	24.9	
1900	1965	14,561	19.8	18,871	24.9	65:0	18,871	24.9	
1905	1970	13,501	19.6	20,219	28.8	65:0	20,219	28.8	

**Table D—Historical Benefits and Replacement Rates for Hypothetical Retired Workers^a
in their First Year of Benefit Receipt (Cont.)**

(based on intermediate assumptions of the 2020 OASDI Trustees Report)

Year of birth ^b	Year attain age 65	Benefit Amounts for Workers Retiring at 62		Benefit Amounts for Workers Retiring at 65		NRA	Benefit Amounts for Workers Retiring at NRA	
		Wage-indexed 2020 dollars ^c	Percent of career-average earnings ^d	Wage-indexed 2020 dollars ^c	Percent of career-average earnings ^d		Wage-indexed 2020 dollars ^c	Percent of career-average earnings ^d
1910	1975	\$16,684	26.0	\$24,994	37.7	65:0	\$24,994	37.7
1915	1980	21,791	33.2	31,215	48.3	65:0	31,215	48.3
1920	1985	22,239	32.7	26,861	38.6	65:0	26,861	38.6
1925	1990	22,946	32.4	28,771	39.4	65:0	28,771	39.4
1930	1995	23,319	30.7	29,578	38.1	65:0	29,578	38.1
1935	2000	23,366	29.3	26,697	33.0	65:0	26,697	33.0
1940	2005	24,668	28.4	29,607	34.8	65:6	31,256	36.1
1945	2010	22,700	26.7	29,689	34.1	66:0	30,945	35.8
1950	2015	23,323	27.1	28,125	32.7	66:0	29,808	33.9
Steady maximum earnings:								
1875	1940	e	e	23,002	16.4	65:0	23,002	16.4
1880	1945	e	e	14,259	10.1	65:0	14,259	10.1
1885	1950	e	e	13,911	9.7	65:0	13,911	9.7
1890	1955	e	e	19,921	15.0	65:0	19,921	15.0
1895	1960	e	e	19,829	16.1	65:0	19,829	16.1
1900	1965	14,561	13.1	18,871	16.5	65:0	18,871	16.5
1905	1970	13,501	13.5	20,489	20.3	65:0	20,489	20.3
1910	1975	16,684	19.4	25,613	28.7	65:0	25,613	28.7
1915	1980	22,559	27.9	33,069	40.6	65:0	33,069	40.6
1920	1985	22,756	29.9	28,531	34.7	65:0	28,531	34.7
1925	1990	24,070	30.0	31,097	35.7	65:0	31,097	35.7
1930	1995	24,922	27.8	32,474	33.5	65:0	32,474	33.5
1935	2000	25,583	25.9	29,885	28.6	65:0	29,885	28.6
1940	2005	27,642	24.5	33,977	29.3	65:6	35,868	30.2
1945	2010	26,308	22.2	35,104	28.0	66:0	36,866	29.3
1950	2015	27,834	21.9	34,038	26.1	66:0	36,234	27.1

^a The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2020.3 at www.ssa.gov/OACT/NOTES/ran3/an2020-3.pdf for more information.

^b Born on January 2nd of year.

^c Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2020 OASDI Trustees Report.

^d Computed using nominal dollars.

^e Benefit at age 62 not available for these years of birth.