

## **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](http://www.ssa.gov/OACT/NOTES/pdf_notes/note155.pdf).

We base all calculations on the intermediate assumptions of the 2021 Trustees Report.

### **Social Security Benefits**

The Social Security benefit formula<sup>1</sup> 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 patterns<sup>2</sup> 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 1998 through 2017. 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 (\$14,766, \$26,579, \$59,065, and \$94,503, respectively, for 2021). The steady maximum earner has earnings at or above the contribution and benefit base (\$142,800 for 2021) for

<sup>1</sup> 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.

<sup>2</sup> Actuarial Note Number 2021.3 has more details on scaled-earnings patterns. See [www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2021-3.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 2021 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.<sup>3</sup> 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

<sup>3</sup> 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 <https://secure.ssa.gov/apps10/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,<sup>4</sup> 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 2034 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.<sup>5</sup>

Tables A through C also include current-law scheduled and payable benefits in CPI-indexed 2021 dollars.<sup>6</sup> 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.

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

<sup>5</sup> The payable benefits replacement rates in Tables A through C for retired workers retiring in the OASDI reserve depletion year (2034) 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.

<sup>6</sup> A CPI-indexed 2021 dollar adjustment uses the adjusted CPI indexing series in table VI.G6 of the 2021 Trustees Report. See: [www.ssa.gov/OACT/TR/2021/lr6g6.html](http://www.ssa.gov/OACT/TR/2021/lr6g6.html).

**Table A—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers<sup>a</sup> in their First Year of Benefit Receipt at Age 62**

*(based on intermediate assumptions of the 2021 OASDI Trustees Report)*

Year of birth <sup>c</sup>	Year attain age 62	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2021 dollars <sup>b</sup>	
		Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Current-Law Scheduled Benefits	Payable Benefits
<b>Scaled very low earnings: (Career-average earnings for 2020 equal \$13,841<sup>f</sup>)</b>							
1955	2017	\$8,704	61.2	\$8,704	61.2	\$8,065	\$8,065
1956	2018	8,406	59.2	8,406	59.2	7,869	7,869
1957	2019	8,278	58.4	8,278	58.4	7,909	7,909
1958	2020	8,260	57.7	8,260	57.7	8,010	8,010
1959	2021	7,977	57.6	7,977	57.6	7,977	7,977
1960	2022	7,770	55.1	7,770	55.1	7,914	7,914
1965	2027	8,013	56.5	8,013	56.5	8,646	8,646
1970	2032	8,011	56.4	8,011	56.4	9,180	9,180
1975	2037	8,016	56.5	6,208	43.8	9,757	7,556
1980	2042	8,029	56.5	6,157	43.3	10,347	7,935
1985	2047	8,038	56.5	6,153	43.2	10,923	8,361
1990	2052	8,032	56.5	6,111	43.0	11,523	8,766
1995	2057	8,030	56.5	6,042	42.5	12,170	9,158
2000	2062	8,028	56.5	5,953	41.9	12,874	9,546
2005	2067	8,028	56.5	5,871	41.3	13,619	9,960
2010	2072	8,030	56.5	5,787	40.7	14,410	10,386
2015	2077	8,031	56.5	5,728	40.3	15,236	10,868
2020	2082	8,034	56.5	5,755	40.5	16,105	11,537
2025	2087	8,032	56.5	5,845	41.1	17,011	12,379
<b>Scaled low earnings: (Career-average earnings for 2020 equal \$24,914<sup>f</sup>)</b>							
1955	2017	11,385	44.5	11,385	44.5	10,549	10,549
1956	2018	10,994	43.0	10,994	43.0	10,293	10,293
1957	2019	10,823	42.4	10,823	42.4	10,340	10,340
1958	2020	10,788	41.9	10,788	41.9	10,461	10,461
1959	2021	10,431	41.9	10,431	41.9	10,431	10,431
1960	2022	10,157	40.0	10,157	40.0	10,345	10,345
1965	2027	10,468	41.0	10,468	41.0	11,295	11,295
1970	2032	10,476	41.0	10,476	41.0	12,005	12,005
1975	2037	10,477	41.0	8,114	31.8	12,752	9,876
1980	2042	10,496	41.0	8,049	31.4	13,526	10,373
1985	2047	10,507	41.1	8,043	31.5	14,279	10,930
1990	2052	10,499	41.1	7,987	31.3	15,062	11,459
1995	2057	10,498	41.1	7,900	30.9	15,912	11,974
2000	2062	10,493	41.0	7,780	30.4	16,825	12,475
2005	2067	10,494	41.0	7,675	30.0	17,804	13,021
2010	2072	10,494	41.0	7,563	29.5	18,833	13,573
2015	2077	10,496	41.0	7,487	29.2	19,913	14,204
2020	2082	10,500	41.1	7,522	29.4	21,048	15,077
2025	2087	10,498	41.1	7,639	29.9	22,231	16,177
<b>Scaled medium earnings: (Career-average earnings for 2020 equal \$55,364<sup>f</sup>)</b>							
1955	2017	18,735	32.9	18,735	32.9	17,358	17,358
1956	2018	18,093	31.9	18,093	31.9	16,939	16,939
1957	2019	17,829	31.4	17,829	31.4	17,034	17,034
1958	2020	17,771	31.0	17,771	31.0	17,233	17,233
1959	2021	17,168	31.0	17,168	31.0	17,168	17,168
1960	2022	16,716	29.6	16,716	29.6	17,026	17,026
1965	2027	17,234	30.4	17,234	30.4	18,596	18,596
1970	2032	17,241	30.4	17,241	30.4	19,758	19,758
1975	2037	17,244	30.4	13,354	23.5	20,989	16,255
1980	2042	17,277	30.4	13,250	23.3	22,266	17,075
1985	2047	17,298	30.4	13,241	23.3	23,508	17,994
1990	2052	17,278	30.4	13,145	23.1	24,788	18,858
1995	2057	17,278	30.4	13,002	22.9	26,189	19,708
2000	2062	17,270	30.4	12,805	22.5	27,694	20,534
2005	2067	17,272	30.4	12,632	22.2	29,302	21,430
2010	2072	17,273	30.4	12,449	21.9	30,998	22,341
2015	2077	17,277	30.4	12,324	21.7	32,779	23,381

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

(based on intermediate assumptions of the 2021 OASDI Trustees Report)

Year of birth <sup>c</sup>	Year attain age 62	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2021 dollars <sup>b</sup>	
		Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Current-Law Scheduled Benefits	Payable Benefits
2020	2082	\$17,282	30.4	\$12,380	21.8	\$34,643	\$24,816
2025	2087	17,279	30.4	12,574	22.1	36,593	26,628
<b>Scaled high earnings: (Career-average earnings for 2020 equal \$88,582<sup>f</sup>)</b>							
1955	2017	24,887	27.3	24,887	27.3	23,058	23,058
1956	2018	24,033	26.5	24,033	26.5	22,500	22,500
1957	2019	23,666	26.1	23,666	26.1	22,611	22,611
1958	2020	23,606	25.8	23,606	25.8	22,891	22,891
1959	2021	22,799	25.7	22,799	25.7	22,799	22,799
1960	2022	22,193	24.6	22,193	24.6	22,604	22,604
1965	2027	22,889	25.2	22,889	25.2	24,697	24,697
1970	2032	22,899	25.2	22,899	25.2	26,243	26,243
1975	2037	22,901	25.2	17,735	19.5	27,874	21,587
1980	2042	22,942	25.2	17,594	19.3	29,566	22,674
1985	2047	22,967	25.2	17,580	19.3	31,212	23,891
1990	2052	22,943	25.2	17,454	19.2	32,915	25,041
1995	2057	22,943	25.2	17,265	19.0	34,775	26,169
2000	2062	22,930	25.2	17,002	18.7	36,770	27,264
2005	2067	22,934	25.2	16,772	18.4	38,907	28,454
2010	2072	22,935	25.2	16,530	18.2	41,160	29,665
2015	2077	22,942	25.2	16,364	18.0	43,526	31,047
2020	2082	22,947	25.2	16,438	18.1	45,999	32,951
2025	2087	22,943	25.2	16,695	18.3	48,587	35,356
<b>Steady maximum earnings: (Career-average earnings for 2020 equal \$136,710<sup>f</sup>)</b>							
1955	2017	30,206	21.7	30,206	21.7	27,986	27,986
1956	2018	29,237	20.9	29,237	20.9	27,372	27,372
1957	2019	28,822	20.6	28,822	20.6	27,537	27,537
1958	2020	28,751	20.4	28,751	20.4	27,880	27,880
1959	2021	27,803	20.3	27,803	20.3	27,803	27,803
1960	2022	27,070	19.4	27,070	19.4	27,571	27,571
1965	2027	27,963	19.9	27,963	19.9	30,172	30,172
1970	2032	28,016	19.8	28,016	19.8	32,106	32,106
1975	2037	28,011	19.9	21,692	15.4	34,094	26,403
1980	2042	28,091	19.8	21,542	15.2	36,201	27,762
1985	2047	28,097	19.9	21,506	15.2	38,182	29,226
1990	2052	28,025	19.9	21,321	15.1	40,207	30,589
1995	2057	28,003	19.9	21,073	15.0	42,444	31,940
2000	2062	27,978	19.9	20,745	14.8	44,864	33,265
2005	2067	27,983	19.9	20,465	14.6	47,473	34,719
2010	2072	27,987	19.9	20,171	14.3	50,225	36,198
2015	2077	27,996	19.9	19,970	14.2	53,116	37,887
2020	2082	28,004	19.9	20,060	14.3	56,136	40,212
2025	2087	27,998	19.9	20,374	14.5	59,294	43,147

<sup>a</sup> The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2021.3 at [www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf) for more information.

<sup>b</sup> CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>c</sup> Born on January 2nd of year.

<sup>d</sup> Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>e</sup> Computed using nominal dollars.

<sup>f</sup> Average of highest 35 years of wage-indexed earnings through the year prior to retirement. The value is for retirement in 2021. Thus, the annual earnings used for this average are wage-indexed to 2020.

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**Table B—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers<sup>a</sup> in their First Year of Benefit Receipt at Age 65**

*(based on intermediate assumptions of the 2021 OASDI Trustees Report)*

Year of birth <sup>c</sup>	Year attain age 65	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2021 dollars <sup>b</sup>	
		Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Current-Law Scheduled Benefits	Payable Benefits
<b>Scaled very low earnings: (Career-average earnings for 2020 equal \$13,894<sup>f</sup>)</b>							
1955	2020	\$10,469	72.8	\$10,469	72.8	\$10,152	\$10,152
1956	2021	9,794	70.5	9,794	70.5	9,794	9,794
1957	2022	9,627	68.0	9,627	68.0	9,805	9,805
1958	2023	9,587	67.3	9,587	67.3	9,884	9,884
1959	2024	9,599	67.2	9,599	67.2	9,990	9,990
1960	2025	9,346	65.6	9,346	65.6	9,842	9,842
1965	2030	9,603	67.4	9,603	67.4	10,743	10,743
1970	2035	9,605	67.4	7,491	52.6	11,414	8,902
1975	2040	9,621	67.5	7,403	51.9	12,130	9,334
1980	2045	9,666	67.7	7,410	51.9	12,863	9,860
1985	2050	9,673	67.8	7,380	51.7	13,576	10,357
1990	2055	9,657	67.7	7,304	51.2	14,318	10,830
1995	2060	9,651	67.7	7,198	50.5	15,130	11,284
2000	2065	9,646	67.7	7,094	49.8	16,000	11,767
2005	2070	9,648	67.7	6,994	49.1	16,931	12,273
2010	2075	9,651	67.7	6,903	48.4	17,907	12,809
2015	2080	9,657	67.7	6,895	48.3	18,937	13,521
2020	2085	9,662	67.7	6,981	48.9	20,014	14,459
2025	2090	9,657	67.7	7,104	49.8	21,142	15,551
<b>Scaled low earnings: (Career-average earnings for 2020 equal \$25,010<sup>f</sup>)</b>							
1955	2020	13,699	52.9	13,699	52.9	13,284	13,284
1956	2021	12,825	51.3	12,825	51.3	12,825	12,825
1957	2022	12,601	49.4	12,601	49.4	12,834	12,834
1958	2023	12,547	48.9	12,547	48.9	12,935	12,935
1959	2024	12,579	48.9	12,579	48.9	13,091	13,091
1960	2025	12,235	47.7	12,235	47.7	12,883	12,883
1965	2030	12,572	49.0	12,572	49.0	14,065	14,065
1970	2035	12,574	49.0	9,807	38.2	14,942	11,654
1975	2040	12,593	49.1	9,690	37.8	15,876	12,216
1980	2045	12,652	49.3	9,699	37.8	16,837	12,907
1985	2050	12,662	49.3	9,660	37.6	17,771	13,557
1990	2055	12,645	49.3	9,564	37.3	18,747	14,180
1995	2060	12,635	49.2	9,423	36.7	19,807	14,772
2000	2065	12,625	49.2	9,285	36.2	20,943	15,402
2005	2070	12,628	49.2	9,153	35.7	22,159	16,062
2010	2075	12,632	49.2	9,036	35.2	23,440	16,767
2015	2080	12,641	49.2	9,025	35.1	24,789	17,699
2020	2085	12,647	49.3	9,137	35.6	26,197	18,926
2025	2090	12,641	49.2	9,298	36.2	27,673	20,355
<b>Scaled medium earnings: (Career-average earnings for 2020 equal \$55,578<sup>f</sup>)</b>							
1955	2020	22,597	39.3	22,597	39.3	21,913	21,913
1956	2021	21,162	38.1	21,162	38.1	21,162	21,162
1957	2022	20,787	36.7	20,787	36.7	21,172	21,172
1958	2023	20,700	36.3	20,700	36.3	21,341	21,341
1959	2024	20,747	36.3	20,747	36.3	21,591	21,591
1960	2025	20,199	35.4	20,199	35.4	21,270	21,270
1965	2030	20,732	36.4	20,732	36.4	23,195	23,195
1970	2035	20,740	36.4	16,177	28.4	24,647	19,224
1975	2040	20,768	36.4	15,981	28.0	26,182	20,147
1980	2045	20,865	36.6	15,995	28.1	27,767	21,286
1985	2050	20,884	36.6	15,932	27.9	29,310	22,360
1990	2055	20,850	36.5	15,770	27.6	30,912	23,381
1995	2060	20,832	36.5	15,537	27.2	32,658	24,356
2000	2065	20,818	36.5	15,310	26.8	34,533	25,396
2005	2070	20,825	36.5	15,095	26.5	36,543	26,489
2010	2075	20,833	36.5	14,902	26.1	38,657	27,651

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

(based on intermediate assumptions of the 2021 OASDI Trustees Report)

Year of birth <sup>c</sup>	Year attain age 65	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2021 dollars <sup>b</sup>	
		Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Current-Law Scheduled Benefits	Payable Benefits
2015	2080	\$20,845	36.5	\$14,883	26.1	\$40,878	\$29,187
2020	2085	20,855	36.6	15,067	26.4	43,199	31,209
2025	2090	20,844	36.5	15,332	26.8	45,632	33,565
<b>Scaled high earnings: (Career-average earnings for 2020 equal \$88,924<sup>f</sup>)</b>							
1955	2020	29,926	32.5	29,926	32.5	29,020	29,020
1956	2021	28,009	31.5	28,009	31.5	28,009	28,009
1957	2022	27,519	30.4	27,519	30.4	28,029	28,029
1958	2023	27,396	30.0	27,396	30.0	28,244	28,244
1959	2024	27,450	30.0	27,450	30.0	28,568	28,568
1960	2025	26,712	29.3	26,712	29.3	28,128	28,128
1965	2030	27,444	30.1	27,444	30.1	30,704	30,704
1970	2035	27,455	30.1	21,414	23.5	32,627	25,448
1975	2040	27,489	30.1	21,153	23.2	34,657	26,668
1980	2045	27,621	30.2	21,174	23.2	36,757	28,177
1985	2050	27,646	30.3	21,090	23.1	38,800	29,600
1990	2055	27,599	30.2	20,875	22.8	40,920	30,951
1995	2060	27,576	30.2	20,566	22.5	43,230	32,241
2000	2065	27,559	30.2	20,267	22.2	45,714	33,619
2005	2070	27,564	30.2	19,980	21.9	48,370	35,062
2010	2075	27,576	30.2	19,725	21.6	51,169	36,601
2015	2080	27,591	30.2	19,700	21.6	54,106	38,632
2020	2085	27,606	30.2	19,944	21.8	57,183	41,312
2025	2090	27,591	30.2	20,295	22.2	60,402	44,429
<b>Steady maximum earnings: (Career-average earnings for 2020 equal \$136,710<sup>f</sup>)</b>							
1955	2020	36,475	25.8	36,475	25.8	35,371	35,371
1956	2021	34,180	25.0	34,180	25.0	34,180	34,180
1957	2022	33,595	24.1	33,595	24.1	34,218	34,218
1958	2023	33,446	23.8	33,446	23.8	34,482	34,482
1959	2024	33,530	23.8	33,530	23.8	34,895	34,895
1960	2025	32,652	23.2	32,652	23.2	34,384	34,384
1965	2030	33,599	23.8	33,599	23.8	37,590	37,590
1970	2035	33,641	23.8	26,239	18.6	39,978	31,181
1975	2040	33,665	23.8	25,905	18.3	42,442	32,659
1980	2045	33,854	23.9	25,952	18.3	45,052	34,536
1985	2050	33,848	23.9	25,822	18.2	47,504	36,240
1990	2055	33,744	23.9	25,523	18.1	50,030	37,841
1995	2060	33,686	24.0	25,123	17.9	52,809	39,385
2000	2065	33,650	23.9	24,747	17.6	55,819	41,050
2005	2070	33,658	23.9	24,398	17.3	59,064	42,813
2010	2075	33,676	24.0	24,088	17.2	62,488	44,698
2015	2080	33,697	24.0	24,060	17.1	66,082	47,182
2020	2085	33,716	24.0	24,358	17.3	69,838	50,455
2025	2090	33,695	24.0	24,785	17.7	73,766	54,260

<sup>a</sup> The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2021.3 at [www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf) for more information.

<sup>b</sup> CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>c</sup> Born on January 2nd of year.

<sup>d</sup> Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>e</sup> Computed using nominal dollars.

<sup>f</sup> Average of highest 35 years of wage-indexed earnings through the year prior to retirement. The value is for retirement in 2021. Thus, the annual earnings used for this average are wage-indexed to 2020.

**Table C—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers<sup>a</sup> in their First Year of Benefit Receipt at Normal Retirement Age (NRA)**

*(based on intermediate assumptions of the 2021 OASDI Trustees Report)*

Year of birth <sup>c</sup>	Year attain NRA	Age at retirement	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2021 dollars <sup>b</sup>	
			Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Current-Law Scheduled Benefits	Payable Benefits
<b>Scaled very low earnings: (Career-average earnings for 2020 equal \$13,894<sup>f</sup>)</b>								
1955	2021	66:2	\$10,896	77.6	\$10,896	77.6	\$10,896	\$10,896
1956	2022	66:4	10,714	74.6	10,714	74.6	10,912	10,912
1957	2023	66:6	10,706	73.8	10,706	73.8	11,037	11,037
1958	2024	66:8	10,860	74.4	10,860	74.4	11,302	11,302
1959	2025	66:10	11,038	75.2	11,038	75.2	11,623	11,623
1960	2027	67:0	10,527	73.9	10,527	73.9	11,358	11,358
1965	2032	67:0	10,823	76.0	10,823	76.0	12,403	12,403
1970	2037	67:0	10,828	76.0	8,386	58.9	13,180	10,207
1975	2042	67:0	10,864	76.2	8,332	58.4	14,001	10,737
1980	2047	67:0	10,927	76.6	8,364	58.6	14,850	11,367
1985	2052	67:0	10,925	76.6	8,311	58.3	15,674	11,925
1990	2057	67:0	10,904	76.5	8,206	57.6	16,527	12,437
1995	2062	67:0	10,892	76.4	8,076	56.6	17,467	12,951
2000	2067	67:0	10,887	76.4	7,962	55.9	18,470	13,508
2005	2072	67:0	10,888	76.4	7,847	55.1	19,540	14,083
2010	2077	67:0	10,896	76.4	7,772	54.5	20,672	14,745
2015	2082	67:0	10,904	76.5	7,811	54.8	21,858	15,658
2020	2087	67:0	10,909	76.5	7,938	55.7	23,103	16,812
2025	2092	67:0	10,903	76.5	8,056	56.5	24,404	18,032
<b>Scaled low earnings: (Career-average earnings for 2020 equal \$25,010<sup>f</sup>)</b>								
1955	2021	66:2	14,259	56.4	14,259	56.4	14,259	14,259
1956	2022	66:4	14,033	54.3	14,033	54.3	14,293	14,293
1957	2023	66:6	14,015	53.7	14,015	53.7	14,449	14,449
1958	2024	66:8	14,221	54.1	14,221	54.1	14,800	14,800
1959	2025	66:10	14,452	54.7	14,452	54.7	15,218	15,218
1960	2027	67:0	13,802	53.8	13,802	53.8	14,893	14,893
1965	2032	67:0	14,170	55.3	14,170	55.3	16,238	16,238
1970	2037	67:0	14,174	55.3	10,977	42.8	17,253	13,361
1975	2042	67:0	14,221	55.4	10,906	42.5	18,327	14,055
1980	2047	67:0	14,304	55.7	10,949	42.6	19,438	14,879
1985	2052	67:0	14,300	55.7	10,879	42.4	20,516	15,608
1990	2057	67:0	14,278	55.6	10,745	41.8	21,642	16,286
1995	2062	67:0	14,258	55.6	10,572	41.2	22,864	16,953
2000	2067	67:0	14,251	55.5	10,422	40.6	24,177	17,682
2005	2072	67:0	14,256	55.5	10,275	40.0	25,584	18,439
2010	2077	67:0	14,264	55.6	10,175	39.7	27,063	19,304
2015	2082	67:0	14,275	55.6	10,226	39.8	28,616	20,499
2020	2087	67:0	14,281	55.6	10,392	40.5	30,244	22,008
2025	2092	67:0	14,272	55.6	10,545	41.1	31,945	23,604
<b>Scaled medium earnings: (Career-average earnings for 2020 equal \$55,578<sup>f</sup>)</b>								
1955	2021	66:2	23,508	41.9	23,508	41.9	23,508	23,508
1956	2022	66:4	23,150	40.3	23,150	40.3	23,579	23,579
1957	2023	66:6	23,125	39.9	23,125	39.9	23,841	23,841
1958	2024	66:8	23,467	40.2	23,467	40.2	24,423	24,423
1959	2025	66:10	23,855	40.6	23,855	40.6	25,119	25,119
1960	2027	67:0	22,783	40.0	22,783	40.0	24,583	24,583
1965	2032	67:0	23,376	41.0	23,376	41.0	26,789	26,789
1970	2037	67:0	23,387	41.0	18,112	31.8	28,467	22,046
1975	2042	67:0	23,458	41.1	17,990	31.5	30,231	23,184
1980	2047	67:0	23,593	41.3	18,059	31.6	32,062	24,542
1985	2052	67:0	23,586	41.3	17,944	31.4	33,838	25,743
1990	2057	67:0	23,551	41.3	17,723	31.1	35,696	26,862
1995	2062	67:0	23,517	41.2	17,437	30.5	37,712	27,962
2000	2067	67:0	23,505	41.2	17,190	30.1	39,876	29,163
2005	2072	67:0	23,511	41.2	16,945	29.7	42,194	30,410
2010	2077	67:0	23,526	41.2	16,781	29.4	44,635	31,838

**Table C—Scheduled and Payable Benefits and Replacement Rates for Hypothetical Retired Workers<sup>a</sup> in their First Year of Benefit Receipt at Normal Retirement Age (NRA) (Cont.)**  
(based on intermediate assumptions of the 2021 OASDI Trustees Report)

Year of birth <sup>c</sup>	Year attain NRA	Age at retirement	Current-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2021 dollars <sup>b</sup>	
			Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Wage-indexed 2021 dollars <sup>d</sup>	Percent of career-average earnings <sup>e</sup>	Current-Law Scheduled Benefits	Payable Benefits
2015	2082	67:0	\$23,545	41.3	\$16,866	29.6	\$47,197	\$33,809
2020	2087	67:0	23,553	41.3	17,139	30.1	49,879	36,296
2025	2092	67:0	23,538	41.3	17,392	30.5	52,688	38,931
<b>Scaled high earnings: (Career-average earnings for 2020 equal \$88,924<sup>f</sup>)</b>								
1955	2021	66:2	31,140	34.7	31,140	34.7	31,140	31,140
1956	2022	66:4	30,636	33.3	30,636	33.3	31,204	31,204
1957	2023	66:6	30,593	33.0	30,593	33.0	31,540	31,540
1958	2024	66:8	31,046	33.2	31,046	33.2	32,310	32,310
1959	2025	66:10	31,550	33.6	31,550	33.6	33,223	33,223
1960	2027	67:0	30,109	33.0	30,109	33.0	32,488	32,488
1965	2032	67:0	30,934	33.9	30,934	33.9	35,450	35,450
1970	2037	67:0	30,944	33.9	23,964	26.3	37,664	29,168
1975	2042	67:0	31,039	34.0	23,803	26.1	40,001	30,676
1980	2047	67:0	31,220	34.2	23,897	26.2	42,427	32,475
1985	2052	67:0	31,216	34.2	23,748	26.0	44,784	34,071
1990	2057	67:0	31,165	34.1	23,452	25.7	47,236	35,546
1995	2062	67:0	31,120	34.1	23,075	25.3	49,903	37,002
2000	2067	67:0	31,104	34.1	22,748	24.9	52,768	38,592
2005	2072	67:0	31,113	34.1	22,424	24.6	55,836	40,242
2010	2077	67:0	31,132	34.1	22,206	24.3	59,065	42,131
2015	2082	67:0	31,157	34.1	22,318	24.4	62,455	44,739
2020	2087	67:0	31,167	34.1	22,680	24.8	66,005	48,030
2025	2092	67:0	31,148	34.1	23,015	25.2	69,721	51,517
<b>Steady maximum earnings: (Career-average earnings for 2020 equal \$136,710<sup>f</sup>)</b>								
1955	2021	66:2	38,067	27.6	38,067	27.6	38,067	38,067
1956	2022	66:4	37,487	26.5	37,487	26.5	38,182	38,182
1957	2023	66:6	37,439	26.2	37,439	26.2	38,598	38,598
1958	2024	66:8	38,008	26.4	38,008	26.4	39,555	39,555
1959	2025	66:10	38,657	26.7	38,657	26.7	40,707	40,707
1960	2027	67:0	37,078	26.3	37,078	26.3	40,007	40,007
1965	2032	67:0	38,104	27.0	38,104	27.0	43,668	43,668
1970	2037	67:0	38,150	27.0	29,544	20.9	46,435	35,961
1975	2042	67:0	38,252	27.0	29,334	20.7	49,296	37,804
1980	2047	67:0	38,485	27.2	29,458	20.8	52,299	40,032
1985	2052	67:0	38,440	27.2	29,245	20.7	55,149	41,956
1990	2057	67:0	38,319	27.2	28,836	20.5	58,080	43,706
1995	2062	67:0	38,235	27.2	28,350	20.2	61,312	45,461
2000	2067	67:0	38,201	27.2	27,938	19.9	64,808	47,397
2005	2072	67:0	38,211	27.2	27,539	19.6	68,574	49,423
2010	2077	67:0	38,239	27.2	27,275	19.4	72,548	51,748
2015	2082	67:0	38,270	27.2	27,414	19.5	76,715	54,954
2020	2087	67:0	38,285	27.2	27,859	19.8	81,078	58,999
2025	2092	67:0	38,259	27.2	28,269	20.1	85,638	63,278

<sup>a</sup> The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2021.3 at [www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf) for more information.

<sup>b</sup> CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>c</sup> Born on January 2nd of year.

<sup>d</sup> Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>e</sup> Computed using nominal dollars.

<sup>f</sup> Average of highest 35 years of wage-indexed earnings through the year prior to retirement. The value is for retirement in 2021. Thus, the annual earnings used for this average are wage-indexed to 2020.



**Table D—Historical Benefits and Replacement Rates for Hypothetical Retired Workers<sup>a</sup>  
in their First Year of Benefit Receipt**  
*(based on intermediate assumptions of the 2021 OASDI Trustees Report)*

Year of birth <sup>b</sup>	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 2021 dollars <sup>c</sup>	Percent of career-average earnings <sup>d</sup>	Wage-indexed 2021 dollars <sup>c</sup>	Percent of career-average earnings <sup>d</sup>		Wage-indexed 2021 dollars <sup>c</sup>	Percent of career-average earnings <sup>d</sup>
<b>Scaled very low earnings:</b>								
1875	1940	e	e	\$5,931	42.0	65:0	\$5,931	42.0
1880	1945	e	e	3,623	25.7	65:0	3,623	25.7
1885	1950	e	e	5,386	37.3	65:0	5,386	37.3
1890	1955	e	e	10,269	72.7	65:0	10,269	72.7
1895	1960	e	e	10,082	71.0	65:0	10,082	71.0
1900	1965	\$7,666	54.7	9,610	66.3	65:0	9,610	66.3
1905	1970	6,990	50.1	10,063	71.5	65:0	10,063	71.5
1910	1975	8,064	60.2	11,428	83.2	65:0	11,428	83.2
1915	1980	9,446	68.1	12,348	91.1	65:0	12,348	91.1
1920	1985	8,987	64.5	10,688	75.5	65:0	10,688	75.5
1925	1990	9,071	65.6	11,308	80.1	65:0	11,308	80.1
1930	1995	9,013	64.4	11,387	80.2	65:0	11,387	80.2
1935	2000	8,853	63.7	10,081	72.0	65:0	10,081	72.0
1940	2005	9,198	63.2	11,029	77.4	65:6	11,643	80.3
1945	2010	8,418	59.8	11,021	76.4	66:0	11,496	80.3
1950	2015	8,663	60.7	10,448	73.2	66:0	11,063	75.8
<b>Scaled low earnings:</b>								
1875	1940	e	e	8,057	31.7	65:0	8,057	31.7
1880	1945	e	e	6,662	26.2	65:0	6,662	26.2
1885	1950	e	e	8,405	32.4	65:0	8,405	32.4
1890	1955	e	e	12,953	51.0	65:0	12,953	51.0
1895	1960	e	e	12,028	47.0	65:0	12,028	47.0
1900	1965	9,249	36.7	11,563	44.3	65:0	11,563	44.3
1905	1970	8,508	33.9	11,973	47.3	65:0	11,973	47.3
1910	1975	10,134	42.0	14,782	59.8	65:0	14,782	59.8
1915	1980	12,236	49.0	16,459	67.5	65:0	16,459	67.5
1920	1985	13,080	52.1	15,586	61.1	65:0	15,586	61.1
1925	1990	11,927	47.9	14,831	58.4	65:0	14,831	58.4
1930	1995	11,836	47.0	14,923	58.4	65:0	14,923	58.4
1935	2000	11,571	46.3	13,198	52.4	65:0	13,198	52.4
1940	2005	12,015	45.8	14,435	56.3	65:6	15,242	58.4
1945	2010	11,019	43.5	14,440	55.6	66:0	15,036	58.3
1950	2015	11,322	44.1	13,675	53.2	66:0	14,487	55.1
<b>Scaled medium earnings:</b>								
1875	1940	e	e	13,642	24.1	65:0	13,642	24.1
1880	1945	e	e	9,380	16.6	65:0	9,380	16.6
1885	1950	e	e	11,028	19.1	65:0	11,028	19.1
1890	1955	e	e	17,068	30.2	65:0	17,068	30.2
1895	1960	e	e	16,804	29.6	65:0	16,804	29.6
1900	1965	13,736	24.5	17,103	29.5	65:0	17,103	29.5
1905	1970	13,165	23.6	18,504	32.9	65:0	18,504	32.9
1910	1975	15,980	29.9	22,768	41.5	65:0	22,768	41.5
1915	1980	19,865	35.9	27,004	50.0	65:0	27,004	50.0
1920	1985	19,616	35.3	23,443	41.5	65:0	23,443	41.5
1925	1990	19,723	35.7	24,547	43.5	65:0	24,547	43.5
1930	1995	19,394	34.7	24,613	43.3	65:0	24,613	43.3
1935	2000	19,055	34.3	21,776	38.9	65:0	21,776	38.9
1940	2005	19,804	34.0	23,808	41.8	65:6	25,133	43.3
1945	2010	18,138	32.2	23,811	41.3	66:0	24,811	43.3
1950	2015	18,641	32.7	22,546	39.5	66:0	23,888	40.9
<b>Scaled high earnings:</b>								
1875	1940	e	e	16,311	18.1	65:0	16,311	18.1
1880	1945	e	e	11,629	12.8	65:0	11,629	12.8
1885	1950	e	e	13,443	14.6	65:0	13,443	14.6
1890	1955	e	e	21,147	24.2	65:0	21,147	24.2
1895	1960	e	e	20,872	25.0	65:0	20,872	25.0
1900	1965	15,456	19.8	20,032	24.9	65:0	20,032	24.9
1905	1970	14,332	19.6	21,463	28.8	65:0	21,463	28.8

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

*(based on intermediate assumptions of the 2021 OASDI Trustees Report)*

Year of birth <sup>b</sup>	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 2021 dollars <sup>c</sup>	Percent of career-average earnings <sup>d</sup>	Wage-indexed 2021 dollars <sup>c</sup>	Percent of career-average earnings <sup>d</sup>		Wage-indexed 2021 dollars <sup>c</sup>	Percent of career-average earnings <sup>d</sup>
1910	1975	\$17,710	26.0	\$26,532	37.7	65:0	\$26,532	37.7
1915	1980	23,235	33.4	33,135	48.3	65:0	33,135	48.3
1920	1985	23,620	32.7	28,513	38.5	65:0	28,513	38.5
1925	1990	24,358	32.4	30,572	39.4	65:0	30,572	39.4
1930	1995	24,753	30.7	31,424	38.1	65:0	31,424	38.1
1935	2000	24,827	29.3	28,341	33.0	65:0	28,341	33.0
1940	2005	26,184	28.4	31,429	34.8	65:6	33,187	36.1
1945	2010	24,095	26.8	31,532	34.2	66:0	32,850	35.8
1950	2015	24,758	27.1	29,855	32.7	66:0	31,643	33.9
<b>Steady maximum earnings:</b>								
1875	1940	e	e	24,417	16.4	65:0	24,417	16.4
1880	1945	e	e	15,136	10.1	65:0	15,136	10.1
1885	1950	e	e	14,766	9.7	65:0	14,766	9.7
1890	1955	e	e	21,147	15.0	65:0	21,147	15.0
1895	1960	e	e	21,049	16.1	65:0	21,049	16.1
1900	1965	15,456	13.1	20,032	16.5	65:0	20,032	16.5
1905	1970	14,332	13.5	21,750	20.3	65:0	21,750	20.3
1910	1975	17,710	19.4	27,189	28.7	65:0	27,189	28.7
1915	1980	23,947	27.9	35,103	40.6	65:0	35,103	40.6
1920	1985	24,156	29.9	30,286	34.7	65:0	30,286	34.7
1925	1990	25,550	30.0	33,010	35.7	65:0	33,010	35.7
1930	1995	26,456	27.8	34,472	33.5	65:0	34,472	33.5
1935	2000	27,157	25.9	31,723	28.6	65:0	31,723	28.6
1940	2005	29,342	24.5	36,067	29.3	65:6	38,075	30.2
1945	2010	27,926	22.2	37,264	28.0	66:0	39,134	29.3
1950	2015	29,546	21.9	36,132	26.1	66:0	38,463	27.1

<sup>a</sup> The table uses four hypothetical “scaled” earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2021.3 at [www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2021-3.pdf) for more information.

<sup>b</sup> Born on January 2nd of year.

<sup>c</sup> Wage-indexed dollar adjustment uses the national average wage indexing series shown in table VI.G6 of the 2021 OASDI Trustees Report.

<sup>d</sup> Computed using nominal dollars.

<sup>e</sup> Benefit at age 62 not available for these years of birth.

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