REPLACEMENT RATES FOR HYPOTHETICAL RETIRED WORKERS

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Introduction

Adequacy of Social Security benefits is a major policy consideration for the program. One measure of adequacy is the percentage of pre-retirement income that Social Security benefits replace, or the "replacement rate". The numerator of this replacement rate is well established as the Social Security benefit.

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 2017 Trustees Report.

Social Security Benefits

The Social Security benefit formula[1] 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 the standard of living over a person's work 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[2] 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 1994 through 2013. 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 case targets a percent of the AWI. For the scaled medium earner, the career-average earnings level is about equal to the AWI (estimated to be $51,314 for 2017). For the scaled very low, low, and high earners, the career-average earnings level is about 25 percent, 45 percent, and 160 percent of the AWI, respectively ($12,829, $23,091, and $82,103, respectively, for 2017). The steady maximum earner has earnings at or above the contribution and benefit base ($127,200 for 2017) for each year starting at age 22 through the year prior to retirement.

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[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 2017.3 has more details on scaled-earnings patterns. See www.ssa.gov/OACT/NOTES/ran3/an2017-3.pdf.

Description of Tables

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 2017 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 present-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 just 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 1951 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 an NRA of 67, individuals retiring at exact age 62 would have a 30 percent reduction in benefits, and those retiring at age 65 would have a $13^1/_3$ percent reduction. Table D shows benefit amounts and replacement rates for retire-

ment 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 present-law scheduled benefits and payable benefits in separate panels. Present-law scheduled benefits are those specified in the law. However, when the trust fund reserves deplete, present law prescribes that expenditures cannot exceed current income. Because the projected date that the combined OASI and DI Trust Funds deplete 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 present-law income is sufficient to pay benefits for that year.

Tables A through C also include present-law scheduled and payable benefits in CPI-indexed 2017 dollars.[5] The present-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.

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[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.

[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] A CPI-indexed 2017 dollar adjustment uses the adjusted CPI indexing series in table VI.G6 of the 2017 Trustees Report. See: www.ssa.gov/OACT/TR/2017/lr6g6.html

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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 2017 OASDI Trustees Report)

Year of birth[c]	Year attain age 62	Present-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b]	
		Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Present-Law Scheduled Benefits	Payable Benefits
Scaled very low earnings: (Career-average earnings for 2016 equal $12,319[f])							
1951	2013	$7,664	60.6	$7,664	60.6	$6,990	$6,990
1952	2014	7,641	61.8	7,641	61.8	7,109	7,109
1953	2015	7,464	60.3	7,464	60.3	7,216	7,216
1954	2016	7,536	60.4	7,536	60.4	7,407	7,407
1955	2017	7,429	60.3	7,429	60.3	7,429	7,429
1960	2022	6,908	56.1	6,908	56.1	7,503	7,503
1965	2027	6,936	56.3	6,936	56.3	7,989	7,989
1970	2032	6,936	56.3	6,936	56.3	8,502	8,502
1975	2037	6,942	56.3	5,320	43.1	9,041	6,929
1980	2042	6,948	56.3	5,376	43.6	9,598	7,427
1985	2047	6,943	56.3	5,442	44.1	10,184	7,983
1990	2052	6,942	56.3	5,472	44.4	10,816	8,526
1995	2057	6,947	56.3	5,431	44.0	11,486	8,980
2000	2062	6,949	56.3	5,362	43.4	12,186	9,403
2005	2067	6,955	56.3	5,290	42.8	12,906	9,817
2010	2072	6,957	56.4	5,218	42.3	13,649	10,238
2015	2077	6,959	56.4	5,187	42.0	14,427	10,754
2020	2082	6,958	56.4	5,193	42.1	15,240	11,373
2025	2087	6,957	56.4	5,159	41.8	16,102	11,940
Scaled low earnings: (Career-average earnings for 2016 equal $22,175[f])							
1951	2013	10,027	44.1	10,027	44.1	9,145	9,145
1952	2014	9,989	44.9	9,989	44.9	9,294	9,294
1953	2015	9,755	43.8	9,755	43.8	9,432	9,432
1954	2016	9,856	43.9	9,856	43.9	9,687	9,687
1955	2017	9,713	43.8	9,713	43.8	9,713	9,713
1960	2022	9,032	40.7	9,032	40.7	9,809	9,809
1965	2027	9,076	40.9	9,076	40.9	10,454	10,454
1970	2032	9,065	40.9	9,065	40.9	11,111	11,111
1975	2037	9,078	40.9	6,957	31.3	11,823	9,061
1980	2042	9,084	40.9	7,029	31.6	12,549	9,710
1985	2047	9,076	40.9	7,114	32.1	13,312	10,435
1990	2052	9,077	40.9	7,155	32.2	14,143	11,148
1995	2057	9,083	40.9	7,101	32.0	15,018	11,741
2000	2062	9,085	40.9	7,010	31.6	15,930	12,292
2005	2067	9,093	40.9	6,917	31.1	16,873	12,834
2010	2072	9,095	40.9	6,823	30.7	17,845	13,386
2015	2077	9,098	40.9	6,782	30.5	18,862	14,060
2020	2082	9,098	40.9	6,789	30.5	19,926	14,869
2025	2087	9,096	40.9	6,745	30.3	21,051	15,610
Scaled medium earnings: (Career-average earnings for 2016 equal $49,278[f])							
1951	2013	16,510	32.6	16,510	32.6	15,058	15,058
1952	2014	16,450	33.3	16,450	33.3	15,307	15,307
1953	2015	16,080	32.5	16,080	32.5	15,547	15,547
1954	2016	16,220	32.5	16,220	32.5	15,942	15,942
1955	2017	15,989	32.4	15,989	32.4	15,989	15,989
1960	2022	14,882	30.2	14,882	30.2	16,163	16,163
1965	2027	14,943	30.3	14,943	30.3	17,211	17,211
1970	2032	14,931	30.3	14,931	30.3	18,300	18,300
1975	2037	14,952	30.3	11,459	23.2	19,472	14,922
1980	2042	14,955	30.3	11,572	23.4	20,659	15,986
1985	2047	14,948	30.3	11,717	23.8	21,925	17,186
1990	2052	14,948	30.3	11,783	23.9	23,290	18,358
1995	2057	14,955	30.3	11,692	23.7	24,728	19,333
2000	2062	14,960	30.3	11,543	23.4	26,233	20,241
2005	2067	14,975	30.3	11,390	23.0	27,787	21,136
2010	2072	14,975	30.3	11,233	22.7	29,381	22,039
2015	2077	14,981	30.3	11,167	22.6	31,058	23,152

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 2017 OASDI Trustees Report)

Year of birth[c]	Year attain age 62	Present-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b]	
		Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Present-Law Scheduled Benefits	Payable Benefits
2020	2082	$14,981	30.3	$11,179	22.6	$32,810	$24,484
2025	2087	14,978	30.3	11,107	22.5	34,663	25,704

Scaled high earnings: (Career-average earnings for 2016 equal $78,845[f])

1951	2013	21,908	27.1	21,908	27.1	19,982	19,982
1952	2014	21,823	27.6	21,823	27.6	20,306	20,306
1953	2015	21,329	26.9	21,329	26.9	20,622	20,622
1954	2016	21,535	27.0	21,535	27.0	21,166	21,166
1955	2017	21,219	26.9	21,219	26.9	21,219	21,219
1960	2022	19,751	25.0	19,751	25.0	21,452	21,452
1965	2027	19,834	25.1	19,834	25.1	22,845	22,845
1970	2032	19,812	25.1	19,812	25.1	24,283	24,283
1975	2037	19,842	25.1	15,206	19.2	25,839	19,802
1980	2042	19,844	25.1	15,355	19.4	27,412	21,211
1985	2047	19,834	25.1	15,547	19.7	29,091	22,804
1990	2052	19,836	25.1	15,636	19.8	30,905	24,361
1995	2057	19,845	25.1	15,515	19.6	32,812	25,653
2000	2062	19,850	25.1	15,316	19.4	34,808	26,858
2005	2067	19,869	25.2	15,113	19.2	36,870	28,045
2010	2072	19,872	25.2	14,906	18.9	38,989	29,246
2015	2077	19,879	25.2	14,818	18.8	41,212	30,721
2020	2082	19,879	25.2	14,834	18.8	43,537	32,489
2025	2087	19,874	25.2	14,737	18.7	45,995	34,107

Steady maximum earnings: (Career-average earnings for 2016 equal $120,418[f])

1951	2013	26,262	21.8	26,262	21.8	23,953	23,953
1952	2014	26,281	22.0	26,281	22.0	24,454	24,454
1953	2015	25,784	21.5	25,784	21.5	24,929	24,929
1954	2016	26,078	21.4	26,078	21.4	25,630	25,630
1955	2017	25,740	21.4	25,740	21.4	25,740	25,740
1960	2022	24,031	19.8	24,031	19.8	26,100	26,100
1965	2027	24,179	19.9	24,179	19.9	27,849	27,849
1970	2032	24,187	19.8	24,187	19.8	29,646	29,646
1975	2037	24,202	19.9	18,547	15.3	31,517	24,153
1980	2042	24,226	19.8	18,746	15.3	33,466	25,896
1985	2047	24,187	19.9	18,959	15.6	35,475	27,808
1990	2052	24,142	19.9	19,030	15.7	37,613	29,648
1995	2057	24,127	19.9	18,863	15.6	39,892	31,188
2000	2062	24,135	19.9	18,623	15.4	42,322	32,656
2005	2067	24,159	19.9	18,376	15.1	44,830	34,100
2010	2072	24,165	19.9	18,127	14.9	47,413	35,565
2015	2077	24,177	19.9	18,022	14.8	50,123	37,363
2020	2082	24,179	19.9	18,043	14.9	52,956	39,518
2025	2087	24,177	19.9	17,928	14.8	55,955	41,493

[a] The table uses four hypothetical "scaled" earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2017.3 at www.ssa.gov/OACT/NOTES/ran3/an2017-3.pdf for more information.

[b] CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2017 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 2017 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 2017. Thus, the annual earnings used for this average are wage-indexed to 2016.

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 2017 OASDI Trustees Report)

| Year of birth[c] | Year attain age 65 | Present-Law Scheduled Benefits | | Payable Benefits | | Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b] | |
		Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Present-Law Scheduled Benefits	Payable Benefits
Scaled very low earnings: (Career-average earnings for 2016 equal $12,341[f])							
1951	2016	$8,958	71.7	$8,958	71.7	$8,805	$8,805
1952	2017	8,800	71.3	8,800	71.3	8,800	8,800
1953	2018	8,549	69.9	8,549	69.9	8,704	8,704
1954	2019	8,737	71.2	8,737	71.2	9,059	9,059
1955	2020	8,742	71.2	8,742	71.2	9,229	9,229
1960	2025	8,287	67.1	8,287	67.1	9,317	9,317
1965	2030	8,297	67.2	8,297	67.2	9,919	9,919
1970	2035	8,296	67.2	6,392	51.8	10,551	8,129
1975	2040	8,320	67.3	6,399	51.8	11,225	8,634
1980	2045	8,319	67.3	6,492	52.5	11,911	9,296
1985	2050	8,310	67.3	6,545	53.0	12,638	9,955
1990	2055	8,316	67.3	6,531	52.9	13,429	10,547
1995	2060	8,321	67.3	6,455	52.2	14,255	11,059
2000	2065	8,334	67.4	6,377	51.6	15,124	11,572
2005	2070	8,349	67.5	6,293	50.9	16,019	12,075
2010	2075	8,352	67.5	6,233	50.4	16,939	12,642
2015	2080	8,357	67.6	6,235	50.4	17,907	13,359
2020	2085	8,357	67.6	6,220	50.3	18,916	14,079
2025	2090	8,352	67.5	6,148	49.7	19,985	14,711
Scaled low earnings: (Career-average earnings for 2016 equal $22,215[f])							
1951	2016	11,728	52.1	11,728	52.1	11,526	11,526
1952	2017	11,517	51.8	11,517	51.8	11,517	11,517
1953	2018	11,189	50.8	11,189	50.8	11,392	11,392
1954	2019	11,437	51.8	11,437	51.8	11,858	11,858
1955	2020	11,442	51.8	11,442	51.8	12,079	12,079
1960	2025	10,847	48.8	10,847	48.8	12,195	12,195
1965	2030	10,860	48.9	10,860	48.9	12,983	12,983
1970	2035	10,860	48.8	8,367	37.6	13,811	10,640
1975	2040	10,888	48.9	8,375	37.6	14,690	11,299
1980	2045	10,888	49.0	8,497	38.2	15,589	12,166
1985	2050	10,876	48.9	8,566	38.5	16,541	13,029
1990	2055	10,881	48.9	8,546	38.4	17,571	13,800
1995	2060	10,890	49.0	8,449	38.0	18,657	14,474
2000	2065	10,907	49.0	8,346	37.5	19,792	15,144
2005	2070	10,926	49.1	8,236	37.0	20,964	15,803
2010	2075	10,930	49.1	8,157	36.6	22,167	16,543
2015	2080	10,936	49.1	8,159	36.6	23,432	17,481
2020	2085	10,936	49.1	8,140	36.5	24,755	18,425
2025	2090	10,929	49.1	8,045	36.1	26,153	19,251
Scaled medium earnings: (Career-average earnings for 2016 equal $49,366[f])							
1951	2016	19,326	38.7	19,326	38.7	18,995	18,995
1952	2017	18,971	38.4	18,971	38.4	18,971	18,971
1953	2018	18,453	37.7	18,453	37.7	18,787	18,787
1954	2019	18,856	38.4	18,856	38.4	19,550	19,550
1955	2020	18,870	38.4	18,870	38.4	19,921	19,921
1960	2025	17,884	36.2	17,884	36.2	20,107	20,107
1965	2030	17,915	36.3	17,915	36.3	21,417	21,417
1970	2035	17,905	36.2	13,794	27.9	22,770	17,543
1975	2040	17,954	36.3	13,809	27.9	24,223	18,631
1980	2045	17,950	36.3	14,009	28.3	25,702	20,058
1985	2050	17,933	36.3	14,125	28.6	27,274	21,483
1990	2055	17,942	36.3	14,091	28.5	28,972	22,754
1995	2060	17,954	36.3	13,929	28.2	30,758	23,862
2000	2065	17,982	36.4	13,759	27.9	32,630	24,967
2005	2070	18,012	36.4	13,578	27.4	34,561	26,053
2010	2075	18,019	36.4	13,448	27.2	36,546	27,274

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 2017 OASDI Trustees Report)

Year of birth[c]	Year attain age 65	Present-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b]	
		Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Present-Law Scheduled Benefits	Payable Benefits
2015	2080	$18,030	36.4	$13,451	27.2	$38,630	$28,819
2020	2085	18,028	36.4	13,419	27.1	40,808	30,374
2025	2090	18,017	36.4	13,262	26.8	43,114	31,736
Scaled high earnings: (Career-average earnings for 2016 equal $78,985[f])							
1951	2016	25,615	32.0	25,615	32.0	25,176	25,176
1952	2017	25,150	31.8	25,150	31.8	25,150	25,150
1953	2018	24,454	31.2	24,454	31.2	24,898	24,898
1954	2019	24,970	31.8	24,970	31.8	25,890	25,890
1955	2020	25,006	31.8	25,006	31.8	26,398	26,398
1960	2025	23,688	30.0	23,688	30.0	26,633	26,633
1965	2030	23,722	30.0	23,722	30.0	28,359	28,359
1970	2035	23,709	30.0	18,266	23.1	30,151	23,229
1975	2040	23,774	30.1	18,286	23.2	32,076	24,672
1980	2045	23,769	30.1	18,550	23.5	34,033	26,560
1985	2050	23,747	30.0	18,705	23.6	36,117	28,448
1990	2055	23,757	30.0	18,658	23.6	38,362	30,128
1995	2060	23,777	30.1	18,446	23.4	40,734	31,601
2000	2065	23,813	30.1	18,221	23.0	43,211	33,064
2005	2070	23,854	30.1	17,981	22.7	45,770	34,502
2010	2075	23,863	30.1	17,809	22.5	48,397	36,119
2015	2080	23,876	30.2	17,812	22.5	51,156	38,164
2020	2085	23,875	30.2	17,770	22.5	54,042	40,224
2025	2090	23,860	30.2	17,563	22.2	57,096	42,029
Steady maximum earnings: (Career-average earnings for 2016 equal $120,418[f])							
1951	2016	31,081	25.6	31,081	25.6	30,548	30,548
1952	2017	30,560	25.4	30,560	25.4	30,560	30,560
1953	2018	29,768	24.9	29,768	24.9	30,308	30,308
1954	2019	30,425	25.3	30,425	25.3	31,546	31,546
1955	2020	30,479	25.3	30,479	25.3	32,177	32,177
1960	2025	28,938	23.8	28,938	23.8	32,536	32,536
1965	2030	29,027	23.8	29,027	23.8	34,700	34,700
1970	2035	29,032	23.8	22,367	18.3	36,921	28,445
1975	2040	29,093	23.8	22,377	18.3	39,252	30,191
1980	2045	29,099	23.8	22,709	18.6	41,665	32,516
1985	2050	29,038	23.8	22,873	18.7	44,165	34,788
1990	2055	28,996	23.9	22,773	18.8	46,822	36,772
1995	2060	28,984	23.9	22,485	18.5	49,653	38,521
2000	2065	29,028	23.9	22,211	18.3	52,674	40,304
2005	2070	29,078	24.0	21,919	18.1	55,793	42,058
2010	2075	29,093	24.0	21,712	17.9	59,005	44,036
2015	2080	29,114	24.0	21,720	17.9	62,379	46,537
2020	2085	29,116	24.0	21,671	17.9	65,906	49,054
2025	2090	29,100	24.0	21,421	17.7	69,636	51,259

[a] The table uses four hypothetical "scaled" earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2017.3 at www.ssa.gov/OACT/NOTES/ran3/an2017-3.pdf for more information.

[b] CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2017 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 2017 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 2017. Thus, the annual earnings used for this average are wage-indexed to 2016.

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 2017 OASDI Trustees Report)

Year of birth[c]	Year attain NRA	Age at retirement	Present-Law Scheduled Benefits Wage-indexed 2017 dollars[d]	Present-Law Scheduled Benefits Percent of career-average earnings[e]	Payable Benefits Wage-indexed 2017 dollars[d]	Payable Benefits Percent of career-average earnings[e]	Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b] Present-Law Scheduled Benefits	Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b] Payable Benefits
Scaled very low earnings: (Career-average earnings for 2016 equal $12,341[f])								
1951	2017	66:0	$9,281	75.2	$9,281	75.2	$9,281	$9,281
1952	2018	66:0	9,192	75.1	9,192	75.1	9,359	9,359
1953	2019	66:0	9,034	73.6	9,034	73.6	9,366	9,366
1954	2020	66:0	9,193	74.9	9,193	74.9	9,705	9,705
1955	2021	66:2	9,376	75.6	9,376	75.6	10,011	10,011
1960	2027	67:0	9,334	75.6	9,334	75.6	10,750	10,750
1965	2032	67:0	9,344	75.7	9,344	75.7	11,452	11,452
1970	2037	67:0	9,348	75.7	7,164	58.0	12,174	9,330
1975	2042	67:0	9,376	75.9	7,255	58.7	12,952	10,022
1980	2047	67:0	9,370	75.9	7,345	59.5	13,744	10,774
1985	2052	67:0	9,359	75.8	7,377	59.7	14,582	11,494
1990	2057	67:0	9,371	75.8	7,326	59.3	15,494	12,113
1995	2062	67:0	9,382	75.9	7,239	58.6	16,451	12,694
2000	2067	67:0	9,404	76.1	7,153	57.9	17,451	13,274
2005	2072	67:0	9,421	76.2	7,067	57.2	18,484	13,865
2010	2077	67:0	9,428	76.2	7,028	56.8	19,545	14,569
2015	2082	67:0	9,434	76.3	7,040	56.9	20,663	15,419
2020	2087	67:0	9,431	76.3	6,993	56.6	21,826	16,185
2025	2092	67:0	9,424	76.2	6,901	55.8	23,060	16,886
Scaled low earnings: (Career-average earnings for 2016 equal $22,215[f])								
1951	2017	66:0	12,142	54.7	12,142	54.7	12,142	12,142
1952	2018	66:0	12,037	54.7	12,037	54.7	12,256	12,256
1953	2019	66:0	11,832	53.5	11,832	53.5	12,268	12,268
1954	2020	66:0	12,040	54.5	12,040	54.5	12,710	12,710
1955	2021	66:2	12,273	55.0	12,273	55.0	13,104	13,104
1960	2027	67:0	12,215	54.9	12,215	54.9	14,069	14,069
1965	2032	67:0	12,224	55.0	12,224	55.0	14,982	14,982
1970	2037	67:0	12,233	55.0	9,375	42.1	15,931	12,209
1975	2042	67:0	12,271	55.2	9,495	42.7	16,951	13,116
1980	2047	67:0	12,263	55.2	9,613	43.3	17,987	14,100
1985	2052	67:0	12,249	55.1	9,656	43.4	19,085	15,044
1990	2057	67:0	12,262	55.1	9,587	43.1	20,274	15,851
1995	2062	67:0	12,276	55.2	9,472	42.6	21,527	16,610
2000	2067	67:0	12,307	55.3	9,362	42.1	22,838	17,372
2005	2072	67:0	12,329	55.4	9,248	41.6	24,190	18,145
2010	2077	67:0	12,338	55.4	9,197	41.3	25,578	19,067
2015	2082	67:0	12,345	55.5	9,212	41.4	27,037	20,176
2020	2087	67:0	12,341	55.4	9,152	41.1	28,562	21,180
2025	2092	67:0	12,332	55.4	9,030	40.6	30,177	22,097
Scaled medium earnings: (Career-average earnings for 2016 equal $49,366[f])								
1951	2017	66:0	20,005	40.5	20,005	40.5	20,005	20,005
1952	2018	66:0	19,830	40.5	19,830	40.5	20,190	20,190
1953	2019	66:0	19,504	39.7	19,504	39.7	20,222	20,222
1954	2020	66:0	19,847	40.4	19,847	40.4	20,952	20,952
1955	2021	66:2	20,250	40.8	20,250	40.8	21,622	21,622
1960	2027	67:0	20,141	40.8	20,141	40.8	23,198	23,198
1965	2032	67:0	20,158	40.8	20,158	40.8	24,707	24,707
1970	2037	67:0	20,177	40.8	15,463	31.3	26,276	20,137
1975	2042	67:0	20,232	40.9	15,655	31.6	27,948	21,626
1980	2047	67:0	20,216	40.9	15,847	32.1	29,652	23,243
1985	2052	67:0	20,199	40.9	15,922	32.2	31,471	24,807
1990	2057	67:0	20,218	40.9	15,807	32.0	33,430	26,136
1995	2062	67:0	20,240	40.9	15,617	31.6	35,492	27,386
2000	2067	67:0	20,291	41.0	15,434	31.2	37,653	28,641
2005	2072	67:0	20,326	41.1	15,247	30.8	39,880	29,915
2010	2077	67:0	20,340	41.1	15,162	30.6	42,167	31,433

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 2017 OASDI Trustees Report)

Year of birth[c]	Year attain NRA	Age at retirement	Present-Law Scheduled Benefits		Payable Benefits		Purchasing Power of Benefits in CPI-Indexed 2017 dollars[b]	
			Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Wage-indexed 2017 dollars[d]	Percent of career-average earnings[e]	Present-Law Scheduled Benefits	Payable Benefits
2015	2082	67:0	$20,352	41.1	$15,187	30.7	$44,574	$33,263
2020	2087	67:0	20,345	41.1	15,087	30.5	47,086	34,916
2025	2092	67:0	20,330	41.1	14,886	30.1	49,747	36,427
Scaled high earnings: (Career-average earnings for 2016 equal $78,985[f])								
1951	2017	66:0	26,521	33.6	26,521	33.6	26,521	26,521
1952	2018	66:0	26,290	33.6	26,290	33.6	26,767	26,767
1953	2019	66:0	25,837	32.9	25,837	32.9	26,789	26,789
1954	2020	66:0	26,287	33.4	26,287	33.4	27,751	27,751
1955	2021	66:2	26,812	33.8	26,812	33.8	28,628	28,628
1960	2027	67:0	26,682	33.8	26,682	33.8	30,731	30,731
1965	2032	67:0	26,695	33.8	26,695	33.8	32,720	32,720
1970	2037	67:0	26,718	33.8	20,475	25.9	34,794	26,664
1975	2042	67:0	26,792	33.9	20,731	26.2	37,010	28,638
1980	2047	67:0	26,773	33.9	20,987	26.6	39,269	30,782
1985	2052	67:0	26,747	33.8	21,083	26.6	41,672	32,848
1990	2057	67:0	26,774	33.9	20,932	26.5	44,269	34,610
1995	2062	67:0	26,802	33.9	20,680	26.2	46,999	36,264
2000	2067	67:0	26,870	34.0	20,439	25.9	49,862	37,927
2005	2072	67:0	26,917	34.0	20,191	25.5	52,811	39,614
2010	2077	67:0	26,937	34.0	20,080	25.3	55,844	41,628
2015	2082	67:0	26,951	34.1	20,112	25.4	59,027	44,048
2020	2087	67:0	26,944	34.0	19,980	25.2	62,358	46,241
2025	2092	67:0	26,923	34.0	19,714	24.9	65,880	48,241
Steady maximum earnings: (Career-average earnings for 2016 equal $120,418[f])								
1951	2017	66:0	32,303	26.8	32,303	26.8	32,303	32,303
1952	2018	66:0	32,063	26.8	32,063	26.8	32,644	32,644
1953	2019	66:0	31,556	26.2	31,556	26.2	32,718	32,718
1954	2020	66:0	32,119	26.7	32,119	26.7	33,908	33,908
1955	2021	66:2	32,795	27.0	32,795	27.0	35,016	35,016
1960	2027	67:0	32,838	27.0	32,838	27.0	37,822	37,822
1965	2032	67:0	32,899	26.9	32,899	26.9	40,324	40,324
1970	2037	67:0	32,944	26.9	25,247	20.6	42,902	32,878
1975	2042	67:0	33,009	27.0	25,542	20.9	45,599	35,284
1980	2047	67:0	32,998	27.0	25,866	21.2	48,399	37,939
1985	2052	67:0	32,925	27.0	25,953	21.3	51,297	40,435
1990	2057	67:0	32,893	27.1	25,716	21.2	54,387	42,521
1995	2062	67:0	32,890	27.1	25,378	20.9	57,675	44,502
2000	2067	67:0	32,969	27.2	25,078	20.7	61,178	46,535
2005	2072	67:0	33,029	27.2	24,775	20.4	64,802	48,609
2010	2077	67:0	33,056	27.2	24,641	20.3	68,530	51,084
2015	2082	67:0	33,077	27.3	24,683	20.4	72,444	54,060
2020	2087	67:0	33,072	27.3	24,524	20.2	76,541	56,758
2025	2092	67:0	33,051	27.2	24,201	19.9	80,874	59,220

[a] The table uses four hypothetical "scaled" earnings levels and a hypothetical worker who earns the taxable maximum each year. See Actuarial Note Number 2017.3 at www.ssa.gov/OACT/NOTES/ran3/an2017-3.pdf for more information.

[b] CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2017 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 2017 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 2017. Thus, the annual earnings used for this average are wage-indexed to 2016.

**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 2017 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 2017 dollars[c]	Percent of career-average earnings[d]	Wage-indexed 2017 dollars[c]	Percent of career-average earnings[d]	NRA	Wage-indexed 2017 dollars[c]	Percent of career-average earnings[d]
Scaled very low earnings:								
1875	1940	e	e	$5,153	42.0	65:0	$5,153	42.0
1880	1945	e	e	3,046	24.8	65:0	3,046	24.8
1885	1950	e	e	4,518	36.2	65:0	4,518	36.2
1890	1955	e	e	8,797	71.8	65:0	8,797	71.8
1895	1960	e	e	8,759	71.0	65:0	8,759	71.0
1900	1965	$6,660	54.6	8,349	66.3	65:0	8,349	66.3
1905	1970	6,073	50.1	8,743	71.5	65:0	8,743	71.5
1910	1975	7,006	60.1	9,929	83.2	65:0	9,929	83.2
1915	1980	8,207	67.9	10,728	91.1	65:0	10,728	91.1
1920	1985	7,808	64.3	9,285	75.5	65:0	9,285	75.5
1925	1990	7,881	65.5	9,825	80.1	65:0	9,825	80.1
1930	1995	7,833	64.3	9,891	80.2	65:0	9,891	80.2
1935	2000	7,692	63.6	8,739	71.9	65:0	8,739	71.9
1940	2005	7,992	63.0	9,580	77.4	65:6	10,115	80.3
1945	2010	7,329	59.8	9,575	76.4	66:0	9,973	80.2
1950	2015	7,527	60.6	9,064	73.1	66:0	9,470	75.8
Scaled low earnings:								
1875	1940	e	e	6,570	29.8	65:0	6,570	29.8
1880	1945	e	e	5,661	25.6	65:0	5,661	25.6
1885	1950	e	e	7,221	32.0	65:0	7,221	32.0
1890	1955	e	e	11,160	50.5	65:0	11,160	50.5
1895	1960	e	e	10,450	47.0	65:0	10,450	47.0
1900	1965	7,916	36.1	10,045	44.3	65:0	10,045	44.3
1905	1970	7,392	33.9	10,402	47.3	65:0	10,402	47.3
1910	1975	8,804	41.9	12,842	59.8	65:0	12,842	59.8
1915	1980	10,526	48.4	14,127	66.7	65:0	14,127	66.7
1920	1985	11,364	52.0	13,540	61.1	65:0	13,540	61.1
1925	1990	10,362	47.8	12,885	58.4	65:0	12,885	58.4
1930	1995	10,283	46.9	12,963	58.4	65:0	12,963	58.4
1935	2000	10,055	46.2	11,447	52.3	65:0	11,447	52.3
1940	2005	10,457	45.8	12,539	56.3	65:6	13,232	58.4
1945	2010	9,574	43.4	12,530	55.5	66:0	13,062	58.3
1950	2015	9,850	44.1	11,868	53.2	66:0	12,390	55.1
Scaled medium earnings:								
1875	1940	e	e	11,680	23.8	65:0	11,680	23.8
1880	1945	e	e	8,073	16.4	65:0	8,073	16.4
1885	1950	e	e	9,501	19.0	65:0	9,501	19.0
1890	1955	e	e	14,533	29.6	65:0	14,533	29.6
1895	1960	e	e	14,445	29.3	65:0	14,445	29.3
1900	1965	11,826	24.2	14,583	28.9	65:0	14,583	28.9
1905	1970	11,339	23.4	15,926	32.6	65:0	15,926	32.6
1910	1975	13,768	29.5	19,644	41.2	65:0	19,644	41.2
1915	1980	17,121	35.6	23,325	49.7	65:0	23,325	49.7
1920	1985	17,067	35.3	20,367	41.5	65:0	20,367	41.5
1925	1990	17,135	35.6	21,326	43.5	65:0	21,326	43.5
1930	1995	16,876	34.6	21,356	43.3	65:0	21,356	43.3
1935	2000	16,577	34.3	18,898	38.9	65:0	18,898	38.9
1940	2005	17,224	34.0	20,650	41.7	65:6	21,802	43.3
1945	2010	15,788	32.2	20,657	41.2	66:0	21,526	43.3
1950	2015	16,222	32.7	19,562	39.4	66:0	20,425	40.9
Scaled high earnings:								
1875	1940	e	e	13,956	17.8	65:0	13,956	17.8
1880	1945	e	e	9,926	12.6	65:0	9,926	12.6
1885	1950	e	e	11,578	14.4	65:0	11,578	14.4
1890	1955	e	e	18,372	24.0	65:0	18,372	24.0
1895	1960	e	e	17,979	24.7	65:0	17,979	24.7
1900	1965	13,428	19.7	17,403	24.8	65:0	17,403	24.8
1905	1970	12,451	19.5	18,506	28.6	65:0	18,506	28.6

**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 2017 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 2017 dollars[c]	Percent of career-average earnings[d]	Wage-indexed 2017 dollars[c]	Percent of career-average earnings[d]	NRA	Wage-indexed 2017 dollars[c]	Percent of career-average earnings[d]
1910	1975	$15,386	25.9	$22,920	37.4	65:0	$22,920	37.4
1915	1980	19,986	33.0	28,582	48.1	65:0	28,582	48.1
1920	1985	20,478	32.7	24,699	38.6	65:0	24,699	38.6
1925	1990	21,128	32.4	26,475	39.6	65:0	26,475	39.6
1930	1995	21,478	30.7	27,228	38.2	65:0	27,228	38.2
1935	2000	21,547	29.3	24,582	33.1	65:0	24,582	33.1
1940	2005	22,767	28.4	27,288	34.8	65:6	28,799	36.1
1945	2010	20,948	26.7	27,365	34.1	66:0	28,524	35.8
1950	2015	21,523	27.1	25,925	32.7	66:0	27,063	33.8
Steady maximum earnings:								
1875	1940	e	e	21,213	16.4	65:0	21,213	16.4
1880	1945	e	e	13,150	10.1	65:0	13,150	10.1
1885	1950	e	e	12,829	9.7	65:0	12,829	9.7
1890	1955	e	e	18,372	15.0	65:0	18,372	15.0
1895	1960	e	e	18,287	16.1	65:0	18,287	16.1
1900	1965	13,428	13.1	17,403	16.5	65:0	17,403	16.5
1905	1970	12,451	13.5	18,896	20.3	65:0	18,896	20.3
1910	1975	15,386	19.4	23,621	28.7	65:0	23,621	28.7
1915	1980	20,805	27.9	30,497	40.6	65:0	30,497	40.6
1920	1985	20,986	29.9	26,312	34.7	65:0	26,312	34.7
1925	1990	22,198	30.0	28,678	35.7	65:0	28,678	35.7
1930	1995	22,984	27.8	29,949	33.5	65:0	29,949	33.5
1935	2000	23,593	25.9	27,560	28.6	65:0	27,560	28.6
1940	2005	25,492	24.5	31,335	29.3	65:6	33,079	30.2
1945	2010	24,262	22.2	32,374	28.0	66:0	33,999	29.3
1950	2015	25,669	21.9	31,391	26.1	66:0	32,927	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 2017.3 at www.ssa.gov/OACT/NOTES/ran3/an2017-3.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 2017 OASDI Trustees Report.

[d] Computed using nominal dollars.

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