

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

We base all calculations on the intermediate assumptions of the 2016 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 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<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 1993 through 2012. 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 (\$49,121 for 2016). 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 (\$12,280, \$22,105, and \$78,594, respectively, for 2016). The steady maximum earner has earnings at or above the contribution and benefit base (\$118,500 for 2016) for each year starting at age 22 through the year prior to retirement.

<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 2016.3 has more details on scaled-earnings patterns. See [www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2016-3.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 2016 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 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 1950 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<sup>1</sup>/<sub>3</sub> percent reduction. Table D shows benefit amounts and replacement rates for retirement at

<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 <http://policy.ssa.gov/poms.nsf/lnx/0201701200>. For years prior to 1937, we use the 1937 national average earnings level.

62,<sup>4</sup> at 65, and at normal retirement age (NRA) for selected hypothetical workers born between 1875 and 1945.

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 2016 dollars.<sup>5</sup> 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.

<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> A CPI-indexed 2016 dollar adjustment uses the adjusted CPI indexing series in table VI.G6 of the 2016 Trustees Report. See: [www.ssa.gov/OACT/TR/2016/index.html](http://www.ssa.gov/OACT/TR/2016/index.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 2016 OASDI Trustees Report)*

| Year of birth <sup>c</sup>   | Year attain age 62 | Present-Law Scheduled Benefits         |   | Payable Benefits                       |   | Purchasing Power of Benefits in CPI-Indexed 2016 dollars <sup>b</sup> |                  |
|--|--------------------|--|---|--|---|---|------------------|
|  |                    | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Present-Law Scheduled Benefits  | Payable Benefits |
| <b>Scaled very low earnings: (Career-average earnings for 2015 equal \$11,922<sup>f</sup>)</b> |                    |  |   |  |   |   |                  |
| 1950   | 2012               | \$7,206                                | 60.6  | \$7,206                                | 60.6  | \$6,719   | \$6,719          |
| 1951   | 2013               | 7,337                                  | 60.6  | 7,337                                  | 60.6  | 6,835   | 6,835            |
| 1952   | 2014               | 7,314                                  | 61.7  | 7,314                                  | 61.7  | 6,951   | 6,951            |
| 1953   | 2015               | 7,200                                  | 60.3  | 7,200                                  | 60.3  | 7,056   | 7,056            |
| 1954   | 2016               | 7,249                                  | 60.8  | 7,249                                  | 60.8  | 7,249   | 7,249            |
| 1955   | 2017               | 7,048                                  | 60.2  | 7,048                                  | 60.2  | 7,186   | 7,186            |
| 1960   | 2022               | 6,608                                  | 56.1  | 6,608                                  | 56.1  | 7,335   | 7,335            |
| 1965   | 2027               | 6,639                                  | 56.2  | 6,639                                  | 56.2  | 7,864   | 7,864            |
| 1970   | 2032               | 6,637                                  | 56.2  | 6,637                                  | 56.2  | 8,373   | 8,373            |
| 1975   | 2037               | 6,649                                  | 56.3  | 5,225                                  | 44.2  | 8,912   | 7,003            |
| 1980   | 2042               | 6,649                                  | 56.3  | 5,248                                  | 44.4  | 9,458   | 7,466            |
| 1985   | 2047               | 6,645                                  | 56.3  | 5,290                                  | 44.8  | 10,046  | 7,996            |
| 1990   | 2052               | 6,647                                  | 56.3  | 5,303                                  | 44.9  | 10,680  | 8,520            |
| 1995   | 2057               | 6,652                                  | 56.3  | 5,249                                  | 44.4  | 11,342  | 8,950            |
| 2000   | 2062               | 6,656                                  | 56.3  | 5,176                                  | 43.8  | 12,032  | 9,357            |
| 2005   | 2067               | 6,660                                  | 56.3  | 5,104                                  | 43.1  | 12,741  | 9,763            |
| 2010   | 2072               | 6,661                                  | 56.3  | 5,033                                  | 42.5  | 13,473  | 10,181           |
| 2015   | 2077               | 6,663                                  | 56.3  | 5,005                                  | 42.3  | 14,243  | 10,699           |
| 2020   | 2082               | 6,663                                  | 56.3  | 5,006                                  | 42.3  | 15,052  | 11,310           |
| <b>Scaled low earnings: (Career-average earnings for 2015 equal \$21,459<sup>f</sup>)</b>      |                    |  |   |  |   |   |                  |
| 1950   | 2012               | 9,429                                  | 44.0  | 9,429                                  | 44.0  | 8,792   | 8,792            |
| 1951   | 2013               | 9,598                                  | 44.0  | 9,598                                  | 44.0  | 8,941   | 8,941            |
| 1952   | 2014               | 9,563                                  | 44.8  | 9,563                                  | 44.8  | 9,088   | 9,088            |
| 1953   | 2015               | 9,423                                  | 43.8  | 9,423                                  | 43.8  | 9,235   | 9,235            |
| 1954   | 2016               | 9,482                                  | 44.2  | 9,482                                  | 44.2  | 9,482   | 9,482            |
| 1955   | 2017               | 9,207                                  | 43.7  | 9,207                                  | 43.7  | 9,388   | 9,388            |
| 1960   | 2022               | 8,638                                  | 40.7  | 8,638                                  | 40.7  | 9,589   | 9,589            |
| 1965   | 2027               | 8,686                                  | 40.9  | 8,686                                  | 40.9  | 10,289  | 10,289           |
| 1970   | 2032               | 8,682                                  | 40.8  | 8,682                                  | 40.8  | 10,952  | 10,952           |
| 1975   | 2037               | 8,696                                  | 40.9  | 6,834                                  | 32.1  | 11,656  | 9,159            |
| 1980   | 2042               | 8,696                                  | 40.9  | 6,864                                  | 32.3  | 12,370  | 9,764            |
| 1985   | 2047               | 8,691                                  | 40.9  | 6,918                                  | 32.6  | 13,139  | 10,458           |
| 1990   | 2052               | 8,693                                  | 40.9  | 6,935                                  | 32.6  | 13,967  | 11,142           |
| 1995   | 2057               | 8,696                                  | 40.9  | 6,863                                  | 32.3  | 14,828  | 11,701           |
| 2000   | 2062               | 8,702                                  | 40.9  | 6,767                                  | 31.8  | 15,732  | 12,234           |
| 2005   | 2067               | 8,709                                  | 40.9  | 6,674                                  | 31.3  | 16,660  | 12,767           |
| 2010   | 2072               | 8,710                                  | 40.9  | 6,582                                  | 30.9  | 17,619  | 13,314           |
| 2015   | 2077               | 8,712                                  | 40.9  | 6,544                                  | 30.7  | 18,623  | 13,990           |
| 2020   | 2082               | 8,712                                  | 40.9  | 6,546                                  | 30.7  | 19,682  | 14,788           |
| <b>Scaled medium earnings: (Career-average earnings for 2015 equal \$47,687<sup>f</sup>)</b>   |                    |  |   |  |   |   |                  |
| 1950   | 2012               | 15,529                                 | 32.6  | 15,529                                 | 32.6  | 14,479  | 14,479           |
| 1951   | 2013               | 15,817                                 | 32.6  | 15,817                                 | 32.6  | 14,734  | 14,734           |
| 1952   | 2014               | 15,747                                 | 33.2  | 15,747                                 | 33.2  | 14,965  | 14,965           |
| 1953   | 2015               | 15,511                                 | 32.5  | 15,511                                 | 32.5  | 15,202  | 15,202           |
| 1954   | 2016               | 15,615                                 | 32.7  | 15,615                                 | 32.7  | 15,615  | 15,615           |
| 1955   | 2017               | 15,166                                 | 32.4  | 15,166                                 | 32.4  | 15,463  | 15,463           |
| 1960   | 2022               | 14,227                                 | 30.2  | 14,227                                 | 30.2  | 15,793  | 15,793           |
| 1965   | 2027               | 14,308                                 | 30.3  | 14,308                                 | 30.3  | 16,949  | 16,949           |
| 1970   | 2032               | 14,297                                 | 30.3  | 14,297                                 | 30.3  | 18,036  | 18,036           |
| 1975   | 2037               | 14,321                                 | 30.3  | 11,254                                 | 23.8  | 19,196  | 15,085           |
| 1980   | 2042               | 14,319                                 | 30.3  | 11,302                                 | 23.9  | 20,369  | 16,078           |
| 1985   | 2047               | 14,312                                 | 30.3  | 11,392                                 | 24.1  | 21,636  | 17,222           |
| 1990   | 2052               | 14,315                                 | 30.3  | 11,420                                 | 24.2  | 22,998  | 18,347           |
| 1995   | 2057               | 14,324                                 | 30.3  | 11,303                                 | 23.9  | 24,422  | 19,272           |
| 2000   | 2062               | 14,331                                 | 30.3  | 11,144                                 | 23.6  | 25,907  | 20,147           |
| 2005   | 2067               | 14,343                                 | 30.3  | 10,991                                 | 23.2  | 27,437  | 21,025           |
| 2010   | 2072               | 14,344                                 | 30.3  | 10,839                                 | 22.9  | 29,014  | 21,924           |

**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 2016 OASDI Trustees Report)

| Year of birth <sup>c</sup>   | Year attain age 62 | Present-Law Scheduled Benefits         |   | Payable Benefits                       |   | Purchasing Power of Benefits in CPI-Indexed 2016 dollars <sup>b</sup> |                  |
|--|--------------------|--|---|--|---|---|------------------|
|  |                    | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Present-Law Scheduled Benefits  | Payable Benefits |
| 2015   | 2077               | \$14,348                               | 30.3  | \$10,778                               | 22.8  | \$30,672  | \$23,041         |
| 2020   | 2082               | 14,348                                 | 30.3  | 10,780                                 | 22.8  | 32,412  | 24,353           |
| <b>Scaled high earnings: (Career-average earnings for 2015 equal \$76,299<sup>f</sup>)</b>     |                    |  |   |  |   |   |                  |
| 1950   | 2012               | 20,616                                 | 27.1  | 20,616                                 | 27.1  | 19,222  | 19,222           |
| 1951   | 2013               | 20,984                                 | 27.1  | 20,984                                 | 27.1  | 19,548  | 19,548           |
| 1952   | 2014               | 20,903                                 | 27.6  | 20,903                                 | 27.6  | 19,865  | 19,865           |
| 1953   | 2015               | 20,587                                 | 26.9  | 20,587                                 | 26.9  | 20,177  | 20,177           |
| 1954   | 2016               | 20,716                                 | 27.2  | 20,716                                 | 27.2  | 20,716  | 20,716           |
| 1955   | 2017               | 20,126                                 | 26.9  | 20,126                                 | 26.9  | 20,520  | 20,520           |
| 1960   | 2022               | 18,880                                 | 25.0  | 18,880                                 | 25.0  | 20,958  | 20,958           |
| 1965   | 2027               | 18,977                                 | 25.1  | 18,977                                 | 25.1  | 22,479  | 22,479           |
| 1970   | 2032               | 18,973                                 | 25.1  | 18,973                                 | 25.1  | 23,933  | 23,933           |
| 1975   | 2037               | 18,996                                 | 25.1  | 14,927                                 | 19.7  | 25,462  | 20,008           |
| 1980   | 2042               | 18,998                                 | 25.1  | 14,996                                 | 19.8  | 27,025  | 21,332           |
| 1985   | 2047               | 18,987                                 | 25.1  | 15,113                                 | 20.0  | 28,704  | 22,848           |
| 1990   | 2052               | 18,990                                 | 25.1  | 15,150                                 | 20.0  | 30,510  | 24,340           |
| 1995   | 2057               | 19,002                                 | 25.1  | 14,995                                 | 19.8  | 32,399  | 25,567           |
| 2000   | 2062               | 19,011                                 | 25.1  | 14,784                                 | 19.5  | 34,368  | 26,726           |
| 2005   | 2067               | 19,026                                 | 25.1  | 14,580                                 | 19.2  | 36,396  | 27,890           |
| 2010   | 2072               | 19,029                                 | 25.1  | 14,379                                 | 19.0  | 38,490  | 29,085           |
| 2015   | 2077               | 19,033                                 | 25.1  | 14,298                                 | 18.9  | 40,687  | 30,564           |
| 2020   | 2082               | 19,034                                 | 25.1  | 14,301                                 | 18.9  | 42,998  | 32,307           |
| <b>Steady maximum earnings: (Career-average earnings for 2015 equal \$116,123<sup>f</sup>)</b> |                    |  |   |  |   |   |                  |
| 1950   | 2012               | 24,572                                 | 21.9  | 24,572                                 | 21.9  | 22,910  | 22,910           |
| 1951   | 2013               | 25,139                                 | 21.8  | 25,139                                 | 21.8  | 23,418  | 23,418           |
| 1952   | 2014               | 25,158                                 | 22.0  | 25,158                                 | 22.0  | 23,908  | 23,908           |
| 1953   | 2015               | 24,872                                 | 21.5  | 24,872                                 | 21.5  | 24,377  | 24,377           |
| 1954   | 2016               | 25,084                                 | 21.6  | 25,084                                 | 21.6  | 25,084  | 25,084           |
| 1955   | 2017               | 24,407                                 | 21.3  | 24,407                                 | 21.3  | 24,886  | 24,886           |
| 1960   | 2022               | 22,967                                 | 19.8  | 22,967                                 | 19.8  | 25,494  | 25,494           |
| 1965   | 2027               | 23,132                                 | 19.9  | 23,132                                 | 19.9  | 27,400  | 27,400           |
| 1970   | 2032               | 23,143                                 | 19.8  | 23,143                                 | 19.8  | 29,194  | 29,194           |
| 1975   | 2037               | 23,159                                 | 19.9  | 18,198                                 | 15.6  | 31,041  | 24,393           |
| 1980   | 2042               | 23,179                                 | 19.8  | 18,296                                 | 15.6  | 32,973  | 26,027           |
| 1985   | 2047               | 23,139                                 | 19.9  | 18,418                                 | 15.8  | 34,981  | 27,844           |
| 1990   | 2052               | 23,100                                 | 19.9  | 18,428                                 | 15.9  | 37,113  | 29,607           |
| 1995   | 2057               | 23,086                                 | 19.9  | 18,218                                 | 15.7  | 39,363  | 31,063           |
| 2000   | 2062               | 23,103                                 | 19.9  | 17,966                                 | 15.5  | 41,764  | 32,478           |
| 2005   | 2067               | 23,124                                 | 19.9  | 17,720                                 | 15.2  | 44,237  | 33,899           |
| 2010   | 2072               | 23,131                                 | 19.9  | 17,479                                 | 15.0  | 46,789  | 35,356           |
| 2015   | 2077               | 23,139                                 | 19.9  | 17,383                                 | 14.9  | 49,466  | 37,159           |
| 2020   | 2082               | 23,143                                 | 19.9  | 17,389                                 | 15.0  | 52,281  | 39,282           |

<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 2016.3 at [www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf) for more information.

<sup>b</sup> CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2016 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 2016 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 2016. Thus, the annual earnings used for this average are wage-indexed to 2015.

**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 2016 OASDI Trustees Report)*

| Year of birth <sup>c</sup>   | Year attain age 65 | Present-Law Scheduled Benefits         |   | Payable Benefits                       |   | Purchasing Power of Benefits in CPI-Indexed 2016 dollars <sup>b</sup> |                  |
|--|--------------------|--|---|--|---|---|------------------|
|  |                    | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Present-Law Scheduled Benefits  | Payable Benefits |
| <b>Scaled very low earnings: (Career-average earnings for 2015 equal \$11,933<sup>f</sup>)</b> |                    |  |   |  |   |   |                  |
| 1950   | 2015               | \$8,744                                | 73.1  | \$8,744                                | 73.1  | \$8,569   | \$8,569          |
| 1951   | 2016               | 8,617                                  | 72.2  | 8,617                                  | 72.2  | 8,617   | 8,617            |
| 1952   | 2017               | 8,392                                  | 71.6  | 8,392                                  | 71.6  | 8,557   | 8,557            |
| 1953   | 2018               | 8,205                                  | 70.0  | 8,205                                  | 70.0  | 8,540   | 8,540            |
| 1954   | 2019               | 8,346                                  | 71.0  | 8,346                                  | 71.0  | 8,845   | 8,845            |
| 1955   | 2020               | 8,324                                  | 70.7  | 8,324                                  | 70.7  | 8,967   | 8,967            |
| 1960   | 2025               | 7,864                                  | 66.6  | 7,864                                  | 66.6  | 9,088   | 9,088            |
| 1965   | 2030               | 7,928                                  | 67.1  | 7,928                                  | 67.1  | 9,753   | 9,753            |
| 1970   | 2035               | 7,934                                  | 67.1  | 6,271                                  | 53.0  | 10,384  | 8,208            |
| 1975   | 2040               | 7,957                                  | 67.3  | 6,258                                  | 52.9  | 11,051  | 8,692            |
| 1980   | 2045               | 7,949                                  | 67.2  | 6,308                                  | 53.3  | 11,727  | 9,306            |
| 1985   | 2050               | 7,946                                  | 67.2  | 6,343                                  | 53.6  | 12,461  | 9,948            |
| 1990   | 2055               | 7,951                                  | 67.2  | 6,309                                  | 53.3  | 13,240  | 10,506           |
| 1995   | 2060               | 7,961                                  | 67.3  | 6,228                                  | 52.6  | 14,062  | 11,000           |
| 2000   | 2065               | 7,974                                  | 67.4  | 6,148                                  | 52.0  | 14,917  | 11,501           |
| 2005   | 2070               | 7,986                                  | 67.5  | 6,065                                  | 51.3  | 15,798  | 11,997           |
| 2010   | 2075               | 7,989                                  | 67.5  | 6,008                                  | 50.8  | 16,706  | 12,562           |
| 2015   | 2080               | 7,992                                  | 67.5  | 6,007                                  | 50.7  | 17,661  | 13,274           |
| 2020   | 2085               | 7,991                                  | 67.5  | 5,983                                  | 50.5  | 18,662  | 13,972           |
| <b>Scaled low earnings: (Career-average earnings for 2015 equal \$21,479<sup>f</sup>)</b>      |                    |  |   |  |   |   |                  |
| 1950   | 2015               | 11,436                                 | 53.1  | 11,436                                 | 53.1  | 11,208  | 11,208           |
| 1951   | 2016               | 11,270                                 | 52.5  | 11,270                                 | 52.5  | 11,270  | 11,270           |
| 1952   | 2017               | 10,976                                 | 52.0  | 10,976                                 | 52.0  | 11,191  | 11,191           |
| 1953   | 2018               | 10,735                                 | 50.9  | 10,735                                 | 50.9  | 11,173  | 11,173           |
| 1954   | 2019               | 10,925                                 | 51.6  | 10,925                                 | 51.6  | 11,579  | 11,579           |
| 1955   | 2020               | 10,889                                 | 51.4  | 10,889                                 | 51.4  | 11,729  | 11,729           |
| 1960   | 2025               | 10,295                                 | 48.4  | 10,295                                 | 48.4  | 11,898  | 11,898           |
| 1965   | 2030               | 10,379                                 | 48.8  | 10,379                                 | 48.8  | 12,768  | 12,768           |
| 1970   | 2035               | 10,383                                 | 48.8  | 8,207                                  | 38.6  | 13,589  | 10,741           |
| 1975   | 2040               | 10,407                                 | 48.9  | 8,185                                  | 38.5  | 14,454  | 11,368           |
| 1980   | 2045               | 10,403                                 | 48.9  | 8,255                                  | 38.8  | 15,347  | 12,179           |
| 1985   | 2050               | 10,395                                 | 48.8  | 8,298                                  | 39.0  | 16,302  | 13,014           |
| 1990   | 2055               | 10,404                                 | 48.9  | 8,255                                  | 38.8  | 17,324  | 13,746           |
| 1995   | 2060               | 10,417                                 | 48.9  | 8,148                                  | 38.3  | 18,399  | 14,392           |
| 2000   | 2065               | 10,433                                 | 49.0  | 8,044                                  | 37.8  | 19,517  | 15,047           |
| 2005   | 2070               | 10,448                                 | 49.0  | 7,935                                  | 37.2  | 20,668  | 15,696           |
| 2010   | 2075               | 10,452                                 | 49.1  | 7,859                                  | 36.9  | 21,856  | 16,435           |
| 2015   | 2080               | 10,456                                 | 49.1  | 7,859                                  | 36.9  | 23,105  | 17,365           |
| 2020   | 2085               | 10,456                                 | 49.1  | 7,828                                  | 36.8  | 24,417  | 18,281           |
| <b>Scaled medium earnings: (Career-average earnings for 2015 equal \$47,731<sup>f</sup>)</b>   |                    |  |   |  |   |   |                  |
| 1950   | 2015               | 18,858                                 | 39.4  | 18,858                                 | 39.4  | 18,482  | 18,482           |
| 1951   | 2016               | 18,579                                 | 38.9  | 18,579                                 | 38.9  | 18,579  | 18,579           |
| 1952   | 2017               | 18,082                                 | 38.6  | 18,082                                 | 38.6  | 18,437  | 18,437           |
| 1953   | 2018               | 17,701                                 | 37.8  | 17,701                                 | 37.8  | 18,424  | 18,424           |
| 1954   | 2019               | 18,003                                 | 38.3  | 18,003                                 | 38.3  | 19,080  | 19,080           |
| 1955   | 2020               | 17,957                                 | 38.1  | 17,957                                 | 38.1  | 19,343  | 19,343           |
| 1960   | 2025               | 16,972                                 | 35.9  | 16,972                                 | 35.9  | 19,614  | 19,614           |
| 1965   | 2030               | 17,102                                 | 36.2  | 17,102                                 | 36.2  | 21,039  | 21,039           |
| 1970   | 2035               | 17,118                                 | 36.2  | 13,530                                 | 28.6  | 22,403  | 17,708           |
| 1975   | 2040               | 17,155                                 | 36.3  | 13,493                                 | 28.6  | 23,827  | 18,740           |
| 1980   | 2045               | 17,142                                 | 36.2  | 13,603                                 | 28.7  | 25,290  | 20,069           |
| 1985   | 2050               | 17,132                                 | 36.2  | 13,677                                 | 28.9  | 26,867  | 21,448           |
| 1990   | 2055               | 17,147                                 | 36.2  | 13,606                                 | 28.7  | 28,554  | 22,657           |
| 1995   | 2060               | 17,166                                 | 36.3  | 13,428                                 | 28.4  | 30,321  | 23,718           |
| 2000   | 2065               | 17,193                                 | 36.3  | 13,255                                 | 28.0  | 32,162  | 24,796           |
| 2005   | 2070               | 17,219                                 | 36.4  | 13,076                                 | 27.6  | 34,062  | 25,867           |

**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 2016 OASDI Trustees Report)*

| Year of birth <sup>c</sup>   | Year attain age 65 | Present-Law Scheduled Benefits         |   | Payable Benefits                       |   | Purchasing Power of Benefits in CPI-Indexed 2016 dollars <sup>b</sup> |                  |
|--|--------------------|--|---|--|---|---|------------------|
|  |                    | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Present-Law Scheduled Benefits  | Payable Benefits |
| 2010   | 2075               | \$17,226                               | 36.4  | \$12,953                               | 27.4  | \$36,020  | \$27,085         |
| 2015   | 2080               | 17,231                                 | 36.4  | 12,950                                 | 27.4  | 38,076  | 28,617           |
| 2020   | 2085               | 17,230                                 | 36.4  | 12,900                                 | 27.3  | 40,236  | 30,124           |
| <b>Scaled high earnings: (Career-average earnings for 2015 equal \$76,369<sup>f</sup>)</b>     |                    |  |   |  |   |   |                  |
| 1950   | 2015               | 24,996                                 | 32.7  | 24,996                                 | 32.7  | 24,498  | 24,498           |
| 1951   | 2016               | 24,628                                 | 32.2  | 24,628                                 | 32.2  | 24,628  | 24,628           |
| 1952   | 2017               | 23,984                                 | 32.0  | 23,984                                 | 32.0  | 24,453  | 24,453           |
| 1953   | 2018               | 23,463                                 | 31.3  | 23,463                                 | 31.3  | 24,420  | 24,420           |
| 1954   | 2019               | 23,863                                 | 31.7  | 23,863                                 | 31.7  | 25,291  | 25,291           |
| 1955   | 2020               | 23,788                                 | 31.6  | 23,788                                 | 31.6  | 25,624  | 25,624           |
| 1960   | 2025               | 22,486                                 | 29.7  | 22,486                                 | 29.7  | 25,987  | 25,987           |
| 1965   | 2030               | 22,666                                 | 30.0  | 22,666                                 | 30.0  | 27,883  | 27,883           |
| 1970   | 2035               | 22,675                                 | 30.0  | 17,924                                 | 23.7  | 29,677  | 23,458           |
| 1975   | 2040               | 22,732                                 | 30.0  | 17,879                                 | 23.6  | 31,573  | 24,832           |
| 1980   | 2045               | 22,714                                 | 30.0  | 18,025                                 | 23.8  | 33,511  | 26,593           |
| 1985   | 2050               | 22,700                                 | 30.0  | 18,121                                 | 23.9  | 35,598  | 28,418           |
| 1990   | 2055               | 22,722                                 | 30.0  | 18,030                                 | 23.8  | 37,837  | 30,023           |
| 1995   | 2060               | 22,746                                 | 30.0  | 17,793                                 | 23.5  | 40,177  | 31,428           |
| 2000   | 2065               | 22,782                                 | 30.1  | 17,564                                 | 23.2  | 42,616  | 32,856           |
| 2005   | 2070               | 22,816                                 | 30.1  | 17,327                                 | 22.9  | 45,133  | 34,275           |
| 2010   | 2075               | 22,824                                 | 30.1  | 17,163                                 | 22.6  | 47,727  | 35,888           |
| 2015   | 2080               | 22,832                                 | 30.1  | 17,160                                 | 22.6  | 50,452  | 37,919           |
| 2020   | 2085               | 22,831                                 | 30.1  | 17,093                                 | 22.5  | 53,316  | 39,917           |
| <b>Steady maximum earnings: (Career-average earnings for 2015 equal \$116,123<sup>f</sup>)</b> |                    |  |   |  |   |   |                  |
| 1950   | 2015               | 30,282                                 | 26.1  | 30,282                                 | 26.1  | 29,678  | 29,678           |
| 1951   | 2016               | 29,897                                 | 25.7  | 29,897                                 | 25.7  | 29,897  | 29,897           |
| 1952   | 2017               | 29,150                                 | 25.5  | 29,150                                 | 25.5  | 29,721  | 29,721           |
| 1953   | 2018               | 28,579                                 | 24.9  | 28,579                                 | 24.9  | 29,745  | 29,745           |
| 1954   | 2019               | 29,085                                 | 25.3  | 29,085                                 | 25.3  | 30,824  | 30,824           |
| 1955   | 2020               | 29,017                                 | 25.1  | 29,017                                 | 25.1  | 31,256  | 31,256           |
| 1960   | 2025               | 27,497                                 | 23.6  | 27,497                                 | 23.6  | 31,778  | 31,778           |
| 1965   | 2030               | 27,747                                 | 23.8  | 27,747                                 | 23.8  | 34,134  | 34,134           |
| 1970   | 2035               | 27,782                                 | 23.8  | 21,960                                 | 18.8  | 36,360  | 28,740           |
| 1975   | 2040               | 27,832                                 | 23.8  | 21,890                                 | 18.7  | 38,657  | 30,404           |
| 1980   | 2045               | 27,823                                 | 23.8  | 22,079                                 | 18.9  | 41,048  | 32,574           |
| 1985   | 2050               | 27,771                                 | 23.8  | 22,169                                 | 19.0  | 43,550  | 34,766           |
| 1990   | 2055               | 27,744                                 | 23.9  | 22,015                                 | 19.0  | 46,200  | 36,659           |
| 1995   | 2060               | 27,741                                 | 23.9  | 21,700                                 | 18.7  | 48,999  | 38,329           |
| 2000   | 2065               | 27,787                                 | 24.0  | 21,423                                 | 18.5  | 51,979  | 40,074           |
| 2005   | 2070               | 27,831                                 | 24.0  | 21,135                                 | 18.2  | 55,054  | 41,809           |
| 2010   | 2075               | 27,847                                 | 24.0  | 20,939                                 | 18.0  | 58,230  | 43,786           |
| 2015   | 2080               | 27,860                                 | 24.0  | 20,939                                 | 18.0  | 61,564  | 46,270           |
| 2020   | 2085               | 27,862                                 | 24.0  | 20,860                                 | 18.0  | 65,065  | 48,714           |

<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 2016.3 at [www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf) for more information.

<sup>b</sup> CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2016 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 2016 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 2016. Thus, the annual earnings used for this average are wage-indexed to 2015.

**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 2016 OASDI Trustees Report)*

| Year of birth <sup>c</sup>   | Year attain NRA | Age at retirement | Present-Law Scheduled Benefits         |   | Payable Benefits                       |   | Purchasing Power of Benefits in CPI-Indexed 2016 dollars <sup>b</sup> |                  |
|--|-----------------|-------------------|--|---|--|---|---|------------------|
|  |                 |                   | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Present-Law Scheduled Benefits  | Payable Benefits |
| <b>Scaled very low earnings: (Career-average earnings for 2015 equal \$11,933<sup>f</sup>)</b> |                 |                   |  |   |  |   |   |                  |
| 1950   | 2016            | 66:0              | \$9,109                                | 76.3  | \$9,109                                | 76.3  | \$9,109   | \$9,109          |
| 1951   | 2017            | 66:0              | 8,851                                  | 75.5  | 8,851                                  | 75.5  | 9,025   | 9,025            |
| 1952   | 2018            | 66:0              | 8,829                                  | 75.3  | 8,829                                  | 75.3  | 9,189   | 9,189            |
| 1953   | 2019            | 66:0              | 8,639                                  | 73.5  | 8,639                                  | 73.5  | 9,156   | 9,156            |
| 1954   | 2020            | 66:0              | 8,798                                  | 74.7  | 8,798                                  | 74.7  | 9,477   | 9,477            |
| 1955   | 2021            | 66:2              | 8,923                                  | 75.2  | 8,923                                  | 75.2  | 9,722   | 9,722            |
| 1960   | 2027            | 67:0              | 8,854                                  | 74.9  | 8,854                                  | 74.9  | 10,488  | 10,488           |
| 1965   | 2032            | 67:0              | 8,922                                  | 75.5  | 8,922                                  | 75.5  | 11,255  | 11,255           |
| 1970   | 2037            | 67:0              | 8,942                                  | 75.6  | 7,026                                  | 59.4  | 11,985  | 9,418            |
| 1975   | 2042            | 67:0              | 8,964                                  | 75.8  | 7,076                                  | 59.8  | 12,752  | 10,066           |
| 1980   | 2047            | 67:0              | 8,952                                  | 75.7  | 7,126                                  | 60.3  | 13,534  | 10,773           |
| 1985   | 2052            | 67:0              | 8,948                                  | 75.7  | 7,138                                  | 60.4  | 14,376  | 11,469           |
| 1990   | 2057            | 67:0              | 8,962                                  | 75.8  | 7,072                                  | 59.8  | 15,280  | 12,058           |
| 1995   | 2062            | 67:0              | 8,976                                  | 75.9  | 6,980                                  | 59.0  | 16,226  | 12,618           |
| 2000   | 2067            | 67:0              | 8,997                                  | 76.0  | 6,894                                  | 58.2  | 17,211  | 13,189           |
| 2005   | 2072            | 67:0              | 9,012                                  | 76.1  | 6,810                                  | 57.5  | 18,229  | 13,775           |
| 2010   | 2077            | 67:0              | 9,017                                  | 76.2  | 6,773                                  | 57.2  | 19,275  | 14,480           |
| 2015   | 2082            | 67:0              | 9,021                                  | 76.2  | 6,778                                  | 57.3  | 20,379  | 15,312           |
| 2020   | 2087            | 67:0              | 9,018                                  | 76.2  | 6,723                                  | 56.8  | 21,534  | 16,055           |
| <b>Scaled low earnings: (Career-average earnings for 2015 equal \$21,479<sup>f</sup>)</b>      |                 |                   |  |   |  |   |   |                  |
| 1950   | 2016            | 66:0              | 11,906                                 | 55.4  | 11,906                                 | 55.4  | 11,906  | 11,906           |
| 1951   | 2017            | 66:0              | 11,573                                 | 54.9  | 11,573                                 | 54.9  | 11,800  | 11,800           |
| 1952   | 2018            | 66:0              | 11,545                                 | 54.7  | 11,545                                 | 54.7  | 12,016  | 12,016           |
| 1953   | 2019            | 66:0              | 11,303                                 | 53.4  | 11,303                                 | 53.4  | 11,979  | 11,979           |
| 1954   | 2020            | 66:0              | 11,522                                 | 54.4  | 11,522                                 | 54.4  | 12,411  | 12,411           |
| 1955   | 2021            | 66:2              | 11,676                                 | 54.7  | 11,676                                 | 54.7  | 12,722  | 12,722           |
| 1960   | 2027            | 67:0              | 11,589                                 | 54.5  | 11,589                                 | 54.5  | 13,728  | 13,728           |
| 1965   | 2032            | 67:0              | 11,679                                 | 54.9  | 11,679                                 | 54.9  | 14,733  | 14,733           |
| 1970   | 2037            | 67:0              | 11,699                                 | 55.0  | 9,194                                  | 43.2  | 15,681  | 12,322           |
| 1975   | 2042            | 67:0              | 11,726                                 | 55.1  | 9,256                                  | 43.5  | 16,681  | 13,167           |
| 1980   | 2047            | 67:0              | 11,711                                 | 55.0  | 9,322                                  | 43.8  | 17,704  | 14,092           |
| 1985   | 2052            | 67:0              | 11,708                                 | 55.0  | 9,340                                  | 43.9  | 18,811  | 15,007           |
| 1990   | 2057            | 67:0              | 11,726                                 | 55.1  | 9,254                                  | 43.5  | 19,994  | 15,778           |
| 1995   | 2062            | 67:0              | 11,744                                 | 55.1  | 9,133                                  | 42.8  | 21,230  | 16,510           |
| 2000   | 2067            | 67:0              | 11,771                                 | 55.2  | 9,020                                  | 42.3  | 22,517  | 17,255           |
| 2005   | 2072            | 67:0              | 11,790                                 | 55.3  | 8,909                                  | 41.8  | 23,848  | 18,021           |
| 2010   | 2077            | 67:0              | 11,797                                 | 55.4  | 8,862                                  | 41.6  | 25,218  | 18,944           |
| 2015   | 2082            | 67:0              | 11,801                                 | 55.4  | 8,867                                  | 41.6  | 26,660  | 20,031           |
| 2020   | 2087            | 67:0              | 11,798                                 | 55.4  | 8,796                                  | 41.3  | 28,172  | 21,004           |
| <b>Scaled medium earnings: (Career-average earnings for 2015 equal \$47,731<sup>f</sup>)</b>   |                 |                   |  |   |  |   |   |                  |
| 1950   | 2016            | 66:0              | 19,635                                 | 41.1  | 19,635                                 | 41.1  | 19,635  | 19,635           |
| 1951   | 2017            | 66:0              | 19,081                                 | 40.7  | 19,081                                 | 40.7  | 19,455  | 19,455           |
| 1952   | 2018            | 66:0              | 19,027                                 | 40.6  | 19,027                                 | 40.6  | 19,803  | 19,803           |
| 1953   | 2019            | 66:0              | 18,631                                 | 39.6  | 18,631                                 | 39.6  | 19,746  | 19,746           |
| 1954   | 2020            | 66:0              | 18,982                                 | 40.3  | 18,982                                 | 40.3  | 20,448  | 20,448           |
| 1955   | 2021            | 66:2              | 19,251                                 | 40.6  | 19,251                                 | 40.6  | 20,976  | 20,976           |
| 1960   | 2027            | 67:0              | 19,114                                 | 40.4  | 19,114                                 | 40.4  | 22,641  | 22,641           |
| 1965   | 2032            | 67:0              | 19,250                                 | 40.7  | 19,250                                 | 40.7  | 24,284  | 24,284           |
| 1970   | 2037            | 67:0              | 19,283                                 | 40.8  | 15,153                                 | 32.1  | 25,846  | 20,310           |
| 1975   | 2042            | 67:0              | 19,331                                 | 40.9  | 15,259                                 | 32.3  | 27,499  | 21,706           |
| 1980   | 2047            | 67:0              | 19,306                                 | 40.8  | 15,367                                 | 32.5  | 29,186  | 23,232           |
| 1985   | 2052            | 67:0              | 19,296                                 | 40.8  | 15,393                                 | 32.5  | 31,001  | 24,732           |
| 1990   | 2057            | 67:0              | 19,326                                 | 40.8  | 15,251                                 | 32.2  | 32,952  | 26,004           |

**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 2016 OASDI Trustees Report)*

| Year of birth <sup>c</sup>   | Year attain NRA | Age at retirement | Present-Law Scheduled Benefits         |   | Payable Benefits                       |   | Purchasing Power of Benefits in CPI-Indexed 2016 dollars <sup>b</sup> |                  |
|--|-----------------|-------------------|--|---|--|---|---|------------------|
|  |                 |                   | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Wage-indexed 2016 dollars <sup>d</sup> | Percent of career-average earnings <sup>e</sup> | Present-Law Scheduled Benefits  | Payable Benefits |
| 1995   | 2062            | 67:0              | \$19,354                               | 40.9  | \$15,050                               | 31.8  | \$34,987  | \$27,208         |
| 2000   | 2067            | 67:0              | 19,400                                 | 41.0  | 14,866                                 | 31.4  | 37,112  | 28,439           |
| 2005   | 2072            | 67:0              | 19,430                                 | 41.0  | 14,682                                 | 31.0  | 39,302  | 29,699           |
| 2010   | 2077            | 67:0              | 19,442                                 | 41.1  | 14,605                                 | 30.9  | 41,562  | 31,222           |
| 2015   | 2082            | 67:0              | 19,448                                 | 41.1  | 14,612                                 | 30.9  | 43,934  | 33,010           |
| 2020   | 2087            | 67:0              | 19,442                                 | 41.1  | 14,495                                 | 30.6  | 46,427  | 34,614           |
| <b>Scaled high earnings: (Career-average earnings for 2015 equal \$76,369<sup>f</sup>)</b>     |                 |                   |  |   |  |   |   |                  |
| 1950   | 2016            | 66:0              | 26,032                                 | 34.1  | 26,032                                 | 34.1  | 26,032  | 26,032           |
| 1951   | 2017            | 66:0              | 25,292                                 | 33.7  | 25,292                                 | 33.7  | 25,788  | 25,788           |
| 1952   | 2018            | 66:0              | 25,227                                 | 33.6  | 25,227                                 | 33.6  | 26,256  | 26,256           |
| 1953   | 2019            | 66:0              | 24,692                                 | 32.8  | 24,692                                 | 32.8  | 26,168  | 26,168           |
| 1954   | 2020            | 66:0              | 25,156                                 | 33.4  | 25,156                                 | 33.4  | 27,097  | 27,097           |
| 1955   | 2021            | 66:2              | 25,508                                 | 33.6  | 25,508                                 | 33.6  | 27,794  | 27,794           |
| 1960   | 2027            | 67:0              | 25,318                                 | 33.5  | 25,318                                 | 33.5  | 29,990  | 29,990           |
| 1965   | 2032            | 67:0              | 25,503                                 | 33.7  | 25,503                                 | 33.7  | 32,171  | 32,171           |
| 1970   | 2037            | 67:0              | 25,551                                 | 33.8  | 20,078                                 | 26.6  | 34,247  | 26,912           |
| 1975   | 2042            | 67:0              | 25,612                                 | 33.8  | 20,217                                 | 26.7  | 36,434  | 28,759           |
| 1980   | 2047            | 67:0              | 25,578                                 | 33.8  | 20,360                                 | 26.9  | 38,669  | 30,780           |
| 1985   | 2052            | 67:0              | 25,566                                 | 33.8  | 20,396                                 | 27.0  | 41,076  | 32,769           |
| 1990   | 2057            | 67:0              | 25,605                                 | 33.8  | 20,206                                 | 26.7  | 43,657  | 34,452           |
| 1995   | 2062            | 67:0              | 25,645                                 | 33.9  | 19,942                                 | 26.4  | 46,359  | 36,051           |
| 2000   | 2067            | 67:0              | 25,705                                 | 33.9  | 19,698                                 | 26.0  | 49,174  | 37,682           |
| 2005   | 2072            | 67:0              | 25,746                                 | 34.0  | 19,455                                 | 25.7  | 52,077  | 39,352           |
| 2010   | 2077            | 67:0              | 25,761                                 | 34.0  | 19,352                                 | 25.5  | 55,070  | 41,369           |
| 2015   | 2082            | 67:0              | 25,769                                 | 34.0  | 19,362                                 | 25.5  | 58,214  | 43,740           |
| 2020   | 2087            | 67:0              | 25,762                                 | 34.0  | 19,207                                 | 25.3  | 61,519  | 45,866           |
| <b>Steady maximum earnings: (Career-average earnings for 2015 equal \$116,123<sup>f</sup>)</b> |                 |                   |  |   |  |   |   |                  |
| 1950   | 2016            | 66:0              | 31,673                                 | 27.3  | 31,673                                 | 27.3  | 31,673  | 31,673           |
| 1951   | 2017            | 66:0              | 30,814                                 | 26.9  | 30,814                                 | 26.9  | 31,418  | 31,418           |
| 1952   | 2018            | 66:0              | 30,780                                 | 26.8  | 30,780                                 | 26.8  | 32,036  | 32,036           |
| 1953   | 2019            | 66:0              | 30,165                                 | 26.2  | 30,165                                 | 26.2  | 31,969  | 31,969           |
| 1954   | 2020            | 66:0              | 30,766                                 | 26.7  | 30,766                                 | 26.7  | 33,140  | 33,140           |
| 1955   | 2021            | 66:2              | 31,223                                 | 26.8  | 31,223                                 | 26.8  | 34,021  | 34,021           |
| 1960   | 2027            | 67:0              | 31,192                                 | 26.8  | 31,192                                 | 26.8  | 36,948  | 36,948           |
| 1965   | 2032            | 67:0              | 31,441                                 | 26.9  | 31,441                                 | 26.9  | 39,661  | 39,661           |
| 1970   | 2037            | 67:0              | 31,521                                 | 26.9  | 24,769                                 | 21.1  | 42,249  | 33,200           |
| 1975   | 2042            | 67:0              | 31,572                                 | 27.0  | 24,921                                 | 21.3  | 44,913  | 35,452           |
| 1980   | 2047            | 67:0              | 31,540                                 | 27.0  | 25,105                                 | 21.5  | 47,681  | 37,953           |
| 1985   | 2052            | 67:0              | 31,490                                 | 27.0  | 25,122                                 | 21.5  | 50,593  | 40,361           |
| 1990   | 2057            | 67:0              | 31,475                                 | 27.1  | 24,839                                 | 21.4  | 53,667  | 42,351           |
| 1995   | 2062            | 67:0              | 31,483                                 | 27.2  | 24,483                                 | 21.2  | 56,913  | 44,258           |
| 2000   | 2067            | 67:0              | 31,560                                 | 27.2  | 24,185                                 | 20.8  | 60,375  | 46,266           |
| 2005   | 2072            | 67:0              | 31,613                                 | 27.2  | 23,889                                 | 20.6  | 63,945  | 48,320           |
| 2010   | 2077            | 67:0              | 31,636                                 | 27.2  | 23,766                                 | 20.4  | 67,630  | 50,804           |
| 2015   | 2082            | 67:0              | 31,650                                 | 27.2  | 23,781                                 | 20.4  | 71,500  | 53,722           |
| 2020   | 2087            | 67:0              | 31,645                                 | 27.2  | 23,593                                 | 20.3  | 75,567  | 56,340           |

<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 2016.3 at [www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf) for more information.

<sup>b</sup> CPI-indexed dollar adjustment uses the adjusted CPI indexing series shown in table VI.G6 of the 2016 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 2016 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 2016. Thus, the annual earnings used for this average are wage-indexed to 2015.



**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 2016 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 |   | Benefit Amounts for Workers Retiring at NRA |  |   |  |
|----------------------------------|--------------------|--|---|--|---|---|--|---|--|
|                                  |                    | Wage-indexed 2016 dollars <sup>c</sup>     | Percent of career-average earnings <sup>d</sup> | Wage-indexed 2016 dollars <sup>c</sup>     | Percent of career-average earnings <sup>d</sup> | NRA   | Wage-indexed 2016 dollars <sup>c</sup> | Percent of career-average earnings <sup>d</sup> |  |
|                                  |                    |  |   |  |   |   |  |   |  |
| <b>Scaled very low earnings:</b> |                    |  |   |  |   |   |  |   |  |
| 1875                             | 1940               | e  | e   | \$4,933                                    | 42.0  | 65:0  | \$4,933                                | 42.0  |  |
| 1880                             | 1945               | e  | e   | 2,916                                      | 24.8  | 65:0  | 2,916                                  | 24.8  |  |
| 1885                             | 1950               | e  | e   | 4,325                                      | 36.2  | 65:0  | 4,325                                  | 36.2  |  |
| 1890                             | 1955               | e  | e   | 8,317                                      | 70.9  | 65:0  | 8,317                                  | 70.9  |  |
| 1895                             | 1960               | e  | e   | 8,238                                      | 69.7  | 65:0  | 8,238                                  | 69.7  |  |
| 1900                             | 1965               | \$6,261                                    | 53.6  | 7,992                                      | 66.3  | 65:0  | 7,992                                  | 66.3  |  |
| 1905                             | 1970               | 5,813                                      | 50.0  | 8,369                                      | 71.5  | 65:0  | 8,369                                  | 71.5  |  |
| 1910                             | 1975               | 6,707                                      | 60.0  | 9,505                                      | 83.2  | 65:0  | 9,505                                  | 83.2  |  |
| 1915                             | 1980               | 7,856                                      | 67.8  | 10,269                                     | 91.1  | 65:0  | 10,269                                 | 91.1  |  |
| 1920                             | 1985               | 7,484                                      | 64.4  | 8,923                                      | 75.8  | 65:0  | 8,923                                  | 75.8  |  |
| 1925                             | 1990               | 7,544                                      | 65.4  | 9,405                                      | 80.1  | 65:0  | 9,405                                  | 80.1  |  |
| 1930                             | 1995               | 7,498                                      | 64.3  | 9,468                                      | 80.2  | 65:0  | 9,468                                  | 80.2  |  |
| 1935                             | 2000               | 7,363                                      | 63.5  | 8,365                                      | 71.9  | 65:0  | 8,365                                  | 71.9  |  |
| 1940                             | 2005               | 7,651                                      | 63.0  | 9,171                                      | 77.4  | 65:6  | 9,682                                  | 80.3  |  |
| 1945                             | 2010               | 7,016                                      | 59.8  | 9,166                                      | 76.4  | 66:0  | 9,547                                  | 80.2  |  |
| <b>Scaled low earnings:</b>      |                    |  |   |  |   |   |  |   |  |
| 1875                             | 1940               | e  | e   | 6,084                                      | 28.9  | 65:0  | 6,084                                  | 28.9  |  |
| 1880                             | 1945               | e  | e   | 5,298                                      | 25.0  | 65:0  | 5,298                                  | 25.0  |  |
| 1885                             | 1950               | e  | e   | 6,874                                      | 31.9  | 65:0  | 6,874                                  | 31.9  |  |
| 1890                             | 1955               | e  | e   | 10,638                                     | 50.4  | 65:0  | 10,638                                 | 50.4  |  |
| 1895                             | 1960               | e  | e   | 9,856                                      | 46.3  | 65:0  | 9,856                                  | 46.3  |  |
| 1900                             | 1965               | 7,578                                      | 36.1  | 9,479                                      | 43.7  | 65:0  | 9,479                                  | 43.7  |  |
| 1905                             | 1970               | 7,076                                      | 33.8  | 9,957                                      | 47.3  | 65:0  | 9,957                                  | 47.3  |  |
| 1910                             | 1975               | 8,318                                      | 41.4  | 12,293                                     | 59.8  | 65:0  | 12,293                                 | 59.8  |  |
| 1915                             | 1980               | 10,076                                     | 48.4  | 13,382                                     | 66.0  | 65:0  | 13,382                                 | 66.0  |  |
| 1920                             | 1985               | 10,878                                     | 52.0  | 12,962                                     | 61.1  | 65:0  | 12,962                                 | 61.1  |  |
| 1925                             | 1990               | 9,919                                      | 47.8  | 12,334                                     | 58.4  | 65:0  | 12,334                                 | 58.4  |  |
| 1930                             | 1995               | 9,843                                      | 46.9  | 12,409                                     | 58.4  | 65:0  | 12,409                                 | 58.4  |  |
| 1935                             | 2000               | 9,645                                      | 46.2  | 10,956                                     | 52.3  | 65:0  | 10,956                                 | 52.3  |  |
| 1940                             | 2005               | 10,010                                     | 45.8  | 11,989                                     | 56.2  | 65:6  | 12,667                                 | 58.3  |  |
| 1945                             | 2010               | 9,179                                      | 43.4  | 11,995                                     | 55.5  | 66:0  | 12,491                                 | 58.3  |  |
| <b>Scaled medium earnings:</b>   |                    |  |   |  |   |   |  |   |  |
| 1875                             | 1940               | e  | e   | 11,057                                     | 23.6  | 65:0  | 11,057                                 | 23.6  |  |
| 1880                             | 1945               | e  | e   | 7,655                                      | 16.3  | 65:0  | 7,655                                  | 16.3  |  |
| 1885                             | 1950               | e  | e   | 9,037                                      | 18.9  | 65:0  | 9,037                                  | 18.9  |  |
| 1890                             | 1955               | e  | e   | 13,763                                     | 29.3  | 65:0  | 13,763                                 | 29.3  |  |
| 1895                             | 1960               | e  | e   | 13,680                                     | 28.9  | 65:0  | 13,680                                 | 28.9  |  |
| 1900                             | 1965               | 11,321                                     | 24.2  | 13,960                                     | 28.9  | 65:0  | 13,960                                 | 28.9  |  |
| 1905                             | 1970               | 10,854                                     | 23.3  | 15,111                                     | 32.3  | 65:0  | 15,111                                 | 32.3  |  |
| 1910                             | 1975               | 13,179                                     | 29.5  | 18,685                                     | 40.9  | 65:0  | 18,685                                 | 40.9  |  |
| 1915                             | 1980               | 16,289                                     | 35.3  | 22,038                                     | 49.1  | 65:0  | 22,038                                 | 49.1  |  |
| 1920                             | 1985               | 16,347                                     | 35.3  | 19,497                                     | 41.5  | 65:0  | 19,497                                 | 41.5  |  |
| 1925                             | 1990               | 16,405                                     | 35.6  | 20,414                                     | 43.5  | 65:0  | 20,414                                 | 43.5  |  |
| 1930                             | 1995               | 16,179                                     | 34.7  | 20,421                                     | 43.2  | 65:0  | 20,421                                 | 43.2  |  |
| 1935                             | 2000               | 15,888                                     | 34.3  | 18,055                                     | 38.8  | 65:0  | 18,055                                 | 38.8  |  |
| 1940                             | 2005               | 16,505                                     | 34.0  | 19,767                                     | 41.7  | 65:6  | 20,868                                 | 43.2  |  |
| 1945                             | 2010               | 15,114                                     | 32.2  | 19,760                                     | 41.2  | 66:0  | 20,593                                 | 43.2  |  |
| <b>Scaled high earnings:</b>     |                    |  |   |  |   |   |  |   |  |
| 1875                             | 1940               | e  | e   | 13,154                                     | 17.5  | 65:0  | 13,154                                 | 17.5  |  |
| 1880                             | 1945               | e  | e   | 9,429                                      | 12.5  | 65:0  | 9,429                                  | 12.5  |  |
| 1885                             | 1950               | e  | e   | 10,987                                     | 14.3  | 65:0  | 10,987                                 | 14.3  |  |
| 1890                             | 1955               | e  | e   | 17,587                                     | 24.0  | 65:0  | 17,587                                 | 24.0  |  |
| 1895                             | 1960               | e  | e   | 17,211                                     | 24.6  | 65:0  | 17,211                                 | 24.6  |  |
| 1900                             | 1965               | 12,854                                     | 19.6  | 16,659                                     | 24.7  | 65:0  | 16,659                                 | 24.7  |  |
| 1905                             | 1970               | 11,919                                     | 19.4  | 17,588                                     | 28.3  | 65:0  | 17,588                                 | 28.3  |  |
| 1910                             | 1975               | 14,729                                     | 25.9  | 21,798                                     | 37.2  | 65:0  | 21,798                                 | 37.2  |  |
| 1915                             | 1980               | 19,132                                     | 33.1  | 27,270                                     | 48.1  | 65:0  | 27,270                                 | 48.1  |  |
| 1920                             | 1985               | 19,569                                     | 32.8  | 23,573                                     | 38.7  | 65:0  | 23,573                                 | 38.7  |  |

**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 2016 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 2016 dollars <sup>c</sup>     | Percent of career-average earnings <sup>d</sup> | Wage-indexed 2016 dollars <sup>c</sup>     | Percent of career-average earnings <sup>d</sup> |      | Wage-indexed 2016 dollars <sup>c</sup>      | Percent of career-average earnings <sup>d</sup> |
| 1925                            | 1990               | \$20,223                                   | 32.5  | \$25,285                                   | 39.7  | 65:0 | \$25,285                                    | 39.7  |
| 1930                            | 1995               | 20,535                                     | 30.8  | 26,014                                     | 38.3  | 65:0 | 26,014                                      | 38.3  |
| 1935                            | 2000               | 20,604                                     | 29.4  | 23,478                                     | 33.2  | 65:0 | 23,478                                      | 33.2  |
| 1940                            | 2005               | 21,794                                     | 28.4  | 26,090                                     | 34.8  | 65:6 | 27,548                                      | 36.1  |
| 1945                            | 2010               | 20,054                                     | 26.7  | 26,196                                     | 34.1  | 66:0 | 27,291                                      | 35.8  |
| <b>Steady maximum earnings:</b> |                    |  |   |  |   |      |   |   |
| 1875                            | 1940               | e  | e   | 20,306                                     | 16.4  | 65:0 | 20,306                                      | 16.4  |
| 1880                            | 1945               | e  | e   | 12,588                                     | 10.1  | 65:0 | 12,588                                      | 10.1  |
| 1885                            | 1950               | e  | e   | 12,281                                     | 9.7   | 65:0 | 12,281                                      | 9.7   |
| 1890                            | 1955               | e  | e   | 17,587                                     | 15.0  | 65:0 | 17,587                                      | 15.0  |
| 1895                            | 1960               | e  | e   | 17,505                                     | 16.1  | 65:0 | 17,505                                      | 16.1  |
| 1900                            | 1965               | 12,854                                     | 13.1  | 16,659                                     | 16.5  | 65:0 | 16,659                                      | 16.5  |
| 1905                            | 1970               | 11,919                                     | 13.5  | 18,088                                     | 20.3  | 65:0 | 18,088                                      | 20.3  |
| 1910                            | 1975               | 14,729                                     | 19.4  | 22,612                                     | 28.7  | 65:0 | 22,612                                      | 28.7  |
| 1915                            | 1980               | 19,916                                     | 27.9  | 29,194                                     | 40.6  | 65:0 | 29,194                                      | 40.6  |
| 1920                            | 1985               | 20,090                                     | 29.9  | 25,188                                     | 34.7  | 65:0 | 25,188                                      | 34.7  |
| 1925                            | 1990               | 21,249                                     | 30.0  | 27,453                                     | 35.7  | 65:0 | 27,453                                      | 35.7  |
| 1930                            | 1995               | 22,002                                     | 27.8  | 28,669                                     | 33.5  | 65:0 | 28,669                                      | 33.5  |
| 1935                            | 2000               | 22,585                                     | 25.9  | 26,383                                     | 28.6  | 65:0 | 26,383                                      | 28.6  |
| 1940                            | 2005               | 24,403                                     | 24.5  | 29,996                                     | 29.3  | 65:6 | 31,669                                      | 30.2  |
| 1945                            | 2010               | 23,225                                     | 22.2  | 30,991                                     | 28.0  | 66:0 | 32,546                                      | 29.3  |

<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 2016.3 at [www.ssa.gov/OACT/NOTES/ran3/an2016-3.pdf](http://www.ssa.gov/OACT/NOTES/ran3/an2016-3.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 2016 OASDI Trustees Report.

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

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