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SCALED FACTORS FOR HYPOTHETICAL EARNINGS EXAMPLES UNDER THE 2014 TRUSTEES REPORT ASSUMPTIONS

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1. Introduction

The Office of the Chief Actuary (OCACT) has traditionally used hypothetical earnings histories to illustrate a range of benefit levels, replacement rates, money's worth measures, and internal rates of return under the Social Security program. OCACT has long used these illustrations to evaluate the program under present law. In addition, in recent years, these hypothetical earnings histories have formed the basis for illustrating possible program changes on benefit levels.[1]

OCACT developed four *scaled worker* hypothetical earnings patterns starting in 2001. These patterns express the hypothetical earnings at each age as a percent of the Social Security Administration's national average wage index (AWI)[2]. Each of the four scaled patterns derives from one set of raw scaled factors based on average work and earnings of actual insured workers over their careers. At each age, the raw scaled factor reflects both the average earnings level of those who worked at that age and the percent of insured workers who actually worked at that age.

This note presents the four sets of scaled worker factors recently updated for the hypothetical very low, low, medium, and high lifetime earnings examples used in table V.C7 of the 2014 Trustees Report. Table 6 shows these final scaled factors. In other office publications, OCACT also includes a final hypothetical "maximum" earner with earnings equal to the OASDI maximum taxable earnings level for each year, in order to provide a fuller range of career taxable earnings levels under the Social Security program.

Prior to the development of *scaled factors*, OCACT generally used hypothetical *steady workers,* who earn a constant percentage of the AWI each year throughout their careers. These hypothetical steady earnings patterns tended to over-represent the proportion of actual lifetime earnings received at younger and older ages, and under-represent the proportion received at prime working ages for most workers.

In developing these four sets of scaled factors, we initially developed one set of *raw scaled factors* using earnings from the Continuous Work History Sample (CWHS). We made a preliminary adjustment to these raw factors for ages 62 and over to account for the select nature of these workers who continue working at such ages. Then, these *preliminary adjusted scaled factors* are further adjusted so that the resulting *career-average earnings levels*[3] are 25 percent, 45 percent, 100 percent, and 160 percent of the AWI for the very low, low, medium, and high hypothetical workers, respectively. We selected these career-average earnings levels in order to provide both a useful range of examples and continuity with previous estimates for hypothetical workers.

Table 1 compares overall earnings for these hypothetical workers to those of actual retiring workers. We use the Average Indexed Monthly Earnings[4] (AIME), which is based on a worker's earnings, as a measure of overall earnings. We develop the distribution of actual workers retiring in 2013, from a 1 percent sample of Social Security administrative records.

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[1] Refer to the February 2, 2011 letter from Stephen C. Goss for an example of this illustrative benefits analysis. This letter is located at: http://www.socialsecurity.gov/OACT/solvency/BowlesSimpsonRivlinDomenici_20110202.pdf

[2] For more information on the national average wage index, including historical values, see: http://www.socialsecurity.gov/OACT/COLA/AWI.html.

[3] We define *career-average earnings* as the average of the highest 35 years of earnings, indexed for growth in average wages to the year prior to benefit entitlement. See further discussion under subsection 3.b. We introduced this revision with the 2003 Trustees Report.

[4] See http://www.socialsecurity.gov/OACT/COLA/Benefits.html#aime for more details on how to calculate the AIME.

Table 1.—Distribution of AIMEs of Actual Workers Retiring in 2013, Relative to AIMEs for Hypothetical Workers Retiring in 2013

Hypothetical worker[1] (Career-average earnings)[2]		Percent with AIME less than AIME for hypothetical case			Percent with AIME closest to AIME for hypothetical case[3]		
		All males	All females	Total, all workers	All males	All females	Total, all workers
Very Low	($11,070)	6.9	16.3	11.5	11.2	25.5	18.1
Low	($19,926)	15.0	34.0	24.2	15.1	29.5	22.1
Medium	($44,280)	39.1	72.9	55.5	28.9	31.3	30.1
High	($70,848)	69.9	93.5	81.4	29.5	11.8	20.9
Maximum	($105,575)	100.0	100.0	100.0	15.3	1.9	8.8

[1] See text for definition of hypothetical workers.

[2] Career-average earnings of hypothetical scaled workers retiring at age 62 in 2013. Earnings are wage indexed to 2012 in this calculation.

[3] Rounded values do not necessarily sum to 100 percent. The percentage of workers with AIME values closest to that of the hypothetical maximum worker is expected to decline in future years.This is due to a significant increase in the OASDI maximum taxable earnings, relative to the AWI, in 1981 and a smaller increase in 1990.

Note: Worker distributions include individuals who are dually entitled, or may become dually entitled to a higher benefit in the future, based on another worker's account. A significant proportion of entitled female workers, especially those with lower earnings, will receive higher benefits as aged spouse or aged widow beneficiaries. If such dually entitled workers were excluded from this analysis the distributions would skew more toward the higher-level hypothetical workers.

Table 1 shows that 34.0 percent of female workers retiring in 2013 have AIMEs below that of a hypothetical low wage scaled worker and that about 40 percent of all workers retiring in 2013 have AIMEs closest to that of hypothetical low or very low wage scaled workers. OCACT first included the level of earnings corresponding to the very low scaled factors in 2004 and chose this level of earnings so that approximately half the retirees who were previously best-represented by the hypothetical low scaled worker would now be best-represented by the hypothetical very low scaled worker.

Dually entitled workers, though still insured for worker benefits, receive a larger benefit as a dependent on another worker's account (generally as a spouse or widow(er)) than they would as a worker beneficiary only. A significant proportion of entitled female workers, especially those with lower earnings, will receive higher benefits as aged spouse or aged widow beneficiaries. If we excluded such dually entitled workers from this analysis, a higher percentage of the remaining workers would have earnings closer to the higher-level hypothetical workers.

2. Developing Raw Scaled Factors from Earnings in the CWHS

Development of the raw scaled factors occurs in three steps:

a. Select workers in the CWHS for computing the factors;

b. Tabulate the earnings for these workers; and

c. Develop the raw scaled factors from the tabulated earnings.

a. Select Workers in the CWHS for Computing the Factors

The CWHS is a 1-percent sample of workers with some OASDI taxable earnings during their lifetime. The Office of Systems updates it annually based on specifications from the Office of Research, Evaluation, and Statistics. We develop the factors in this actuarial note using the CWHS containing earnings data through 2011. The CWHS contains earnings for all the workers in the sample. It is important to limit analysis only to workers who are likely either to be eligible for retirement or disability benefits, or to have dependents eligible for survivors benefits. To include only those workers, we used the status of *fully insured*. A worker is considered fully insured if he or she has a total number of quarters of coverage (QCs)[5] at least equal to the number of years after attainment of age 21 through the last year considered in the analysis (in this case 2010). A further requirement is that the worker must have a minimum of 6 QCs. Since a worker achieves *permanent insured* status with 40 QCs, any worker with 40 QCs is fully insured no matter how many years have elapsed since age 21. Any *fully insured* worker is likely to become eligible for a Social Security retirement benefit if he or she survives to eligibility age.

[5] The QC is the basic unit for determining whether a worker is insured for Social Security benefits. In 2014, for example, a worker needed to have $1,200 in covered earnings to obtain a QC. Workers can earn up to 4 QCs per calendar year. Since 1978 the amount of covered earnings required to obtain a QC has been automatically indexed each year with the growth in SSA's national average wage index. See: http://www.socialsecurity.gov/OACT/COLA/QC.html for more information, including a list of historical QC amounts.

b. Tabulate Earnings for These Workers

The updated CWHS file contains taxable earnings for years 1951 through 2011. Due to posting delays, the earnings for 2011 in this file are less complete than for earlier years and were not used in our analysis. For each of the workers classified as fully insured as of 2010 (based on all earnings after 1950), our analysis includes earnings for the most recent 20-year period (1991 through 2010) for ages 21 and over. We classify earnings by age of worker, and express earnings as their ratio to the AWI for the specific year.

OCACT developed scaled factors taking into account both the variations in earnings by age and the probabilities that workers may have years with zero earnings. The earnings records selected include years with zero earnings, but not years in which the worker was deceased[6] or receiving a retired worker or disabled worker Social Security benefit.

c. Develop Raw Scaled Factors from the Tabulated Earnings

To normalize earnings from different years, annual earnings amounts for each year are divided by the AWI for that year. For each fully insured worker, normalized earnings are tabulated by age for each age 21 and over for years 1991-2010, as described in the preceding paragraph. The normalized earnings are summed by age and a corresponding worker count is kept. The raw scaled factors are determined by dividing the tabulated sum for each age, including years at zero earnings, by the corresponding numbers of workers. Table 2 displays the results.

[6] Data concerning worker deaths appears in the CWHS. However, death data in the CWHS does not include all state-reported death data. Therefore, we also used Social Security's NUMIDENT file to identify deaths of individuals in the CWHS. The NUMIDENT file contains, among other things, death data including state-reported deaths.

Table 2.—Raw Scaled Worker Factors for the 2014 Trustees Report

Age	Percent with Earnings	Average earnings as % of AWI for those with earnings	Factor
21	0.842	0.315	0.265
22	0.847	0.375	0.318
23	0.851	0.464	0.395
24	0.852	0.547	0.466
25	0.852	0.614	0.523
26	0.851	0.673	0.573
27	0.851	0.726	0.618
28	0.852	0.772	0.658
29	0.851	0.813	0.692
30	0.850	0.849	0.722
31	0.849	0.881	0.748
32	0.848	0.909	0.771
33	0.848	0.932	0.790
34	0.848	0.952	0.807
35	0.848	0.971	0.823
36	0.849	0.985	0.836
37	0.849	1.000	0.849
38	0.850	1.012	0.860
39	0.851	1.022	0.870
40	0.851	1.033	0.879
41	0.851	1.043	0.888
42	0.851	1.053	0.896
43	0.851	1.061	0.903
44	0.850	1.071	0.910
45	0.849	1.079	0.916
46	0.847	1.087	0.921
47	0.845	1.093	0.924
48	0.842	1.099	0.925
49	0.839	1.103	0.925
50	0.836	1.104	0.923
51	0.831	1.106	0.919
52	0.826	1.103	0.911
53	0.820	1.099	0.901
54	0.813	1.095	0.890
55	0.805	1.084	0.873
56	0.795	1.064	0.846
57	0.782	1.047	0.819
58	0.769	1.027	0.790
59	0.753	1.007	0.758
60	0.733	0.980	0.718
61	0.706	0.949	0.670
62	0.771	1.099	0.847
63	0.767	1.136	0.871
64	0.748	1.139	0.852

3. Adjust Raw Scaled Factors to Match Selected Career-Average Earnings Levels

Adjustment of the raw scaled factors occurs in three steps:

a. Calculate preliminary adjusted scaled factors from the raw scaled factors by overriding the scaled factors at ages 62-64;

b. Construct the earnings pattern and calculate the career-average earnings for a hypothetical scaled worker using the preliminary adjusted scaled factors; and

c. Calculate very low, low, medium, and high *final scaled factors* from the preliminary adjusted scaled factors such that the career-average earnings for these hypothetical workers match the selected percentages of the AWI in the year prior to entitlement (25, 45, 100 and 160 percent).

a. Calculate Preliminary Adjusted Scaled Factors from Raw Scaled Factors

The following values, based on table 2, show that there is an accelerating decline in raw factors at ages 60 and 61, followed by increases at ages 62 and 63:

Age	Raw Scaled Factor	Difference
55	0.873	---
56	0.846	-0.027
57	0.819	-0.027
58	0.790	-0.029
59	0.758	-0.032
60	0.718	-0.040
61	0.670	-0.048
62	0.847	+0.177
63	0.871	+0.024
64	0.852	-0.019

We do not have definitive information on the reasons for these changes after age 59. However, it seems reasonable to assume that some of the decline in the raw factors at ages 60 and 61 is due to the retirement (total or partial) of some workers before they became entitled to their OASDI retirement benefits at age 62. The increases in the raw factors at ages 62 and 63 may well occur because healthier, higher-wage workers, and workers who have maintained consistent employment at older ages, are more likely to delay entitlement to OASDI benefits until after age 62. Our methodology removed the earnings of many non-workers, low-wage workers, or less-healthy workers from the tabulated group starting at age 62 because they started to receive Social Security retirement benefits.

Due to the differences between the groups of workers represented in data for ages just-before versus just-after reaching age 62, we develop a smoother set of “adjusted” raw factors for ages 62-64. Here we assume that earnings for workers over age 61 will stay constant in nominal dollars, thus decreasing relative to the AWI.

The preliminary adjusted scaled factors equal the raw scaled factors for ages up to 61. Table 3 calculates factors for ages 62 and over so that earnings in nominal dollars stay constant at the level for age 61. For example, we calculate the preliminary adjusted factor for age 62 by dividing the factor for age 61 by the *ultimate* assumed annual increase in average wages under the intermediate assumptions of the 2014 Trustees Report. Table 3 shows the calculation of the preliminary adjusted scaled factors for ages 62-64.

Though it provides an imperfect approximation for all types of workers, we adopted this approach in order to avoid having different scaled factors for workers who become entitled to OASDI benefits at different ages.

Table 3.—Scaled Factor Adjustments Made for Ages After 61

Age	61	62	63	64
Raw scaled factor	0.670	0.847	0.871	0.852
Ultimate AWI increase since age 61, based on 2014 Trustees Report, Intermediate Assumptions	1.000	1.0383	$(1.0383)^2$	$(1.0383)^3$
Preliminary adjusted scaled factor (age 61 raw scaled factor) / (Ultimate AWI increase)	0.670	0.645	0.621	0.599

b. *Construct the Earnings Pattern and Calculate the Career-Average Earnings for a Selected Hypothetical Scaled Worker Using the Preliminary Adjusted Scaled Factors*

The selected hypothetical scaled worker (referred to as the *1960-born preliminary scaled worker*) was born on January 2, 1960, has earnings from age 21 through 64, and retires at age 65. We calculate earnings for each year by multiplying the preliminary adjusted scaled factor for that age by the AWI value for the corresponding year. This worker turns age 22 in 1982, so the age 22 preliminary adjusted factor of 0.318 is multiplied by the 1982 AWI of $14,531.34 to obtain annual earnings of $4,620.97. Table 4 shows the preliminary adjusted scaled factors, AWI amounts, and corresponding hypothetical earnings for the 1960-born preliminary scaled worker.

The last line of table 4 shows career-average earnings of $59,820 (wage indexed to 2024) for the 1960-born preliminary scaled worker. This is a slightly different calculation than the AIME because (1) earnings are indexed to the year prior to entitlement rather than to two years prior to eligibility, and (2) earnings are averaged on an annual basis instead of a monthly one. For the 1960-born preliminary scaled worker, who retires at age 65 in 2025, the indexing year used to compute career-average earnings is 2024.

Table 4.—Computation of the Earnings Record and the Career-Average Earnings for the 1960-Born Preliminary Scaled Worker Based on the Preliminary Adjusted Scaled Factors and the AWI Series

Year	Age	Preliminary adjusted scaled factors (1)	AWI for current year (2)	Estimated earnings for current year (1)*(2) (3)	Earnings wage indexed to 2024 (4)
1981	21	0.265	$13,773.10	$3,649.87	$19,016.55
1982	22	0.318	14,531.34	4,620.97	22,819.89
1983	23	0.395	15,239.24	6,019.50	28,345.44
1984	24	0.466	16,135.07	7,518.94	33,440.43
1985	25	0.523	16,822.51	8,798.17	37,530.78
1986	26	0.573	17,321.82	9,925.40	41,118.81
1987	27	0.618	18,426.51	11,387.58	44,348.04
1988	28	0.658	19,334.04	12,721.80	47,218.48
1989	29	0.692	20,099.55	13,908.89	49,658.34
1990	30	0.722	21,027.98	15,182.20	51,811.15
1991	31	0.748	21,811.60	16,315.08	53,676.94
1992	32	0.771	22,935.42	17,683.21	55,327.43
1993	33	0.790	23,132.67	18,274.81	56,690.88
1994	34	0.807	23,753.53	19,169.10	57,910.81
1995	35	0.823	24,705.66	20,332.76	59,058.98
1996	36	0.836	25,913.90	21,664.02	59,991.86
1997	37	0.849	27,426.00	23,284.67	60,924.74
1998	38	0.860	28,861.44	24,820.84	61,714.12
1999	39	0.870	30,469.84	26,508.76	62,431.72
2000	40	0.879	32,154.82	28,264.09	63,077.57
2001	41	0.888	32,921.92	29,234.66	63,723.40
2002	42	0.896	33,252.09	29,793.87	64,297.49
2003	43	0.903	34,064.95	30,760.65	64,799.82
2004	44	0.910	35,648.55	32,440.18	65,302.14
2005	45	0.916	36,952.94	33,848.89	65,732.70
2006	46	0.921	38,651.41	35,597.95	66,091.52
2007	47	0.924	40,405.48	37,334.66	66,306.79
2008	48	0.925	41,334.97	38,234.85	66,378.56
2009	49	0.925	40,711.61	37,658.24	66,378.56
2010	50	0.923	41,673.83	38,464.95	66,235.04
2011	51	0.919	42,979.61	39,498.26	65,947.99
2012	52	0.911	44,321.67	40,377.04	65,373.90
2013	53	0.901	45,128.76	40,661.01	64,656.30
2014	54	0.890	46,786.77	41,640.23	63,866.94
2015	55	0.873	49,058.50	42,828.07	62,647.00
2016	56	0.846	51,505.89	43,573.98	60,709.46
2017	57	0.819	54,052.13	44,268.69	58,771.93
2018	58	0.790	56,590.98	44,706.87	56,690.87
2019	59	0.758	59,018.85	44,736.29	54,394.54
2020	60	0.718	61,453.22	44,123.41	51,524.11
2021	61	0.670	63,979.68	42,866.39	48,079.61
2022	62	0.645	66,556.71	42,948.08	46,306.07
2023	63	0.621	69,129.06	42,962.52	44,597.98
2024	64	0.599	71,760.60	42,952.88	42,952.88
Career-Average Earnings					$59,820.00

Note: We base career-average earnings on the highest 35 years of indexed earnings (column 4). Years 1981-87 and 2023-2024 are excluded because they are not among the highest 35 years of indexed earnings.

c. *Calculate Very Low, Low, Medium, and High Final Scaled Factors from the Preliminary Adjusted Scaled Factors such that Selected Hypothetical Scaled Workers with Earnings Based on These Factors Would Have Career-Average Earnings Equal to Selected Percentages of the AWI in the Year Prior to Entitlement*

The selected career-average earnings level for the medium scaled worker is the AWI in the year prior to entitlement. Similarly, the selected career-average earnings levels for the very low, low, and high scaled workers are 25 percent, 45 percent and 160 percent of the AWI in the year prior to entitlement, respectively. As noted earlier, the career-average earnings for the 1960-born preliminary scaled worker equals $59,820, wage indexed to 2024 (see table 4). By comparison, the average wage index for 2024 is $71,760.60[7]. Corresponding career-average earnings levels for a very low, low, and high earner are $17,940, $32,292, and $114,817, respectively. Table 5 summarizes this information, and provides the ratio of the selected career-average earnings levels to the career-average earnings for the 1960-born preliminary scaled worker.

Two primary reasons for choosing the year prior to entitlement as the indexing year in computing the career-average earnings are:

- To maintain consistency with prior hypothetical steady workers[8] while simplifying calculations, and
- To make the calculation of the hypothetical scaled worker factors independent of the prior hypothetical steady worker calculation.

Furthermore, career-average earnings provide a reasonable denominator for replacement rate calculations that allow hypothetical scaled worker replacement rates to maintain consistency with the prior hypothetical steady worker replacement rates.

[7] The projected AWI value for 2024 appears in the 2014 Trustees Report. See http://www.socialsecurity.gov/OACT/TR/2014/lr6f6.html.

[8] Prior to 2001, the hypothetical workers used were all "steady" workers. Today, we retain only the "steady maximum" worker. "Steady" workers were assumed to work beginning at age 22 until retirement, death, or disability, and to have a steady amount of earnings relative to the AWI each year. For example, the "steady average" worker earns the AWI for every working year. Similarly, the "steady low" worker earns 45 percent of the AWI for every working year, and the "steady high" worker earns 160 percent of the AWI for every working year.

Table 5.—Table of Key Ratios Used to Finalize Scaled Worker Calculations

Case	Selected career-average earnings levels for hypothetical scaled workers (1)	Career-average earnings of the 1960-born preliminary selected scaled worker (2)	Ratio (1) / (2) (3)
Very low earner	$17,940	$59,820	0.300
Low earner.	32,292	59,820	0.540
Medium earner.	71,761	59,820	1.200
High earner	114,817	59,820	1.919

The last step is to apply the ratios from table 5 to the preliminary adjusted scaled factors. This step requires four separate calculations, one each for the very low, low, medium, and high scaled worker cases. For example, we determine the scaled factors for the hypothetical medium scaled worker by multiplying:

- The preliminary adjusted scaled factors for ages 21 through 64, by
- The ratio of 1.200 shown in tables 5 and 6.

Table 6 shows the calculation of the final scaled factors, combining the preliminary adjusted scaled factors with the adjustment factors.

Table 6.—Calculation of Final Scaled Factors

Adjustment factors...		Final Scaled Factors by Earnings level: Very low	Low	Medium	High
Age	Preliminary adjusted scaled factors	0.300	0.540	1.200	1.919
21	0.265	0.079	0.143	0.318	0.509
22	0.318	0.095	0.172	0.381	0.610
23	0.395	0.118	0.213	0.474	0.758
24	0.466	0.140	0.252	0.559	0.894
25	0.523	0.157	0.282	0.627	1.004
26	0.573	0.172	0.309	0.687	1.100
27	0.618	0.185	0.334	0.741	1.186
28	0.658	0.197	0.355	0.789	1.263
29	0.692	0.208	0.374	0.830	1.328
30	0.722	0.217	0.390	0.866	1.386
31	0.748	0.224	0.404	0.897	1.436
32	0.771	0.231	0.416	0.925	1.480
33	0.790	0.237	0.426	0.948	1.516
34	0.807	0.242	0.436	0.968	1.549
35	0.823	0.247	0.444	0.987	1.580
36	0.836	0.251	0.451	1.003	1.605
37	0.849	0.255	0.458	1.018	1.630
38	0.860	0.258	0.464	1.032	1.651
39	0.870	0.261	0.470	1.044	1.670
40	0.879	0.264	0.475	1.054	1.687
41	0.888	0.266	0.479	1.065	1.704
42	0.896	0.269	0.484	1.075	1.720
43	0.903	0.271	0.487	1.083	1.733
44	0.910	0.273	0.491	1.092	1.747
45	0.916	0.275	0.494	1.099	1.758
46	0.921	0.276	0.497	1.105	1.768
47	0.924	0.277	0.499	1.108	1.774

Table 6.—Calculation of Final Scaled Factors (Cont.)

Adjustment factors		Final Scaled Factors by Earnings level: Very low	Low	Medium	High
Age	Preliminary adjusted scaled factors	0.300	0.540	1.200	1.919
48	0.925	0.277	0.499	1.110	1.775
49	0.925	0.277	0.499	1.110	1.775
50	0.923	0.277	0.498	1.107	1.772
51	0.919	0.276	0.496	1.102	1.764
52	0.911	0.273	0.492	1.093	1.749
53	0.901	0.270	0.486	1.081	1.729
54	0.890	0.267	0.480	1.068	1.708
55	0.873	0.262	0.471	1.047	1.676
56	0.846	0.254	0.457	1.015	1.624
57	0.819	0.246	0.442	0.982	1.572
58	0.790	0.237	0.426	0.948	1.516
59	0.758	0.227	0.409	0.909	1.455
60	0.718	0.215	0.388	0.861	1.378
61	0.670	0.201	0.362	0.804	1.286
62	0.645	0.194	0.348	0.774	1.239
63	0.621	0.186	0.335	0.746	1.193
64	0.599	0.180	0.323	0.718	1.149

4. Developing Hypothetical Worker Earnings from Factors

Given a year of birth, and an earnings level for scaled workers, classified as either very low, low, medium, or high, one can obtain annual earnings by multiplying the relevant set of scaled factors by the AWIs in the corresponding years. Consider as an example a low earnings worker born in 1970. To determine earnings for this worker at age 22, multiply the scaled factor for the low scaled worker at age 22 by the AWI in 1992, the year in which the worker turns 22. Because the hypothetical workers are born in January, a year of age corresponds to a calendar year. Therefore, a worker born on January 2, 1970 would be age 22 throughout 1992. In this way, one can develop a series of very low, low, medium, and high scaled earnings for any age and hypothetical year of birth. Table 7 carries out the calculation of hypothetical scaled worker earnings for high earnings workers for the selected years of birth 1930, 1949, and 1997.

Table 7.—Example: Developing Earnings for the Hypothetical High Earners Born in 1930, 1949, and 1997

Year of birth		1930		1949		1997	
Age	Final scaled factors for high earner (1)	AWI (2)	Age-scaled earnings (1)*(2) (3)	AWI (4)	Age-scaled earnings (1)*(4) (5)	AWI (6)	Age-scaled earnings (1)*(6) (7)
21	0.509	$2,799.16	$1,423.75	$6,186.24	$3,146.53	$56,590.98	$28,784.10
22	0.610	2,973.32	1,814.80	6,497.08	3,965.56	59,018.85	36,022.80
23	0.758	3,139.44	2,380.18	7,133.80	5,408.51	61,453.22	46,590.93
24	0.894	3,155.64	2,822.49	7,580.16	6,779.91	63,979.68	57,225.24
25	1.004	3,301.44	3,314.09	8,030.76	8,061.54	66,556.71	66,811.80
26	1.100	3,532.36	3,884.89	8,630.92	9,492.30	69,129.06	76,028.24
27	1.186	3,641.72	4,319.71	9,226.48	10,944.20	71,760.60	85,120.50
28	1.263	3,673.80	4,639.82	9,779.44	12,350.93	74,502.16	94,092.37
29	1.328	3,855.80	5,121.30	10,556.03	14,020.59	77,383.47	102,781.26
30	1.386	4,007.12	5,553.02	11,479.46	15,908.10	80,428.66	111,457.08
31	1.436	4,086.76	5,867.33	12,513.46	17,965.47	83,613.75	120,043.58
32	1.480	4,291.40	6,350.57	13,773.10	20,381.95	86,918.83	128,625.74
33	1.516	4,396.64	6,666.65	14,531.34	22,033.95	90,348.80	136,996.39
34	1.549	4,576.32	7,088.42	15,239.24	23,604.59	93,907.46	145,456.54
35	1.580	4,658.72	7,359.12	16,135.07	25,487.68	97,596.75	154,168.21
36	1.605	4,938.36	7,924.08	16,822.51	26,993.35	101,423.66	162,744.08
37	1.630	5,213.44	8,495.55	17,321.82	28,226.75	105,379.44	171,720.92
38	1.651	5,571.76	9,197.09	18,426.51	30,415.94	109,478.18	180,711.44
39	1.670	5,893.76	9,841.73	19,334.04	32,285.05	113,710.44	189,880.00
40	1.687	6,186.24	10,436.99	20,099.55	33,910.55	118,098.97	199,248.30
41	1.704	6,497.08	11,073.65	21,027.98	35,840.18	122,662.37	209,066.26
42	1.720	7,133.80	12,268.42	21,811.60	37,510.70	127,395.59	219,089.74
43	1.733	7,580.16	13,137.89	22,935.42	39,751.55	132,306.97	229,313.76
44	1.747	8,030.76	14,026.77	23,132.67	40,404.23	137,403.78	239,993.63
45	1.758	8,630.92	15,174.42	23,753.53	41,762.19	142,690.86	250,871.46
46	1.768	9,226.48	16,310.05	24,705.66	43,673.27	148,172.68	261,931.30
47	1.774	9,779.44	17,343.85	25,913.90	45,958.35	153,841.97	272,838.99
48	1.775	10,556.03	18,741.40	27,426.00	48,692.70	159,710.83	283,553.97
49	1.775	11,479.46	20,380.88	28,861.44	51,241.21	165,795.47	294,356.77
50	1.772	12,513.46	22,168.62	30,469.84	53,979.83	172,112.36	304,911.21
51	1.764	13,773.10	24,294.44	32,154.82	56,718.04	178,675.22	315,166.08
52	1.749	14,531.34	25,408.77	32,921.92	57,565.62	185,490.60	324,339.56
53	1.729	15,239.24	26,354.07	33,252.09	57,504.70	192,564.84	333,013.18
54	1.708	16,135.07	27,562.62	34,064.95	58,191.21	199,905.76	341,487.61
55	1.676	16,822.51	28,188.03	35,648.55	59,733.20	207,528.48	347,737.55
56	1.624	17,321.82	28,127.01	36,952.94	60,003.83	215,441.14	349,831.28
57	1.572	18,426.51	28,965.87	38,651.41	60,758.76	223,641.40	351,556.99
58	1.516	19,334.04	29,316.31	40,405.48	61,267.05	232,131.12	351,981.71
59	1.455	20,099.55	29,242.55	41,334.97	60,137.65	240,933.54	350,530.73
60	1.378	21,027.98	28,978.88	40,711.61	56,105.10	250,080.01	344,637.92
61	1.286	21,811.60	28,049.30	41,673.83	53,591.74	259,589.21	333,826.70
62	1.239	22,935.42	28,406.54	42,979.61	53,232.16	269,467.52	333,747.49
63	1.193	23,132.67	27,593.99	44,321.67	52,869.46	279,718.32	333,664.22
64	1.149	23,753.53	27,289.40	45,128.76	51,846.48	290,353.86	333,574.99