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Social Security: Benefit Calculation Overview

Background

Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI), referred to on a combined basis as OASDI, are social insurance programs that protect workers and their family members against a loss of income due to old age, disability, or death. These programs are often referred to as Social Security. Most Social Security beneficiaries are retired or disabled workers whose monthly benefits depend on their past earnings, their age, and other factors. Benefits are also paid to workers' eligible dependents and survivors based on the worker's earning record.

This In Focus provides an overview of the computation of Social Security benefits. The examples used throughout are for those of a hypothetical medium earner—a worker who consistently earned at a medium level—born in 1953 (the most recent year for which complete information on indexed earnings and program-specific factors are known). From 2016 through 2021, roughly 30% of workers retiring had career-average earnings at about the medium level (see “Related Resources”).

Eligibility and Insured Status

About 94% of workers earn wages or income in Social Security-covered employment. While working in covered employment, workers earn *quarters of coverage* (QCs). In 2023, a worker will earn one QC for every \$1,640 of earnings, up to four QCs per year. A worker who earns at least \$6,560 in covered employment at any point in 2023 is credited with the maximum number (four) of QCs for that year. The level of earnings needed for a QC generally increases annually with growth in average earnings in the national economy, as measured by Social Security's Average Wage Index (AWI).

To be eligible for benefits, workers must be *fully insured*. Fully insured status requires one QC for each year elapsed after the worker turns 21 years old—with a minimum of six QCs and a maximum of 40 QCs—through the year before the worker attains age 62, the year before the worker dies, or the year before the worker becomes disabled. A worker is first eligible for Social Security retirement benefits at age 62, so to be eligible for retirement benefits, a worker must generally have worked for 10 years.

Average Indexed Monthly Earnings

The first step in determining Social Security benefits amounts for eligible workers is to compute the average indexed monthly earnings (AIME), a measure of a worker's past earnings.

Wage Indexing

A worker's benefit amount is based on his or her earnings during covered employment. Only earnings from years of covered employment are included in the calculation.

Earnings that were not covered (i.e., not subject to the Social Security payroll tax) are not included.

Under current law, the Social Security payroll tax is applied to covered earnings up to an annual limit, or taxable maximum (\$160,200 in 2023). This level of earnings is both the contribution base (i.e., amount of covered earnings subject to the Social Security payroll tax) and the benefit base (i.e., amount of covered earnings used to determine benefits). Earnings in excess of the taxable maximum are not included in benefit calculations. The taxable maximum is indexed to national average wage growth for years in which a cost-of-living adjustment (COLA) is payable.

Rather than using the amounts earned in past years directly, the AIME computation process first updates past earnings up to the taxable maximum to account for the growth in overall economy-wide earnings. That is done by increasing each year of a worker's taxable earnings after 1950 by growth in average earnings in the economy, as measured by the AWI, from the year of work until two years prior to eligibility for benefits, which for retired workers is at age 60. For instance, the national average wage grew from \$32,155 in 2000 to \$41,674 in 2010. So if a worker earned \$20,000 in 2000 and turned 60 in 2010, the *indexed* wage for 2000 would be $\$20,000 \times (\$41,674/\$32,155)$, or \$25,921. Earnings from later years—for retired workers at ages 60 and above—are not indexed.

Number of Years

For retired workers, the AIME equals the average of the highest 35 years of indexed earnings divided by 12 (to change the benefit from an annual to a monthly measure). Those years of earnings are known as *computation years*. If the person worked fewer than 35 years in employment subject to Social Security payroll taxes, the computation includes those as years of zero earnings. The number of computation years for disabled or deceased workers may be fewer than 35 years.

The sum of the highest 35 years of wage-indexed earnings for a hypothetical medium earner born in 1953 is \$1,565,493.44. (Wage-indexed earnings are rounded to the nearest cent.) This sum figure is then divided by 420 (the number of months in 35 years) to determine the worker's AIME, or \$3,727.00. (AIMEs are rounded down to the nearest dollar.)

Primary Insurance Amounts

The next step in determining the Social Security benefit amount is to compute the primary insurance amount (PIA). To do this, the AIME is sectioned into three brackets (or segments) of earnings, which are divided by dollar amounts known as bend points. In 2023, the bend points are \$1,115 and \$6,721. Those amounts are indexed to the AWI, so they generally increase each year.

Three factors—fixed in law at 90%, 32%, and 15%—are applied to the three brackets of AIME to allow for a progressive benefit formula. The formula results in a *progressive* replacement rate, which is measured as the percent of AIME that the PIA replaces. The replacement rate is higher for lower earners—83% for very low earners—than for higher earners—37% for high earners (see “Related Resources”). The formula also results in *individual equity*: The more a worker earns (and pays in payroll tax), up to the taxable maximum, the higher the PIA. **Table 1** shows how to calculate the PIA for a hypothetical medium earner born in 1953.

Table 1. Computation of Primary Insurance Amount (PIA) for Hypothetical Medium Earner Born in 1953

Factors	Brackets of AIME in 2015	Medium Earner (AIME of \$3,727.00)
90%	first \$826 of AIME, plus	\$743.40
32%	AIME over \$826 and through \$4,980, plus	928.32
15%	AIME over \$4,980	0.00
Total: Worker’s PIA (by law, rounded down to nearest 10 cents)		1,671.70

Source: CRS.

Notes: The bend points shown in the table apply to workers who first become eligible in 2015 (i.e., the year in which a hypothetical medium earner born in 1953 reaches age 62). Under current law, PIA is rounded down to the nearest dime (42 U.S.C. §415(a)(1)(A)).

Benefit Amounts

The PIA is further adjusted for age at benefit claiming and for COLAs to determine the benefit received by the worker.

Adjustments for Claiming Age

The *earliest eligibility age* is the age at which a retired worker can first claim benefits (age 62). The *full retirement age* (FRA) is the age at which the worker can receive the full PIA increased by any COLAs. For workers born in 1960 or later, the FRA is age 67.

The permanent reduction in monthly benefits that applies to people who claim *before* the FRA is an *actuarial reduction*. It equals five-ninths of 1% for each month (6⅔% per year) for the first three years of early claim and five-twelfths of 1% for each month (5% per year) beyond 36 months. The permanent increase in monthly benefits that applies to those who claim *after* the FRA is called the *delayed retirement credit* (DRC). For people born after 1942, the DRC is 8% for each year of delayed claim after the FRA up to age 70.

COLAs

A COLA is applied to the benefit beginning in the second year of eligibility, which for retired workers is age 63. The COLA applies even if a worker has not yet begun to receive benefits. The COLA usually equals the growth in the Consumer Price Index for Urban Wage Earners and Clerical Workers from the third quarter of one calendar year to the third quarter of the next calendar year. The COLA becomes

effective in December of the current year and is payable in January of the following year. Beneficiaries will receive a COLA of 8.7% for benefits paid in January 2023.

Adjustments to the PIA for early or late claiming (relative to a worker’s FRA) interact with COLAs to produce the actual benefit amount. These two factors affect all claimants, while other adjustments may affect only some claimants (see “Other Adjustments”). **Table 2** shows how adjustments for claiming age work together with COLAs to produce benefit amounts before other adjustments.

Table 2. Initial Monthly Benefit Amounts for Hypothetical Medium Earner Born in 1953, by Claiming Age

Primary Insurance Amount (PIA) adjusted for claiming age relative to full retirement age (FRA) and cost-of-living adjustments (COLAs)

Year	Claiming Age	Percent of PIA	COLA	Benefit Amount (PIA of \$1,671.70)
2015	62	75.0%	-	\$1,253.00
2016	63	80.0%	0.0%	1,337.00
2017	64	86.6%	0.3%	1,453.00
2018	65	93.3%	2.0%	1,596.00
2019	66	100.0%	2.8%	1,758.00
2020	67	108.0%	1.6%	1,929.00
2021	68	116.0%	1.3%	2,099.00
2022	69	124.0%	5.9%	2,376.00
2023	70	132%	8.7%	2,749.00

Source: CRS.

Notes: Under current law, monthly benefit amounts are rounded down to the nearest dollar (42 U.S.C. §415(g)).

Other Adjustments

In certain situations, other adjustments may apply. For example, the *windfall elimination provision* may reduce benefits for worker beneficiaries with pensions from uncovered Social Security employment. The *government pension offset* may reduce spousal benefits for spouses with government pensions from uncovered Social Security employment. The *retirement earnings test* may result in a temporary withholding of benefits for early claimants (younger than FRA) with earnings above a certain level.

Related Resources

CRS Report R46658, *Social Security: Benefit Calculation*, provides a more detailed discussion of benefit computation, including calculations for a wider range of earnings levels, and briefly introduces the *family maximum*, which limits total benefits that are payable to a beneficiary’s family.

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