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Indexing Social Security Benefits: The Effects of Price and Wage Indexes

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Summary

Under current law, Social Security benefits increase from one generation to the next at the rate that the national average wage rises. In other words, initial Social Security benefits are *wage-indexed*. Once enrolled in the program, beneficiaries' Social Security checks increase each year at the same rate as the Consumer Price Index (CPI); that is, they are *price-indexed*. Due to increases in worker productivity, wages tend to rise faster than prices when measured over long periods of time. Consequently, if initial benefits were based on the rate at which prices rise rather than the rate at which wages rise, initial benefits for each succeeding generation of workers would grow more slowly than under current law.

The growth of Social Security benefits over time can be measured against either the rate of growth of prices or wages. If benefits grow faster than the rate at which prices rise, the benefits increase in purchasing power, and future retirees will enjoy higher standards of living than today's retirees. If benefits grow at the same rate as prices, purchasing power is unchanged, and future retirees will be able to maintain a standard of living similar to that of today's retirees. Benefit levels that grow more slowly than the rate at which prices rise will decline in purchasing power, resulting in falling standards of living for future retirees. Because Social Security benefits are wage-indexed, the purchasing power of benefits rises from one generation of workers to the next, and the replacement rate — initial benefits as a percentage of workers' career-average earnings — remains constant for each successive generation of workers. If benefits were price-indexed, the purchasing power of benefits would remain constant for each generation of workers, and replacement rates would fall.

Price-indexing would make small annual reductions in initial benefits, but the cumulative reduction would be substantial when compounded over many years. This could have serious implications for the retirement income of low-wage workers. Price-indexing benefits also would make deeper cuts in benefits if wages grow faster than projected, even as Social Security's financial situation would be improving. Likewise, if wages grow more slowly than projected, price-indexing would make smaller cuts in benefits, leading to a larger financing deficit.

One way to preserve benefits for low-wage workers would be to progressively price-index initial benefits. Initial benefits of low-wage workers would continue to be fully wage-indexed, the benefits of average-wage workers would be based on a mix of wage-indexing and price-indexing, and the benefits of high-wage workers would be fully price-indexed. President Bush has suggested that Congress consider progressive price-indexing of Social Security benefits. The Social Security Administration (SSA) has analyzed a method of progressive price-indexing that would continue to wage-index Social Security benefits for workers with career-average earnings in the lowest 30% of the earnings distribution. SSA has estimated that this proposal would eliminate about three-fourths of the program's 75-year unfunded liability. One consequence of this method of progressive price-indexing would be that, eventually, all workers with earnings in the top 70% of the earnings distribution would receive the same benefit. This report will not be updated.

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I. Social Security's Financial Situation

According to the most recent report of the Social Security Board of Trustees, outgo for Social Security benefits will begin to exceed income from Social Security payroll taxes in 2017.[1] By 2027, the program's spending will exceed its combined income from payroll taxes, income taxes on Social Security benefits, and interest on the Treasury bonds held by the Social Security trust fund. In 2041, according to the Trustees, Social Security will redeem the last of its Treasury bonds, and the assets of the trust fund will be exhausted. Absent changes in federal law that either increase Social Security revenues or reduce Social Security benefits, when the trust funds are fully depleted in 2041 annual income from tax revenue will be sufficient to pay only 74% of scheduled benefits. By 2079, tax revenue will equal just 68% of benefits promised under current law.

There are many combinations of benefit reductions or tax increases that could restore Social Security to financial solvency over the legally mandated 75-year valuation period, or longer. However, neither cuts in promised benefits nor increases in taxes are popular options among most Members of Congress or the public, and the debate about how to more closely match Social Security revenues with Social Security outlays is often contentious. One way to reduce future benefits would be to link the calculation of workers' initial benefits to a *price index* rather than to a *wage index*, as under current law.[2]

Whether initial Social Security benefits are based on wages or prices could have a substantial effect on the rate of growth of benefits. Under current law, initial Social Security benefits increase from one generation to the next at the rate that the national average wage index rises. For each generation of Social Security beneficiaries, their average Social Security benefit exceeds that of the preceding generation by the difference in their average wage. In other words, initial Social Security benefits are wage-indexed. Once enrolled in the program, beneficiaries' Social Security checks increase each year at the same rate as the Consumer Price Index (CPI) so that they do not decline in value as prices rise over time; that is, they are price-indexed. Due to increases in worker productivity, wages tend to rise faster than prices when measured over long periods of time. Consequently, if initial benefits were based on the rate at

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[1] Social Security and Medicare Board of Trustees, *Status of the Social Security and Medicare Programs: A Summary of the 2005 Annual Reports*, Mar. 2005, available online at [http://www.ssa.gov/OACT/TRSUM/tr05summary.pdf].

[2] An *index* measures the relative change in a series of values compared with a *base period*. The value of the index during the base period is 100. Changes in the index represent percentage changes from the base value of the index.

which prices rise rather than the rate at which wages rise, initial benefits for each succeeding generation of workers would grow more slowly than under current law.

Under progressive price-indexing, initial benefits for low-wage workers would continue to be based on the rate of growth of the national average wage index (AWI). Initial Social Security benefits would continue to be fully wage-indexed for these workers. Initial benefits for high-wage workers would be based on the rate of growth of the CPI. Social Security benefits would be fully price-indexed for these workers. Benefits for average-wage workers would be based partly on the rate of growth of the national AWI and partly on the rate of growth of the CPI. Initial Social Security benefits would be partly wage-indexed and partly price-indexed for these workers. President Bush has suggested that Congress consider progressive price-indexing of initial Social Security benefits as a possible reform to help restore the program to financial solvency.

Measuring the Value of Initial Social Security Benefits over Time. The growth of Social Security benefits over time can be measured against either the rate of growth of prices or wages. If benefits grow faster than the rate at which prices rise, the benefits increase in purchasing power, and future retirees will enjoy higher standards of living than today's retirees. If benefits grow at the same rate as prices, purchasing power is unchanged, and future retirees will be able to maintain a standard of living similar to that of today's retirees. Benefit levels that grow more slowly than the rate at which prices rise will decline in purchasing power, resulting in falling standards of living for future retirees. Under current law, benefits for each generation of workers grow at the same rate as their wages grow. Consequently, (1) the purchasing power of benefits rises from one generation of workers to the next, and (2) the replacement rate — initial benefits as a percentage of workers' career-average earnings — remains constant for each successive generation of workers. If initial benefits were to rise at the same rate as prices increase, (1) the purchasing power of benefits would remain constant for each successive generation of workers, and (2) replacement rates would fall.

Social Security Retirement Benefits Under Current Law. Workers who have completed at least 40 quarters of employment covered by Social Security can begin receiving reduced Social Security retirement benefits as early as age 62 or full benefits at the full retirement age (65 and 6 months in 2005).[3] The monthly benefit amount payable to a worker upon retirement at the full retirement age is called the Primary Insurance Amount (PIA). The PIA is based on the worker's annual earnings up to the maximum taxable amount, averaged over a period of 35 years. In 2005, earnings up to $90,000 are taxable. This amount, also called the taxable wage base, increases each year at the rate of growth of the national average wage index. The PIA is computed in three steps:

Step 1: Indexing Earnings. The worker's annual earnings in each year after 1950 are indexed to the second calendar year before the year in which he or she was first eligible for retirement benefits; that is, before age 62. This is called the

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[3] The full retirement age is 65 for those born before 1938, 67 for those born in 1960 or later, and between 65 and 67 for people born between 1938 and 1960.

indexing year. Earnings at age 60 or later are not indexed but instead are counted at their nominal value.[4] For workers who are applying for Social Security retirement benefits, earnings in all years up to age 60 are indexed to growth in the national average wage. Specifically, earnings in each past year are indexed by multiplying them by the ratio of the national average wage for the indexing year to the national average wage in the year the income was earned.

Step 2: Determining AIME. Since 1979, Social Security benefits have been based on average indexed monthly earnings (AIME). The worker's average indexed monthly earnings are the average of his or her highest 35 years of indexed earnings. Earnings at age 60 or later are not indexed, but they are included in the AIME calculation if they are among the worker's highest 35 years of earnings.

Step 3: Computing the PIA. To calculate the worker's PIA, his or her career-average earnings are divided into three brackets and multiplied by PIA factors (90%, 32%, and 15%) that are set in law for each bracket. The factors decline as the earnings brackets rise, so that Social Security replaces a higher proportion of career-average earnings for workers with relatively low earnings than it does for high-wage workers. The dollar amounts that define the boundaries of the brackets, called bend points, increase each year by the rate of growth of the national average wage index.[5] This keeps the proportion of average earnings multiplied by each factor the same from year to year. For workers who reach age 62 in 2005, the PIA is

> 90% of the first $627 of average indexed monthly earnings, plus
> 32% of the next $3,152 of average indexed monthly earnings, plus
> 15% of average indexed monthly earnings over $3,779.

Earnings are wage-indexed only up to age 60, but the PIA is adjusted to reflect changes in price levels after age 62. If the individual claims retirement benefits between age 62 and the full retirement age, the PIA is increased by the percentage change in the CPI between age 62 and the full retirement age.[6]

The National Average Wage Index. The Social Security Administration determines the national average wage each year based on the earnings reports it receives from employers. The annual values of the average wage index are used to calculate the factors for indexing earnings up to age 60. The annual percentage change in the average wage index is used to determine the percentage increase in the bend points in the PIA formula.

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[4] Earnings are indexed only up to age 60 because it can take up to two years for the national earnings data on which the wage indexing series is based to become available.

[5] The amounts at which the PIA factors change are called *bend points* because when the PIA factors are graphed against the AIME, the graph appears as three lines joined at these points.

[6] Social Security Disability Insurance (DI) benefits are based on the same PIA formula as retirement benefits. The PIA formula applied is based on the year the worker is first entitled to DI benefits.

Calculating AIME and the PIA. **Table 1** shows how average indexed monthly earnings would be calculated for an individual born on January 1, 1940, who retires on July 1, 2005, at the full retirement age of 65 and 6 months. The individual's earnings history between 1965 and 2004 is shown in the column labeled "Nominal Earnings." **Table 1** shows how the individual's nominal annual earnings would be converted to indexed earnings by applying the indexing factors and how the indexed earnings would be averaged to determine his or her average indexed monthly earnings, or AIME. The individual in this example attained age 62 — the first year of eligibility for retirement benefits — on January 1, 2002. Therefore, the bend points for the year 2002 are applied to the worker's average indexed monthly earnings to calculate this individual's primary insurance amount, or PIA. The bend points for the year 2002 are $592 and $3,567. The formula applied to the AIME of $3,727 is

(.90 X 592) + (.32 X (3,567 - 592)) + (.15 X (3,727 - 3,567)) = $1,508.80

The initial PIA of $1,508.80 is then increased by the annual percentage change in the CPI for each year between the first year of eligibility and the year the worker reached the full retirement age. The percentage changes in the CPI were 1.4%, 2.1%, and 2.7% for 2002, 2003, and 2004, respectively. The resulting PIA is $1,604.10, which is rounded down to $1,604. Because the individual applied for retirement benefits at the full retirement age, his or her retirement benefit is the same as the PIA. There is no reduction for early retirement and no delayed retirement credit is applied.

Table 1. Illustration of Average Indexed Monthly Earnings

Year	Nominal Earnings	Average U.S. Earnings	Index Number	Indexed Earnings
1965	$4,193	$4,659.72	6.9021	$28,941
1966	4,713	4,938.36	6.5112	30,687
1967	5,194	5,213.44	6.1677	32,035
1968	5,747	5,571.76	5.7710	33,196
1969	6,262	5,893.76	5.4557	34,164
1970	6,746	6,186.24	5.1978	35,064
1971	7,253	6,497.08	4.9491	35,896
1972	8,135	7,133.80	4.5074	36,668
1973	8,815	7,580.16	4.2420	37,393
1974	9,511	8,030.76	4.0040	38,082
1975	10,396	8,630.92	3.7255	38,730
1976	11,293	9,226.48	3.4851	39,357
1977	12,151	9,779.44	3.2880	39,952
1978	13,305	10,556.03	3.0461	40,528
1979	14,667	11,479.46	2.8011	41,084
1980	16,197	12,513.46	2.5696	41,620
1981	18,051	13,773.10	2.3346	42,142
1982	19,273	14,531.34	2.2128	42,647
1983	20,445	15,239.24	2.1100	43,139
1984	21,887	16,135.07	1.9929	43,619
1985	23,063	16,822.51	1.9114	44,083
1986	23,994	17,321.82	1.8563	44,540
1987	25,779	18,426.51	1.7450	44,984
1988	27,311	19,334.04	1.6631	45,421
1989	28,659	20,099.55	1.5998	45,849
1990	30,257	21,027.98	1.5291	46,266
1991	31,663	21,811.60	1.4742	46,678
1992	33,582	22,935.42	1.4020	47,082
1993	34,155	23,132.67	1.3900	47,475
1994	35,360	23,753.53	1.3537	47,867
1995	37,071	24,705.66	1.3015	48,249
1996	39,188	25,913.90	1.2408	48,624
1997	41,790	27,426.00	1.1724	48,995
1998	44,305	28,861.44	1.1141	49,360
1999	47,115	30,469.84	1.0553	49,720
2000	50,076	32,154.82	1.0000	50,076
2001	51,629	32,921.92	1.0000	51,629
2002	52,503	33,252.09	1.0000	52,503
2003	54,148	34,064.95	1.0000	54,148
2004	$56,092	$35,291.29	1.0000	$56,092
Total of highest 35 years of indexed earnings:				**$1,565,562**
Average indexed monthly earnings:				**$3,727**

Source: [http://www.ssa.gov/OACT/ProgData/retirebenefit1.html] and calculations by CRS.

II. History of Indexing Social Security Benefits

The Social Security Amendments of 1972. Prior to the 1970s, Social Security benefits rose only when Congress voted to raise them. The worker's primary insurance amount (PIA) — the benefit payable at the full retirement age — was computed by comparing his or her average monthly earnings to a benefit table established by Congress. Average monthly earnings (AME) were calculated as a simple arithmetic average of the individual's nominal earnings in each year of employment after 1950. Average monthly earnings were divided into several brackets, and earnings in each bracket were multiplied by the factors prescribed in law. Prior to the Social Security Amendments of 1972 (P.L. 92-336), both the income brackets and the associated factors changed only when Congress voted to raise Social Security benefits. As a matter of practice, when Congress voted to increase the benefits of individuals already enrolled in the program, they also increased the benefits awarded to new beneficiaries by the same percentage. This was done by increasing the PIA factors in the formula by which initial benefits were calculated.

The historical practice of increasing Social Security benefits only through legislation was changed by the Social Security Amendments of 1972. These amendments increased benefits for persons already receiving Social Security by 20% and provided for automatic future benefits increases that were to be based on the annual percentage change in the Consumer Price Index. The law also directed that the PIA factors by which each bracket of career-average earnings was multiplied were to increase annually by the same percentage as the benefits of current recipients were increased. The amendments also added another earnings bracket to the benefit table each time that the amount of earnings subject to Social Security taxes (the taxable wage base) was increased. Career-average earnings continued to be based on nominal career-average earnings; that is, they were not indexed. The tables used to calculate the PIA for persons who applied for benefits in the years 1975 through 1978 are shown in **Table 2**.

Table 2. PIA Computation Tables for 1975 to 1978

1975	1976	1977	1978
129.48% of the first $100 of AME	137.77% of the first $100	145.90% of the first $100	155.38% of the first $100
+ 47.10% of the next $290	50.10% of the next $290	53.06% of the next $290	56.51% of the next $290
+ 44.01% of the next $150	46.82% of the next $150	49.58% of the next $150	52.81% of the next $150
+ 51.73% of the next $100	55.05% of the next $100	58.30% of the next $100	62.09% of the next $100
+ 28.77% of the next $100	30.61% of the next $100	32.42% of the next $100	34.53% of the next $100
+ 23.98% of the next $250	25.51% of the next $250	27.02% of the next $250	28.78% of the next $250
+ 21.60% of the next $175	22.98% of the next $175	24.34% of the next $175	25.92% of the next $175
	21.28% of the next $100	22.54% of the next $100	24.01% of the next $100
		21.18% of the next $100	22.56% of the next $100
			21.30% of the next $100

Source: *Social Security Bulletin: Annual Statistical Supplement, 1981*.

Under the 1972 amendments, the first automatic increases to Social Security benefits were scheduled to occur in 1975.[7] Under the benefit formula adopted in 1972, whenever there was a cost-of-living adjustment (COLA) in the benefit paid to people already receiving Social Security, the PIA factors in the formula for calculating initial benefits for new recipients were increased by the same percentage. These increases were based on the rate of inflation as measured by the CPI. In the 1970s, there were several years in which the rate of increase in prices exceeded the rate of increase in wages.[8] Because the 1972 amendments increased the PIA factors by the rate of price growth, whenever prices grew faster than wages, benefits grew faster than the wage base from which these benefits would be financed.

Social Security Cost-of-Living Adjustments and the Consumer Price Index

After an individual begins to receive Social Security benefits, these payments are indexed to annual increases in the Consumer Price Index, which measures changes in the price of a market basket of consumer goods and services. In 1972, Congress provided for annual cost-of-living adjustments for Social Security to prevent these benefits from losing purchasing power through the effects of price inflation. COLAs are to ensure that a Social Security beneficiary's monthly check will purchase the same amount of goods and services from year to year that it could purchase at the time the individual first began to receive Social Security. COLAs do not reflect increases in the labor productivity of people who are still in the work force, and thus they do not increase the real purchasing power of Social Security income. COLAs do not make beneficiaries better off financially; they are merely to protect them from becoming financially worse-off over time as prices rise.

The 1975 Social Security Advisory Council. The 1975 Social Security Advisory Council suggested a method for determining initial benefits that would not be affected by cost-of-living adjustments for current Social Security recipients. This procedure was generally referred to as "decoupling" the initial benefit computation from the COLAs applied to current beneficiaries. The council recommended that when calculating workers' career-average earnings, their past earnings should be indexed to more current values based on a national average wage index. This would have the effect of restating all past earnings in terms of what they would be worth in the current labor market, thereby eliminating an inequity of unindexed earnings, which gave more recent earnings greater weight in determining Social Security benefits. The council further recommended that the bend points in the PIA formula should be indexed to increases in the national average wage. This would keep replacement rates — initial Social Security benefits as a percentage of a worker's career average earnings — stable at 42% of average indexed monthly earnings for a career average-wage earner. Each year, the earnings brackets would expand by the percentage increase in the national average wage, and each PIA factor (which would be fixed in law, rather than rising each year at the rate of CPI increase) would be applied to the same fraction of average earnings for each successive cohort of retirees. The council recommended that annual COLAs for current beneficiaries

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[7] Robert M. Ball, "Social Security Amendments of 1972: Summary and Legislative History," *Social Security Bulletin*, Mar. 1973.

[8] Prices grew faster than the national average wage in 1970, 1974, 1975, 1977, and 1979.

should continue to be based on the rate of increase of the CPI, thus maintaining the purchasing power of benefits throughout the remainder of each beneficiary's life.

The Social Security Amendments of 1977. The Social Security Amendments of 1977 (P.L. 95-216) largely followed the recommendations of the 1975 Advisory Council. These amendments created the current benefit formula, which is based on the worker's average indexed monthly earnings (AIME). This law also indexed the bend points that separate the earnings brackets in the benefit formula to the rate of increase in the average wage index. The 1977 amendments set the three "PIA factors" that are applied to earnings within each bracket at 90% of AIME up to the first bend point ($180 in 1979; $627 in 2005); 32% of AIME between the first and second bend points ($1,085 in 1979; $3,779 in 2005); and 15% of AIME above the second bend point. The two elements of the Social Security benefit formula adopted in 1977 that keep replacement rates constant for each successive generation of retirees are that (1) the PIA factors applied to each earnings bracket remain unchanged from year to year, and (2) the bend points in the formula for determining the PIA are indexed to increases in the national average wage. As discussed below, indexing past earnings — which is part of the computation of AIME — has little effect on replacement rates over time. Indexing past earnings to current values mainly affects the distribution of benefits within each cohort of workers rather than the relative size of benefits among successive cohorts of workers.[9]

How Wage Indexing *Earnings Histories* Affects Benefits. Until the 1977 amendments were enacted, Social Security benefits were based on workers' nominal career-average earnings. Using nominal earnings histories had the effect of treating workers differently based on which years they had worked and when their highest earnings had occurred. Indexing workers' earnings histories to more current values reduces the difference in Social Security benefits among workers whose ages and real earnings are similar, but whose years of employment differed. For example, consider two workers of the same age claiming benefits in the same year, both of whom worked for a total of 35 years doing the same job. Worker "A" worked 35 years from age 30 to 65, while worker "B" worked 35 years from age 20 to 55. Calculating average career earnings without indexing would be advantageous to worker A, whose earnings occurred more recently and would be higher in nominal terms than worker B's earnings. There is, however, no reason why worker A's 35 years of earnings should be valued more highly than workers B's 35 years of earnings when calculating their Social Security benefits unless they also are higher in real terms. By expressing the past earnings of workers who retire in the same year in amounts that are more directly comparable to each other, indexing past wages to current values eliminates a disadvantage that otherwise would under-value the earnings of workers who either worked more or earned more early in their careers.

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[9] A "cohort" is a group of people with a common demographic trait, such as their year of birth.

Basing benefits on nominal earnings also had the effect of depressing the benefits of retired-worker beneficiaries relative to disabled workers and survivors of workers who had died while still young. Because benefits for disabled workers and the survivors of younger workers are based on relatively short earnings histories, they are based on more current earnings than those of retired workers. The relative disadvantage to retired workers of including many years of earnings from the more distant past is mitigated by indexing those earnings so that they are expressed in terms of their current value in the labor market.

How Wage Indexing the *Bend Points* Affects Benefits. The percentage of career-average earnings replaced by Social Security is called the replacement rate.[10] Under the current benefit formula, in which initial benefits for each generation of workers grow at the same rate as the national average wage, replacement rates remain constant from one generation of workers to the next. The Social Security Administration has estimated the replacement rate under current law to be 55% of average wages for a career-long low-wage earner; 41% for a career-long average-wage earner, and 27% for a worker who always earned the annual maximum taxable wage. Replacement rates remain stable under current law because: (1) the "bend points" are indexed to wage growth, and (2) the PIA factors remain fixed from year to year.

III. How "Price Indexing" Would Affect Social Security Benefits

Because of increases in worker productivity, wages grow faster than prices in the long run. Consequently, one way to slow the growth of benefits would be to convert Social Security from wage-indexed benefits to price-indexed benefits. Price indexing initial benefits would slow the growth of Social Security expenditures while maintaining the purchasing power of benefits. However, because Social Security benefits would then grow more slowly than workers' wages, the replacement rate — Social Security benefits as a percentage of career-average earnings — would fall for each successive generation of workers.

How *Price Indexing Earnings Histories* Would Affect Benefits. If past earnings were indexed to the present based on the growth of a price index (such as the CPI) instead of the growth in the average wage index (AWI), workers' average indexed monthly earnings would be lower, as would the amount of their Social Security benefits. This would permanently reduce the amount of future Social Security benefits, but it would not permanently reduce the rate of growth of future benefits. Indexing past earnings to current values based on the rate of growth of the CPI would reduce the rate of growth of benefits only during the period of transition

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[10] Replacement rates can be measured against *final* earnings or *career-average* earnings. Replacement rates measured against final earnings will almost always be lower than when measured against career-average earnings. Replacement rates measured against *indexed* career-average earnings will almost always be lower than when measured against *nominal* career-average earnings.

from wage-indexing to price-indexing.[11] The amount of benefits paid would be lower in every future year, but after approximately 40 years — at which point all workers' entire earnings histories would be fully price-indexed — the average indexed monthly earnings of each successive cohort of workers would be higher than the average indexed earnings of the previous cohort by the difference in their nominal average wage, just as it is under current law.

The examples shown in **Table 3** illustrate how price-indexing past earnings would affect both the amount of benefits and the rate of growth of benefits.

Table 3. Average Indexed Monthly Earnings for a Career Average-Wage Earner With Wage-Indexed Earnings and Price-Indexed Earnings

Year	Wage-Indexed Earnings		Price-Indexed Earnings		Price-Indexed Earnings vs. Wage-Indexed Earnings
	Average Monthly Earnings	Average Annual Growth	Average Monthly Earnings	Average Annual Growth	
2005	$2,979	5.23%	$2,476	5.23%	-16.9%
2010	3,607	3.90%	2,967	3.69%	-17.7%
2025	6,403	3.90%	5,305	3.95%	-17.1%
2050	16,663	3.90%	13,986	3.95%	-16.1%
2075	43,366	3.90%	36,398	3.90%	-16.1%
2080	52,509	3.90%	44,071	3.90%	-16.1%

Source: Estimates prepared by the Congressional Research Service, based on data in the 2005 report of the Social Security Trustees.

Based on the SSA's historical wage-indexing series, the average indexed monthly earnings in 2005 of a worker who had always earned the national average wage would be approximately $2,979. If past earnings were indexed to 2005 using the Consumer Price Index rather than the average wage index, the career-average earnings of this worker would be $2,476, or about 17% lower. This difference reflects the fact that wages have grown faster than prices over the 35-year indexing period. An immediate switch from wage-indexing past earnings to price-indexing past earnings would result in reducing the initial Social Security benefit of a career-long average-wage earner by approximately 17%. Thus, price indexing of past earnings would result in permanently reducing the level of Social Security benefits from the benefit levels scheduled to be paid under current law. Note, however, that

[11] During the transition period from the 1970s to the 1990s, when the period over which workers' earnings histories were averaged was lengthened from 21 years to 35 years, indexing workers' earnings histories also contributed to maintaining stable replacement rates. Otherwise, with each year added to the averaging period, a significantly lower (because unindexed) year of earnings would have been added to the benefit computation, thereby tending to make the workers' AIME and PIA lower relative to his or her final earnings. Indexing past earnings converts these lower values into an amount comparable to what they would be worth if they had been earned more recently.

the rate of growth of benefits would eventually be exactly the same under price indexing of past earnings as it would be under wage-indexing of past earnings. Provided that prices grow more slowly than wages, price-indexed earnings will always be lower than wage-indexed earnings, but regardless of the method used to index past wages to the present, the average indexed career earnings of each successive cohort of workers would exceed the average indexed career earnings of the preceding cohort by the difference in their nominal average wage.[12]

How *Price Indexing the Bend Points* Would Affect Benefits. If the bend points in the PIA formula were indexed to prices (which, in the long run, grow more slowly than wages), replacement rates would decline because as wages grow over time, more of workers' earnings would be included in the upper two brackets of the benefit formula, to which lower PIA factors are applied. Eventually, workers would find most of their career-average earnings in the top bracket, and the replacement rate would be nearly the same for all workers, regardless of their average earnings. The benefit formula would be less progressive than under current law.

The examples shown in **Table 4** illustrate how price indexing the bend points of the PIA formula would affect both the amount of benefits and the rate of growth of benefits. Panel A illustrates the increases in the bend points under current law. The bend points are adjusted upward annually by the rate of growth of the national average wage. Because the bend points grow at the same rate as wages, the percentage of wages that falls in each earnings bracket remains the same from one generation to the next. In this example, about 21% of the career-average earnings of an average wage-earner would be in the lowest earnings bracket (multiplied by the 90% replacement factor) in 2080, which is the same percentage of earnings in the lowest bracket in 2005. Likewise, with the bend points wage-indexed, about 79% of the career-average earnings of an average wage-earner would be in the second earnings bracket (multiplied by the 32% replacement factor) in 2080, which is also the percentage of earnings in the second bracket in 2005.

If the bend points were to be price-indexed rather than wage-indexed, they would grow more slowly than workers' earnings and over time, more of those earnings would fall into the higher earnings brackets and be multiplied by lower PIA factors. This is illustrated in Panel B of **Table 4**. With the bend points price-indexed, only about 10% of the career-average earnings of an average wage-earner would be in the lowest earnings bracket (multiplied by the 90% replacement factor) in 2080, which is less than half of the percentage of earnings in the lowest bracket if the bend points are wage-indexed. Only about 48% of the career-average earnings of an average wage-earner would be in the second earnings bracket (multiplied by the 32% replacement factor) in 2080, which is 31 percentage points lower than the percentage of earnings in the second bracket under wage-indexing. Finally, with the bend points price-indexed, about a third of the career-average earnings of an average-wage earner

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[12] **Table 3** shows the effect on average benefits of an *immediate* switch from wage-indexing to price-indexing of past earnings. In practice, this would create a large downward "notch" in benefits. If price indexing of past earnings were phased in one year at a time the notch would be avoided, but benefit reductions (and the annual reduction in outlays) would be smaller for each year until all workers' career earnings were fully price-indexed.

would be in the top earnings bracket (multiplied by the 15% replacement factor) in 2080. Under wage indexing, none of the earnings of a career-long average-wage earner would be subject to the 15% replacement factor in 2080.

While price indexing the bend points would reduce the rate of growth of benefits, it also would substantially erode the progressivity of the benefit formula. Eventually, workers at all levels of career-average earnings would find a large percentage of their earnings subject to the lowest PIA factor of 15%.

Table 4. Percentage of an Average-Wage Earner's Indexed Monthly Earnings Subject to Each Pia Factor under Wage-Indexing and Price-Indexing of Bend Points

Year	2005		2050		2080	
AIME: **$2,979**			AIME: **$16,663**		AIME: **$52,509**	
Panel A: Wage-indexed Bend Points (Current law)						
PIA Factors	Bend Points	Percent of average wage in each bracket	Bend Points	Percent of average wage in each bracket	Bend Points	Percent of average wage in each bracket
90.0%	$627	**21.0%**	$3,507	**21.0%**	$11,052	**21.0%**
32.0%	$3,779	**79.0%**	$21,139	**79.0%**	$66,611	**79.0%**
15.0%	>=$3,780	**0%**	>=$21,140	**0%**	>=$66,612	**0%**
Panel B: Price-indexed Bend Points						
PIA Factors	Bend Points	Percent of average wage in each bracket	Bend Points	Percent of average wage in each bracket	Bend Points	Percent of average wage in each bracket
90.0%	$627	**21.0%**	$2,172	**13.0%**	$4,975	**9.5%**
32.0%	$3,779	**79.0%**	$13,094	**65.5%**	$29,982	**47.6%**
15.0%	>=$3,780	**0%**	**>=**$13,095	**8.4%**	>=$29,083	**33.4%**

Source: Estimates prepared by the Congressional Research Service, based on data in the 2005 report of the Social Security Trustees.

How *Price Indexing the Pia Factors* Would Affect Benefits. Another way to price-index initial benefits — rather than indexing past earnings or the bend points to price increases — would be to reduce the PIA factors each year by the ratio of the CPI to the AWI. If the PIA factors were reduced each year by the ratio of the consumer price index to the average wage index, then

(1) the progressivity of the benefit formula would be maintained,
(2) the purchasing power of benefits would be maintained because benefits would grow at the same rate as prices,
(3) replacement rates would fall for each succeeding generation of workers.

Preceding the adoption of the 1977 amendments, Congress considered a proposal under which the PIA factors would have been reduced by one-half of the increase in real wages each year from 1988 through 2030. Replacement rates would have declined during this period, and then risen in years after 2030. The timing of the decline in replacement rates was intended to coincide approximately with the period during which the ratio of workers to retirees would be falling. This method of indexing initial benefits was not included in the 1977 Social Security amendments.

Recommendations of the 2001 President's Commission. In 2001, President Bush appointed a commission to recommend policy options for restoring Social Security to long-term fiscal solvency. The President provided the commission with several guiding principles, including the requirement that the reformed system must include individual accounts. The commission developed three alternative models for reform, all of which incorporated individual accounts. According to the commission's final report, "Model 2" is the one most likely to result in permanent solvency for Social Security, in part because it would index future benefits to the growth rate of prices rather than wages. The commission argued that, given the age-distribution of the U.S. population, the current wage-indexed benefit formula is fiscally unsustainable.[13] It concluded that if the benefit formula were indexed to grow with prices rather than wages, the system would be put on a path to permanent solvency.

The commission's final report recommended the following method of price indexing benefits:

> Modify the Primary Insurance Amount (PIA) formula factors (90, 32, and 15) starting in 2009, reducing them successively by the measured **real** wage growth in the second prior year. Modified PIA factors would be applicable for OASDI beneficiaries becoming eligible for benefits in 2009 and later. This provision would result in increasing benefit levels for individuals with equivalent lifetime earnings across generations (relative to the average wage level) at the rate of price growth (increase in the CPI), rather than at the rate of growth in the average wage level as in current law. Calculation of the average indexed monthly earnings (AIME) used in computing the PIA would be unaffected by this provision.[14]

The method of price indexing initial Social Security benefits recommended by the President's Commission would multiply the PIA factors each year by the ratio of the CPI to the AWI for the second prior year. Workers' past earnings and the bend points in the benefit formula would continue to be indexed to the rate of growth of the national average wage index. If, for example, prices in a particular year grew by 2.8% and wages grew by 3.9%, each of the PIA factors would be multiplied by 1.028/1.039 = .989. Because increases in worker productivity cause wages to rise

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[13] The problem is not that a wage-indexed system of benefits is inherently unsustainable, but rather that the future decline in the ratio of workers to retirees in the United States will cause the benefits payable under current law to exceed the income to Social Security from payroll taxes and interest.

[14] Memo from Stephen Goss, SSA Chief Actuary, to the Commission, Jan. 31, 2002.

faster than prices, the PIA factors would fall and Social Security replacement rates would decline.

The Social Security Administration has estimated the long-term rates of growth of prices and wages will be 2.8% per year and 3.9% per year, respectively.[15] Under this assumption, after 75 years of multiplying the PIA factors by the ratio of price growth to wage growth, the 90% PIA factor would fall to 40.5%, the 32% factor would fall to14.4%, and the 15% factor would fall to 6.7%. All three factors would continue to fall into the indefinite future. The replacement rate for a career average-wage earner retiring at the full retirement age in 2080 would fall from 39% under current law to 16% under full price-indexing.[16]

This method of price-indexing would maintain the progressivity of the Social Security benefit formula. In any year, the percentage reduction in benefits would be the same for workers at all levels of career-average earnings. For example, **Table 5** shows that low-wage, average-wage and high-wage earners retiring in 2030 would receive the same percent reduction to their Social Security benefits.

Table 5. Reduction in Social Security Benefits Under Price Indexing for Workers Retiring at the Full Retirement Age in 2030

Career Earnings	Social Security Benefit		
	Current Law	"Model 2" Price Indexing	Percent Change
Low-wage earner	$1,615	$1,333	- 17.4%
Average-wage earner	$2,769	$2,286	- 17.4%
High-wage earner	$4,673	$3,859	- 17.4%

Source: Estimates prepared by the Congressional Research Service, based on data in the 2005 report of the Social Security Trustees.

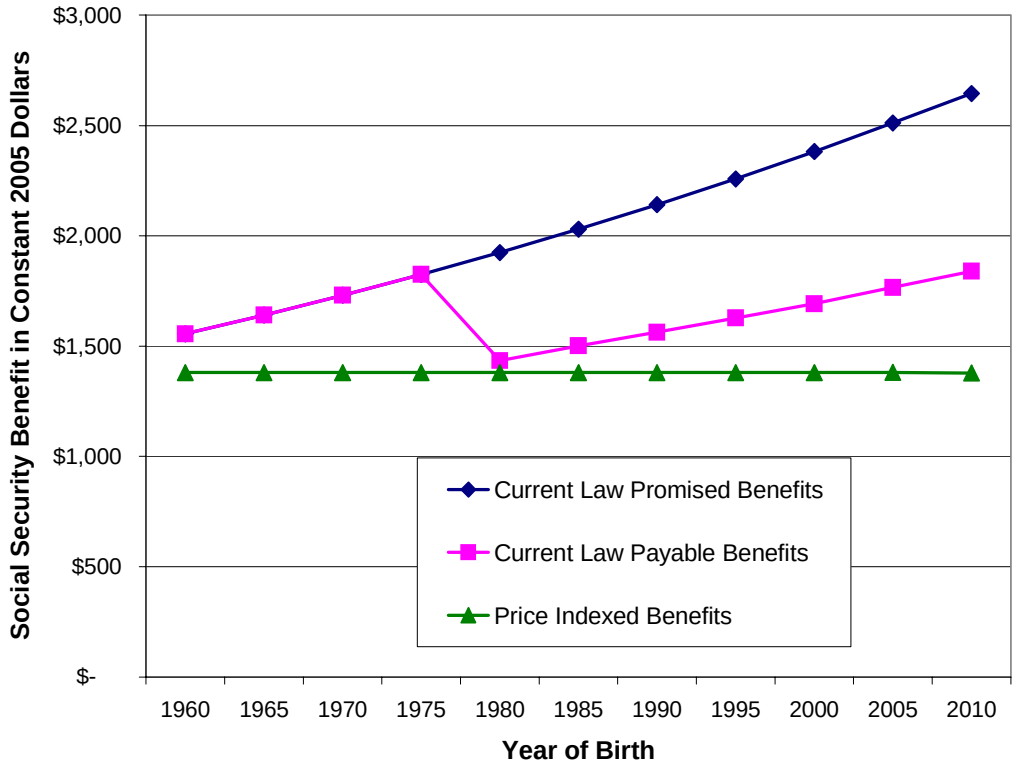
According to the SSA, fully price-indexing initial benefits would more than restore solvency to Social Security. Full price indexing would cut benefits by 2.07% of taxable payroll, which is more than is needed to offset the projected revenue shortfall of 1.92% of taxable payroll. The size of the benefit reduction, relative to that required to achieve solvency, can be seen for average-wage workers born in different years in **Figure 1**. Figure 1 shows the size of the Social Security benefit reductions over time, assuming that a price-indexed benefit formula is implemented

[15] In the Mar. 2005 Trustees' Report, the long-run rate of inflation is estimated to be 2.8% and the long-run rate of nominal wage growth is estimated to be 3.9%. These growth rates would yield a long-term annual growth rate of real wages of 1.039/1.028 = 1.07%.

[16] Due to the increase in the full retirement age to 67, scheduled under current law, the replacement rate for an average-wage earner who claims benefits at the full retirement will fall from 42% in 2005 to 39% age in 2080.

in 2012.[17] The difference in benefit levels increases for each successive each birth cohort. For a worker born in 2010, the reduction due to price indexing would be 25% larger than the reduction that would take place under current law after the Trust Funds are exhausted.

Figure 1. Social Security Benefits for a Scaled Average-Wage Worker Under Current-Law Compared to Price-Indexing (Constant 2005 Dollars)



Source: Congressional Research Service estimates.
Note: Assumes price-indexed benefits are implemented in 2012 and all other current-law provisions remain unchanged. The 'promised' benefit is that which is scheduled to be paid under current law. The 'payable' benefit is that which could be paid using only Social Security tax revenues after the Social Security Trust Funds are depleted.

Figure 1 also shows that the purchasing power of Social Security benefits would be maintained under price indexing. Under current law, Social Security benefits increase in real value for each generation of workers because benefits are indexed to wages, which rise faster than prices in the long run. Under price indexing, the real value of Social Security benefits would remain flat each year because they would be indexed to prices. Thus, the purchasing power of Social Security benefits would remain the same for future generations.

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[17] The year 2012 was selected for this analysis because the President has indicated that those workers currently age 55 and over would not be affected by Social Security reform proposals. The PIA formula is based upon the year of eligibility (age 62 for retirement benefits). Thus, in order for those currently age 55 and over to be held harmless, the price indexing could not begin until these workers are age 62, in 2012.

"Progressive" Price Indexing of Initial Benefits. As discussed above, even a small annual reduction in the PIA factors would result in substantial reductions in benefits when compounded over many years. This could have especially serious implications for the retirement income of low-wage workers, who are less likely to have employer-sponsored pensions, retirement savings, or other sources of retirement income. One way to preserve benefits for low-wage workers would be through progressive price-indexing of initial benefits. Under progressive price indexing, the initial benefits of low-wage workers would continue to be fully wage-indexed, the benefits of average-wage workers would be based on a mix of wage-indexing and price-indexing, and the benefits of high-wage workers would be fully price-indexed.

Implementing progressive price-indexing of initial benefits would require workers to be segregated into three categories, based on their career-average earnings. Congress would have to define the earnings thresholds for low-wage workers, who would continue to have their initial benefits fully wage-indexed, and for high-wage workers, whose initial benefits would be fully price-indexed. Workers whose career-average earnings fall between these two amounts would have their initial benefits determined through a mix of wage-indexing and price-indexing. Under progressive price indexing, the reduction in total Social Security outlays would be smaller than if all workers' benefits were fully price-indexed. The difference in total outlays would depend in part on the proportion of workers whose initial benefits would continue to be fully wage-indexed. The total reduction in outlays also would depend on whether benefits for high-wage earners would be reduced by the same percentage as they would have been cut if full price indexing had been applied to all workers, or if larger reductions would be made in the benefits of high-wage earners. If benefits for high-wage workers were cut by a greater percentage than they would have been cut under full price-indexing for all workers, then the difference in total savings achieved by full price-indexing and progressive price-indexing would be smaller. The precise benefit reduction for workers at each earnings level would depend on the policy goals that Congress wishes to achieve through price-indexing benefits.

How Progressive Price Indexing Would Work. The Social Security Administration has described a method of progressive price-indexing for individuals who become eligible for retired-worker benefits in 2012 and later.[18] This would be done in three steps. First, SSA would compute the percentage benefit reduction that would apply for a career high-wage earner if all three of the PIA factors (90%, 32%, and 15%) were fully price-indexed.[19] For example, if the benefit for a career high-wage earner retiring at the full retirement age in a future year were determined to be, say, $2,800 per month and the percentage changes in prices and wages since the base year were 2.8% and 3.9%, respectively, the benefit for a high-wage earner would be recalculated with each of the three PIA factors multiplied by the ratio 1.028/1.039 or

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[18] Memorandum from Stephen Goss, Chief Actuary of the Social Security Administration to Robert Pozen, Feb. 10, 2005.
See [http://www.ssa.gov/OACT/solvency/RPozen_20050210.pdf].

[19] This would be done as described in "Model 2" of the President's 2001Commission to Strengthen Social Security. See [http://www.csss.gov/reports/Final_report.pdf].

.989. Thus, in this example, the benefit of a high-wage earner under full price indexing would be reduced by 1.1% in the first year that price indexing was in effect. After ten years — assuming that prices and wages continued to grow annually by 2.8% and 3.9% — the PIA factors would be multiplied by $1.028^{10}/1.039^{10} = .899$, representing a benefit reduction of 10.1%.

The benefits of low-wage workers would be preserved by establishing a new bend point in the PIA formula, below which initial benefits would continue to be fully wage-indexed. In the proposal studied by SSA, this new bend point would be established at the 30th percentile of earnings. Workers with career-average earnings in the lowest 30% of the earnings distribution would continue to have their initial benefits fully wage-indexed. SSA has historically defined a low-wage worker as one with earnings less than or equal to 45% of the average wage. Congress could, of course, define low-wage workers in any of a number of ways, depending on the relative importance it assigns to reducing program costs compared to maintaining the benefits of low-wage workers. The higher the earnings level defined as low-wage, the deeper the benefit cuts for higher-wage workers would have to be in order to achieve the same total reduction in outlays.

The new bend point would increase each year by the rate of growth of the national average wage, just as the two current bend points are wage-indexed. SSA has estimated that a bend point at the 30th percentile of average monthly earnings would be located 28.6% of the way up from the current first bend point to the current second bend point. This would put the new bend point at about $2,000 in 2012, the first year of progressive price indexing in the proposal analyzed by SSA. All retired workers with career-average earnings below this new bend point would continue to have their initial benefits fully wage-indexed. The 90% PIA factor would apply to average monthly earnings up to the first bend point and the 32% PIA factor would apply to average monthly earnings between the first bend point and the new second bend point.

The third step of the process would be to calculate the percentage reduction to the PIA factors above the new bend point (32% and 15%) that would result in the same benefit reduction for career-long maximum-wage earners (those always at or above the annual maximum taxable wage) as would have applied to these earners if price indexing had been applied to all workers. This would reduce benefits for career-long maximum-wage earners by the same percentage as they would have been reduced if the benefit formula were fully price-indexed for workers at all earnings levels. Benefits would be reduced by a smaller percentage for workers with career-long average wages and not at all for workers with average wages that fall in the lowest 30% of the earnings distribution. SSA has estimated that this method of price indexing would reduce the long-run Social Security deficit by 1.4% of taxable payroll, or about 74% of the estimated 75-year deficit of 1.9% of taxable payroll.

Estimated Effect on Benefits of Progressive Price Indexing. **Table 6** illustrates the effects in 2030 of full price indexing and of progressive price indexing on hypothetical workers with maximum, average, and low career-average

earnings.[20] If full price-indexing of initial benefits were to be implemented in 2012, and if prices and wages were to grow at 2.8% per year and 3.9%, respectively, for each year thereafter, by 2030 the three PIA factors in the benefit formula would be multiplied by a factor of .826, representing the ratio of price increases to wage increases over the period from 2012 to 2030. This would reduce each PIA factor by 17.4%. Under full price-indexing, the initial benefits of all new beneficiaries would be reduced by this percentage. Under the method of progressive price-indexing described by SSA, benefits would continue to be wage-indexed for all workers whose career-average earnings fall in the lowest 30% of the earnings distribution. To achieve this objective, a new bend point would be established about 28.6% of the way between the current first and second bend points. Below this new bend point — which would fall in the earnings bracket to which the 32% PIA factor now applies — the 90% and 32% PIA factors would continue to be applied each year. Above this new bend point, both the 32% and 15% PIA factors would be reduced by a greater percentage than they would have been reduced under full price-indexing so that the percentage reduction that would apply to maximum-wage earners would be the same as under full price indexing for all workers.

Table 6 shows that with prices and wages growing at 2.8% and 3.9% per year, in order to achieve the same percentage reduction in benefits in 2030 for maximum-wage earners under progressive price indexing as under full price indexing, the 32% factor (above the new bend point) and the 15% factor would have to be reduced by 26.6%.[21] Reducing the top two PIA factors by 26.6% would reduce the PIA of maximum-wage earners by the same amount as would a 17.4% reduction applied to all three original PIA factors. Progressive price indexing would reduce the PIA of average-wage workers by a smaller percentage than would full indexing. In this example, benefits for average-wage worker would be reduced by 12.1% in 2030. Workers with career-average earnings in the lowest 30% of the earnings distribution would not experience any cut in benefits. **Table 7** and **Table 8** show the estimated effects on initial benefits of full price-indexing and progressive price-indexing in 2055 and in 2080.

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[20] These examples illustrate how price indexing would be applied to the PIA factors. They show the *approximate* effects of price indexing on the Primary Insurance Amount of hypothetical workers with high, medium, and low career earnings.

[21] It would be necessary to apply this greater reduction to the PIA of the high-wage earner because some of the earnings of these individuals would fall in the two lowest earnings brackets, to which the 90% and 32% PIA factors would continue to be applied.

Table 6. Estimated Primary Insurance Amounts at Full Retirement Age in 2030 Under Full Price Indexing and Progressive Price Indexing

Bend Points	AIME within each bracket	PIA Factors	PIA	PIA Adjustment Factor	New PIA Factors	New PIA	Change in PIA
High-wage earner: full price indexing							
$1,427	$1,427	0.90	$1,284	0.826	0.743	$1,061	
$8,599	$7,172	0.32	$2,295	0.826	0.264	$1,895	
$15,892	$7,293	0.15	$1,094	0.826	0.124	$903	
	$15,892		**$4,673**			**$3,859**	**-$815**
							-17.4%
High-wage earner: progressive price indexing							
$1,427	$1,427	0.90	$1,284	1.0000	0.900	$1,284	
*$3,478	$2,051	0.32	$656	1.0000	0.320	$656	
$8,599	$5,121	0.32	$1,639	0.7019	0.225	$1,150	
$15,892	$7,293	0.15	$1,094	0.7019	0.105	$768	
	$15,892		**$4,673**			**$3,859**	**-$815**
							-17.4%
Average-wage earner: full price indexing							
$1,427	$1,427	0.90	$1,284	0.826	0.743	$1,061	
$8,599	$6,176	0.32	$1,976	0.826	0.264	$1,632	
$15,892	$0	0.15	$0	0.826	0.124	$0	
	$7,603		**$3,261**			**$2,692**	**-$569**
							-17.4%
Average-wage earner: progressive price indexing							
$1,427	$1,427	0.90	$1,284	1.0000	0.900	$1,284	
*$3,478	$2,051	0.32	$656	1.0000	0.320	$656	
$8,599	$4,125	0.32	$1,320	0.7019	0.225	$926	
$15,892	$0	0.15	$0	0.7019	0.105	$0	
	$7,603		**$3,261**			**$2,867**	**-$393**
							-12.1%
Low-wage earner: full price indexing							
$1,427	$1,427	0.90	$1,284	0.826	0.743	$1,061	
$8,599	$2,051	0.32	$656	0.826	0.264	$542	
$15,892	$0	0.15	$0	0.826	0.124	$0	
	$3,478		**$1,941**			**$1,602**	**-$338**
							-17.4%
Low-wage earner: progressive price indexing							
$1,427	$1,427	0.90	$1,284	1.0000	0.900	$1,284	
*$3,478	$2,051	0.32	$656	1.0000	0.320	$656	
$8,599	$0	0.32	$0	0.7019	0.225	$0	
$15,892	$0	0.15	$0	0.7019	0.105	$0	
	$3,478		**$1,941**			**$1,941**	**-$0**
							-0%

Source: Estimates prepared by the Congressional Research Service.

* New bend point.

Table 7. Estimated Primary Insurance Amounts at Full Retirement Age in 2055 Under Full Price Indexing and Progressive Price Indexing

Bend Points	AIME within each bracket	PIA Factors	PIA	PIA Adjustment Factor	New PIA Factors	New PIA	Change in PIA
High-wage earner: full price indexing							
$3,714	$3,714	0.90	$3,343	0.633	0.569	$2,115	
$22,379	$18,655	0.32	$5,973	0.633	0.202	$3,779	
$41,359	$18,980	0.15	$2,847	0.633	0.095	$1,801	
	$41,359		**$12,163**			**$7,696**	**-$4,467**
							-36.7%
High-wage earner: progressive price indexing							
$3,714	$3,714	0.90	$3,343	1.0000	0.900	$3,343	
*$9,052	$5,338	0.32	$1,708	1.0000	0.320	$1,708	
$22,379	$13,327	0.32	$4,265	0.3719	0.140	$1,586	
$41,359	$18,980	0.15	$2,847	0.3719	0.066	$1,059	
	$41,359		**$12,163**			**$7,696**	**-$4,467**
							-36.7%
Average-wage earner: full price indexing							
$3,714	$3,714	0.90	$3,343	0.633	0.569	$2,115	
$22,379	$16,072	0.32	$5,143	0.633	0.202	$3,254	
$41,359	$0	0.15	$0	0.633	0.095	$0	
	$19,787		**$8,486**			**$5,370**	**-$3,116**
							-36.7%
Average-wage earner: progressive price indexing							
$3,714	$3,714	0.90	$3,343	1.0000	0.900	$3,343	
*$9,052	$5,338	0.32	$1,708	1.0000	0.320	$1,708	
$22,379	$10,734	0.32	$3,435	0.3719	0.140	$1,277	
$41,359	$0	0.15	$0	0.3719	0.066	$0	
	$19,787		**$8,486**			**$6,328**	**-$2,157**
							-25.4%
Low-wage earner: full price indexing							
$3,714	$3,714	0.90	$3,343	0.633	0.569	$2,115	
$22,379	$5,338	0.32	$1,708	0.633	0.202	$1,081	
$41,359	$0	0.15	$0	0.633	0.095	$0	
	$9,052		**$5,051**			**$3,196**	**-$1,855**
							-36.7%
Low-wage earner: progressive price indexing							
$3,714	$3,714	0.90	$3,343	1.0000	0.900	$3,343	
*$9,052	$5,338	0.32	$1,708	1.0000	0.320	$1,708	
$22,379	$0	0.32	$0	0.3719	0.140	$0	
$41,359	$0	0.15	$0	0.3719	0.066	$0	
	$9,052		**$5,051**			**$5,051**	**-$0**
							-0%

Source: Estimates prepared by the Congressional Research Service.

* New bend point.

Table 8. Estimated Primary Insurance Amounts at Full Retirement Age in 2080 Under Full Price Indexing and Progressive Price Indexing

Bend Points	AIME within each bracket	PIA Factors	PIA	PIA Adjustment Factor	New PIA Factors	New PIA	Change in PIA
High-wage earner: full price indexing							
$9,666	$9,666	0.90	$8,700	0.485	0.436	$4,219	
$58,242	$48,576	0.32	$15,544	0.485	0.155	$7,538	
$107,637	$49,395	0.15	$7,409	0.485	0.073	$3,593	
	$107,637		**$31,653**			**$15,349**	**-$16,304**
							-51.5%
High-wage earner: progressive price indexing							
$9,666	$9,666	0.90	$8,700	1.0000	0.900	$8,700	
*$23,559	$13,893	0.32	$4,446	1.0000	0.320	$4,446	
$58,242	$34,683	0.32	$11,099	0.1191	0.068	$1,322	
$107,637	$49,395	0.15	$7,409	0.1191	0.032	$881	
	$107,637		**$31,653**			**$15,349**	**-$16,304**
							-51.5%
Average-wage earner: full price indexing							
$9,666	$9,666	0.90	$8,700	0.485	0.436	$4,219	
$58,242	$41,828	0.32	$13,385	0.485	0.155	$6,491	
$107,637	$0	0.15	$0	0.485	0.073	$0	
	$51,494		**$22,085**			**$10,709**	**-$11,375**
							-51.5%
Average-wage earner: progressive price indexing							
$9,666	$9,666	0.90	$8,700	1.0000	0.900	$8,700	
*$23,559	$13,893	0.32	$4,446	1.0000	0.320	$4,446	
$58,242	$27,935	0.32	$8,939	0.1191	0.068	$1,065	
$107,637	$0	0.15	$0	0.1191	0.032	$0	
	$51,494		**$22,085**			**$14,210**	**-$7,875**
							-35.7%
Low-wage earner: full price indexing							
$9,666	$9,666	0.90	$8,700	0.485	0.436	$4,219	
$58,242	$13,891	0.32	$4,445	0.485	0.155	$2,156	
$107,637	$0	0.15	$0	0.485	0.073	$0	
	$23,557		**$13,145**			**$6,374**	**-$6,771**
							-51.5%
Low-wage earner: progressive price indexing							
$9,666	$9,666	0.90	$8,700	1.0000	0.900	$8,700	
*$23,559	$13,891	0.32	$4,445	1.0000	0.320	$4,445	
$58,242	$0	0.32	$0	0.1191	0.068	$0	
$107,637	$0	0.15	$0	0.1191	0.032	$0	
	$23,557		**$13,145**			**$13,145**	**-$0**
							-0%

Source: Estimates prepared by the Congressional Research Service.

* New bend point.

Long-term Implications of Price-indexing Initial Benefits. The reduction in future Social Security benefits under either full price-indexing or progressive price-indexing would depend on the difference between wage growth and the rate of inflation. This is called real wage growth. For example, if prices rise by 3% and wages grow by 4%, then real wage growth would be 1% and the PIA factors would be multiplied by 1.03/1.04 or .99. However, if wages grow by 4.5% and prices rise by 3%, real wage growth would be 1.5% and the PIA factors would be multiplied by 1.03/1.045 or .985. Faster growth of real wages would lead to deeper cuts in benefits. If wages were to rise faster than currently forecast for a number of years, the reduction in future benefits would be substantially deeper than originally estimated. For example, the Social Security Trustees' intermediate or "best guess"economic assumptions project that in the long run, prices will grow by 2.8% per year and wages will grow by 3.9% per year. This would result in a long-run rate of real wage growth of 1.1%. If all three PIA factors were reduced annually by 1.07%, after 75 years the 90% PIA factor would be reduced to 40.5%, the 32% factor would be reduced to 14.4%, and the 15% factor would be reduced to 6.7%. However, if instead real wages were to grow by 1.5%, then after 75 years the 90% would be reduced to 30.4%, the 32% factor would be reduced to 10.8%, and the 15% factor would be reduced to 5.1%.

Faster real wage growth would reduce the need for future benefit cuts to restore Social Security to fiscal solvency because it would produce higher payroll taxes to the trust fund many years in advance of the higher benefit payments that those higher wages also would produce. The Social Security Administration Office of the Actuary, for example, has estimated that annual real wage growth of 1.6% would reduce the 75-year unfunded liability of Social Security from 1.92% of payroll to 1.39% of payroll, a reduction of 28%.[22] Thus, somewhat paradoxically, if real wages rise faster than projected, price indexing would result in deeper benefit cuts, even as Social Security's unfunded 75-year liability would be shrinking. Similarly, if real wage growth falls short of the 1.1% annual rate projected by the Social Security Administration, the benefit reductions that price indexing would generate would be smaller than estimated and the program's unfunded liability would grow larger.

The method of price-indexing Social Security benefits recommended in Model 2 of the President's Commission would reduce the PIA factors each year by the ratio of the Consumer Price Index to the average wage index. This process would reduce the PIA factors into the indefinite future. However, the ratio of workers to retirees will not continue to fall indefinitely. Therefore, it may not be necessary for replacement rates to continue to fall indefinitely. If Congress were to choose this method of price indexing benefits, it could leave it up to future Congresses to decide if the PIA factors should continue to be reduced, or legislation that implements price indexing could specify the conditions under which the PIA factors would no longer be price-indexed and replacement rates would be stabilized.[23]

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[22] 2005 Annual Report of the Board of Trustees, Table VI.D4, p. 153.

[23] Congress also would have to decide whether the same procedures would be applied in years when prices grow faster than wages. This occurred 18 times between 1940 and 2004.

Progressive Price Indexing Would Lead to the Same Benefit for Most Workers. The current Social Security benefit formula is progressive in that the replacement rate is higher for low-wage workers than for high-wage workers. Nevertheless, the current benefit formula also is designed to recognize the greater amount of payroll taxes paid by high-wage workers. It does this by paying higher benefits to high-wage workers than to low-wage workers. Under the method of progressive price indexing analyzed by SSA and described in this report, most workers eventually would be paid the same monthly benefit. This would occur because the PIA factors applied to the two higher earnings brackets would be reduced each year while the PIA factors applied to the two lower earnings brackets would remain unchanged. Eventually, the PIA factors applied to the upper two earnings brackets would be reduced to zero. At that point, initial benefits would be the same for all workers with earnings in the top 70% of the earnings distribution. The Congressional Research Service estimates that this would occur approximately 90 years following the implementation of progressive price indexing as described by SSA, assuming long-run real wage growth of 1.1% per year. As noted earlier, however, Congress could identify in any legislation that implemented price- indexing the conditions — such as elimination of Social Security's long-term deficit — under which the reduction of benefits through price indexing would no longer continue.

IV. Other Elements of Social Security That Might Be Affected by Price-Indexing Benefits

Because price indexing would alter the PIA formula, it is important to consider the potential consequences of such a change on other Social Security provisions that are either based upon the PIA formula or based upon the concept of wage indexing.

Windfall Elimination Provision (WEP). Under current law, the windfall elimination provision (WEP) reduces the Social Security benefits of workers who also have pension benefits from employment not covered by Social Security (e.g., employment under the Federal Civil Service Retirement System or some state and local governments). Its purpose is to remove an advantage these workers would otherwise receive because Social Security's benefit formula favors workers with smaller amounts of Social Security-covered career earnings. Under the WEP, the 90% factor in the first band of the regular PIA formula is replaced by a factor of 40%. Lesser reductions apply to workers with 21 through 30 years of substantial covered employment, as follows:

	Years of Social Security Coverage										
	20	21	22	23	24	25	26	27	28	29	30
First factor in formula	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

The effect of replacing the 90% formula factor with a lower factor is to lower the proportion of their earnings in the first bracket that are converted to benefits.[24]

[24] For additional information on the WEP, please refer to CRS Report 98-35, *Social Security: The Windfall Elimination Provision (WEP)*, by Laura Haltzel.

Because the WEP PIA formula is based upon the current-law PIA formula for all but the first PIA factor, price-indexing would automatically change the 32% and 15% factors for both the regular PIA and the WEP PIA formula. However, the first WEP PIA factor (40% or whatever based on years of coverage) is written into law and would not automatically change with the reduction in the regular PIA formula. Thus, if price-indexing were to be implemented and action were not taken to alter the WEP provision, eventually the reduction to the 90% formula factor would be large enough to bring this factor down to, and in some cases below, the level of the current-law WEP formula factor. For example, under the current-law WEP, a worker with 25 years of coverage would have the 90% PIA factor replaced with a 65% factor. Under full price-indexing, the 90% factor is gradually reduced and would reach 65% by 2041. Thus, a worker who spent their entire career contributing to Social Security and becomes eligible to retire in 2041 would have a PIA formula identical to a worker who contributed for only 25 years. For those regular Social Security-contributing workers becoming eligible in future years the first formula factor would continue to fall while the WEP beneficiary is held harmless from this reduction. In order to maintain the intent of the WEP provision and avoid penalizing workers who contribute to the Social Security system for their entire careers, the WEP provision would need to specify that the same price indexing reduction would apply to whatever first PIA formula factor would have applied to the worker under current law.

Benefits Paid to Family Members Based on the Worker's Earnings Record. In addition to the worker's retirement benefits, Social Security provides benefits (auxiliary benefits) to other family members (e.g., the worker's spouse, divorced spouse, young children, and dependent parents) who are eligible to receive benefits based on the worker's Social Security earnings record. As of December 2004, approximately 3.1 million children and spouses received benefits based on a retired worker's benefits, approximately 6.7 million children and spouses received benefits based on a deceased worker's benefits, and approximately 1.8 million children and spouses received benefits based on a disabled worker's benefits.[25] In each case, the worker's PIA is the basis for calculating these benefit amounts. For example, while the worker is still alive, a spouse retiring at the full retirement age is eligible to receive a Social Security benefit equal to 50% of the worker's PIA. A child under age 18 (or under age 19 if he or she is a full time student in elementary or high school) is eligible to receive a benefit equal to 50% of the worker's PIA. Thus, any reduction in the worker's PIA automatically translates into a reduction in benefits for every individual who would be eligible to receive benefits on this worker's earnings record. For example, as shown previously in Table 6, under full price indexing the PIA of a scaled average wage worker retiring in 2030 at the full retirement age would be reduced by about 17%. If the worker's PIA were $2,769 under current law, under price indexing it would be reduced to $2,286. Thus, assuming the worker is still alive, the spousal benefit would be reduced from about $1,385 to $1,143, a 13% reduction. Any children eligible for benefits would also see their benefits reduced by 13%. If this result is undesirable, Congress could specify that these beneficiaries be held harmless from price indexing. However, this exemption would also reduce the savings generated by this provision.

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[25] Social Security Administration, 2005 Social Security/SSI Factsheet, available at [http://www.ssa.gov/legislation/2005_factsheet.doc].

In some cases there may be multiple individuals who are eligible to receive Social Security benefits based on one worker's earnings history. The combination of benefits paid to these family members is subject to a dollar limit, the maximum family benefit (MFB), which is based on the worker's PIA. When the total monthly Social Security benefits paid to eligible family members exceeds the MFB, each benefit that is based on the worker's earnings history (other than the worker's own benefit and benefits paid to a former spouse) is reduced proportionately until the total benefits paid fall below the MFB. The maximum family benefit is based upon the PIA of the insured worker. Thus, any reduction in the PIA, reduces the maximum combined benefit that can be paid to eligible family members.

Continuing the example above where the worker's PIA would be reduced to $2,286, the spousal benefit and children's benefits would be reduced from about $1,385 to $1,143. Because the maximum family benefits are directly linked to the PIA, the MFB would also be reduced from $5,176 under current law to $3,862, potentially leading to additional benefit reductions for these family members.

Table 9. Example of How the Maximum Family Benefit Would Work Under Current Law vs. Price-Indexing of the PIA, Scaled Average-Wage Worker With Spouse and Three Eligible Children

	Current Law	Price-Indexing of PIA
Individual Benefit Amount Each Family Member is Eligible to Receive	$1,385	$1,143
Total Family Benefit Prior to MFB	$5,540	$4,572
Maximum Family Benefit (after worker's PIA has been subtracted)	$2,407	$1,576
Reduction in Total Family Benefit Required Under MFB	$3,133	$2,996
Resulting Individual Social Security Benefit for Each Family Member	$602	$394
Percent Reduction Due to Maximum Family Benefit	- 57%	- 66%

Source: Estimates prepared by the Congressional Research Service.

As seen in **Table 9**, if the scaled average-wage worker above had a spouse and three children under the age of 18, this family would have (were it not for the MFB) qualified for a spousal benefit of $1,385 and three children's benefits of $1,385 each, for a total of $5,540. Under current law, this $5,540 total would exceed the $2,407 maximum family benefit by $3,133. Thus, each of the family members' benefits would be reduced in equal proportion to $602 each, a reduction of 57%. Under price indexing of the PIA, because of the worker's lower PIA, this family would have qualified for a spousal benefit of $1,143 and three children's benefits of $1,143 each, for a total of $4,572. Because price indexing automatically reduces the MFB as well as individual family member benefits, this $4,572 total exceeds the price indexed MFB of $1,576 by $2,996. Thus, each of the family benefits would be reduced in equal proportion to $394 each, a reduction of 66%.

Social Security Components Indexed to Average Wages. In addition to Social Security benefits, there are many other Social Security components that are currently indexed with the increase in the national average wage:

- The Social Security contribution and benefit base (i.e. maximum taxable earnings)
- The "old law" contribution and benefit base
- Exempt amounts under the retirement earnings test
- The formula for computing maximum family benefits (MFB)
- The amount of earnings needed to earn a quarter of coverage under Social Security
- Coverage thresholds for domestic and election workers
- Substantial gainful activity amounts for DI beneficiaries
- The amount of earning affecting a trial work period for DI beneficiaries

Social Security Contribution and Benefit Base. Social Security taxes are levied on earnings up to a maximum level set each year. In 2005, this maximum — or what is referred to as the taxable earnings base — is $90,000. The taxable earnings base serves as both a cap on contributions and a cap on benefits. As a contribution base, it establishes the maximum amount of earnings for each worker that is subject to the payroll tax. As a benefit base, it establishes the maximum amount of earnings used to calculate benefits. Under current law, the Social Security contribution and benefit base increases with the growth in the national average wage. If this amount continued to increase in line with wages, while benefits increased in line with prices, over time the portion of pre-retirement earnings that would be replaced by Social Security benefits upon retirement would decline. If the contribution and benefit base were price indexed rather than wage indexed, benefit amounts and replacement rates for average and low-wage workers would be unchanged. Benefits would be reduced only for high wage and maximum wage workers who would pay less in taxes as the base fell relative to their earnings. High wage and maximum wage workers would also have lower benefits than if just the PIA were price indexed as the amount of earnings that are counted towards benefits would also decrease. Therefore, price indexing the contribution and benefit base would reduce the replacement rate for higher wage workers more sharply than would price indexing the PIA. In addition to these effects on benefits and replacement rates of higher earners, Social Security revenues would fall. Lowering the growth rate of the taxable maximum would also lower the growth rate of revenues into the Social Security system, which reduces the solvency savings from price indexing the PIA.

"Old-Law" Contribution and Benefit Base. The old-law contribution and benefit base is the base that would have been effective without enactment of the 1977 amendments to the Social Security Act. Under current law, this base is indexed to increases in the national average wage. In 2005, the old-law base is $66,900, substantially smaller than the current-law contribution and benefit base of $90,000. The old-law base is used by the Social Security Administration to determine a 'year of coverage' in computing the special minimum benefit and to calculate a year of coverage in computing benefits for those subject to the WEP. This base is also used by the Railroad Retirement program to determine tax liabilities and Tier II benefits payable under Railroad Retirement to supplement the Tier 1 benefits, which correspond to basic Social Security benefits. The Pension Benefit Guaranty

Corporation (PBGC) uses the old-law base to determine the maximum amount of pension guaranteed under the Employee Retirement Income Security Act (ERISA). Thus, price-indexing the old-law base would increase financial protections for some Social Security beneficiaries by reducing the earnings required to obtain a year of coverage under certain Social Security provisions. But the same step would also reduce protection provided to pensioners under the Railroad Retirement system and by the PBGC.

Exempt Amounts Under the Retirement Earnings Test. The retirement earnings test (RET) reduces Social Security benefits for those below the full retirement age who have income from work that exceeds certain dollar thresholds. In 2005, Social Security withholds $1 in benefits for every $2 of earnings in excess of $12,000 if 2005 is not the year the worker reaches the full retirement age. If 2005 is the year the worker reaches the full retirement age, a higher exempt amount applies to earnings made in months prior to the month of attaining the full retirement age. For those months Social Security withholds $1 in benefits for every $3 of earnings over $31,800. The dollar thresholds are indexed annually with the increase in the national average wage. As a result, when wages increase from year to year, approximately the same proportion of a worker's earnings is subject to the RET. Price indexing Social Security benefits alone would not alter this structure (although the $1 benefit reduction would be a larger percentage of the smaller price indexed benefit). However, if both Social Security benefits and the exempt amounts subject to the RET were price indexed, the growth rate in the real wages being earned by workers would exceed the growth rate of the exempt amounts. This change would push more and more wages over the exempt amount, making the same level of benefits subject to a larger reduction under the RET.

Formula for Computing Maximum Family Benefits (MFB). Under current law, the formula for the maximum family benefit is structured similarly to that of the current-law PIA formula. For the family of a worker who becomes age 62 or dies in 2005 before attaining age 62, the total amount of benefits payable may not exceed:[26]

> 150% of the first $801 of the worker's PIA, *plus*
> 272% of the worker's PIA over $801 through $1,156, *plus*
> 134% of the worker's PIA over $1,156 through $1,508, *plus*
> 175% of the worker's PIA over $1,508.

As with the current-law PIA formula, the dollar amount bend points connected to each replacement factor are indexed to increases in the national average wage. A logical question to ask if the regular PIA bend points are price indexed is whether the MFB formula factors should also be indexed.

As discussed above, even without making any changes to the MFB formula factors, the family benefit based on an insured worker's earnings record will be reduced relative to current law. This reduction is due to the link between the worker's PIA, a family member's benefits and the MFB. Continuing the example

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[26] A special formula is used for computing the maximum benefits payable to the family of a disabled worker.

from **Table 9** above, if the MFB formula factors were also price-indexed in line with the PIA factors, the new MFB would be $904. This new MFB is $3,668 smaller than what the family members would qualify for based on the spouse's PIA. Thus, each family members benefit would be reduced to $226, a reduction of 80% due to the MFB. This large reduction occurs because each beneficiary is affected twice by price- indexing: (1) through the reduction of the MFB that occurs automatically when the worker's PIA is decreased; and (2) through the reduction of the MFB factors by price-indexing.

Coverage for Social Security Benefits. In order to be insured for Social Security retirement benefits, traditional workers must have earned 40 quarters of coverage by working in Social Security covered positions.[27] The amount of earnings required for a quarter of coverage in 2005 is $920 and this dollar amount increases automatically each year with increases in the national average wage index. Workers can earn no more than 4 quarters of coverage in a year. Domestic employees and election workers are subject to special coverage thresholds to qualify for Social Security benefits. In 2005, a domestic worker must earn at least $1,400 in a single private home to obtain coverage, and this amount is indexed annually with the increase in the national average wage. Election workers must earn $1,200 in 2005 to qualify for Social Security coverage. This amount is also indexed annually to the increase in the national average wage.

Price indexing Social Security benefits would not affect the quarters of coverage or coverage thresholds needed to qualify for Social Security benefits; however, it would create a disconnect between the 'cost' of the coverage earned and the benefits ultimately received. If the earnings required to obtain a quarter of coverage were also price-indexed, lower paid workers would find it easier to meet the coverage requirement because the growth in wages would exceed the growth in the coverage thresholds. Thus, price-indexing the quarters of coverage or coverage thresholds could lead more workers to ultimately qualify for Social Security benefits, which is beneficial from a coverage standpoint, but potentially costly from the standpoint of solvency.

Substantial Gainful Activity Amounts for Disabled Workers. To be eligible for Social Security disability benefits, a person must be unable to engage in "substantial gainful activity" (SGA). A person who earns more than a certain monthly amount (net of impairment-related work expenses) is typically considered to be engaging in SGA and would not be eligible for DI benefits. The amount of monthly earnings considered as SGA depends on the type of disability. The Social Security Act specifies a higher SGA amount for statutorily blind individuals while Federal regulations specify a lower SGA amount for non-blind individuals. In 2005, the SGA for statutorily blind individuals is $1,380. For non-blind individuals the 2005 SGA is $830. Both SGA levels increase annually with increases in the national average wage. Although price indexing the PIA would automatically reduce the disability benefits of those eligible for DI benefits, this form of price indexing would not affect a disabled individual's ability to qualify for these benefits. However, if the SGA levels were also subject to price indexing, the growth in earnings would outpace

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[27] Fewer quarters of coverage are required to be eligible for disability benefits or for survivor benefits that are based on a worker's earnings record.

the growth in the SGA, ultimately leading fewer individuals with disabilities to qualify for DI benefits not because of increased ability or work effort, but just due to the difference between price growth and wage growth.

Trial Work Period for Disabled Workers. After an individual becomes eligible for disability benefits, the person may attempt to return to the work force. To encourage DI beneficiaries to test their ability to work, Social Security provides a "trial work period" in which the beneficiary may have earnings and still collect DI benefits. Social Security does not consider a disability to have ended until a disabled worker is able to perform a certain level of "services" for at least 9 months (not necessarily consecutive) out of a rolling 60-month period. In 2005, any month in which the disabled worker's earnings exceed $590 is considered to be a month of services. This dollar threshold is indexed to the annual increase in the national average wage. Price indexing Social Security benefits would not directly affect the level of earnings considered to qualify as a month of services for the disability trial work period. However, if the trial work period dollar threshold were also price-indexed, the growth in earnings would outpace the growth in the trial work period threshold, ultimately causing more individuals with disabilities to lose their DI benefits not because of increased ability or work effort, but just due to the difference between price growth and wage growth. This reduction in the trial work period threshold may therefore create a disincentive for those currently receiving DI benefits to attempt returning to work.

V. Conclusion

Social Security faces a long-term deficit in the income dedicated to the program compared to the benefits promised under current law. One way to restore the program to long-term financial solvency would be to slow the growth of benefits. Under current law, Social Security benefits are indexed to growth in the national average wage. They increase from one generation to the next at the rate that the national average wage rises. Basing initial benefits on the rate at which prices rise rather than the rate at which wages rise would slow the growth rate of benefits because in the long run prices grow more slowly than wages.

Price indexing initial benefits for all beneficiaries would result in small annual reductions in initial benefits, but the cumulative reductions would be substantial when compounded over many years. This could have serious implications for low-wage workers, who depend heavily on Social Security as a source of retirement income. Price indexing initial benefits also would make deeper cuts in benefits if wages grow faster than projected, even as Social Security's financial situation would be improving. Likewise, if wages grow more slowly than projected, price indexing would make smaller cuts in benefits, leading to a larger long-term financing deficit.

One way to preserve benefits for low-wage workers would be through progressive price-indexing of initial benefits. Under progressive price-indexing, the initial benefits of low-wage workers would continue to be fully wage-indexed, the benefits of average-wage workers would be based on a mix of wage-indexing and price- indexing, and the benefits of high-wage workers would be fully price-indexed. President Bush has suggested that Congress consider progressive price-indexing of Social Security as a means of restoring Social Security to financial solvency. The Social Security Administration has analyzed a method of progressive price-indexing

that would continue to wage-index Social Security benefits for workers with career-average earnings in the lowest 30% of the earnings distribution. SSA has estimated that this proposal would eliminate about three-fourths of the program's 75-year unfunded liability. One consequence of this method of progressive price-indexing would be that, eventually, all workers with earnings in the top 70% of the earnings distribution would receive the same benefit.