

## ***The Distributional Effects of Changing the Averaging Period and Minimum Benefit Provisions***

*by Steven H. Sandell, Howard M. Iams, and Daniel Fanaras\**

This study evaluates the effects of changing the averaging period used to calculate Social Security benefits from 35 years to 38 or 40 years and the introduction of a minimum benefit provision for future retirees born during the early part of the baby boom generation. Proposals to change the averaging period have been recommended by a majority of the 1994-96 Advisory Council on Social Security. Based on the Survey of Income and Program Participation (SIPP) matched to Social Security Administration earnings records, the study projects retirement benefits for different subgroups of the population under existing and proposed benefit rules. The magnitudes of the retirees' benefit changes vary by demographic group. The minimum benefit provision substantially mitigates the effects of the change to a 40-year averaging period for some groups of women.

---

\*Division of Policy Evaluation, Office of Research, Evaluation and Statistics, Office of Policy, Social Security Administration. The views are those of the authors and do not reflect the views of any government agency or research organization.

### ***Introduction***

Concern about the long-term solvency of the Old-Age and Survivors Insurance (OASI) Trust Fund has spawned numerous proposals to reform the existing structure of the Social Security program. Recent projections of the Social Security Trustees estimate that the assets of the combined OASI and Disability Insurance (DI) Trust Funds will be depleted by the year 2034 under present law and the intermediate assumptions.<sup>1</sup> The retirement of the baby boom generation will strain the system as benefit payments to retirees increase relative to contributions made by workers. Many proposed policy changes reduce retirement benefits to promote long-term solvency. Obviously if aggregate benefit payments are reduced, more retirees could be paid over a longer period of time. This article examines the distributional effects of increasing the number of years of earnings counted in the formula used to determine retirement benefits and establishing a poverty-level benefit for persons who worked 40 years.

Currently, retirement benefits are calculated using the highest 35 years of earnings during one's lifetime work history. The formula used to determine the monthly primary insurance amount (PIA), or full benefit for a retired worker, is based on the individual's lifetime average indexed monthly earnings (AIME), which is derived from their highest 35 years of earnings. A majority of the 1994-96 Social Security Advisory Council (1997) proposed increasing the number of years of earnings in the AIME formula from 35 to 38 years.<sup>2</sup> Some recommended that this number be increased to 40 years.<sup>3</sup> As indicated by these two proposals, changing the averaging period of the benefit formula has attracted the attention of policymakers.

Some also recommended a minimum benefit provision designed to increase the progressivity of the existing benefit structure. Such a benefit is designed to shield low-

income contributors from adverse effects of other provisions recommended to restore the Social Security program to solvency. Retirees who have contributed to the program for 40 years could be guaranteed a benefit equal to the aged poverty level. Workers with 20 years of covered earnings could be guaranteed a benefit that is equal to 60 percent of the poverty level. For workers with more than 20 years of covered earnings, the minimum benefit level increases 2 percent of the poverty level with every additional year of contributing into the system, so that those who contribute for 40 years could be guaranteed the poverty level benefit. Since a proposal could call for the minimum benefit component to be phased-in from 2001 through 2020, workers born during the baby boom generation could be affected.

The Social Security benefit formula uses a multi-year averaging period to relate a worker's retirement benefit to their career earnings (Ball 1998). Proponents of changing the period argue that since most people work more than 35 years, counting more years would cause benefits to reflect average career earnings more accurately than they do now. However, if a number of years of zero earnings were added, due to the progressivity of the benefit formula, an increase in the averaging period would have a greater effect on the benefits of people with low earnings.

Proposals that reduce Social Security benefits affect the income of future retirees. An increase in the averaging period to either 38 or 40 years would reduce benefits for all workers whose earnings in the additional years are lower than in those years previously included. The reductions would depend on a worker's years of contributions to the system and how much they earned during those years. Presumably, individuals who exit the workforce during their lifetime, for reasons such as childbearing or to become a homemaker, would likely be penalized more with respect to their own worker benefit than those who remained in the workforce for their entire lives. Indeed some individuals are likely to be affected more than others. But whom will such a policy change affect the most? Would a minimum benefit counter any reductions in benefits among those who are less fortunate?

The magnitude of the effect of increasing the averaging period on worker benefits is influenced by the number of zero earning years, the number of low-earnings years added, and a person's position in the progressive benefit formula. First, because Social Security benefits are derived from a measure of average lifetime earnings (AIME) any years of the number required (currently 35 years) not working for pay (with zero earnings) reduce one's retired-worker benefits. These years are counted as being zero in the numerator of the AIME averaging formula and reduce the average by creating a larger denominator relative to the numerator. By counting more years, an increase in the averaging period reduces the number of years of zero earnings that can be dropped, making it likely for a retiree to have zero-earnings years included in the AIME formula, thus reducing the retirement benefit. Second, an increase in the averaging period would be likely to increase the number of

years of low earnings included in the AIME formula and reduce the average. Current retirees have up to 5 years of their lowest earnings dropped before the average is calculated. Consequently, retirees with more than 5 years of low earnings would have their benefits decreased. Workers with steady earnings for all years used in the computation would not be affected by such a change. Lastly, due to the progressive structure of the benefit formula, any change in the AIME would yield larger benefit changes for retirees with lower earnings and smaller changes for retirees with higher lifetime earnings. For example, persons whose AIME is \$477 or less in 1998 would have their benefits reduced by 90 cents for each dollar reduction in their AIME, persons with an AIME between \$478 and \$2,875 would be reduced 32 cents for each dollar reduction and persons with AIMEs above \$2,875 would have benefits reduced by 15 cents for each dollar reduction in their AIMEs.<sup>4</sup> Thus the effects of increasing the averaging period are potentially regressive with respect to lifetime earnings.

This article evaluates for the early baby boom generation the distributional effects of changing the averaging period and adding a minimum benefit provision. It uses lifetime earnings projections based on the 1991 panel of the Survey of Income and Program and Participation (SIPP) matched to SSA administrative earnings records.

Our approach is to simulate benefit changes among different demographic groups between current policy (35-year averaging period) and under three alternative policies: 38-year averaging period, 40-year averaging period, and 40-year averaging period with a minimum benefit. We are interested in determining how benefits will change under each policy with respect to gender, minority status, lifetime earnings level, and one's educational attainment.

The next section discusses the method we use to simulate the proposed policy changes. Then we briefly discuss how the formula used to calculate retirement benefits implies different distributional effects stemming from the proposed policy changes. Afterwards, we present the results of simulating the retirement benefit changes among demographic groups. We conclude with a summary of our findings.

## *Procedure*

We simulate the effects of the policy changes on the first half of the baby boom cohort (born between 1946 and 1955 inclusive and reaching age 62 between 2008 and 2017). We use data from the 1991 Survey of Income and Program Participation (SIPP) matched to SSA administrative records of annual earnings in 1951-96 subject to FICA (Social Security) contributions.<sup>5</sup> Three steps are involved in the simulation: projecting earnings in unobserved future years, projecting the number of years of covered earnings, and simulating the benefits that would be received under the proposed benefit formulae. We project Social Security benefits in 1998 dollars assuming retirement at the normal retirement age based on the AIME projection.

We combine the Social Security earnings observed between 1951 and 1996 with estimates of annual earnings and quarters of coverage until age 62 using the procedure developed in Iams and Sandell (1997).<sup>6</sup> We estimated AIME for each person using the highest 35, the highest 38, and the highest 40 years of earnings and the associated PIA, the individual's basic (unreduced) benefit in 1998 dollars. We consider only workers who would be eligible for retired-worker benefits under current policy. The projections created in this study reflect the basic retirement benefits of individual workers based on their own earnings. The effects of changing the averaging period on auxiliary Social Security benefits, such as survivors or spousal benefits, are not generated.<sup>7</sup> Because we do not consider the impact of dual entitlement to higher wife benefits, the effects reported here reflect the impact on earned retired-worker benefits and do not represent the impact on total Social Security benefits that include wife benefits as well as earned benefits for many couples. A separate analysis suggests approximately two-thirds of baby boom cohort wives will receive only retired-worker benefits (Butrica, Iams, and Sandell 1999).

To predict the effects of adding a minimum benefit provision, we project benefits for each participant assuming a 40-year averaging period combined with the minimum benefit guarantee.<sup>8</sup> We estimate the proportion of benefit recipients that would qualify for either a full (100 percent) poverty level benefit or a partial (60-98 percent) poverty level minimum benefit based on their level of lifetime earnings and years of contributions. The annual poverty level income for an aged individual used in the analysis is \$8,693 in 1998 dollars.<sup>9</sup>

We use the median dollar change in Social Security benefits to assess the effects of extending the averaging period to 38 or 40 years compared with current policy (35-year averaging period). The mean change in the benefit is a less useful measure because outliers can have a disproportional effect on the mean change.

We examine the distributional effects of benefit changes by gender, minority status, and socioeconomic status (education and lifetime earnings). Minority status is indicated by black, white-Hispanic, and white non-Hispanic. We measure the socioeconomic level by lifetime earnings using the procedure

described above and by the highest number of years of education reported in the SIPP. Respondents are classified according to three categories: 0-11 years, 12 years, and 13 or more years.

Another representation of socioeconomic status includes our measure of lifetime earnings, AIME, for each individual in the sample. This is not an ideal measure of the family's retirement income because it ignores the spouse's earnings and other sources of income, such as pensions and the returns from savings. However, classifying people by their AIME levels allows us to conduct the distributional analysis using one of the key components of retirement income, Social Security benefits.

The poverty level is adjusted annually by the change in the price level, while Social Security benefits for new retirees are indexed by the change in average wages. Because the Trustees project wages to increase faster than prices, in the future, the minimum benefit will be worth less over time compared to benefits calculated using the regular formula. In this article we assume wages and prices to increase at the same rate by making adjustments only for wage growth. Although different wage growth assumptions could be used, we did not want that assumption to drive the analysis. It is also possible that even if the rate of change in average real wages were 0.9 percentage point as projected by the Trustees (Board of Trustees 1999), real wages at the low end of the labor market may continue to be stagnant.

## Results

### *Increasing the Averaging Period*

Our simulation indicates that most retirees in the first half of the baby boom generation would have their benefits reduced if the averaging period were increased to either 38 or 40 years. Table 1 shows the mean and median level of benefits for men and women under the different averaging period policies. The median level is below the mean level for all groups indicating that benefits for the middle person are less than suggested by the mean. Benefit changes are likely to vary among demographic groups, with some groups being affected more than others are. The following analysis describes how benefits

Table 1.—Projected average PIA benefits under various proposals (1946-55 cohort)

Averaging period	[In 1998 dollars]					
	Mean value			Median value		
	Total population	Men	Women	Total population	Men	Women
35 year (current policy).....	\$837	\$1,005	\$681	\$799	\$986	\$642
38 year .....	809	976	655	766	947	618
40 year (no minimum benefit).....	789	954	637	744	917	602
40 year (with minimum benefit).....	831	976	697	744	917	686

Source: Authors' projections based on 1991 Survey of Income and Program Participation exactly matched to SSA administrative records.

would change with respect to gender, minority status, lifetime earnings level, and education.

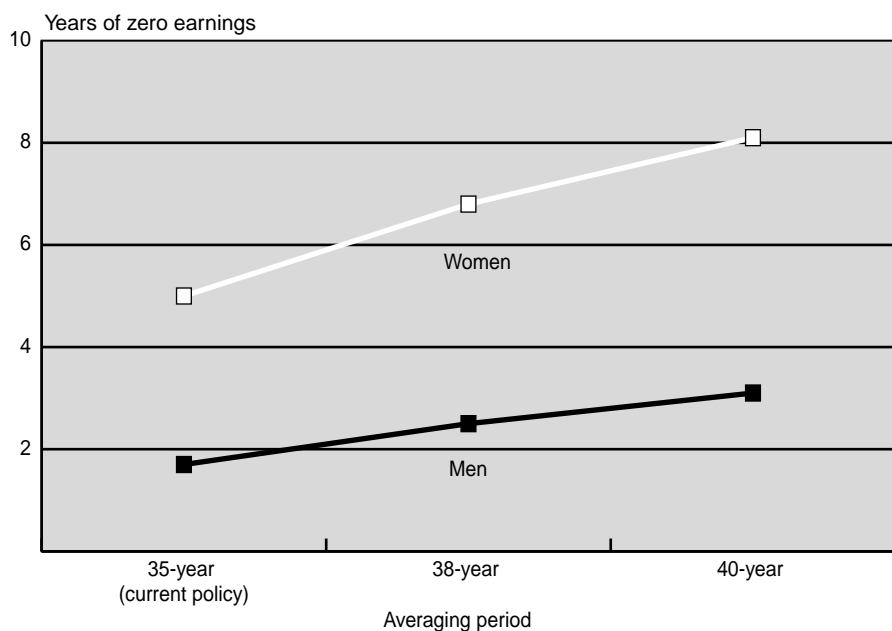
### Gender

A decrease in women's benefits would typically be larger than men's if the average period were increased. Because women are more likely than men to exit the labor market for nonmarket work, such as childbearing or homemaking, they generally have more years in their work history in which they acquire no earnings. These years are included as zeros in calculating the numerator of the AIME formula, and result in lower benefits. Chart 1 shows that the number of years of zero earnings for women retired workers exceeds the number for men under the current policy. If the averaging period were increased to either 38 or 40 years, the difference in the number of zero earnings years between men and women would increase from 3.3 to 4.3 and 5.0 years, respectively.

If the averaging period were increased to 38 years, the median percentage decrease in benefits for women would be 4.1 percent while the median percentage decrease for men would be 3.4 percent. Under a 40 year averaging period, the typical decrease for women would be 6.8 percent whereas the decrease for men would be 5.9 percent (table 2).

As a result of lower market wages and more years spent outside the workforce, women typically earn less during their lifetimes than men. Due to the progressivity of the benefit formula, retirees with lower AIME levels are likely to experience a larger benefit decrease than those with higher AIME levels.

Chart 1.—Mean years of zero earnings for early baby boom retirees (born 1946-55) for averaging periods of 35, 38, or 40 years, by gender



Source: Authors' projections based on 1991 Survey of Income and Program Participation (SIPP) exactly matched to SSA administrative records.

Since a large percentage of women have low earnings, on average they would experience larger benefit decreases than men.<sup>10</sup>

### Minority Status

Minority groups are likely to be affected differently by increasing the averaging period. The typical retirement benefit in all three groups considered, blacks, whites (non-Hispanic) and white-Hispanic, would decrease. As expected, the benefit decreases would be notably higher if the averaging period were increased to 40 years than if it were changed to 38. Also, the women in each minority group would receive a larger benefit reduction than the men. In general, black men and white-Hispanic women would be affected the most by the policy change.

If the averaging period were increased to 38 years, black men would receive the largest median percentage decrease among men at 4.0 percent; white men would receive the smallest decrease among men at 3.2 percent, while white-Hispanic men would receive a decrease of 3.3 percent.<sup>11</sup> White-Hispanic women would receive the largest decrease among women at 5.0 percent, white women would receive the smallest decrease at 4.1 percent, while black women would receive a decrease of 4.2 percent (table 2).

The distribution of the decreases would be similar under a 40-year averaging period, but their magnitude would be larger. The typical percentage decreases would be 6.6 percent for black men, 5.6 percent for white men, and 5.7 percent for white-Hispanic men. Among women, the decreases would be 7.9 percent for white-Hispanic women, 6.7 percent for white women, and 7.2 percent for black women.

### Lifetime Earnings

Our simulation classifies Social Security beneficiary data into three AIME categories: low, medium, and high based on the lifetime earnings of men who were retired in 1990.<sup>12</sup> In 1988 dollars, workers in the lowest (quartile) AIME category earned less than \$1,200 monthly, those in the middle (two quartiles) category earned between \$1,200 and \$2,000 monthly, while those in the highest quartile earned more than \$2,000 monthly over their lifetimes. Based on the methodology used in Iams and Sandell (1997), each individual worker's 35-year AIME is projected. While this classification provides an estimate of lifetime earnings levels, it is not an accurate indicator of retirement income. However, because savings, pensions, and other sources of retire-

Table 2.—Change in projected monthly PIA benefits between current policy (35-year averaging period), and a 38-year averaging period, a 40-year averaging period, and a 40-year averaging period with a minimum benefit provision

[Amounts in 1998 dollars]

Demographic group	Averaging period					
	38 year		40 year (no minimum benefit)		40 year (with minimum benefit)	
	Median dollar change	Median percent change	Median dollar change	Median percent change	Median dollar change	Median percent change
<b>Gender:</b>						
Men.....	-\$26	-3.4	-\$47	-5.9	-\$44	-4.4
Women.....	-24	-4.1	-41	-6.8	-28	-4.3
<i>Lifetime AIME level</i>						
<b>Men:</b>						
Lowest .....	-24	-4.1	-40	-6.8	-7	-1.3
Middle .....	-37	-3.7	-64	-6.6	-64	-6.6
Highest .....	-23	-1.8	-43	-3.3	-43	-3.3
<b>Women:</b>						
Lowest .....	-21	-4.4	-35	-7.2	+27	+4.7
Middle .....	-39	-4.0	-67	-7.1	-67	-7.1
Highest .....	-28	-2.2	-52	-3.9	-52	-3.9
<i>Education level (in years)</i>						
<b>Men:</b>						
0-11 .....	-23	-3.7	-40	-6.4	-29	-3.6
12.....	-22	-2.9	-41	-5.2	-37	-3.5
13 or more.....	-31	-3.6	-53	-6.1	-53	-4.9
<b>Women:</b>						
0-11 .....	-19	-5.2	-31	-8.3	+16	+3.1
12.....	-22	-4.1	-37	-6.8	-16	-2.8
13 or more.....	-27	-4.1	-46	-6.8	-41	-5.1
<i>Minority status</i>						
<b>Men:</b>						
Black.....	-25	-4.0	-43	-6.6	-31	-4.7
White non-Hispanic.....	-26	-3.2	-48	-5.6	-46	-4.4
White-Hispanic.....	-23	-3.3	-41	-5.7	-32	-3.2
<b>Women:</b>						
Black.....	-24	-4.2	-40	-7.1	-27	-4.2
White non-Hispanic.....	-24	-4.1	-41	-6.7	-28	-4.2
White-Hispanic.....	-23	-5.0	-38	-7.9	-14	-3.6

Source: Authors' projections based on 1991 Survey of Income and Program Participation exactly matched to SSA administrative records.

ment income generally reflect lifetime earnings, the classification according to AIME level is a useful categorization.

People in all three AIME categories would receive benefit decreases if the averaging period were increased. The largest proportional decreases would occur among people in the lowest AIME category, and the smallest decreases would occur among those in the highest AIME category. As previously discussed, this is a result of the progressivity of the benefit formula.

Increasing the averaging period to 38 years typically would

result in a median percentage decrease in benefits of 4.1 percent among the lowest AIME for men, 3.7 percent among the middle AIME for men, and 1.8 percent among the highest AIME for men. The median percentage benefit decreases would be 4.4 percent for the lowest AIME for women, 4.0 percent for the middle AIME for women, and 2.2 percent for the highest AIME for women (table 2).

If the averaging period were increased to 40 years, the median percentage decreases in benefits would be substantially

larger. Benefits would decrease typically by 6.8 percent for the lowest AIME for men, 6.6 percent for the middle AIME for men, and only 3.3 percent for the highest AIME for men. Similarly, the benefit decreases for women would be 7.2 percent for the lowest AIME category, 7.1 percent for the middle AIME category, but only 3.9 percent for the highest AIME category.

### Education

Our simulation classifies workers into three levels of education, as reported in the SIPP. The lowest education group (0-11 years) did not attend 12 years of school, the middle group reports 12 years of school, while the highest group reports having 13 or more years of education.

The benefit for men in the lowest education group typically would decrease by 3.7 percent. Men with 12 years of education would receive a benefit decrease of 2.9 percent, while those with 13 or more years would decrease by 3.6 percent. Women in the lowest education group would receive a benefit decrease of 5.2 percent, which is somewhat larger than their male counterparts with similar education. The typical decrease among women with 12 years of education would be 4.1 percent, the same as those with 13 or more years of education. Thus, the policy change would have the same effect on women with middle and high levels of education (table 2).

Similarly, a 40-year averaging period would affect lesser-educated retirees slightly more than the two higher educated groups since the percentage of their benefit changes would be noticeably larger. Men in the lowest education category would receive a median percentage decrease in benefits of 6.4 percent, those with 12 years of education would receive a decrease of 5.2 percent, while those with 13 or more years would receive a decrease of 6.1 percent. Among women, the lowest education group would receive a median percentage benefit decrease of 8.3 percent. Women in both the middle and highest education groups would receive a benefit decrease of 6.8 percent. As with an increase to 38 years, the effects of the policy change would be the same among the two highest education groups.

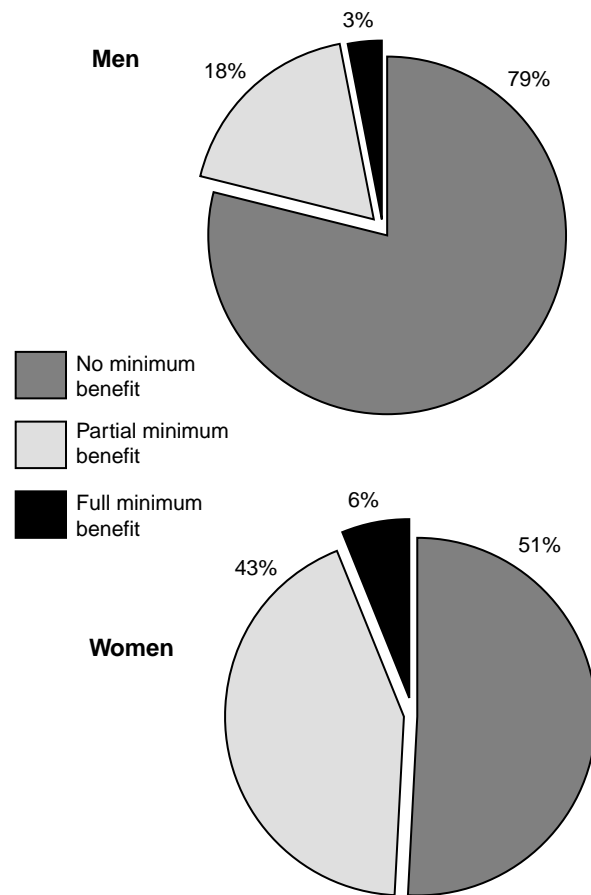
### Minimum Benefit Provision

#### Qualification

As discussed before, some propose a minimum benefit equal to the aged poverty level for persons with 40 years of covered earnings. Persons with 20 years of covered earnings in their work history receive a minimum benefit of 60 percent of the poverty level. The benefit increases by 2 percent for each additional year of contributing to the system. Because the minimum benefit requires at least 20 years of covered earnings, some individuals with retirement income below the poverty level would not qualify because they do not meet the minimum lifetime-work requirement.

A notable segment of the retired baby boom population would qualify for the minimum benefit. As chart 2 indicates, about 21 percent of men and 49 percent of women would

Chart 2.—Percentage of baby boom retirees (born 1946-55) who would qualify for the minimum benefit provision



Note: Only workers eligible for retirement benefits are considered. Source: Authors' projections based on 1991 Survey of Income and Program Participation exactly matched to SSA administrative records.

qualify for either the poverty level minimum benefit or the partial minimum benefit (between 60 and 98 percent of the poverty level). But only 3 percent of men and 6 percent of women would qualify for the full poverty level benefit. This indicates that 18 percent of men and 43 percent of women may receive some benefit supplement, but would not qualify to receive the full poverty level benefit.

It is useful to focus on individuals with low resources who are likely to live below or near the poverty level in retirement, and to need the minimum benefit. For this assessment, we consider retirees in the lowest education group and retirees in the lowest AIME group. For retirees in the lowest earnings group, roughly 11 percent of men and 8 percent of women would qualify for the full poverty level benefit (chart 3). However, almost 59 percent of men and 64 percent of women would qualify for a partial minimum benefit (60-98 percent of poverty level). A segment of the low AIME population does not have 20 years of covered earnings, disqualifying them for a minimum benefit.

Among lower educated retirees, roughly 9 percent of men

and 4 percent of women would qualify for the full minimum benefit. Roughly 40 percent of men and 56 percent of women would qualify for a partial minimum benefit (chart 3). These retirees would have their benefits increased.

### ***How the Minimum Benefit Counteracts Increasing the Averaging Period to 40 Years***

Providing a minimum benefit would mitigate the benefit reductions by increasing the averaging period from 35 to 40 years. The median percentage benefit decrease for men would be 4.4 percent while the median percentage benefit decrease for women would be 4.3 percent. Compared to an increase in the averaging period alone, adding a minimum benefit would even out the larger effect on women than men (chart 4). More complete distributional effects are shown in table 2.

Black men would receive the largest benefit reductions among men. The median percentage benefit decrease for this group would be 4.7 percent. Median percentage benefit decreases would be 4.4 percent for white (non-Hispanic) men and 3.2 percent for white-Hispanic men. Among women, benefits would decrease by 4.2 percent for both black women and white women. The decrease for white-Hispanic women would be 3.6 percent (table 2).

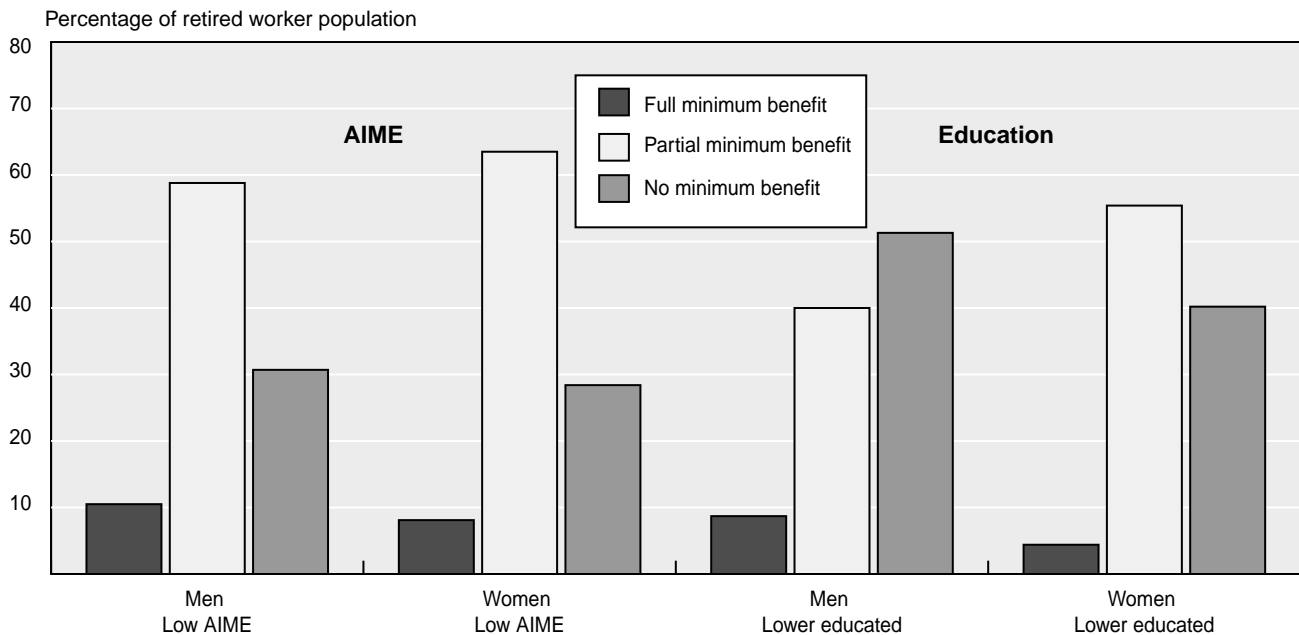
As mentioned earlier, increasing the averaging period would generate larger benefit decreases for retirees with low lifetime earnings. The minimum benefit, however, would counter some

of this effect. Men in the lowest AIME group would receive a median percentage benefit decrease of only 1.3 percent. But, those in the middle AIME group would receive a benefit decrease of 6.6 percent, while the benefits of the highest AIME group would decrease only 3.9 percent, which are the same decreases generated by increasing the averaging period to 40 years. Since the minimum benefit only applies to retirees with earned benefits below the poverty level, the minimum benefit provisions do not affect the higher AIME groups.

Women in the lowest AIME group would receive a benefit *increase* as a result of the minimum benefit provision. The benefit for this group typically would increase by 4.7 percent. The middle AIME group, however, would receive a benefit decrease of 7.1 percent, while the highest AIME group would receive a decrease of only 3.9 percent. The middle AIME group would receive the largest decreases as a result of the policy.

Benefit changes for men differ minimally by education level, and the benefit in each education group typically would decrease. Benefits would decrease by 3.5 percent for the lowest education group (0-11 years), 3.5 percent for the middle education group (12 years), and 4.9 percent for the highest group (13 or more years). Among women, the lowest education group would receive a benefit increase if the minimum benefit provision were established. The middle education group would receive a benefit decrease of 2.8 percent, while benefits among the highest group would decrease by 5.1 percent. Thus, the policy would generate a progressive distribution, with the highest education group receiving the largest benefit decrease.

Chart 3.—Percentage of baby boom cohort (born 1946-55) retirees with limited resources who would qualify for the minimum benefit, as indicated by low education and low lifetime earnings (AIME)



Note: Individuals with lower education report their educational attainment as being between 0-11 years. Individuals with low AIME levels are considered to have average monthly earnings of less than \$1,200 (in 1998 dollars) when indexed for inflation. Only workers eligible for retirement benefits are considered.

Source: Authors' projections based on 1991 Survey of Income and Program Participation (SIPP) exactly matched to SSA administrative records.

## Conclusion

Increasing the number of years in the averaging period would reduce earned retired-worker benefits for most retirees, but some would be affected more than others. An increase to 40 years would cut benefits more notably than an increase to 38 years. Women, in general, would receive larger proportional worker benefit decreases than men because they typically work fewer years and earn less during their lifetimes. This occurs because women are more likely to exit the labor force, for homemaking or child bearing, giving them more years of zero earnings during the averaging period than men. In addition, women typically earn lower wages than men. Due to the progressivity of the benefit formula, changes in the AIME are likely to affect retirees with lower earnings more than those with higher earnings. As a result, retirees with low earnings would receive larger benefit decreases if the averaging period were increased. Thus, a combination of lower lifetime earnings and fewer years of taxable contributions would cause women to receive larger earned retired-worker benefit decreases. Because our estimates do not include auxiliary spouse benefits to dually entitled wives, the impact would be less on Social Security benefits than for the earned retired-worker benefits in this analysis.

While our simulation indicates that increasing the averaging period would generate larger benefit decreases for retired workers who have relatively low lifetime earnings, it is evident that retirees in the middle lifetime earnings group would receive slightly smaller decreases. Meanwhile, those in the highest lifetime earnings group would receive the smallest decreases. An increase in the averaging period to 38 years, for example, would result in a median percentage reduction of 4.1 percent for the lowest earnings group, 3.7 percent for the middle group, but only 1.8 percent for the highest (table 2). It is clear that any increase in the averaging period would affect workers with low lifetime earnings more than others.

The effects of changing the averaging period differ by education as well, but the differences are less pronounced. Retired workers with the least years of education are likely to receive the largest benefit reductions because they typically earn less throughout their lifetimes than those who are more educated. Similarly, women are likely to have larger benefit cuts than men with similar educational attainment. Under a 40-year averaging period, for example, women with low education (between 0-11 years) would receive a benefit decrease of 8.3 percent, while men would receive a decrease of 6.4 percent.

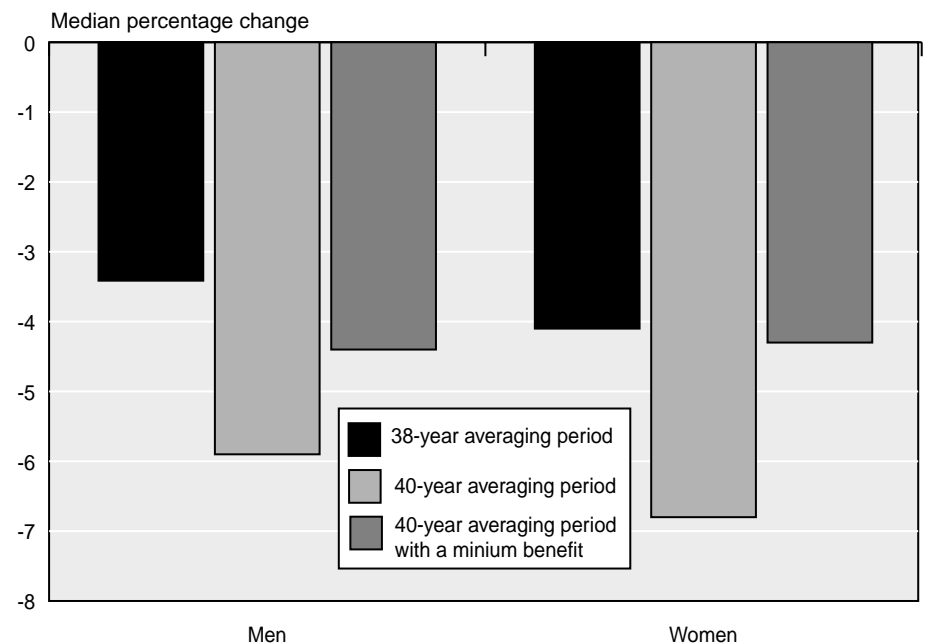
Benefit changes are also likely to vary by minority status. If the averaging period were extended to either 38 or 40 years, black men would receive the largest benefit decreases among men, while white-Hispanic women would receive the largest decreases among women. Among both men and women, whites (non-Hispanic) would receive the smallest benefit decreases.

Our simulation also indicates that women would be more likely than men to qualify for the minimum benefit provision. The benefits of women with low education and low lifetime earnings actually *increase* if a minimum benefit was included, by 3.1 percent and 4.7 percent, respectively. This suggests that the minimum benefit would mitigate some of the differences between benefit cuts among men and women that result from increasing the averaging period.

The minimum benefit would also counter some of the regressivity that results from extending the averaging period. Women in the lowest earnings category would likely receive a 4.7-percent *increase* while men in this category would receive a benefit reduction of only 1.3 percent. But because the minimum benefit is only applicable to retirees in the lowest earnings group, the benefit decreases among retirees with higher lifetime earnings remain the same. As a result, the middle earnings group would still face benefit decreases that are larger than the highest income group.

Adding the minimum benefit would typically provide the least educated women with a benefit increase, since they are also likely to have a low level of lifetime earnings. The other education groups would still receive a benefit decrease if the minimum benefit were established.

Chart 4.—Median percentage change in projected monthly PIA benefits for baby boom retirees if the averaging period were increased to 38 or 40 years, and if a minimum benefit were established, by gender



Source: Authors' projections based on 1991 Survey of Income and Program Participation exactly matched to SSA administrative records.



Minority status matters as well. The benefit changes of white-Hispanics are improved by adding a minimum, but still remain negative as a group. The benefit decreases among blacks and whites (non-Hispanics) would be similar to one another and less than if a 40-year extension of the averaging period were implemented without a minimum benefit.

Indeed the minimum benefit would counter many of the benefit decreases that result from changing the averaging period to 40 years. But many baby boom workers would still receive benefits that are below the poverty level because they do not meet the minimum contribution requirement (20 years of taxable earnings) to qualify for the partial minimum benefit. In addition, many retirees with lifetime earnings that are less than the poverty level would qualify for the partial minimum benefit, but very few would qualify for the full poverty level benefit. For example, approximately 63 percent of women with low lifetime earnings (low AIME) would qualify for a partial minimum benefit, whereas only 8 percent of women with low lifetime earnings would qualify for the full poverty level benefit.

A substantial number of retirees would receive earned, retired-worker benefits below the poverty level because they fail to meet the 40-year contribution requirement. The benefit decreases among these retirees would not be alleviated by the creation of a minimum benefit that is tied to one's number of years of taxable earnings.

This simulation suggests that the earned retired-worker benefits of retirees would be affected differently in subpopulations if the averaging period were increased or if a poverty level minimum benefit were implemented. An effective assessment of these policies must weigh the solvency gains from reductions in retirement incomes of individuals. Because the benefits of some groups would be affected more than others, it is important to consider these differences when evaluating the overall effects of the policy.

## Reference

- Advisory Council. 1997. Report of the 1994-1996 Advisory Council on Social Security: Findings and Recommendations. Washington, DC: Social Security Administration.
- Ball, Robert M. and Thomas N. Bethell (contributor). 1998. *Straight Talk About Social Security: An Analysis of the Issues in the Current Debate*. New York: Century Foundation. Twentieth Century Fund Report.
- Board of Trustees. 1998. *1998 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. Washington, DC: GPO.
- Butrica, Barbara A.; Steven H. Sandell; and Howard M. Iams. 1999. "Using Couple Data to Project Distributional Effects of Social Security Policy Changes." Paper presented to the 1999 Annual Meetings of the Population Association of America, New York, NY.
- Iams, Howard M. and Steven H. Sandell. 1997. "Projecting Social Security Earnings: Past Is Prologue." *Social Security Bulletin*, Vol. 60, No. 2 (Spring).
- Sandell, Steven H. and Howard M. Iams. 1996. "Women's Future Social Security Benefits: Why Widows Will Still Be Poor." Paper

presented at the Population Association of America Annual Meetings, New Orleans, LA.

Social Security Administration. 1998. *Annual Statistical Supplement, 1998 to the Social Security Bulletin*. Washington, DC: U.S. Government Printing Office.

## Notes

<sup>1</sup>Board of Trustees. 1999. *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*. Annual Report, page 4.

<sup>2</sup>The Advisory Council's report (1997, p. 20) indicates that several members did not favor this extension. It also asserts that one proposed plan (the Personal Savings Account) moves to a different system of benefits in which the averaging period becomes eliminated. Nevertheless, the Personal Savings Account increases the early retirement age from 62 to 65 years and thus extends the earnings period by 3 years.

<sup>3</sup>Extending the averaging period to 40 years would include the entire period of earnings between age 21 and retirement at age 62.

<sup>4</sup>Social Security Administration (1998), table 2.A11, page 28.

<sup>5</sup>About 90 percent of the 1991 SIPP respondents could be matched to Social Security records.

<sup>6</sup>Unobserved Social Security taxed earnings beyond 1996 are estimated with statistical regression equations using the 1984 SIPP panel matched to SSA records. Annual covered earnings were adjusted to 1988 dollars using the wage indexing procedure for the 1990 basic Social Security benefit formula for each individual's observed monthly earnings from the year reaching age 22 through 1993. Regression models were used to estimate Mean Indexed Monthly Earnings (MIME) for the period 1984-93 (separately for men and women) based on the Summary Earnings Record and SIPP variables; MIME in 1974-83, 1983 earnings, number of years reaching the taxable maximum in 1974-83, birth cohort, minority status, education, marital status, major occupation, manufacturing industry, and reported work experience. The models had a high degree of explanatory power in predicting the next 10 years of earnings. The last year of earnings before the survey, 1983 earnings, had a major impact on subsequent earnings. For this article, we projected unobserved earnings in 10-year blocks interpreting the birth cohort effect representing age-group aging for the next decade. Using an equation predicting the number of years with earnings, we extended earnings until age 62. We identified the highest 35, 38, and 40 years of indexed earnings.

The MIME is very similar to the AIME calculated by the Social Security Administration. The main difference would be our assumption that future retirees will stop working by age 62 when they receive retirement benefits. Of course, some continue earning beyond age 61. In 1996, 60 percent of newly awarded, retired-worker beneficiaries were age 62 and 78 percent were ages 62-64 (Social Security Administration (1998), table 6.B1).

<sup>7</sup>It is important to consider that any change in the averaging period is also likely to affect these benefits as well.

<sup>8</sup>One proposed minimum PIA is based on quarters of coverage rather than years of covered earnings. Requiring 160 quarters rather than 40 years of covered earnings may depress the minimum for some low earners.

<sup>9</sup>This is based on the 1996 poverty level and the cost-of-living adjustments in the Trustees' Report (1998).

<sup>10</sup>The benefit decreases for women discussed thus far refer to decreases in their individual retirement benefits as workers. Women often benefit from survivor's benefits and spousal benefits as well, which are determined as a percentage of their spouse's retirement benefits. In this situation, women actually receive benefits based on their husband's benefits. While our simulation doesn't project benefit changes for such auxiliary benefits, one should consider that a change in the averaging period is also likely to affect those benefits. If one's spouse receives a benefit decrease as a result of the policy change, their auxiliary benefits would be subsequently reduced following the

reduction of their husband's benefits, probably at a lower rate of reduction.

<sup>11</sup>These percentages refer to the median decrease in benefits within the particular sample.

<sup>12</sup>This classification follows the Iams/Sandell procedure for classifying lifetime earnings (Sandell and Iams 1996). In 1988 dollars, workers in the lowest AIME category earned less than \$1,200 monthly (\$14,000 annually), those in the middle AIME category earned between \$1,200 and \$2,000 monthly (\$14,000 and \$24,000 annually), while those in the highest earned more than \$2,000 monthly (\$24,000 annually) over their lifetimes.