

Minimum Benefits in Social Security

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Introduction

In 1998, the bipartisan National Commission on Retirement Policy advanced a reform proposal that contained a minimum benefit within Social Security. Since then, numerous congressional proposals have included minimum benefits as part of a package of reforms, and a commission President George W. Bush set up during his first term also recommended one. Little effort, however, has been made to develop the rationale for a minimum benefit or to examine alternative designs.¹ As a consequence, the design of a minimum benefit—or, for that matter, of almost all redistributive formulas within Social Security—has seldom been based on any theoretical or empirical notion of exactly what goals are sought and what types of formulaic adjustments would best achieve them.

This study attempts to fill that gap. It has three main sections. In the first, we examine Social Security's redistributive purpose and how it relates to the program's other purposes. We discuss the current system's redistributive features, and consider whether a minimum benefit might improve program adequacy in a more equitable or efficient way. We also consider an alternative: increasing the basic means-tested program that provides an income floor for the aged and disabled.

With this theoretical context in mind, we turn to the second section, in which we design a few minimum benefits based on years of work and the poverty threshold. In this section, we consider how Social Security currently treats low-wage workers, review literature on minimum benefits, and examine benefit design elements. Our benefit design draws from the principles outlined above, as well as from empirical research about distributions of numbers of years in covered employment for men and women.

In the third section, we empirically examine how well different types of minimum benefits achieve various goals, such as reducing poverty. We compare the minimums with similar mechanisms (for example, changes to the benefit formula bend points). We use DYNASIM, the Urban Institute's dynamic microsimulation model of the U.S. population (Favreault and Smith 2004), in these analyses. Our aim is not to reach a definitive conclusion about how minimum benefits should be designed but rather to show how certain Social Security purposes—particularly those associated with poverty relief—can be better achieved when they are solidly grounded in thoughtful analysis and empirical research.

We make roughly fiscally equivalent comparisons assuming a system that is reduced relative to scheduled benefits because of Social Security's long-term fiscal deficit (OASDI Board of Trustees 2005). We assume that increased contributions meet approximately half of Social Security's annual deficit in 2050, and benefit reductions meet the other half.² These estimated reductions, based on Social Security cost projections, are inherently uncertain. Social Security may require smaller or greater adjustments depending on how accurate these predictions turn out to be. Nonetheless, this is a reasonable starting place.

¹ Exceptions from the literature include Herd (2005) and Fitzpatrick et al. (2003), as we discuss below.

² We choose 2050 because it is the DYNASIM simulation horizon.

Progressivity and Other Goals of Social Security

Social Security's current design reflects compromises between the principles of progressivity and individual equity. It contains both redistributive features and features that relate benefits to workers' payments into the system. It differs from means-tested programs that are available to people only when their means/income are below some given amount. Almost all Social Security contributors—provided they have made deposits for at least 10 years—and their spouses are entitled to benefits when they reach retirement age.

Adequacy/progressivity: Providing adequate retirement income stands out as a clear goal for Social Security. At the program's outset, poverty rates among the aged were quite high. As late as 1959, over a third of the elderly lived in poverty. Today, the aged are less likely than prime-age workers or children to be poor.³ Undoubtedly, one of Social Security's major goals—and accomplishments—has been to reduce aged poverty (Englehardt and Gruber 2004). The Social Security Administration regularly estimates the extent to which Social Security payments might reduce poverty among the aged, recently suggesting that the program brought 12 million Americans out of poverty (derived from Koenig 2002).

In addition to redistributing from younger to older generations, the system attempts to redistribute *within* each generation of the aged by providing higher replacement rates for those with lower lifetime earnings, even though higher earners pay the same rate (up to a taxable maximum, set at \$94,200 in 2006).⁴ Put another way, Social Security's benefit formula is progressive with respect to earnings, while the payroll tax is roughly proportionate (or regressive annually because of the maximum).⁵ Other redistributive mechanisms are also part of the system.

Recent U.S. data on income of aged persons suggest that, despite Social Security's enormous impacts on adequacy, there is room for further poverty reduction. In 2004, almost 8 percent of Social Security beneficiaries ages 65 and older had family income below the poverty line, and almost 15 percent had family income below 125 percent of poverty (Social Security Administration 2006b). For certain groups, risk levels are more substantial. Almost 10 percent of women, for example, have income less than poverty, but this poverty rate jumps to 17 percent for nonmarried women, 28 percent of whom have family income below 125 percent of poverty. Race differences in poverty also reveal high-risk groups. In 2003, over a quarter (27.4 percent) of black women and a fifth (21.7 percent) of Hispanic women ages 65 and older were poor (He et al. 2005). For older black and Hispanic women who live alone, rates reach 40 percent.

Equity: Social Security requires most workers to participate, thus sharing the burden for the retirement system as a whole. The system's design helps to prevent free riders—those who might avoid paying into a collective effort but still rely on it by consuming their income when they are younger and later becoming eligible for income-conditioned old age assistance.

³ Poverty rates in 2004 were 9.8 percent for those ages 65 and older, 11.3 percent for those ages 18 to 64, and 17.8 percent for children (DeNavas-Walt, Proctor, and Lee 2005).

⁴ In 2003, approximately 5.5 percent of workers (8.2 percent of men and 2.5 percent of women) had earnings above the maximum taxable level (Social Security Administration 2006: Table 4.B4).

⁵ A comprehensive, lifetime definition of progressivity combines taxes *and* benefits.

After paying taxes for a modest number of years, each taxpayer qualifies for a Social Security benefit. Relating benefits to taxes paid is consistent with the notion that those who pay for government benefits ought to receive something back (corresponding to the benefit principle of taxation, in which taxes are considered payment for goods/services received). This is associated with the broader notion of individual equity, which holds that people are entitled to the rewards from their own labors.

Evaluation: Little research in Social Security's early years determined just how much redistribution the program was accomplishing.⁶ The replacement wage for an "average wage" worker was set at about 40 percent, a figure imperfectly related to expenses of old age, taxes at younger ages, evolving family work patterns, or other considerations.⁷ Moreover, because benefits related to earnings rather than to taxes paid, the amount of income the system redistributed varied enormously across generations, with substantially higher returns for earlier generations, which paid lower tax rates for similar replacement wages (Moffitt 1984, Steuerle and Bakija 1994).

Recent research reveals that, when measured by rates of return on taxes paid or lifetime benefits relative to lifetime taxes, Social Security redistributes less within generations than conventional wisdom may have suggested, despite its many redistributive features. Shorter life expectancy for lower-income persons partially offsets the system's mechanisms for redistributing to those with lower lifetime earnings.⁸ (See, for instance, Steuerle and Bakija 1994; Caldwell et al. 1999; Coronado, Fullerton, and Glass 1999; Gustman and Steinmeier 2000; and Smith, Toder, and Iams 2003/2004.) Results from these types of studies are sensitive to outcome measures (Leimer 1995); to definition of lifetime earnings (e.g., actual versus potential, individual versus couple); and to the program components (Old Age Insurance [OAI] worker benefits, Disability Insurance [DI] worker benefits, spouse/survivor benefits, children's benefits) one includes.

Tools for Redistribution: Existing Provisions Versus a Minimum Benefit

Existing Provisions

Social Security has three primary provisions for redistributing to those with lower lifetime earnings: (1) a progressive formula of benefit rates; (2) a limited number of years counted in the benefit formula; and (3) spousal and survivor benefits.⁹ Social Security includes a "special minimum PIA" under current law, but few receive benefits on this basis.¹⁰

⁶ Friedman (1962) brought early attention to the question of offsetting effects in Social Security progressivity. Aaron (1977) was among the first researchers to examine OASDI redistribution empirically.

⁷ The average-wage worker calculation was limited because many workers, especially women, drop out of the workforce over their working years. Hence, the average lifetime earnings of a typical worker who earns the average wage are less than the average wages of a worker who works all years.

⁸ Differential marriage and divorce rates by socioeconomic status, as well as the payroll tax cap, also have impacts.

⁹ Other redistributive provisions in OASDI include, for example, income taxation of benefits above certain thresholds. This provision's significance is declining because benefit taxation thresholds are not inflation indexed.

¹⁰ In 2004, 113,200 persons (less than 0.25 percent of the OASDI caseload) received benefits based on the special minimum PIA (Social Security Administration 2006a: Table 5.A8). Special minimum coverage has declined largely

A progressive formula: The progressive benefit formula provides those with lower lifetime earnings higher replacement rates (defined as benefits divided by average lifetime earnings subject to payroll tax). For instance, a worker with average indexed monthly earnings (AIME) of less than \$656 in 2006 will receive a benefit equal to 90 percent of that average (assuming he/she claimed benefits at the normal retirement age). As earnings increase, the benefit returns only 32 percent of the additional dollars of earnings, then eventually (above \$3,995) only 15 percent of additional earnings. For someone with average monthly earnings of \$2,000 in 2006, the combination of the 90, 32, and 15 percent replacement wage for different portions of earnings yields about 50 percent on net. At average earnings of \$5,000, it yields about 36 percent on net.¹¹

The benefit formula's progressive rate schedule may be Social Security's most effective mechanism for progressively redistributing benefits. Cohen, Steuerle, and Carasso (2004) break out the components of Old Age and Survivors Insurance (OASI) redistribution and show that none comes close to the formula in tilting benefits toward those with lower lifetime earnings. It is unique in the U.S. social welfare structure in its dependence on *lifetime* rather than *annual* circumstances.

The progressive rate structure also redistributes to those whose incomes fall because they are out of the labor force for a variety of reasons, including unemployment, time off to raise children, part-time work, or residence abroad (e.g., immigration). Just as additional dollars of earnings generate lower average replacement wages, reduced earnings generate higher average replacement wages. The progressive benefit formula does not differentiate one cause for lesser earnings from another.

A limited number of years counted in the benefit formula: In counting only the highest 35 years of earnings, the system provides some reprieve for those who are unemployed or out of the workforce for other reasons. However, this adjustment is fairly arbitrary in its application. Because of the way it interacts with the progressive benefit formula, it fails to reward lower-income workers who might work more years. For example, it provides higher benefits to those who have average indexed annual earnings of \$40,000 for 30 years than to those with earnings of \$30,000 for 40 years. All earnings count toward the benefit for the former workers, while for the latter just 35 years worth of earnings count. Penalizing workers who pay as much tax and work more years over a lifetime seems inequitable. Similarly, the formula tends to penalize workers who work half-time for 20 years of a 45 year career, who might get to count only half the earnings from those part-time years in the formula, compared with those who drop out entirely for 10 years but then can count every dollar earned over a 35 year career.

because its parameters are indexed to prices rather than wages. Olsen and Hoffmeyer (2001/2002) and Fitzpatrick, Hill, and Muller (2003) provide detail on the special minimum. Analyses suggest the special minimum will be irrelevant for new beneficiaries by 2013 (Feinstein 2000).

¹¹ These calculations assume benefit claiming at the full retirement age (age 66 for those reaching age 62 in 2005–2016). Many beneficiaries claim Social Security earlier (with the majority claiming at age 62), and receive benefit reductions to compensate for the longer receipt period. This implies significantly lower replacement rates. For example, individuals reaching age 62 this year receive 75 percent of their full benefit at age 62, implying replacement rates of 38 and 27 percent in the previous examples (for \$2,000 and \$5,000 in AIME, respectively).

Spousal and survivor benefits: Spousal and survivor benefits represent another redistributive mechanism in OASDI. To compensate for the fact that two people have more expenses than one, Social Security provides spousal benefits of one half of the worker's benefit when both spouses are alive, and the full worker's benefit for survivors. If a family has two workers, the lower earner can take the higher of his or her own worker benefit or the spousal benefit. Social Security spousal and survivor benefits require no extra contribution by workers.¹²

Never married parents, single persons, and persons divorced before 10 years of marriage to a worker cannot access these benefits, leading to inequities. A single head of household can work more, pay more taxes, and raise more children than a spouse, yet receive lower Social Security benefits. Spouses who marry workers with high earnings get higher benefits than those who marry low-wage workers.¹³ One worker can generate several spousal/survivor benefits through multiple marriages without paying additional tax.

OASDI spousal and survivor benefit structures also treat some households that pay the same amount of payroll tax (and presumably have equal needs) unequally. Two-earner couples in which one spouse earns much more than the other get more benefits than two-earner couples with more equal earnings, even though both pay the same amount of tax. The disparity between the couples rises significantly when one spouse dies, as the survivor then gets the benefit associated with the higher of the two earners. As an example, a typical couple with one spouse earning \$30,000 and the other nothing will get around \$100,000 more in lifetime benefits than a couple in which each earns \$15,000.

Minimum Benefit

A minimum benefit could redistribute more efficiently than these existing mechanisms—especially limited computation years and spousal/survivor benefits.¹⁴ A minimum could take many forms. Some minimum benefit proposals require no years of work, thus ensuring a universal minimum support level for all aged persons; others require some minimum number of work years and/or ratchet up the minimum benefit as years of work increase. These latter types of minimums rely more on a back-up welfare system (e.g., Supplemental Security Income, or SSI) to cover those in need. Table 1 summarizes minimum benefit proposals that have appeared in a variety of legislative, advisory, and advocacy contexts.

The table suggests that minimums that require some work have been more common than universal ones in recent proposals. The National Commission on Retirement Policy (NCRP) minimum benefit recommendation (1998) offered workers a benefit equal to 60 percent of poverty with 20 years of work, increasing by 2 percent of poverty for each additional work year and reaching a maximum 100 percent of poverty with 40 years. The benefit was scheduled to

¹² In private sector pensions, workers typically pay for spousal/survivor benefit out of their own benefits (e.g., they receive lower annuity payments initially in order to pay the expected cost of survivors' benefits).

¹³ The philosophical underpinnings of this result rely on the notion of a family replacement rate in retirement.

¹⁴ Of course, a minimum benefit could be used in combination with, rather than instead of, these other mechanisms.

take effect in 2010 and be wage-indexed thereafter.¹⁵ The context for the NCRP plan's minimum was a package with carve-out personal accounts, retirement age increases, and other changes.

The President's Commission to Strengthen Social Security (CSSS) report (2001) contained two plans with minimum benefits and other changes. Its "model two" minimum would affect those with over 20 years of work, providing a benefit of 120 percent of poverty for minimum-wage workers with 30 or more years of earnings (prorated for those with 21 to 29 work years). It is combined with numerous changes, most notably carve-out personal accounts and price indexing (rather than wage indexing) of initial Social Security benefits. The "model three" minimum would provide a benefit of 100 percent of poverty for minimum-wage workers with 30 or more years of earnings (again, prorated for those with 21 to 29 years of earnings), and again in concert with carve-out personal accounts, but also with longevity-indexed benefits. In the model two case, the minimum benefit was price-indexed; in model three, it was indexed at a level between wages and prices. Liebman, MacGuineas, and Samwick (2005) develop a plan that includes, among other changes, the model two minimum benefit. Diamond and Orszag (2003) also propose a low-earner PIA enhancement for workers with 21 or more years of earnings in their solvency plan. Senator Lindsey Graham (R-SC) (2003) proposed a minimum benefit that equals 120 percent of poverty with 35 years of work and phases out at 10 work years.

Smeeding and Weaver (2001) proposed a senior income guarantee (SIG) that resembles a minimum benefit but essentially develops a third tier in the U.S. retirement income system (that falls between SSI and OASDI). Their full guarantee requires 40 years of residence and 40 covered quarters, but can be prorated for persons with shorter residency. The SIG would award a benefit of 75 percent of the poverty threshold at the normal retirement age and allow persons to exclude \$200/month of other income (including OASDI) when determining eligibility. The program would also impose an asset test that would be more liberal than current SSI asset tests. The SIG would not automatically confer Medicaid eligibility, as SSI does in most states.

Key Design Parameters in a Minimum Benefit

The preceding discussion reveals several key issues associated with the design of a minimum benefit for Social Security, including the following:

- The benefit level (often expressed as a percentage of poverty) and how it varies with years of service (steeper slopes encourage work but can reduce benefit adequacy).
- The number of years of service required (usually based on work, though this could be based on combinations of, for example, childrearing and work).
- The definition of a year of service (e.g., four covered quarters, 1,000 hours at the minimum wage, care for a child under age five).

¹⁵ Legislation sponsored by representatives Jim Kolbe (R-AZ) and Charles Stenholm (D-TX) (H.R. 1793 -- 106th Congress, H.R. 2771 -- 107th Congress, and H.R. 3821--108th Congress), Senators Judd Gregg (R-NH) and John Breaux (D-LA) (S. 2313 -- 105th Congress), and, more recently, by Kolbe and Allen Boyd (D-FL) (H.R. 440 -- 109th Congress) included a minimum benefit of this nature. In subsequent legislation, Gregg and Breaux substituted a benefit formula change for the minimum benefit (S. 1383 -- 106th Congress).

- Whether partial years of service are permitted (for example, people earning half the designated threshold receive half a credit).
- Whether and how disabled persons can qualify.
- Future treatment of the benefit level (e.g., is it wage-indexed or price-indexed, or something in between)? If the benefit is indexed, when does indexing begin?
- Computation method (e.g., is it attached to the PIA, or does it occur after actuarial adjustments?).
- Whether it confers an additional spousal right.
- Whether it unintentionally creates windfalls for groups without strong attachment to Social Security–covered work (e.g., uncovered state and local workers, immigrants living in the United States for a short time) and whether prorating addresses such trajectories.¹⁶
- How well it coordinates with means-tested assistance (e.g., does imposing the minimum remove people from—or move people onto—Medicaid and other programs?).

These issues interact in complex ways. Such interactions could lead a minimum benefit design to have extraordinarily high replacement rates, discontinuities (e.g., cliffs at which benefits drop markedly), and strong or less strong work incentives/disincentives.

Is a Minimum Benefit Needed?

Simple examples of workers with wages at certain levels for select numbers of years can help illustrate how minimum benefits could work and how some recent proposals for minimums would alter current law (table 2). The table presents the workers in descending level of work effort, starting with a worker who has worked full-year, full-time (i.e., 2,000 hours per year) at the federal minimum wage, then showing a worker who worked half as much (also at the minimum wage), and finishing with a worker who earned exactly the threshold for four quarters of coverage in a year (equivalent to \$3,880 in 2006).¹⁷ For each wage profile, we compute Social Security benefits for different numbers of years in the labor force (0 through 40). We examine benefits at ages 62 and 66 (the early eligibility age and normal retirement age for members of this cohort).¹⁸ At the normal retirement age, we add SSI benefits (assuming eligibility) to the OASDI benefit, where applicable.

One striking finding from this table is that at age 62 a worker who had worked for 40 years at the minimum wage would be eligible for an OASDI benefit of significantly less than poverty—approximately 76 percent of the threshold (see line 1d, column 1). At the normal retirement age (of age 66), the worker would earn a benefit that just reaches poverty (line 1d,

¹⁶ These issues played an important role in earlier debates about the minimum Social Security benefit (General Accounting Office 1979).

¹⁷ We chose the four covered quarters threshold because, as Table 1 shows, several proposals use this value for determining minimum benefit eligibility.

¹⁸ These computations require many assumptions. We assume that workers are born in 1943, first collect OASI benefits at age 62 (in 2005), and do not qualify for disability, spouse, or survivor benefits. Work years occur beginning at age 20 in all cases, and last without interruption until the designated end age (29, 39, and 59). The poverty calculations use the Health and Human Services poverty threshold for the contiguous 48 states.

column 2). When they turn age 65, virtually all these workers would be eligible to receive SSI benefits in addition to OASDI if they met SSI's asset tests and had no other income sources (e.g., an employer pension).¹⁹ Indeed, except for the minimum wage, full-year, full-time workers, all recipients are only slightly better off on an annual basis with Social Security than they would be had they not worked at all and received only SSI (compare 1d to 1a in the SSI eligible column 4, where benefits rise, and 2d to 2a and 3d to 3a in the same column, where benefits barely change). Of course, workers can receive benefits for three additional years—ages 62 through 64—if they accrue Social Security rights, so are clearly better off on a lifetime basis even if annual benefits do not change much. Also, while these workers' Social Security benefits do not exceed poverty, the replacement rates are high. All the workers have AIMEs that fall below the first bend point under current law, so OASI replaces 90 percent of their preretirement earnings at the normal retirement age, or 68 percent at age 62. So while these workers may have low retirement incomes, they are not much worse off than they were, on average, before retirement.

With the addition of a minimum benefit styled after the NCRP minimum, Social Security benefits increase significantly for workers in the latter two work categories (full-year half-time work and four covered quarters) in most instances. For example, at age 62 the worker who consistently worked four covered quarters for 20 years would see a benefit increase from 7 percent of poverty under scheduled benefits to 45 percent of poverty with the minimum (row 3c, columns 1 and 5). If that person waited until age 66 to claim, he/she would receive 9 percent of poverty under current law, but 60 percent under this option (row 3c, columns 2 and 6).

Social Security data on distributions of worker benefits (table 3) reveal that these sample workers, while stylized, reflect an important reality: that nontrivial fractions of beneficiaries reach retirement with OASDI benefits of less than poverty. In December 2004, almost half of women Social Security retired worker beneficiaries received benefits of less than 99 percent of poverty, as did about a fifth of men worker beneficiaries.²⁰ Women's fractions with benefits lower than 99 percent of poverty decrease with age, due largely to many women converting (upon their spouses' deaths) from workers or dually entitled spouses to dually entitled survivors. For men, the age pattern is less clear.

Of course, Social Security benefits of less than poverty do not necessarily translate into incomes of less than poverty. About 20 percent of the aged in 2004 had OASDI as their sole income source, and these benefits made up more than 90 percent of total income for 31 percent (Social Security Administration 2006b, table 6.A1). The remaining recipients had other resources, sometimes quite substantial. Because of their strong relationship to lifetime earnings, OASDI benefits tend to be highly correlated with other forms of wealth and income. But individual circumstances vary, so taking other income sources into account when evaluating OASDI reforms can help target resources where they are most needed. (This is especially important for persons with substantial pensions earned in uncovered employment.)

¹⁹ SSI's 2006 asset test standard is "countable resources" not exceeding \$2,000 for an individual (\$3,000 for a couple). In determining countable resources, the Social Security Administration excludes the value of a home and personal effects (within reasonable limits); the value of an auto (up to \$4,500 or the vehicle's full value if used for medical purposes); the value of life insurance cash surrender and burial funds (both to \$1,500).

²⁰ We chose the 99 percent threshold (as opposed to 100 percent), as it is at a break point in the Social Security Administration (2006a) table (5.B9).

Evaluating a Minimum Benefit

Relative to the benefit formula already in Social Security, a minimum benefit is similar to increasing the rate (now 90 percent) for the first dollars of average earnings. Under the benefit formula, one only has to work for 10 years (40 covered quarters), so differences arise depending on minimum design issues, especially the way that the formula counts years of work.

By concentrating redistribution on those with lesser lifetime earnings, a minimum benefit can avoid unintended inequities and work disincentives that result from failing to count earnings for years of work beyond 35 toward benefits. Such provisions could redistribute to those with higher earnings if they were more likely to take years out of the labor force. With minimum benefits, however, those with higher lifetime earnings would already be eligible for basic Social Security benefits that exceeded the minimum.

If we spent the same amount on a minimum benefit as we spend on auxiliary benefits, OASDI could more effectively reduce poverty and increase well-being for those aged persons with lower-than-average incomes (see, for example, Herd 2005). Moreover, it would not leave out single parents and other divorced and never married persons who cannot access the current spousal and survivor benefit and are relatively vulnerable economically.

In sum, a carefully designed minimum benefit has the potential to achieve progressive goals in a more efficient, straightforward manner than do the current redistributive mechanisms in Social Security. We analyze this empirically below.

Expansion of Means-Tested Programs

An alternative to using minimum benefits would be to means test benefits, so that only those with lower incomes/assets benefit from redistribution. Congress has thus far avoided means testing OASDI, and many program advocates oppose means testing, believing that it reduces program popularity.²¹ A large literature discusses the relative merits of targeting and universalism in social policy (on OASDI specifically, see Kingson and Schulz 1997). Often, recipients view means-tested benefits as degrading, and many do not apply for them even when they are eligible. For example, recent estimates of Supplemental Security Income program participation by the eligible aged are typically less than two-thirds (e.g., Davies et al. 2002).

Among the aged, a means-tested approach poses additional problems. Many people with significant capability to save for retirement choose not to save. By requiring almost everyone to pay into the system, Social Security minimizes low-saving problems (whether they are due to myopia or “free rider” issues). The flip side to this is that no one is denied benefits because her/his earnings are too high. Second, means tests are less effective at measuring well-being among the aged. While one can reasonably use annual income to identify those who are not well-off among workers, it is weaker at determining who has need (or ability to pay) among persons who can decide whether to work. Choosing not to work typically lowers one’s income by tens of

²¹ Congress did create a means-tested program for the aged and disabled, called Supplemental Security Income, in 1974 to provide a floor for those with low or no Social Security.

thousands of dollars annually, regardless of ability. Meanwhile, those who are relatively well-off can easily recognize little or no capital income (and, in many cases, income from retirement accounts) by holding onto stock that pays few dividends, avoiding realizing gains on appreciating stock, transferring assets into homes that yield no direct earnings (and may not count against program asset tests), or hiding income in foreign assets. Likewise, transferring money to one's children can make an aged person eligible for means-tested programs. Tracking down these types of transfers is difficult and costly. Finally, means tests often impose high tax rates and large marriage penalties on participants (see for example, Balkus and Wilschke 2003).

Besides these philosophical and administrative issues, program interactions are important in the U.S. social policy context. Simply expanding SSI could create technical issues that might significantly alter costs. For example, many states closely link SSI participation and other programs, such as Medicaid, food stamps, energy assistance, and other supports. Enhancements in SSI's generosity could increase Medicaid costs substantially, which in turn could erode support for reform.²²

Another issue with minimum benefits is that if they depend on years of work, some people still might not benefit (or benefit enough) to pull them out of poverty. One example is partially disabled people with little work experience who do not qualify for DI.

In sum, expanding means testing could target transfers progressively to those with less income, but would raise significant enforcement and administration problems, could generate inequities and program interactions, and many people would consider it degrading. However, some features of a backup means-tested program may still be required, even if primary emphasis were placed on a minimum benefit, depending on its parameters (for example, work years).

Empirical Evidence on Designing a Minimum Benefit Based on Years Worked

Because, as table 1 shows, many minimum benefit proposals structure benefit eligibility and levels based on the number of years one spends in Social Security-covered employment, it is helpful to examine distributions of years in the labor force for today's Americans. Tabulations of Social Security-covered employment from survey data matched to Social Security administrative data (table 4) suggest that men's and women's employment histories differ greatly (Burtless, Ratcliffe, and Moskowitz 2004). The data show that approximately 20 percent of women and 72 percent of men ages 60 to 64 in 2000 have worked 36 or more years under Social Security. A significant share (21 percent) of women entering retirement (e.g., reaching the early eligibility age of 62) in 1998 through 2002 would not be eligible for a minimum benefit that required at least 10 years of earnings (though current law spousal/survivor benefits cover many of these women). However, younger cohorts have accumulated more years of covered earnings, so the group that a minimum based on work years would not cover is shrinking. About 84 percent of all

²² Similarly, OASDI minimum benefit increases would need to be coordinated with other means-tested programs. In particular, one might want to allow people to qualify for health insurance under SSI or SSI-type programs in cases where they might otherwise lose coverage. (Under current law, Medicaid is available immediately if one receives disability under SSI, but Medicare requires a two-year waiting period under Social Security Disability Insurance.)

women are fully insured as workers for Social Security, as are close to 90 percent in prime age (Social Security Administration 2006a: table 4.C5).²³

More subtle aspects of covered employment histories impact minimum benefit design, including the issue of whether persons with low wages continue to have low wages for a long career. Over a full career (ages 22 to 61), those with low lifetime earnings are overwhelmingly women, and most have low lifetime earnings because of years out of the labor force, not low wages for long periods (Hungerford 2004). Over shorter periods, mobility is considerable, though less for workers with less education, and with some increase in low-wage work and sustained low-wage work from the early 1980s to the early 1990s (Ryscavage 1996).

A second minimum benefit design issue is how to handle periods of covered and uncovered employment. Under current law, legislators attempt to avoid providing windfalls (because of Social Security's progressive benefit rate structure) to those with work outside of Social Security-covered employment. Windfall avoidance provisions would need to apply to minimum benefits as well. Similarly, work by immigrants raises similar issues.²⁴ Designers of a minimum may wish treat workers with substantial fractions of their working lives outside the United States in ways that reflect these complexities.

Previous Studies on Minimum Benefits

While explorations of minimum benefit design and rationale have been sparse, several recent studies illustrate various minimums' effects. Herd (2005) considers three different minimum benefit types: (1) one that, like NCRP, offers long-career low-wage workers a poverty-level benefit that declines to 60 percent of poverty for workers with a 20 year work history; (2) one that provides poverty-level benefits to workers with at least 10 work years; and (3) a universal one that provides SSI-level benefits to all citizens or residents, regardless of whether their assets meet SSI tests. To offset costs for these latter two types, Herd eliminates spousal benefits. She simulates the alternatives using a simplified microsimulation model. She finds important differences in the minimums' redistributive properties: All have more progressive effects than current spousal benefits. The universal minimum and benefit that requires just 10 work years direct more benefits to the bottom (defined by asset quintiles) than does the minimum more closely tied to work.

Fitzpatrick, Hill, and Muller (2003) focus on Social Security's existing special minimum benefit provisions. They consider expanding it four ways: (1) lowering the number of required years; (2) lowering the level required for a year of earnings; (3) counting partial coverage years; and (4) counting quarters of coverage toward the minimum. The authors simulate effects using survey data matched to administrative records. They find that the changes could greatly increase the number of persons with below-median earnings qualifying for the special minimum, that

²³ Fully insured status is defined as quarters of coverage greater than or equal to the number of elapsed years.

²⁴ Immigrants, about 12 percent of the U.S. population, often have limited years of work, leading to lower OASDI benefits. Gustman and Steinmeier (1998) point out that Social Security's formula treats high-earning immigrants with short careers relatively well. Years spent out of the country are treated as zero earnings years, leading to relatively high replacement rates.

effects by gender are similar across reforms, and that the special minimum population would become less skewed toward persons with less than a high school education under the reforms.

Favreault, Sammartino, and Steuerle (2002) and Favreault and Sammartino (2002) simulate minimum benefits resembling the NCRP version, both alone as an add-on to the system and combined with other provisions aimed at increasing the system's equity (e.g., caps on spousal benefits). They simulate effects using an earlier version of DYNASIM. Their findings stress minimum benefits' efficacy in relieving poverty compared with alternatives (e.g., survivor benefit increases). Davies and Favreault (2004) use MINT to model a minimum benefit equal to 50 percent of poverty for workers with at least 15 years of work, with 2 percent added for each additional work year (reaching a maximum 100 percent of poverty for those with 40 years). They find that minimum benefits in OASDI tend to be more effective at reducing poverty than SSI reforms (liberalizing asset tests, increasing the general income exclusion, and increasing benefit levels).

Sandell, Iams, and Fanaras (1999) simulate the effects of a minimum similar to the NCRP version. They use longitudinal data matched to earnings records, focus on early baby boomers, and project earnings on the basis of the administrative records. They find that substantial fractions of this population (21 percent of men and nearly half of women) could benefit from the minimum. The authors also combine a minimum with increasing the averaging period for AIME, and find that the minimum counteracts some effects of a computation years increase.

Zedlewski (2002) considers how minimum benefits (again, styled after NCRP's) might affect OASDI entitlement for women with welfare system experience. Zedlewski constructs representative workers for three groups (those with limited, moderate, and high public assistance usage) using longitudinal data and considers the late 1990s uptick in single mothers' work. She finds that single mothers with the most work (least welfare) experience almost reach poverty-level OASDI benefits at age 62, but this minimum does not help them much at that point. Women with more extensive public assistance experience earn benefits that are farther below poverty, so benefit more from the minimum (though more so at the normal retirement age than at 62). Those in the highest welfare use group end up not much better off with Social Security and additional work than they would have been with SSI alone. In some cases, though, they no longer need to meet SSI's asset tests and can receive benefits for more years, no longer needing to wait until age 65 to collect.

Our study complements this literature. It differs from others (Herd 2005, Sandell et al. 1999, Fitzpatrick et al. 2003) in that our simulation model is more detailed with a broader population base (the full U.S. noninstitutionalized population in 1992), and can thus focus on younger cohorts that are more likely to experience reform. This should enable us to capture important cohort changes, especially in women's work and marital patterns. It builds on the Favreault et al. papers (2002), which use a similar method and focus on alternatives to spousal/survivor expansion, by implementing reforms in a reduced (rather than increased) system. (Of the studies we mention, only Davies and Favreault [2004] use a reduced system as a benchmark.) Finally, we use information on total income to help identify instances in which low OASDI benefits do not signify increased need.

Simulations

Description of Options

In this section, we simulate eight alternative benefit options (plus two sensitivity tests) that target workers with relatively low incomes (table 5). We compare current law benefits reduced due to OASDI's long-term fiscal imbalance with four distinct minimum benefits, one formula adjustment, and then one of the minimums combined with two other often-mentioned reforms. (The two sensitivity tests simulate changes to certain design details.) Like the current law baseline, all simulations are embedded in the context of a reduced Social Security system. We assume that an approximately equal combination of benefit reductions and tax increases will close the long-run fiscal deficit. We process these simulations in a roughly cost-neutral manner, defining cost neutrality as approximately equivalent costs at a point in time (2050).

Turning to details of the minimums, we first examine two minimum benefits that are standard for the literature. Our "standard" minimum resembles those found in the NCRP plan (and related congressional proposals) but is more generous for persons who have worked between 10 and 20 years. Instead of offering 60 percent of poverty at 20 work years plus an extra 2 percent for each additional year up to 40, we offer 55 percent of poverty for 10 years of work and an additional 1.5 percent of poverty for each added year (again, up to 40).²⁵ The first version of this standard minimum is price-indexed, and the second wage-indexed, consistent with NCRP. We then consider two minimum benefits that are on the generous end of those from the literature. Our more generous minimum has some features that are consistent on the top end with Senator Graham's proposal. It starts at 80 percent of poverty for a worker with 10 years of work (more generous than Graham at the low end) and increases to 120 percent of poverty for 40 years (equivalent in generosity to Graham's proposal for a full career). Our minimums thus provide a spectrum of possibilities, although we do not consider minimum benefits that are not conditioned on years of work in some minimal way, as such plans have been rare in recent years.²⁶

To implement cost neutrality, we simulated the first option, tabulated its 2050 costs, and determined that benefits needed to be reduced by 12.8 percent for all persons becoming entitled starting in the year the simulations take effect (2007) to meet our goal of resolving half the OASDI financing problem by 2050. When we wage-index the minimum, the size of the required cut is larger—about 14.3 percent. We construct the remaining simulations (the two generous minimums, adjusting the bend points/percentages under current law, and the combination options) so that we spend the same amount of money in 2050. When minimum benefits are larger and reach more people, we institute deeper across-the-board benefit cuts (for those entitled after 2007) in order to have equivalent costs.

²⁵ In defining poverty, we use Census Bureau thresholds for the aged.

²⁶ In all cases, we determine minimum benefits at the point of PIA calculation, with three implications: (1) actuarial reductions and delayed retirement credits apply (so individuals below the normal retirement age when first taking benefits do not get the full poverty fraction the minimum designates); (2) individuals do not "age onto" the minimums (when wage indexing increases the minimums beyond the point at which one would be eligible if entitlement were redetermined); and (3) the minimum can generate spousal and survivor benefits (beyond the worker entitlement). Also, we prorate work years requirements for persons on DI so that they remain proportionate to possible work years (except in the second sensitivity analysis, option 10).

By way of comparison, we then change the OASDI benefit formula to protect those with low incomes. Specifically, we add a third bend point (between the first and second) to the PIA formula at the point that results in a benefit equal to the poverty threshold (as defined for those age 65 and older).²⁷ Figure 1 illustrates how the change works. The dotted line indicates the current law benefit formula's replacement levels, the line marked with triangles shows what current law would look like in the presence of scalar reductions that bring outlays and revenues closer to balance in 2050, and the solid line shows the alternative with the new bend point. Under this alternative, benefits remain identical to current law benefits through a poverty-level benefit and then are reduced progressively, with reductions of 26 percent (from 32 to 23.6 percent) at earnings between the new third and fourth bend points and 37 percent (from 15 to 9.4 percent) for earnings above the highest bend point. Compared with scalar-reduced current law, this formula generates higher benefits up to AIMEs of about \$3,600 (corresponding to average annual earnings over the 35 highest years of about \$43,000) but then (depicted by the point at which the solid line and the line with the triangles cross) generates lower benefits.²⁸

We next repeat the standard wage-indexed minimum benefit from above combined with two other frequently mentioned benefit reforms: a chained Consumer Price Index (CPI)²⁹—assuming a 0.5 percentage point reduction in the OASDI cost-of-living adjustment (COLA)—and an increase in the number of computation years used for determining Social Security retirement benefits (to 40 from 35). Both of these parameter changes have received. Because the COLA cut and increase in computation years reduce system costs, the sizes of the scalar reductions required to keep these options in balance with the others are lower (7.7 percent for COLA, 10.2 percent for computation years).

Finally, the first sensitivity test again uses the wage-indexed standard minimum and alters the scalar adjustment that meets half the 2050 shortfall. We make the adjustment more progressive by explicitly shielding the bottom AIME bracket (the 90 percent replacement zone) from benefit cuts when making the benefit adjustments. The second sensitivity test considers what would happen if we did *not* prorate the work years requirements for people who are entitled to DI (i.e., allow workers to qualify with years of service more proportionate to the length of their career prior to entitlement) for this same minimum benefit.

In all cases, the changes to OASDI (benefit reductions, minimums, and other adjustments) take place in 2007. For each alternative, we compare outcomes based on lifetime earnings (calculated on both an individual and a couple basis for persons who have been married),³⁰ education, marital status, sex, race/origin, disability status, nativity (U.S. or foreign-

²⁷ We use 2006 bend points of \$656, \$1,320, and \$3,995, compared to \$656 and \$3,995 under current law. Our rates are 90, 32, 23.6125, and 9.445 percent, compared to 90, 32, and 15 percent under current law.

²⁸ This benefit formula change resembles Pozen-style progressive price indexing (2005) in that it does not implement reductions below a certain point. The change differs from Pozen in that it occurs at a single point in time and does not grow over time. This implies stable (though reduced) replacement rates at middle and upper income ranges.

²⁹ The rationale for a chained CPI is that persons can substitute various goods in the CPI basket as prices fluctuate.

³⁰ We define lifetime earnings as average earnings between ages 22 and 62, where we divide each year's earnings by the average wage. This resembles AIME for Social Security purposes but differs because of the age range and lack of computation years (i.e., we do not sort and drop the lowest years).

born), years of work, and other attributes. We aim to determine whether the alternatives perform better or worse than current law (reduced) based on a set of adequacy, equity, and efficiency criteria. To evaluate performance on the adequacy criterion, we look at poverty rates, poverty reduction, and the fraction of benefits going toward beneficiaries with incomes of different multiples of poverty and in different earnings quintiles.³¹ For the equity criterion, we consider fractions of benefits persons in different groups of years worked receive. We examine outcomes in 2025 and 2050 to understand how the effects of the minimums (and other changes) evolve over time: whether they shrink, grow, or stay relatively constant and whether they reach different types of people at the different points. The 2050 estimates, our focus, are ultimately more useful because of the cost neutrality that year.

Methods

Our method for simulating the effects of these minimum benefits is to integrate the proposed parameters into a dynamic microsimulation model of the U.S. population, the Urban Institute's DYNASIM3 model.³² DYNASIM relies on a starting sample of approximately 100,000 persons from the 1990 to 1993 panels of the Census Bureau's Survey of Income and Program Participation (SIPP). For each year, the model simulates birth, schooling, deaths, marriages, divorces, work, disability, and participation in Social Security. This aging procedure accounts for differentials in processes along important dimensions: age, gender, race, education, and earnings. We calibrate key assumptions about fertility, mortality, immigration, disability, work, and earnings to the assumptions of the OASDI Board of Trustees (2005). As earnings histories are vital for calculating Social Security benefits (and minimum benefits), the model includes a careful imputation of earnings histories based on earnings data from longitudinal sources and administrative records (Smith, Scheuren, and Berk 2002).

In processing the options using DYNASIM, we assume that people do not substantially change their behavior in response to either the benefit reductions or the new minimum benefits. That is, we assume that they work, earn, and collect OASDI benefits no differently after the change than they did under current law. This allows us to focus on the policies' effects in a relatively simple environment. (Assumptions about behavioral change—especially behavioral change differentials—can be controversial given the absence of empirical data from which to estimate changes.) Because of this simplifying assumption, readers should interpret our results conservatively.

Results: Comparing the Minimums

³¹ These poverty measures reflect most major retirement income sources. DYNASIM projects earnings, defined benefit and defined contribution pensions, income from assets, SSI, OASDI, and co-resident income. Excluded income sources that Census integrates into its poverty definition are transfer income other than OASDI or SSI (e.g., benefits from Temporary Assistance for Needy Families, unemployment insurance, veterans' benefits, or workers' compensation). In 2004, about 3.2 percent of Americans 65 and older had income from veterans' benefits that averaged \$8,800 annually, suggesting the size of this exclusion's potential bias (Whitman and Purcell 2005).

³² The specific DYNASIM release that we use is run number 432 (FEH data file date stamped October 26, 2005).

Table 6 presents the fraction of beneficiaries age 62 and older who receive the minimum benefit under each scenario in 2025 and 2050.³³ All four minimum benefits have a fairly broad reach in 2025. The standard wage-indexed minimum reaches about 11.3 percent of beneficiaries, compared with 6.3 percent for the standard price-indexed minimum. The more generous minimum benefits more than double these impacts. In the wage-indexed case, nearly 3 in 10 persons who have Social Security income receive the minimum. Almost 19 percent receive the price-indexed generous benefit of up to 120 percent of poverty. Of course, in this cost-neutral context, the larger minimum benefits trigger larger benefit reductions than more standard minimums. This means that the benefit reduction qualifies more people for the minimum, in addition to the minimums' reaching farther into the distribution.

The story changes fairly dramatically for the price-indexed minimums when we reach 2050. At that point, the standard price-indexed minimum has markedly declined in impact. Only 5 percent of beneficiaries receive on this basis. For the price-indexed generous minimum benefit, 12 percent receive the minimum. Interestingly, the wage-indexed standard minimum surpasses the price-indexed generous benefit in its reach by 2050. About 16 percent receive a benefit from this provision. The wage-indexed generous benefit still reaches well over a third of persons in 2050, documenting persistence in both need and in the minimums' ability to reach if it is wage-indexed. This does represent a flattening of benefits, and potentially lesser replacement for added effort despite the benefit's tie to work-years.

In addition to these aggregate differences, the *types* of people that the minimums reach differ across the four options. Women are far more likely to receive a minimum than men in all four cases. This is even more true in 2025, when women's histories differ more significantly from men's, than in 2050, when the groups have more similar lifetime work experiences. For example, in 2025, the ratio of women to men receiving the standard wage-indexed minimum is about 1.5:1. This falls to 1.1:1 in 2050. Further, the price-indexed minimums reach proportionately more women than the wage-indexed versions in both years. Minimums with broader reach extend farther up the earnings scale, where women earners dominate the distribution less.

Whether people receive the minimum is a limited measure of its reach given our cost-neutral concept. We also need to know *how much* people receive from the minimum and how this compares with their current situation (assuming proportional benefit reductions that bring the system closer to long-term fiscal balance). Table 7 displays the *share* of total OASDI benefits that each group receives in 2050. In terms of aggregate expenditures, the more generous minimums make the system more redistributive toward women. For example, current law reduced directs 50.44 percent of benefits to people age 62 and older toward women, while the standard wage-indexed minimum directs 50.49 percent toward them. The more generous wage-indexed minimum has the largest effect for women as a whole (50.71 percent of total benefits), especially for married women (18.77 percent, compared with 18.32 percent under current law reduced). All four minimums direct higher fractions of total OASDI to persons in the bottom quintile of the AIME distribution (measured both individually and sharing with spouses), those

³³ This measure is a complex one. For each formula change, it identifies the people who receive the minimum. This is not equivalent to the number of people receiving higher benefits than under our current law baseline, which is reduced to equate costs with revenues in 2050.

with income of less than twice the poverty threshold, and those with less than a college education. The minimum benefits further lead to greater fractions of benefits for non-Hispanic blacks and Hispanics than for non-Hispanic whites in 2050.

Age patterns in benefit payments under the minimums differ markedly across the various types. Not surprisingly, the wage-indexed minimums have deeper effects at younger ages (62 to 66) in 2050, while the price-indexed minimums are less patterned by age. Of course, the youngest age group is relatively select. Workers who collect benefits at age 62 should be disproportionately female (Munnell and Soto 2005) and somewhat more likely to be disabled. The other age ranges reflect broader, and thus more representative, fractions of the beneficiaries in a given cohort.

Results: Minimum Benefits and Other Adjustments

A central question is whether formula adjustments can be as effective as minimum benefits at achieving certain objectives (e.g., ensuring adequate income while encouraging and rewarding work). When we compare the minimums to changes to the benefit formula to add a bend point at a poverty level benefit and make it more progressive by reducing the upper replacement rates (table 8), we see that in 2050 the formula adjustment has redistributive properties with respect to lifetime earnings that are similar to those for some of the minimums. Here we focus on a comparison with the standard wage-indexed minimum, the most common minimum from the literature. Again, we consider benefit shares for particular groups.

The formula adjustment (in the column labeled “poverty bend point”) is more redistributive toward women than the wage-indexed standard minimum benefit with an across-the-board benefit cut for post-2007 entitlees. In 2050, it grants 50.74 percent of total benefits to women, compared with 50.43 under the standard wage-indexed minimum option and 50.44 under current law reduced. It also grants the highest fraction of benefits to those with a high school education and the lowest to those with at least some college.

However, some equity trade-offs accompany this redistribution. Higher fractions of benefits go to those with fewer years of work under the formula adjustment than under any other option. For example, in 2050, fractions of benefits going to people with less than 10, 10 to 19, and 20 to 29 years of work all increase with the poverty-level benefit bend point compared with all of the other options and current law reduced.

The increased computation years option (in tandem with the standard wage-indexed minimum benefit and reductions for new entitlees in 2007 onward), in contrast, has several desirable equity properties. The share of benefits going to persons with the most (35 or more) work years, as well as the share to those with at least 20 work years, increases compared with current law reduced in 2050. The option also tends to reduce redistribution toward immigrants compared with the other options and current law reduced. At the same time, it is fairly redistributive toward those in lower parts of the earnings distribution, certainly compared with current law reduced.

Adjustments to Social Security's COLA to account for a shift to using a chained CPI (again, along with a wage-indexed standard minimum) have a substantially different redistributive character than the other simulations. Only this simulation leads to a substantially greater fraction of benefits going to men than to women (compared with current law reduced). To a large extent, this reflects differences in benefits by age, as women are overrepresented at the oldest ages where COLA cuts have the deepest reach. Like the computation years option, the COLA option concentrates benefits among those with more years of work and, indeed, surpasses the computation years option on several work-years dimensions. Again, this likely reflects the strong age/cohort-gender component of a COLA reduction. Because it contains the standard wage-indexed minimum, this option still maintains redistribution toward those with less education and benefits of less than poverty compared with current law with a simple across-the-board reduction. This option also causes the greatest income loss among the oldest old, who experience the most years of COLA benefit cut.

Results: Impacts on Poverty

Our final focus is on the alternatives' adequacy effects. Table 9 displays results for the poverty rates and poverty reduction (in percentage terms and number of people no longer in poverty) from the minimum benefits with reductions to Social Security and the three alternative methods for restructuring benefits (new bend point at poverty, COLA cut, and computation years increase). The table also includes results from the two sensitivity analyses. Again, the table population is restricted to Social Security beneficiaries age 62 and older. Poverty reduction is tracked relative to current law reduced for solvency using the uniform benefit reduction (under which poverty rates are 4.3 percent in 2050³⁴).

The more generous minimums, not surprisingly, are highly effective at reducing beneficiary poverty. The more generous wage-indexed benefit leads the pack, reducing poverty by about two-thirds (or over 2.2 million people). The second most effective option with respect to poverty alleviation is the standard wage-indexed minimum in which we do not reduce benefits in the 90 percent bracket. It increases the poverty alleviation impact by over half compared with the same minimum alone without shielding the lowest bracket. This illustrates the importance of the form that any necessary benefit reductions might take.

The poverty-level bend point comes in third in terms of poverty alleviation, with a reduction of about a quarter (or almost 850,000 people). It is followed closely by the generous price-indexed minimum, the wage-indexed standard minimum benefit, and the standard wage-indexed minimum in concert with an increase in computation years (all granting between 22 and 24 percent reduction in poverty).

The sensitivity test in which work requirements for the disabled are not prorated based on the number of years elapsed prior to disability does worse with respect to poverty alleviation than the minimum alone (a difference of about 110,000 people in 2050). This underscores the vulnerability of many in the DI population and the need to be careful to take account of their needs in minimum benefit design.

³⁴ These rates are low relative to current rates. We expect this because wages (and thus OASDI benefits, which are initially indexed to wages) typically grow faster than prices (and thus poverty thresholds), all else equal.

The least effective option is the more modest price-indexed minimum benefit, which reduces poverty by about 6 percent. Even the COLA simulation, the second least effective with respect to poverty reduction, does substantially better than the price-indexed minimum benefit, with a reduction of almost 13 percent.

Caveats

A few caveats to these analyses are appropriate. First, predicting the future along so many dimensions (work/earnings, mortality, marriage, etc.) is difficult and warrants conservative interpretation. Our assumptions about minimal behavioral response also call for caution. If OASDI benefit reductions lead older workers to work longer, they may enter retirement in stronger financial positions because of lower actuarial reductions to their OASDI benefits and additional savings. Conversely, the high replacement rates that certain minimum benefits impose might lead some low-wage workers to work until qualifying for the minimum but then reduce labor supply absent strong incentives. This paper has focused on retirees age 62 and older (including disabled workers ages 62 to 64 and formerly disabled workers who convert to retired worker benefits). Including younger disabled workers requires design considerations that we have not addressed. Our estimates have not focused on family structure issues. Designers of a minimum may want to cap couples' benefit from the minimum (for example, limiting minimum benefit payments to spouses of workers with high benefits) so that a minimum does not replicate or exacerbate certain less desirable equity features of spouse and survivor benefits. Finally, while all the proposals have similar costs in 2050, the time paths for these costs differ (table 10).³⁵ Some simulations front-load benefits, while others back-load them, so that all reach 2050 with similar costs.

Conclusions

Given that Social Security does not guarantee many low-wage workers a poverty-level benefit, there may be a case for expanding the program's minimum benefits. This is especially true because the system's long-term fiscal deficit is likely to lead to some type of benefit (or benefit growth) reductions. The U.S. retirement benefit system is less generous to those with low lifetime earnings than those of similar countries, and SSI fails to reach a sizable number of people who would be eligible for assistance because of incomplete take-up and asset tests that have not kept up with inflation.

We find that minimum benefits could help reduce aged poverty substantially in the context of a system with benefits reduced to improve the program's long-term fiscal deficit. Minimum benefits that have relatively high requirements for qualification (e.g., large numbers of work years) tend to have relatively modest impacts. More generous minimums have broader reach, but sometimes raise issues of equity for long-term workers and inadequate work incentives.

³⁵ When projecting the proposals' costs, we examine the OASDI program as modeled in DYNASIM. DYNASIM represents retired and disabled worker benefits (including spouses and survivors of retired and disabled workers) but does not currently include children's benefits of any type.

Although our analyses are stylized, a few important lessons for designers of Social Security policy are clear:

- Without wage-indexed parameters, many minimum benefit designs would have decreasing relevance over time.
- Trade-offs between adequacy and horizontal equity are apparent. Approaches that do the most to alleviate poverty tend to do less in terms of rewarding extra work. The most generous versions of a minimum could lead to a flatter benefit distribution, reducing Social Security's relationship to earnings, a source of the program's political support.
- Formula adjustments can do about as well as minimums on improving adequacy but could result in less of a tie between benefits and work effort.
- Women benefit disproportionately from minimum benefits in the aggregate. However, when men receive minimums, their average benefit increments are larger than women's.
- The form that benefit reductions take can interact with minimum benefit design. Designs that protect the bottom of the AIME distribution from reductions can greatly enhance a minimum's ability to reduce poverty.
- Minimum benefit designs that do not take into account the truncated work histories of disabled workers will be less successful in alleviating poverty than those that do.

In sum, the most effective OASDI changes are likely to combine parameter changes that improve program adequacy and changes that enhance horizontal equity. Careful analysis will be required to understand interactions between these parameters.

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Tables

Table 1. Selected Minimum Benefit Proposals for Social Security

Proposal name and source	Size of minimum (amount granted at NRA)	Minimum number of years required (and maximum if applicable)	Definition of a year (e.g., CQ, 20 hours/week at minimum wage, etc.)	Allow partial years?	Future treatment of initial level (default = price-indexed)	Empirical analyses
National Commission on Retirement Policy (1998) (similar in Kolbe-Stenholm [2002], Kolbe-Boyd [2005])	60% poverty at 20 years, up to 100% at 40 years	20 (up to 40)	4 CQs (2006=\$3,880)	yes in law, no in some cited studies	Wage-indexed	Herd (2005) "Privatization"; Sandell, Iams, Fanaras (1999); Favreault, Steuerle, Sammartino (2002); Zedlewski (2002)
Herd "Worker"	Poverty	10	4 CQs (2006=\$3,880)	no	Price-indexed	Herd (2005)
"Resident" (1979 SS Advisory Council)	\$545 (72.5% of poverty): federal SSI level in 2002	0	n/a	n/a	Price-indexed	Herd (2005)
President's Commission to Strengthen Social Security Model 2 (2001)	120% poverty at 30 years	21 to 30 (no work after 60 assumed)	minimum wage worker (2000 hours per year at \$5.15 in 2000, wage-indexed, or \$10,300)	still counts CQs when <4 in any year	Price-indexed	Goss and Wade (2002) (primarily aggregate)
President's Commission to Strengthen Social Security Model 3 (2001)	100% poverty at 30 years	21 to 30	as in CSSS Model 2	still counts CQs when <4 in any year	Intermediate-indexed (projected CPI + 0.5)	Goss and Wade (2002) (primarily aggregate)
Diamond and Orszag (2003)	60% poverty at 20 years, up to 100% at 35 years	21 (up to 35)	minimum wage worker ("steadily rising to" 2000 hours per year at \$5.15 in 2000, wage indexed, or \$10,300)	still counts CQs when <4 in any year	Wage-indexed	Goss (2003) (primarily aggregate)
Graham (2003)	120% poverty at 35 years, reduced by 1.2% for each CQ under 140 (phased in); prorate for DI	11 (up to 35)	4 CQs (2006=\$3,880)	yes	Price-indexed	Chaplain and Wade (2003) (primarily aggregate)
Fitzpatrick et al. (2003)	1. Adjust special minimum: change years of service from 30 to 25			no	No change	Fitzpatrick et al. (2003)
	2. Adjust special minimum: lower amount necessary for a year of service		26 percent of average wage (\$9,516 in 2005)	no	No change	
	3. Count partial years of service			yes	No change	
Senior Income Guarantee (Smeeding, Weaver 2001)	75% poverty at 40 years residence and 10 work years	10	4 CQs (2006=\$3,880)	prorate	Unspecified, appears price-indexed	Simple estimates in Smeeding, Weaver (2001)

Notes: CPI = Consumer Price Index; CQ = covered quarter; CSSS = President's Commission to Strengthen Social Security; NA = not applicable; NRA = normal retirement age

Table 2. Combined Social Security and SSI Benefits as a Percentage of Poverty under Current Law for Never Married Low-Wage Workers from the 1943 Birth Cohort

Career earnings type	Number of work years	Combined annual benefit (OASI + SSI as percentage of poverty for single person)						OASI replacement rate (current law)		
		Current law		NCRP-style minimum (ineligible)						
Claiming age		62	NRA	62	NRA	62	NRA	62	NRA	
		1	2	3	4	5	6	7	8	
1a	Federal minimum	0	0%	0%	NC	74%	NC	NC	NA	NA
1b	wage (\$5.15 in	10	38%	50%	NC	76%	NC	NC	68	90
1c	2005), full-year,	20	61%	80%	NC	82%	NC	82%	68	90
1d	full-time (2,000 hours/year)	40	76%	99%	NC	100%	NC	100%	68	90
2a	Federal minimum	0	0%	0%	NC	74%	NC	NC	NA	NA
2b	wage, full-year,	10	19%	25%	NC	76%	NC	NC	68	90
2c	part-time or half-	20	36%	47%	NC	76%	45%	60%	68	90
2d	year full-time (1,000 hours/year)	40	56%	73%	NC	76%	75%	100%	68	90
3a	Exactly 4 CQ	0	0%	0%	NC	74%	NC	NC	NA	NA
3b	threshold in all	10	3%	3%	NC	76%	NC	NC	68	90
3c	years (\$3,880/year	20	7%	9%	NC	76%	45%	60%	68	90
3d	in 2006)	40	20%	27%	NC	76%	75%	100%	68	90

Notes: Person claims benefits in 2005 (at age 62), does not qualify for spouse/survivor benefit. When reaching age 65, person would be eligible for monthly SSI benefits of up to \$603 (2006) if his or her assets (excluding full value of a home) were less than \$2,000. SSI calculations assume no earnings or other income besides OASDI and that the worker lives in a state without an SSI supplement. We assume work years commence at age 20 and continue without interruption (i.e., a worker with 10 years of work earns at ages 20–29, a worker with 20 years of work earns at ages 20–39, and so on).

NC = no change from current law SSI-ineligible person; NA = not applicable (because of zero denominator); CQ = covered quarter; OASI = Old-Age and Survivors Insurance; SSI = Supplemental Security Income

Source: Authors' calculations.

Table 3. Percentage of Retired Worker Beneficiaries with OASDI Benefits of Less Than 99 Percent of Poverty under Current Law, December 2004

Ages	Men	Women
All	19.2	47.4
62–64	21.5	64.7
65–69	17.9	52.3
70–74	19.6	52.1
75–79	19.0	46.9
80–84	20.3	39.6
85–89	18.6	29.3
90+	20.5	27.9

Notes: We use the Census Bureau’s aged poverty threshold for all groups, even though Census classifies persons ages 62 to 64 using nonaged thresholds. This table reflects data on worker benefits, so does not include all Social Security beneficiaries age 62 and older; workers must have earned a minimum number of quarters of coverage.

Source: Authors’ calculations from Social Security Administration (2006a), table 5.B9.

**Table 4. Years of Social Security–Covered Earnings in 2000
for the 1936–40 Cohort, by Sex**

Years of covered earnings	(percentage distribution)	
	Women	Men
0	4	0
1–5	9	1
6–10	8	2
11–15	9	3
16–20	10	4
21–25	11	3
26–30	14	4
31–35	16	10
36+	20	72

Notes: Sample excludes immigrants and persons who became disabled or died before age 62. A year of earnings is defined as one having any earnings.

Source: Burtless, Ratcliffe, and Moskowitz (2004). Authors use pooled 1990–1993 panels of the Survey of Income and Program Participation matched to Summary Earnings Records.

Table 5. Options Simulated

Option	Minimum details (% of poverty by year, work year = 4 CQ)	Solvency mechanism(s)
<i>Current Law with Feasible Benefits</i>		
1 Reduced current law	None	Uniform cuts of 12.45%
<i>Minimum Benefits</i>		
2 Standard price-indexed minimum benefit	55% at 10, increment by 1.5% to reach 100% at 40	Uniform cuts of 12.81%
3 Standard wage-indexed minimum benefit	55% at 10, increment by 1.5% to reach 100% at 40	Uniform cuts of 14.27%
4 Generous price-indexed minimum benefit	80% at 10, increment by 2.0% to reach 100% at 20, increment by 1.0% to reach 120% at 40	Uniform cuts of 13.64%
5 Generous wage-indexed minimum benefit	80% at 10, increment by 2.0% to reach 100% at 20, increment by 1.0% to reach 120% at 40	Uniform cuts of 18.62%
<i>Formula Adjustments</i>		
6 Add a bend point to the benefit formula at the point where benefit equals the poverty threshold	N/A	Reduce upper two formula factors (to 23.6125% and 9.445%); first and new segments retain CL (90%, 32%) replacement rates
<i>Minimum Benefits Combined with Other Well-Known Reforms</i>		
7 Standard wage-indexed minimum benefit with chained CPI	As in 3	COLA cut of 0.50% plus uniform cuts of 7.67%
8 Standard wage-indexed minimum with increase in computation years	As in 3	Increase computation years (to 40) plus uniform cuts of 10.22%
<i>Sensitivity Analyses</i>		
9 Standard wage-indexed minimum benefit, but lowest bracket shielded	As in 3	Reduce upper two formula factors by 24.0% (90% bracket is unchanged)
10 Standard wage-indexed minimum benefit, but DI years not prorated	As in 3, except for DI	Uniform cuts of 13.7%

Notes: All options take effect in 2007. Work years requirements are prorated for those on DI (except in option 10). Benefit reductions are across the board for new entitlees and target cost equivalence in 2050. Expenditure time paths of the reforms differ (see table 10).

CL = current law scheduled; COLA = Cost-of-Living Adjustment; CPI = Consumer Price Index; CQ = covered quarter; DI = Disability Insurance; N/A = Not Applicable

Table 6. Percentage of OASDI Beneficiaries Age 62 and Older Receiving a Minimum Benefit under Four Alternative Specifications, 2025 and 2050

	N	Standard Wage- Indexed	Standard Price- Indexed	Generous Wage- Indexed	Generous Price- Indexed
2025					
All	25,336	11.3%	6.3%	29.3%	18.7%
Men	11,215	8.7%	4.8%	24.4%	14.4%
Women	14,121	13.4%	7.6%	33.2%	22.0%
2050					
All	31,302	15.8%	4.6%	35.4%	12.1%
Men	14,709	15.1%	4.3%	32.7%	11.0%
Women	16,593	16.4%	4.8%	37.7%	13.0%

Source: Authors' tabulations from the Urban Institute's *DYNASIM3* (run ID 432).

Table 7. Share of OASDI Benefits Received by Different Groups at Age 62 and Older under Four Alternative Minimum Benefit Specifications, 2050

	N	Share of All Persons	Current Law Reduced	Standard Wage-Indexed	Standard Price-Indexed	Generous Wage-Indexed	Generous Price-Indexed
All	31,302	100.00	100.00	100.00	100.00	100.00	100.00
Sex and 2050 Marital Status							
Men							
All Men	14,709	46.99	49.56	49.57	49.56	49.29	49.51
Married	8,670	27.70	30.13	30.08	30.11	29.81	30.05
Widowed	1,986	6.34	7.18	7.10	7.16	6.95	7.13
Divorced	1,777	5.68	5.66	5.69	5.66	5.70	5.67
Never Married	2,276	7.27	6.59	6.69	6.62	6.82	6.66
Women							
All Women	16,593	53.01	50.44	50.43	50.44	50.71	50.49
Married	6,694	21.39	18.32	18.37	18.31	18.77	18.33
Widowed	5,350	17.09	18.50	18.31	18.46	17.99	18.42
Divorced	2,637	8.42	8.33	8.33	8.33	8.36	8.33
Never Married	1,912	6.11	5.30	5.42	5.34	5.60	5.41
Age							
62 - 66	5,740	18.34	15.12	15.43	15.16	15.93	15.21
67 - 70	5,899	18.85	20.46	20.50	20.46	20.53	20.44
71 - 74	5,100	16.29	17.14	17.13	17.14	17.12	17.13
75 - 79	5,360	17.12	17.99	17.90	17.97	17.77	17.96
80 - 84	4,425	14.14	14.45	14.34	14.44	14.17	14.43
85+	4,778	15.26	14.84	14.70	14.83	14.48	14.84
Highest Grade 2050							
HS Dropout	3,381	10.80	7.72	7.91	7.77	8.50	7.93
HS Graduate	16,299	52.07	48.12	48.31	48.14	48.77	48.21
College	11,622	37.13	44.16	43.78	44.08	42.73	43.86
Race/ethnicity							
White, Non-Hispanic	19,595	62.60	65.99	65.86	65.95	65.33	65.84
Black, Non-Hispanic	3,675	11.74	10.32	10.45	10.35	10.67	10.41
Hispanic	5,391	17.22	15.31	15.37	15.32	15.72	15.39
Other	2,641	8.44	8.38	8.33	8.37	8.28	8.36
Work years							
Less than 10	1,397	4.46	2.88	2.90	2.89	3.02	2.94
10-19	3,630	11.60	7.81	7.92	7.85	8.49	8.02
20-29	5,594	17.87	15.39	15.41	15.41	15.69	15.45
30-34	4,134	13.21	12.94	12.94	12.93	12.96	12.92
35+	16,547	52.86	60.99	60.84	60.92	59.85	60.67
Immigration Status							
Born in US	24,468	78.17	80.94	81.03	80.95	80.68	80.91
Not born in US	6,834	21.83	19.06	18.97	19.05	19.32	19.09
AIE class							
Lowest quintile	6,260	20.00	12.56	13.43	12.80	14.83	13.41
Second quintile	6,261	20.00	15.02	15.29	14.98	16.32	14.96
Middle quintile	6,260	20.00	18.84	18.60	18.79	18.51	18.64
Fourth quintile	6,261	20.00	23.72	23.33	23.66	22.34	23.47
Highest quintile	6,260	20.00	29.86	29.35	29.77	28.00	29.52
Shared AIE class							
Lowest quintile	6,260	20.00	11.69	12.58	11.90	14.22	12.48
Second quintile	6,261	20.00	16.46	16.56	16.43	17.09	16.39
Middle quintile	6,260	20.00	20.15	19.96	20.10	19.71	19.97
Fourth quintile	6,261	20.00	23.62	23.28	23.56	22.51	23.38
Highest quintile	6,260	20.00	28.08	27.63	28.00	26.47	27.78
Poverty Level							
<99.99%	1,322	4.22	1.64	2.03	1.78	2.59	2.03
100% -149.99%	2,241	7.16	4.12	4.37	4.15	5.02	4.30
150% -199.99%	2,406	7.69	5.57	5.69	5.58	6.04	5.64
200% -249.99%	2,557	8.17	6.96	7.00	6.96	7.13	6.97
250% +	22,776	72.76	81.71	80.90	81.53	79.21	81.05

Note: AIE is defined as average indexed earnings (covered and uncovered) from ages 22 to 62.
Source: Authors' tabulations from the Urban Institute's *DYNASIM3* (run ID 432).

Table 8. Share of OASDI Benefits Received by Different Groups at Age 62 and Older under Wage-Indexed Standard Minimum Benefit Specification and Three Alternatives, 2050

	N	Share of All Persons	Current Law Reduced	Standard Wage-Indexed	Poverty Bend Point	Comp Years + Standard Wage	COLA + Standard Wage-Indexed
All	31,302	100.00	100.00	100.00	100.00	100.00	100.00
Sex and 2050 Marital Status							
Men							
All Men	14,709	46.99	49.56	49.57	49.36	49.63	49.94
Married	8,670	27.70	30.13	30.08	29.88	30.16	30.49
Widowed	1,986	6.34	7.18	7.10	7.08	7.11	6.95
Divorced	1,777	5.68	5.66	5.69	5.67	5.70	5.75
Never Married	2,276	7.27	6.59	6.69	6.73	6.66	6.74
Women							
All Women	16,593	53.01	50.44	50.43	50.64	50.37	50.06
Married	6,694	21.39	18.32	18.37	18.56	18.30	18.66
Widowed	5,350	17.09	18.5	18.31	18.27	18.34	17.74
Divorced	2,637	8.42	8.33	8.33	8.36	8.33	8.29
Never Married	1,912	6.11	5.3	5.42	5.45	5.40	5.38
Age							
62 - 66	5,740	18.34	15.12	15.43	15.49	15.30	16.17
67 - 70	5,899	18.85	20.46	20.50	20.47	20.52	21.14
71 - 74	5,100	16.29	17.14	17.13	17.12	17.16	17.34
75 - 79	5,360	17.12	17.99	17.90	17.88	17.95	17.76
80 - 84	4,425	14.14	14.45	14.34	14.34	14.37	13.9
85+	4,778	15.26	14.84	14.70	14.70	14.70	13.69
Highest Grade 2050							
HS Dropout	3,381	10.80	7.72	7.91	8.10	7.84	7.82
HS Graduate	16,299	52.07	48.12	48.31	48.72	48.21	48.15
College	11,622	37.13	44.16	43.78	43.18	43.95	44.03
Race/ethnicity							
White, Non-Hispanic	19,595	62.60	65.99	65.86	65.45	66.07	65.76
Black, Non-Hispanic	3,675	11.74	10.32	10.45	10.55	10.39	10.45
Hispanic	5,391	17.22	15.31	15.37	15.59	15.29	15.43
Other	2,641	8.44	8.38	8.33	8.41	8.25	8.36
Work years							
Less than 10	1,397	4.46	2.88	2.9	2.97	2.89	2.77
10-19	3,630	11.60	7.81	7.92	8.22	7.82	7.74
20-29	5,594	17.87	15.39	15.41	15.78	15.12	15.27
30-34	4,134	13.21	12.94	12.94	13.02	12.77	12.92
35+	16,547	52.86	60.99	60.84	60.01	61.41	61.29
Immigration Status							
Born in US	24,468	78.17	80.94	81.03	80.50	81.27	80.97
Not born in US	6,834	21.83	19.06	18.97	19.50	18.73	19.03
AIE class							
Lowest quintile	6,260	20.00	12.56	13.43	13.04	13.41	12.73
Second quintile	6,261	20.00	15.02	15.29	15.75	15.19	14.89
Middle quintile	6,260	20.00	18.84	18.60	19.28	18.43	18.49
Fourth quintile	6,261	20.00	23.72	23.33	23.50	23.26	23.62
Highest quintile	6,260	20.00	29.86	29.35	28.42	29.73	30.26
Shared AIE class							
Lowest quintile	6,260	20.00	11.69	12.58	12.57	12.47	11.81
Second quintile	6,261	20.00	16.46	16.56	17.04	16.40	16.16
Middle quintile	6,260	20.00	20.15	19.96	20.26	19.87	19.86
Fourth quintile	6,261	20.00	23.62	23.28	23.25	23.32	23.61
Highest quintile	6,260	20.00	28.08	27.63	26.86	27.94	28.56
Poverty Level							
<99.99%	1,322	4.22	1.64	2.03	1.85	2.02	1.93
100% -149.99%	2,241	7.16	4.12	4.37	4.52	4.33	4.22
150% -199.99%	2,406	7.69	5.57	5.69	5.91	5.61	5.55
200% -249.99%	2,557	8.17	6.96	7.00	7.18	6.91	6.90
250% +	22,776	72.76	81.71	80.90	80.54	81.12	81.40

Note: AIE is defined as average indexed earnings (covered and uncovered) from ages 22 to 62.

Source: Authors' tabulations from the Urban Institute's *DYNASIM3* (run ID 432).

Table 9. Share and Number of Social Security Beneficiaries in Poverty under the Options at Age 62 and Older, 2050

Year	Current Law Reduced	Poverty Bend Point	Standard Wage-Indexed	Standard Price-Indexed	Generous Wage-Indexed	Generous Price-Indexed	Computation Years plus Standard Wage-Indexed	COLA Cut plus Standard Wage-Indexed	Shield Lowest Formula Factors plus Standard Wage-Indexed	Standard Wage-Indexed with No DI Prorating
N	31,302	31,297	31,284	31,296	31,274	31,285	31,293	31,331	31,287	31,288
Poverty rate	4.26	3.19	3.24	3.99	1.42	3.23	3.31	3.72	2.68	3.38
Change in poverty										
Number of people		-848,000	-806,000	-213,000	-2,240,000	-814,000	-749,000	-429,000	-1,244,000	-696,000
Percentage points		-1.08	-1.02	-0.27	-2.85	-1.03	-0.95	-0.54	-1.58	-0.88
% change		-25.25%	-24.02%	-6.35%	-66.76%	-24.25%	-22.32%	-12.75%	-37.08%	-20.73%

Note: Changes are expressed relative to current law reduction.

Source: Authors' tabulations from the Urban Institute's *DYNASIM3* (run ID 432).

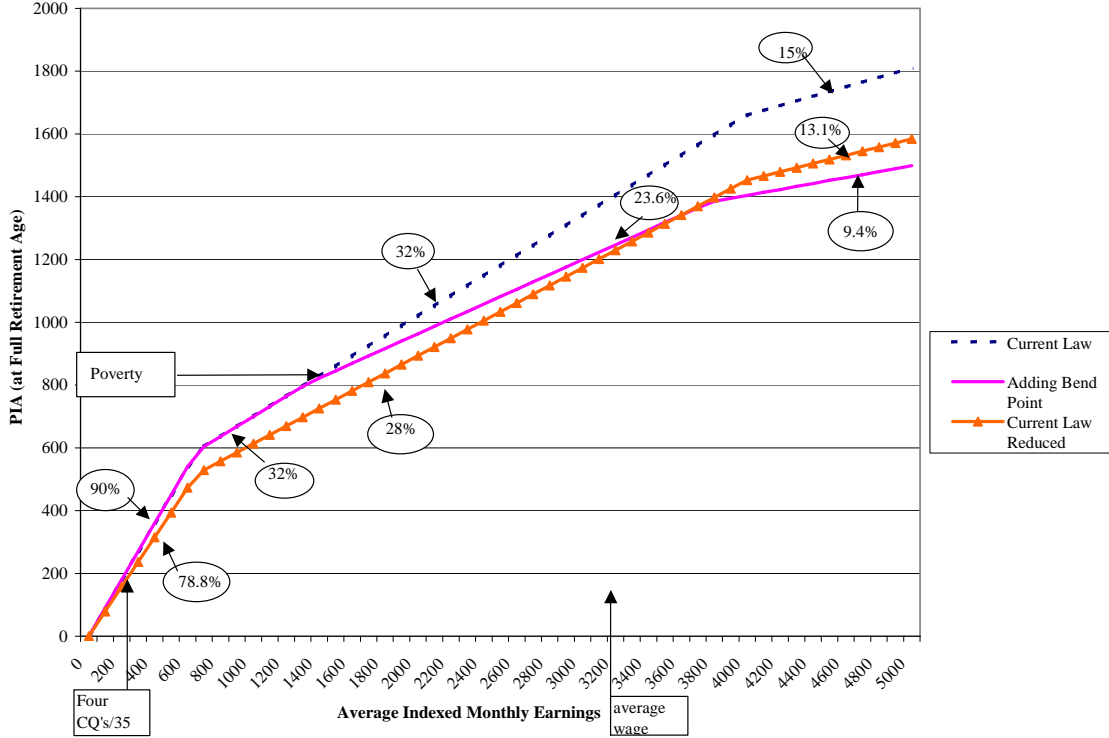
Table 10. Time Paths of the Alternatives: Expenditures as a Percentage of Current Law Benefits under Each of the Options, 2010 to 2050

Percent of Current Law Benefits										
Year	Current Law Reduced	Poverty Bend Point	Standard Wage-Indexed	Standard Price-Indexed	Generous Wage-Indexed	Generous Price-Indexed	Computation Years plus Standard Wage-Indexed	COLA Cut plus Standard Wage-Indexed	Shield Lowest Formula Factor plus Standard Wage-Indexed	Standard Wage-Indexed No DI Pro-Rating
2010	97.850%	98.211%	97.846%	98.040%	98.251%	98.749%	97.656%	97.799%	98.047%	97.864%
2020	91.688%	92.042%	91.331%	91.913%	91.615%	93.061%	91.081%	91.558%	91.562%	91.460%
2030	88.925%	89.105%	88.456%	89.023%	88.414%	89.768%	88.247%	88.711%	88.590%	88.588%
2040	87.986%	87.992%	87.697%	88.015%	87.541%	88.342%	87.612%	87.732%	87.710%	87.745%
2050	87.666%	87.674%	87.666%	87.639%	87.672%	87.648%	87.655%	87.634%	87.644%	87.661%

Source: Authors' tabulations from the Urban Institute's *DYNASIM3* (run ID 432).

Figures

Figure 1. Design of Simulation with Additional Bend Point (in the Context of Reduced Benefits), Compared with Current Law and Current Law with Scalar Reductions



Note: Formula applies to a person first entitled in 2006.