#2004-18
December 2004

Social Security Reform and Its Effects on Participation in the Supplemental Security Income Program

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Acknowledgments

The authors thank Laurel Beedon, John Gist, Michael Schuster of AARP's General Counsel; Paul Davies and Lee Cohen of the Social Security Administration; Barbara Butrica, Larry Thompson, and Sheila Zedlewski of the Urban Institute; and three anonymous reviewers for helpful comments.

Foreword

Social Security (Old Age, Survivors and Disability Insurance) plays a critical role in the income security of workers and their families. Social Security insures workers and their spouses and children against certain predictable risks by pooling those risks across the population and financing the insurance collectively. The program today pays benefits to more than 47 million retired and disabled workers and their families and the families of deceased workers. Supplemental Security Income (SSI), while administered by the Social Security Administration (SSA), has an entirely different focus. SSI was designed to reduce poverty, by providing basic support to the aged, blind, and disabled.

Unlike Social Security benefits that are funded through payroll taxes and paid based on contributions of workers and their employers, federal SSI benefits are funded through general revenues and based on an individual's need. To qualify a person must meet the strict SSI income and asset thresholds. (The maximum monthly SSI payment in 2004 is $564 for an individual and $846 for a couple. In addition, to qualify as a recipient, a person's financial resources cannot exceed $2,000 for individuals and $3,000 for couples.) In contrast to Social Security's 47 million beneficiaries, the Supplemental Security Income program (SSI) is small (6.9 million recipients). Yet SSI is important because it is the largest cash assistance program available for people with low and no income and assets.

Today, Social Security faces the financial challenges associated with an aging society and will require some adjustments to ensure that it remains strong for future generations. Numerous options and combinations of options for reform have been proposed. Many entail some reduction in benefits for future beneficiaries. For future low-income workers it is logical to assume that, should their income, due to lowered Social Security benefits, fall below the SSI thresholds, they would be eligible for SSI benefits.

This Issue Paper by the Urban Institute's Melissa M. Favreault, Jillian A. Berk, and Karen Smith uses the Institute's dynamic microsimulation model (DYNASIM) to determine the effects on SSI of five Social Security reform options that would reduce guaranteed benefits: 1) use price indexing rather than the wage indexing in the formula for calculating initial benefits; 2) decrease the cost-of-living adjustment; 3) eliminate the hiatus for birth years 1943-1954 in the gradually increasing age for full retirement and index full retirement age to life expectancy; 4) use the factors in option 3 and increase early eligibility age to 64; 5) and, increase the number of years included in the computation of benefits from 35 to 38.

The analysis reveals that the several reform options simulated have a significant effect on Social Security benefits and as a result the percentage of people with benefits and total incomes below or near poverty increases dramatically. In contrast, the impact of the reform options on the SSI program is only slight. For those people who receive both Social Security and SSI, reductions in Social Security may lead to modest SSI increases. On the other hand, few who are not receiving SSI to begin with are projected to qualify as new SSI recipients. The researchers found that a prominent reason is that the SSI asset limits are set at only $2,000 for individuals and $3,000 for couples.

It must be briefly noted that these asset limits were set in 1989 and have not changed since. While the concept of an asset test makes sense--those whose resources exceed the limit should use the excess to meet their needs before they become eligible for the SSI program—an amount unadjusted since 1989 does not reflect the economic realities of 2004. Even as the value of a person's home as long as he or she is living in it is excluded, many older people, for example, have a life insurance policy and small savings

accounts to pay for funeral and burial expenses. The asset test rules allow a $1,500 life insurance policy and $1,500 in burial funds. According to a Federal Trade Commission Consumer Guide, however, that is not nearly enough. (The Guide is available at http://www.ftc.gov/bcp/conline/pubs/services/funeral.htm). A traditional funeral costs about $6,000.

There is little dispute about the need to make adjustments that ensure the long-term solvency of the Social Security program. However, changes must be made not only with aggregate program dollars but also with beneficiaries and recipients in mind. This research provides not only useful information about the five reform options discussed, but also it underscores the importance of conducting in-depth analysis of all proposed Social Security reform options and their impact on various groups in the population before changes are made.

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Executive Summary

This study uses a dynamic microsimulation model, the Urban Institute's Dynamic Simulation of Income Model (DYNASIM), to examine the likely impact of the Supplemental Security Income program (SSI) on the U.S. income distribution in coming decades and then to gauge the effects on SSI of five Social Security reform options that would reduce guaranteed benefits. The five reforms include two indexing changes, two changes to increments in retirement ages, and one change in the benefit calculation numbers as follows:

- a shift from wage to price indexing of the formula for calculating initial benefits;
- a decrease in the cost-of-living adjustment (COLA);
- the elimination of the hiatus for raising the full benefit age that exists in current law for the 1943 to 1954 cohorts and subsequent indexing of the full benefit age to life expectancy;
- an increase in the early eligibility age to 64; and
- an increase in the number of computation years in the benefit formula from 35 to 38.

The study discusses both aggregate and distributional consequences of the various policy changes for the future adult beneficiary population, and focuses on effects in the year 2024, a point at which the reforms have had the chance to phase into effect. In these discussions, we consider effects on both the federal program and, with some simplifying assumptions, on state supplements to SSI.

We find substantial effects of the reforms on Social Security and thus total incomes, especially under the two indexing reforms. These reforms lead to significant increases in poverty and especially near poverty among the aged and disabled relative to current law (which is out of long-term actuarial balance). However, we find relatively modest effects on SSI participation and benefits, even under the more dramatic reforms. We then try to determine why SSI reaches so few Social Security beneficiaries who have experienced benefit cuts, and find that the asset test has a major impact. When we increase the SSI asset test, benefits reach substantially more people.

Introduction and Background

Because of the program's long-term fiscal deficit, Social Security reform will be necessary in coming decades. Any reform that reduces Social Security guaranteed benefits will have consequences for the Supplemental Security Income (SSI) program. SSI, the "program of last resort" for aged and disabled persons with entitlement to low or no benefits from Social Security, provides monthly benefits to aged, blind, and disabled individuals and couples who meet stringent income and asset tests. SSI recipients are among the most needy of the aged and disabled, and they rely heavily on benefits from Social Security. In December of 2002, 35.5 percent of federal SSI beneficiaries also received Social Security benefits, a percentage that increases with age (Social Security Administration 2003: Table 7.D1).[1] These Social Security benefits averaged about $410 per month for those SSI recipients over age 18.

Both the SSI and Social Security populations have changed dramatically in recent years, and they are projected to shift further still in coming decades (Toder et al. 2002). At the SSI program's inception, aged persons dominated the caseload, comprising over 53 percent of SSI beneficiaries in 1975. This pattern has reversed, so that in 2002 the overwhelming majority of recipients (just over 81 percent) were receiving benefits on the basis of blindness or disability rather than old age.[2] The *Zebley* decision of 1990, which led Congress to change SSI eligibility standards for children, played an important role in this shift. At the same time, Social Security beneficiary rolls are also changing markedly, with women becoming increasingly likely to receive worker and dually entitled benefits rather than spouse and survivor only benefits (Office of the Chief Actuary 2002; Favreault and Sammartino, 2002) and Disability Insurance (DI) rolls surging (Zayatz 1999).

The fact that the composition of both SSI and Social Security beneficiary rolls are changing rapidly makes it especially important to understand the consequences of reforming Social Security for the SSI program. Major changes in work and disability patterns will have far-reaching consequences for eventual Social Security entitlements. In the presence of such fundamental social change, one cannot simply rely on historical data to ascertain the effects of Social Security reform on SSI. One needs a model that integrates information on these disparate trends to provide reliable forecasts of the future beneficiary populations for these important programs.

This project uses a dynamic microsimulation model, the Urban Institute's Dynamic Simulation of Income Model (DYNASIM), to examine the likely impact of SSI on income distribution through 2050 and then to gauge the effects on the SSI program of five Social Security reform proposals that would reduce guaranteed benefits. These reforms include two indexing changes (a shift from wage to price indexing of the formula for calculating initial

[1]Just 7.1 percent of those under age 18 who receive SSI also collect Social Security, while 30.7 percent of those 18 to 64, and nearly three fifths (57.8 percent) of those 65 and older collect dual benefits (Social Security Administration 2003: Table 7.D1).

[2]One needs to interpret many of the aggregate statistics on SSI reported in Social Security Administration publications with some care. Frequently, tables classify persons ages 65 and older who first received SSI prior to age 65 as blind or disabled rather than aged. Throughout our analyses, we use age alone to distinguish between SSI beneficiaries wherever possible. Where this is not possible, we note this in the text or a footnote.

benefits, and a decrease in the cost-of-living adjustment, or COLA), increments in retirement ages (through the elimination of the hiatus for raising the full benefit age that exists in current law for the 1943 to 1954 cohorts, through subsequent indexing of the full benefit age to life expectancy, and through increasing the early eligibility age to 64), and increases in the number of computation years in the benefit formula (from 35 to 38).[3] We discuss both aggregate and distributional consequences of the various policy changes for the future aged and adult disabled populations. In these discussions, we consider effects on both the Federal program and, with some simplifying assumptions, on state supplements to SSI.

While dynamic microsimulation is ideally suited to this type of study, modeling these five alternatives nonetheless poses a number of challenges. To the extent that the reforms reduce or defer benefits, for example, they could stimulate behavioral changes among Social Security or SSI beneficiaries. Also, modeling the reforms required that we enhance DYNASIM to provide more detailed SSI and immigration components. We discuss how we incorporated these different changes into our forecasts below.

We find that the effects of the reforms on Social Security benefits are quite large, especially for the two indexing reforms. The portion of persons with benefits and total incomes below poverty increase substantially (compared to current law) when the changes take effect. Nonetheless, increases to SSI benefits are quite modest. Relatively few people receive SSI benefits that replace the Social Security benefit cuts. We explore some of the reasons for this, and find that the SSI asset test plays an important role in reducing the program's potential impact. We also find important distributional differences between the reforms, including differential effects by age, disability status, and lifetime earnings.

Our paper continues with a brief description of the workings of the SSI program. We follow this with a discussion of some of the important recent trends in both SSI and Social Security. Next we review the literature on SSI and Social Security reform, focusing on those studies that have a distributional focus and/or address the specific reforms that we analyze. We then provide detail on our method of analysis. This includes a discussion of our forecast period, our programmatic assumptions (both under current law and under the reform), and behavioral responses. Our results follow. First, we present SSI and Social Security projections from DYNASIM under current law, and then we present them under each of the five reforms and the additional sensitivity analysis in which we liberalize SSI's asset test. We close with a summary, some conclusions, and a few recommendations for future research.

How the SSI Program Works

Provisions

The 2004 guaranteed federal monthly SSI benefit is $564 for an individual and $846 for a couple. As noted above, SSI recipients face both income and asset tests.[4] While asset tests are

[3] We use the term "full benefit age" because it is more intuitive than the program term "normal retirement age."
[4] For 2004, the asset test standard is "countable resources" not exceeding $2,000 for an individual or $3,000 for a couple. In determining countable resources, SSA excludes the value of a home and of personal effects (within

standard, differing only based on whether one is married or not, the income test for SSI is quite complex. Depending on the composition of their other sources of income, their living arrangements, and their state of residence, individuals and couples in different circumstances face different income limits.

SSI's label as "program of last resort" reflects one of the most important features of the program—the SSI income test. Before qualifying for SSI, one must first apply for all other benefits for which one is eligible. These rules imply that benefits from Social Security always take precedence over the SSI benefit. SSI recipients who receive Social Security benefits can, however, exclude up to $20 of their monthly income from Social Security (or from another non means-tested source, like a government or private pension or workers' compensation). After that point, the Social Security Administration (SSA) reduces one's SSI benefit by one dollar for each dollar in Social Security benefits received. Because of this one-for-one reduction, cuts to Social Security could render some individuals newly eligible for SSI benefits, or they could make those who are already receiving benefits entitled to larger SSI benefits.[5]

To encourage work among SSI recipients, SSA has an additional monthly exclusion of $65 for earnings. After this amount, earnings reduce the SSI benefit at a lower rate than Social Security benefits or income from assets or pensions. For every two dollars of earnings, SSA disregards one dollar in determining the SSI benefit.

To adjust for the fact that needs may vary based on one's living arrangements, SSA reduces the SSI benefit by up to one third if a person is living in another's home and receiving "support and maintenance in kind" from the people in whose home one lives. SSA appears to interpret this provision fairly liberally, as only 4.2 percent of SSI beneficiaries have their benefits reduced for this reason even though larger portions of beneficiaries live with other persons (Social Security Administration 2003: Table 7.E5).[6]

Many states supplement SSI. Supplements can vary based on filing status and living arrangements. In 2001, individual supplements in the contiguous 48 states ranged from a few dollars a month to $217 a month for an aged individual in Connecticut. For couples, state supplements to SSI ranged again from a few dollars a month to $603 per month for a couple with shared living arrangements in Colorado. States that supplement the SSI benefit tend to have higher living costs, but the correspondence between supplement size and regional expenses is imperfect.

Sample calculations of income limits

In the most routine case of persons living independently in states that do not provide supplements, it is fairly straightforward to estimate the point at which one's income makes one ineligible for SSI based on the program's monthly maximum (again, $564 monthly for an

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reasonable limits set by the Social Security Administration), as well as the value of an auto (up to $4,500 or, if used for medical purposes, one hundred percent of the vehicle's value), the value of life insurance cash surrender (up to $1,500), and burial funds (also up to $1,500).

[5] The reverse would also be the case: Social Security benefit increases could lead to SSI reductions.

[6] An additional 2.1 percent receive very low benefits because they reside in institutional care covered by Medicaid. For discussion of living arrangements and SSI, see Favreault and Wolf (2004) or Koenig and Rupp (2004).

individual and $846 for a couple) and earned income and general income exclusions. Roughly speaking, an individual or a couple with annual earnings of $780 (12 times $65) and annual other income of $240 (12 times $20) would be eligible for full federal SSI benefits. After that point, earnings are "taxed" at 50 percent and other income is fully deducted from benefits. Thus, an individual would no longer be eligible for any SSI at annual income of $14,316 if his or her income were entirely from earnings, or $7,008 if his or her income were entirely from other sources. The corresponding figures for a couple are $21,084 and $10,392. These lower thresholds (for persons with only unearned income) are less than national poverty thresholds.[7] Earned income and state supplementations can push some SSI beneficiaries out of poverty, as can income of other family members for those SSI beneficiaries who share a household with others. Historically, though, very few SSI beneficiaries have had earnings: only about 4.1 percent of all SSI beneficiaries and just 1.4 percent of beneficiaries ages 65 and older in 2001 (Social Security Administration 2003: Table 7.D1). A higher percentage, 11.7 percent, has unearned income besides Social Security (Ibid).

Trends in SSI and Social Security

SSI trends

While SSI caseloads have grown in absolute terms since the program's 1974 inception, age-specific rates of participation have diverged between the aged and disabled programs (for an overview of SSI trends, see, for example, Kennedy 1999, or Social Security Administration 2003). An explosion in proportion of the SSI population under age 18 in the 1990s accompanied a marked reduction in the proportion on the rolls at older ages (Figure 1).[8] This has led to changing patterns in the expected time a beneficiary spends on the SSI rolls, because those who enter the SSI disability program at younger ages tend to remain on the program for much longer (Rupp and Scott 1995).

Interestingly, the absolute increases in SSI caseloads have occurred despite the fact that coverage under SSI has eroded since the program began in 1974. The Social Security Administration's 2000 report on Income and Resources Exclusions in the SSI program (SSA 2000a) does not contain specific recommendations for SSI, but points out that the program's exclusions have eroded considerably in real value. The unearned and earned income exclusions, for example, have not changed since 1974, while the program's asset exclusions have not risen with inflation. Had the earned income and general income exclusions been indexed, they would now equal about $234 and $70 monthly, respectively (compared to $65 and $20 under current law).

SSI is a particularly important income source for immigrants. This is not surprising, given that Social Security, the main U.S. source for income support in old age and disability,

[7] In 2003, the Census Bureau poverty threshold for a person living alone was $9,573 if the person was under age 65 and $8,825 if he or she was over 65. For two person households, these thresholds were $12,321 and $11,122, respectively.

[8] Figure 1 combines data from the aged and disabled programs for the age 65 to 74 and age 75 plus series. As noted earlier, SSA continues to classify recipients whose original receipt of SSI benefits was disability as disabled (rather than aged) even after they reach age 65.

depends on earnings histories. Many immigrants have only partial earnings histories, rendering them eligible for only small Social Security benefits. The fact that immigrants are relatively heavy recipients of SSI has generated both research (for example, Van Hook and Bean 1999), and some controversy, leading to changes in SSI eligibility. In 1996, welfare reform restricted non-naturalized immigrants' eligibility for SSI. (Naturalization requirements for immigrants vary considerably, but usually require at least five years of residence in the U.S. See U.S. Department of Justice [2000] for details.) In 1995, noncitizens comprised 31.8 and 6.3 percent of the aged and of the blind and disabled SSI caseloads, respectively (SSA 2002: Table 7.E6).[9] In 2002, they comprised a slightly lower fraction, 29.1 percent of the SSI aged caseload and 6.1 percent of the blind and disabled caseload.

OASDI trends

The DI population is more cyclical than the SSI population, but also show signs of increase in absolute terms (Zayatz 1999). These increases are due in part to the aging of the population (into age ranges at which DI prevalence is higher) and the increasing fraction of women who are covered by the program. While in 1957, the first year that DI paid benefits, about 19 percent of workers receiving benefits were women, this percentage had risen to almost 45 (44.6) percent by 2002 (Social Security Administration 2003: Table 5.D3). Similarly, in 2002 women represented about 47 percent of those insured for Social Security disability benefits (Social Security Administration 2003: Table 4.C2).

In both the DI program and the SSI- disability program, the composition of types of impairments for which beneficiaries qualify has changed in important ways (Zayatz 1999). SSA increasingly makes new awards to persons with mental and musculoskeletal disorders (e.g., arthritic, back, and bone disorders), and awards a smaller fraction of benefits on the basis of circulatory diseases and neoplasmic disorders (e.g., cancer). Further, in 1997 Congress enacted legislation that eliminated drug-addiction and alcoholism as material causes of disability. These trends and policies have implications for mortality and recovery probabilities among beneficiaries, and thus for average length of stay in the program. For example, recent years have seen declines in mortality among the disabled, which may be due in part to the removal of drug addicts and alcoholics from DI roles and the increase in fractions of persons on DI with mental impairments (Ibid).

For the retirement and survivor components of Social Security, two key trends deserve attention. First, the age of first benefit receipt has declined markedly. In 1965, only about 23 percent of all workers claimed retirement benefits at age 62 (Committee on Ways and Means 2004).[10] Now closer to three-fifths of all workers do (56 percent in 2002). Second, women are increasingly likely to receive Social Security benefits fully or partially on the basis of their own

[9] At present, immigrants must either be naturalized citizens or have acquired forty quarters of Social Security covered employment to qualify (for additional detail, see Social Security Administration 2002). The 1996 law was subsequently amended to grandfather those receiving SSI benefits in 1996 and to expand coverage for some narrowly targeted groups (for example, Cuban and Haitian entrants and victims of severe forms of trafficking in persons).

[10] We present statistics from 1965 because men were not allowed to collect their benefits at age 62 until 1961 (women had been offered that option five years earlier).

earnings records rather than as spouses or survivors (Social Security Administration 2003, Table 5.A14, Favreault and Sammartino 2002, Office of the Chief Actuary 2002).

Relative sizes of OASDI and SSI

To anticipate the magnitude of Social Security-SSI interactions, some perspective on the relative sizes of the two programs is helpful. In old age (ages 65 and older), the Social Security program dwarfs SSI. There is only one SSI recipient for every 31 Social Security beneficiaries. And for every dollar paid to an SSI beneficiary, 70 dollars are paid to Old Age and Survivors Insurance (OASI) beneficiaries. This differential is reflected in average monthly payments, which were $895 for retired workers and $338 for aged SSI beneficiaries in 2002 (Social Security Administration 2003: Tables 5.A1.1 and 7.A5).[11]

At younger ages, however, the programs are much more comparable in terms of number of beneficiaries, though the differences in average benefits remain quite large. There are only about 1.3 SSDI beneficiaries (including spouse and dependent child beneficiaries) for every blind and disabled SSI recipient. In 2002, average monthly SSDI worker benefits were $834,[12] while average SSI disability benefits were just over half of that, $429 (Social Security Administration 2003: Tables 5.A1.2 and 7.A5).

Literature Review on SSI and Social Security Reform

Overview

Detailed, separate literatures examine reforms to the Social Security and Supplemental Security Income programs, but few studies examine the reciprocal effects of reform of one program on the other. Many recent studies of Social Security reform have focused on the likely distributional consequences of instituting individual accounts as a part of the program, most typically as a "carve out" from Social Security revenues (see, for example, Feldstein and Leibman 2000, Penner and Cove 2002). These studies tend to mention the consequences for SSI as an afterthought, to the extent that that they mention the program at all. The report of the President's Social Security Commission (2001), for example, contains a short section on SSI, suggesting that the program should be re-examined for consistency with a reformed Social Security program, but it does not present any details about SSI interactions that would result from the Commission's proposed reforms. Other studies focus on more incremental changes to Social Security (see, for example, Iams, Sandell, and Fanaras, 1999, Favreault and Sammartino, 2002). These studies often neglect SSI in the same way. In both of these groups (studies of individual accounts and studies of more incremental reforms), many studies also overlook the disability component of OASDI.

A separate literature considers the effects of changes to SSI. Davies, Rupp, and Strand (2004) estimate the costs and distributional effects of expanding SSI's aged program, through

[11] This average payment is less than the SSI guarantee ($564/$846) because many SSI recipients receive less than the full benefit because of an offset of their Social Security benefits (or other income).
[12] Spouse benefits under DI averaged only $211 per month, and children's benefits just $245, in 2002.

increases to the program's asset or income tests. They use a model based on the 1990 panel of the Survey of Income and Program Participation (SIPP) to compare fiscally equivalent reforms. Estimates from their model suggest that removing the SSI asset test is relatively successful in reducing older Americans' poverty (see also Rupp, Strand, and Davies, 2003). McGarry (2000) conducts similar analyses on an older group using data from Asset and Health Dynamics of the Oldest Old (AHEAD). She explores a variety of policy alternatives, including a poverty-level income guarantee, elimination of the asset test, increasing income disregards, and basing the income test solely on Social Security income; she also highlights the detrimental effect of low take-up on SSI's ability to reduce poverty more.[13] In earlier work, Zedlewski and Meyer (1989) also considered the effects of liberalizing SSI income and asset tests, as well as of setting the federal SSI benefit rate at the poverty line. This work also explored alternative financing mechanisms for the changes. Zedlewski and Meyer find a number of methods for significantly reducing aged poverty through SSI.

One branch of the Social Security and SSI literature suggests moving much of the function that SSI serves for the disadvantaged aged and disabled into the social insurance (i.e., Social Security) system. Such studies engage a much larger literature on the relative merits of targeting compared to universalism in social policy generally (see, for example, Ellwood 1988, Greenstein 1991, Skocpol 1991), and reflect debates that surrounded the SSI program at its outset (Burke and Burke 1974). Smeeding and Weaver (2001), for example, provide one such proposal for a new benefit tier, which they call the Senior Income Guarantee (SIG). The SIG would provide a benefit of 75 percent of the poverty threshold plus an indexed income set aside of $200/monthly, allowing most workers a poverty level income beginning at the full benefit age. Minimum benefit proposals relate closely to this initiative (explored in a low-income context in Zedlewski 2002; see also McGarry 2000, discussed above). Such proposals would essentially shift part of the function that SSI serves into Social Security, leaving a greatly reduced SSI program for those who fail to qualify for Social Security for whatever reason (e.g., insufficient quarters of coverage, never marrying a covered worker).[14]

Our study is unique in its focus on Social Security-SSI interactions in the future and its evaluation of DI. Davies and Favreault (2004) undertake a similar study of several reforms that would bring the Social Security system into solvency, with a focus on the aged population. They model outcomes in the Social Security Administration's Modeling Income in the Near Term (MINT), and focus on outcomes in 2022. Another important study is Koening et al. (2003), which also uses MINT and other data sources including the Current Population Survey (CPS). Haveman et al. (2003) have explored similar issues in a more historical context (focusing on benefits in 1982 and 1991).

[13] Researchers from early studies (see, for example, McGarry 1996, Warlick 1982, Urban Systems 1981), which use self-reported measures of SSI participation, typically find SSI participation rates ranging between 50 and 60 percent of those eligible. More recent studies that rely on matched administrative records (for example, Davies et al. 2002) document somewhat higher participation rates (of about 63 percent).

[14] Such a shift could have many important consequences for low-income populations because of eligibility for other programs (e.g., for Medicaid benefits) that SSI eligibility now typically conveys.

Previous research on the reforms

Each of the five specific reforms that we examine has its advocates and critics. These reforms have also generated a significant body of research. Here we present some highlights.

Option 1: Price indexing of the formula for assigning initial benefits

Historically, wages have tended to grow at a faster rate than prices. Over the 1963 to 2002 period, the real wage differential averaged 1.0 percentage points.[15] In some years (for example the 1970 to 1980 period and the past three years), this differential was actually negative. In the late 1990s (specifically, over the 1995 to 2000 period), the difference between wage and price growth was as high as 3.2 percent. Over the long run, the OASDI program's Board of Trustees (2004) assume a differential of 1.1 percent between wages and prices, close to the recent 40 year experience.

Because of this historical differential, initial Social Security benefits have tended to grow faster than price inflation, a factor that contributes to the long-term financing problems of the program. Moving from wage to price indexing of initial benefits could reduce Social Security's long-term shortfall. Indeed, several analyses suggest that enacting this measure alone could more than close Social Security's long-term financing gap (Goss and Wade 2002; Cogan and Mitchell 2002).

The report of the President's Commission to Save Social Security (2001) included proposals to change the indexing in the formula used to calculate initial Social Security benefits. Cogan and Mitchell (2002) present the Commission's case for reverting to price indexing. In essence, they argue that other government obligations do not grow faster than prices, and that Social Security beneficiaries would maintain the same absolute (though not relative) standard of living if Congress were to change benefit indexing. They further point out that Social Security benefits have been wage indexed for less than half the program's history. Cogan and Mitchell also raise equity issues: changing from wage to price indexing of initial benefits relatively soon would reduce the proportion of the Social Security burden that future generations of workers and beneficiaries will be required to pay.

However, previous studies of the effects of converting the indexing of initial Social Security benefits from a wage to a price basis using representative workers have also revealed that this type of reform can lead to extremely large benefit cuts relative to current law, cuts that increase over time (see, for example, Kijakazi and Greenstein 1991 or Shelton, Beedon, and Ng-Baumhackl 2002; Diamond and Orszag 2002 provide additional discussion). Also, analysts argue that Social Security should replace pre-retirement wages to maintain relative living standards.

We discuss how we actually implement the shift from wage to price indexing in our section on simulation parameters. Our analyses using DYNASIM should offer an improvement over the prior studies, as they take into account the changing, and heterogeneous, work and

[15] We use the Social Security Trustees' definition of this differential: the difference between the percentage increases, before rounding, in the average annual wage in covered employment and the average annual Consumer Price Index (Board of Trustees 2004).

family profiles of workers who are now reaching retirement and who will reach retirement over the next two decades.

Option 2: Reduction in the cost-of-living adjustment

Many policymakers who have proposed changes to the COLA have done so because of a concern that the Consumer Price Index (CPI), on which Social Security COLAs are based,[16] overstates inflation (for example, Advisory Commission to Study the Consumer Price Index 1996). This would imply that past OASDI benefit increases have been excessively generous. Senators Moynihan and Kerrey (1998), for example, proposed a full percentage point reduction in the COLA. Others have called for smaller COLA reductions (for example, Kolbe and Stenholm 2002, Gregg and Breaux 1998). Earlier this year, Federal Reserve Chair Alan Greenspan discussed COLA changes as a way to reduce Social Security liabilities (Greenspan 2004).

Since many of these proposals gained prominence, the Bureau of Labor Statistics has addressed some of the concerns about the CPI's overestimation of inflation. This has decreased the attention paid to this type of reform. Nonetheless, as with reverting to price indexing, cuts of this type could dramatically reduce the program's long-term liabilities (see, for example, Advisory Council on Social Security 1997). Therefore, exploring even a fairly arbitrary proposal along these lines could yield insights into the consequences of different reform approaches. As mentioned above, and discussed further below with the simulation parameters, we simulate a COLA reduction of one percent below CPI-W.

While many analysts support correcting technical deficiencies in the measurement in the Consumer Price Index, using the COLA strictly for Social Security cost saving is controversial. Moon and Mulvey (1995) and Steuerle and Bakija (1994) argue vigorously against COLA cuts relative to other types of reform, noting their poor targeting and the likelihood of hurting the most vulnerable. Indeed, previous research, based on data from the March 1998 Current Population Survey (CPS), backs up these assertions, and shows that reducing cost-of- living adjustments would have important implications for poverty levels, especially among the oldest old (Johnson 1999; Johnson, Goldwyn, and Favreault 2004).

Option 3: Elimination of the hiatus for raising the full benefit age and subsequent indexing of the full benefit age to life expectancy

Since 1940, life expectancy at age 65 has increased by about four (4.1) years for men and six and one half years for women (Board of Trustees 2004).[17] The principal justification for raising the full benefit age (i.e., the age at which unreduced Social Security benefits for retired workers are available) more quickly than scheduled under current law is that the existing increases do not adequately take into account increases in life expectancy that have occurred since Social Security began paying benefits.[18] Indexing the retirement age insures that the ratio of working to retirement years will remain fairly constant over time, rather than perpetually

[16] SSA specifically uses the Department of Labor's Consumer Price Index for urban wage earners and clerical workers (CPI-W).
[17] These estimates reflect period life expectancy. Cohort patterns differ somewhat.
[18] Table 1 provides a description of the current law parameters.

decreasing. Further, fewer U.S. workers today than in the past hold jobs that could be classified as physically demanding (Steuerle, Spiro, and Johnson 1999, Johnson 2003), suggesting that increasing the retirement age may be less problematic than it would have been a decade or two ago.

These factors have led a number of advocates to support more rapid increases in the full benefit age and indexing of retirement age parameters. These supporters include the National Commission on Retirement Policy (1998), Representatives Sanford (1999) and Smith (1999), and Aaron and Reischauer (1998). The Individual Account reform of the 1994 to 1996 Advisory Council on Social Security (1997) proposes retirement age changes that closely resemble the plan that we model.

Increasing the full benefit age by eliminating the hiatus is, essentially, an across the board benefit cut targeted narrowly to members of the 1943 to 1954 cohorts (and, in some cases, their spouses). It has the special feature of protecting the disabled from benefit reductions, as the increased actuarial reductions triggered by a full benefit age increase do not impact persons receiving disabled worker benefits. As a consequence, we would expect Social Security benefit reductions to be fairly uniform among the non-disabled within a cohort under the reform. Those with higher benefits will receive larger absolute reductions, but those at the bottom will be vulnerable to poverty. Indexing will insure that the number of years of life for which one is eligible for old age benefits from Social Security would not increase appreciably beyond current levels and distributes costs further to cohorts after 1954. Johnson (1999) examines the effects of a full benefit age increase to 67 alone, and finds substantial benefit reductions (of about six percent) for the affected cohorts.

In a report for SSA, analysts from the RAND Corporation considered behavioral responses to proposed increases in the early and full benefit ages (Panis et al. 2002). They find only modest effects on labor supply and benefit claiming (both for DI and OASI). This suggests that simple assumptions about changes in take-up among retirees (which we discuss below) may not be all that problematic.

Option 4: Elimination of the hiatus for raising the full benefit age, subsequent indexing of the full benefit age to life expectancy, and an increase the early entitlement age to 64.

As with Option 3, the justification for raising the Early Eligibility Age (EEA) lies principally in the rapidly increasing life expectancy of the U.S. population. As we have noted, most Social Security retired worker beneficiaries now begin collecting their benefits at age 62, earlier than in previous generations despite increased life expectancy. Changing the early eligibility age would send a strong signal about appropriate times to leave the labor force. The Personal Savings Account reform of the 1994 to 1996 Advisory Council on Social Security (1997) integrated similar provisions, and Aaron and Reischauer (1998) advocate such changes.

Increasing the early eligibility age will not necessarily save as much additional money for the system as other reforms, though, because workers' smaller actuarial reductions should largely offset their benefit losses. That is, even though beneficiaries will receive benefits for fewer years, their benefits will be higher for the years that they do receive them. This in turn could reduce SSI benefits for some people. The size of the effects on SSI and OASDI costs will

depend on whether increased work (and thus payroll tax contributions) accompanies the delay in claiming Social Security benefits.

Option 5: Increase in the number of computation years in the AIME formula from 35 to 38

Under current law, a worker's Social Security benefit is based on the average of his or her highest 35 years of indexed earnings, a computation known as Average Indexed Monthly Earnings (AIME).[19] Advocates of increasing the number of computation years in the AIME formula (see, for example, Advisory Council on Social Security 1994-96; National Commission on Retirement Policy 1998; Moynihan and Kerrey 1998; Aaron and Reischauer 1998) point to its ability to enhance Social Security's efficiency and equity. The efficiency argument is principally that older Americans should have added incentive to work. The equity argument is that those who already worked more than 35 years should receive some benefit from that effort. The option we simulate increases the years from 35 to 38, but some proposals would raise computation years as high as 40 years (for example, DeFazio 1999, Kolbe and Stenholm 2002), sometimes with the addition of childcare dropout years.

With an increase in the number of computation years in the AIME formula starting in 2004, persons with fewer than 38 years of work or with declines in indexed earnings between their 35th through 38th earnings years (arrayed not chronologically, but by size of earnings), as well as their spouses/survivors, should experience Social Security benefit losses. Because Social Security's benefit formula is progressive and replaces a higher fraction of earnings for those with lower AIME, effects should be proportionately larger on those persons whose average indexed earnings total less than the first bend point. However, for some workers, spouse or survivor benefits could potentially partially offset losses to worker benefits.

Previous research, based on data from the 1991 SIPP matched to SSA earnings records, has suggested that such reforms would have differential effects on the members of the 1946 to 1955 cohorts (Sandell, Iams, and Fanaras 1999). Women would typically experience proportionately larger benefit reductions than men (though this analysis does not take into account auxiliary benefits, which could potentially offset some of the reductions). Black men would also experience larger losses than white men, and Hispanic women would likewise face greater reductions than non-Hispanic women. Reductions would also be highest for those with least education and lowest lifetime earnings. In this article, Sandell, Iams, and Fanaras combine the change in the number of computation years with a minimum benefit, and find that the minimum benefit can "substantially mitigate" the effects of the reform on some groups of women. Coronado, Fullerton, and Glass (1999) specifically simulate the effects of increasing the number of computation years all the way to 44. They use PSID data to construct combined observed and simulated earnings profiles, and use care in constructing these profiles to account for income differences in mortality. They find that increasing computation years is somewhat regressive for all demographic categories.

[19] AIME is defined as the average of one's highest years of indexed, Social Security earnings (e.g., covered earnings up to the taxable maximum), where earnings are indexed to the earlier of the year that one turns age 60, or to two years before one becomes disabled or dies. AIME is used to compute the base benefit amount for workers (Primary Insurance Amount, or PIA). For details of AIME and PIA computations, see Social Security Administration (2003).

Overview of Method: Dynamic Microsimulation

To investigate how these five changes to the Social Security program will impact the SSI program, we use dynamic microsimulation techniques. Numerous reviews have identified dynamic microsimulation as the most appropriate technique for distributional analysis of this type (see, for example, Burtless 1996, Citro and Hanushek 1997, Technical Panel 1999). Specifically, we use the current version of the Urban Institute's DYNASIM to identify how many people reform would affect, the characteristics of those it affects, and the total cost to the Federal program and to the states that provide supplements.[20]

Over the years, researchers have used the DYNASIM model for a wide variety of applications related to Social Security reform, including earnings sharing (for an overview, see Zedlewski 1990). More recently, it has been used to examine women's well being in old age (Favreault, Sammartino and Steuerle 2002; Favreault and Sammartino 2002), distributional issues associated with different annuitization mandates for individual accounts carved out of Social Security (Uccello et al. 2003), the implications for future retirement income of current patterns in earnings inequality (Smith 2003) and growth in single mothers' labor supply and earnings (Johnson, Favreault, and Goldwyn 2003).

The current starting database for DYNASIM is a self-weighting sample from the 1990 to 1993 panels of the SIPP. DYNASIM analyses typically begin with a baseline sample of about 100,000 individuals. DYNASIM ages this starting sample in yearly increments, to as far as 2050. The annual aging process includes birth, death, disability, leaving home, schooling, marriage and divorce, work and earnings, and wealth accumulation.[21] This sequence of processes creates a file with earnings, disability, and marital histories that one can use to compute entitlement to benefits from Social Security and SSI. DYNASIM also includes projections of immigration, including forecasts of immigrant earnings and eligibility status.[22] This is important for producing reliable SSI forecasts because currently about 10.4 percent of all SSI beneficiaries are not citizens (Social Security Administration 2003: Table 7.E6). Table 2 details DYNASIM's aging modules, including information on the specification of each module and on the data on which the module's parameters were estimated. The appendix presents additional background on the model, including details on the SSI module.

[20] The specific file that we use for evaluating current law income and benefits is incomeid388.sas7bdat (date stamped May 25, 2004). The option files include: income_optcolav3id388.sas7bdat, income_optcompyrsdropid388.sas7bdat, income_optbendpctv2id388.sas7bdat, income_optnraid388.sas7bdat, income_optnraeeaid388.sas7bdat, income_optcolav3hiasst.sas7bdat, and income_optcolav3noasst.sas7bdat (all date stamped June 15 to December 2, 2004).

[21] The aging process consists of two separate stages. First, microdynamic equations, usually estimated from family- or individual-level longitudinal data, predict individual or family transitions. Second, alignment ensures that family or individual outcomes meet groupwide targets, usually derived from more aggregated data.

[22] We model immigrant characteristics using statistical matching techniques (drawing from recent immigrants to the U.S. as "donors"). We based targets for the match on work from the Social Security Administration (Dowhan and Duleep 2002). We then assume naturalization at the earliest point permitted under law.

Estimating the Long Range Impact of Reduced Social Security Benefits

Forecast period

In previous DYNASIM Social Security work, we focused on well being of the aged in out years of the simulation (for example, 2040 or even 2050). Given that initial Social Security benefits are indexed to wages, while SSI benefits are indexed to prices, SSI should play a declining role in the future. This is because, as we noted earlier, prices tend to grow less quickly than wages. The fact that SSI's asset tests are not indexed at all, as we also noted earlier, contributes further to this pattern. Increased coverage for Social Security benefits among the aged should also lead to declining SSI eligibility.[23] Indeed, SSI participation rates among the aged have declined markedly since 1974, especially at ages 75 and older, (again, documented in Figure 1). Projections from the Office of the Chief Actuary (OCACT) (Social Security Administration 2004) and MINT (Favreault and Wolf 2002) suggest future declines in SSI participation among the aged. Further, projections from both MINT (Toder et al. 2002) and DYNASIM (Smith 2003) suggest substantial declines in poverty rates in the population age 62 and older.

As a consequence of these likely developments, our analyses focus on an earlier year in the projection horizon (2024), when SSI-Social Security interactions are likely to be larger. In some of the simulations, however, the reform provisions take longer than 20 years to fully phase in. For example, previous analyses of COLA reductions and substituting price indexing for wage indexing have revealed the importance of these proposals' cumulative effects (see, for example, Johnson 1999, and Kijakazi and Greenstein 2001). Because of this, we also display a small subset of selected results for later years.[24]

Projection assumptions: Current law

When projecting future behavior in DYNASIM, we draw from the literature to make assumptions that are consistent with consensus views from experts. For example, as Table 1 indicates, we calibrate future fertility, mortality, labor force participation, and wage and price growth in the model to the intermediate assumptions of the OASDI Trustees (Board of Trustees 2002). Professional staff members in SSA's OCACT use data on historical patterns to help the Trustees to determine these assumptions, and a technical panel on assumptions and methods reviews the assumptions regularly and makes recommendations for changes as appropriate (see, for example, Technical Panel on Assumptions and Methods, Social Security Advisory Board 1999).

Forecasting SSI expenditures into the future requires making a number of assumptions about the likely future course of government actions.[25] Where legislation mandates changes to

[23]This results in large part from increases in covered employment. The *Green Book* reports that the percentage of civilian workers covered by OASDI increased from 90.5 percent at SSI's start in 1974 to 96.0 percent in 2002 (Committee on Ways and Means 2004). Women's increased work in recent decades surely plays a role in increased Social Security coverage as well.

[24]Full simulation results through 2050 for all options are available from the authors upon request.

[25] In DYNASIM, virtually all of these assumptions are parameterized (so that users can generally change them fairly readily).

the federal program (e.g., benefit levels increase with changes in the Consumer Price Index), we adjust values using assumptions from the OASDI Trustees' Report (Board of Trustees 2002). Where changes are not part of the law, but rather implemented on an *ad hoc* basis by Congress, we assume that the program's parameters grow at the same rates that they have since SSI's inception in 1974. For example, SSI asset test thresholds have grown at a rate that has been lower than inflation. We carry this average annual rate of increase indefinitely into the future.

As the Committee on Ways and Means (2004) points out, state supplements to SSI have tended to decline since the program started, though with some variation (pp. 3-28 – 3-31). To account for this variation, we examine how each state's supplement changed between 2000 and 2001 and carry this rate of change forward when projecting the state programs.[26]

Simulation parameters and alternative baselines

As noted in our introductory section and discussed in the literature review, the five simulations in which we modify current Social Security law include:

- a shift from wage to price indexing of the formula for setting initial benefits (implemented specifically via the bend percentages);
- a reduction in the cost-of-living adjustment by one percentage point below the CPI–W each year;
- elimination of the eleven-year hiatus for raising the full benefit age that exists in current law (for the 1943 to 1954 cohorts) and subsequent indexing of the full benefit age to life expectancy;
- same as above, but also with an increase in the early entitlement age to 64; and
- an increase in the number of computation years in the AIME formula (from 35 to 38).

Table 3a presents the parameters for each of these five Social Security reform simulations, including the start years, any phase-in provisions, assumptions about behavioral response, and other details.[27] Tables 3b and 3c contain additional details about the third and fourth simulations.

[26] For states in which supplements declined over these two years, we apply the same reduction factor in subsequent years (not allowing supplements to drop below zero). Similarly, for states that increased supplements between 2000 and 2001, we apply a cost-of-living adjustment to the prior year's supplement in all subsequent years. States with supplements that remained constant between 2000 and 2001 (including states who did not supplement benefits in either year) retain the same supplement indefinitely.

[27] Readers should keep in mind that we have simulated each of these five proposals in isolation. Were we to incorporate these proposals into combination packages, their effects would not be additive. That is to stay, important interaction effects are likely to arise when one combines most Social Security reform proposals.

As Table 3a reveals, we simulate all reforms prospectively (that is, starting either this year or at some point further in the future).[28] The advantage of simulating reforms prospectively is that it allows us to account more fully for on-going compositional changes in the SSI and Social Security populations. The disadvantage to this approach is that we must look much farther into the future to determine the effects of the fully phased in proposal.[29] In general, we choose moderately realistic parameters, integrating, for example, phase-in periods and "grandfathering" current recipients, as Congress has generally prescribed in the historical period. The COLA reform is the major exception, applying to all cohorts effective in 2004.

The implementation of the wage to price indexing in the benefit calculation formula is perhaps the least straightforward of the five proposals. Consistent with the description in Table 3a, we simulate the reform using adjustments in the bend *percentages*, rather than in the bend *points*. For example, in 2004, the first bend percentage declines from 90 percent to 88.8 percent.[30] This is consistent with simulations that OCACT conducted for the President's Commission (Goss and Wade 2002). Using the bend points would lead to different distributional consequences.[31]

Because we explore the COLA reduction approach as a method of saving money for the OASDI system, rather than as a technical adjustment to account for mismeasurement of inflation, we do *not* reduce SSI annual benefit increases or poverty level increases in concert with the reform (again, Table 3a). This specification has important implications for the reform's consequences.

Behavioral responses to reform

We make behavioral responses as simple as possible, allowing SSI claiming changes when expected benefits increase but not altering earnings decisions or, in most cases, OASDI take-up.[32] We avoid implementing most earnings and Social Security take-up responses in part because they are expected to be so modest (Panis et al. 2002). These simplifications serve the dual goals of keeping the analyses as straightforward and clear as possible and minimizing controversy over assumptions that could obscure more important aspects of the analysis.[33]

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[28] We know that such changes will not occur this year. However, despite this limitation, this approach has some appealing analytic features.

[29] Alternatively, we could have implemented the proposals at some point in the past (for example, 1993). One advantage to this strategy is that the point of full or nearly full phase-in comes much earlier in the projection period. This comes, however, at the cost of lesser realism (e.g., more modeling of cohorts who look different from the cohorts that the reform would in fact affect).

[30] Formally, each bend percentage at time t equals the bend percentage at t-1 multiplied by the following ratio: (1 + (pindex(t)-pindex(t-1))/pindex(t-1)) / (1 + (ae(t)-ae(t-1))/ae(t-1)), where "pindex" denotes the price index and "ae" denotes the Social Security average wage.

[31] Readers should thus interpret our results with caution, as they will only apply to analogously specified reforms.

[32] In DYNASIM's benefit take-up model, individuals can respond to changes in their level of Social Security benefit. As a result, each of the five reforms we model could *automatically* trigger a response in terms of individuals' Social Security claiming choices. Generally speaking, declines in one's own and one's spouse's benefit tend to decelerate Social Security claiming, but the relationship is fairly complex.

[33] While allowing for such behavioral changes may make model estimates more realistic, it can complicate analyses of winners and losers from reform at a point in time. For example, an individual might delay retirement by a year in response to a benefit cut, and the decrease in his/her actuarial reduction may more than offset the benefit cut. This

We establish parameters for the two indexing reforms that we simulate so that similar changes to Disability Insurance benefits accompany changes to retirement benefits. Likewise, we code the computation years option so that deceased and disabled workers may see an increase in their computation years. The two full benefit age reforms, in contrast, do not affect DI beneficiaries, as the disabled are not subjected to Social Security's actuarial reductions. Thus, under these two latter options, differentials between retired and disabled worker benefits do change (implying some potential for changes in DI take-up rates).

The fourth simulation, which increases the early entitlement age to 64, requires modifications to DYNASIM's retirement model and algorithms that determine Social Security take-up. As Table 3a indicates, we assume that under this reform an even larger spike would develop at age 64 than currently exists at age 62. Essentially, we impose take-up at 64 for everyone who would have taken-up at 62, 63, or 64 under current law.[34] While all five reforms could also impact Social Security claiming behavior for those who are (newly) near the SSI asset and income thresholds,[35] we do not impose any changes.

Our reform analyses raise the issue of whether reductions to Social Security benefits could lead individuals/families with low Social Security benefits to alter their asset accumulation behavior in order to qualify for SSI. Neumark and Powers (1997) find evidence that SSI may reduce saving for those nearly eligible for program benefits. As in our previous work in this area, we apply small adjustments to SSI thresholds to account for measurement error, and for the fact that individuals near the threshold can transfer assets into forms that are excludable (e.g., burial plots, homes, or in many cases vehicles). Specifically, we set this adjustment at 110 percent of the threshold (so that one's assets can exceed the threshold by up to ten percent, or just a few hundred dollars in absolute terms). Additionally, we require that all nearly eligible people with prior SSI experience maintain low assets throughout the simulation.

Results

Projections of the distribution of SSI benefits under current law

To better understand changes to SSI that stem from Social Security reform, one first needs to understand what the future SSI population will look like, and how this population differs from the current one. In Table 4, we contrast those persons who receive SSI benefits, separately for the aged and disabled programs, with the general population in three separate years: 2019, 2024, and 2029. (We choose 2024 because it is our reform analysis year, and than bracket it by five years on either side.)

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may make the individual appear to be a "winner" at a point in time from a reform that should only have created losers (because benefits were cut universally).

[34] Alternatively, we could assume that individuals merely delay benefit claiming relative to the new EEA and shift the whole current-law model-generated distribution of take-up years over two years. However, most analyses suggest that this is less likely (for example, Panis et al 2002).

[35] Powers and Neumark (1998; 2001) have found that SSI interacts with Social Security early retirement, leading prospective SSI beneficiaries to claim OASI early. However, the presence of the unearned income exclusion in SSI surely plays a role, reducing the potential for large behavioral responses. Also, our SSI take-up equations may implicitly account for this (for example through its use of recent and lifetime earnings as predictors). We therefore assume no additional change in Social Security claiming behavior by SSI recipients.

A first noteworthy trend from the table is that the fraction of the population receiving benefits from SSI is projected to decline from current levels and over these years. As the first row of the table shows, the percent of adults ages 25 to 64 receiving SSI falls from 1.5 percent in 2019 to 1.3 percent in 2029 (from around 1.8 percent currently). Among the aged, this decline is even more marked in absolute terms, to 4.2 percent in 2019 and 3.3 percent in 2029 from a current level of about 5.2 percent.[36,37] Differentials between Social Security wage indexing and SSI price indexing, as well as increased Social Security coverage in later cohorts surely play large roles in this evolution of SSI beneficiary rolls.

Similarly, patterns of concurrence in SSI and Social Security benefit receipt shift fairly dramatically across time. For the aged, we project that concurrent receipt will be somewhat less prevalent in the future than it is at present. About half of SSI beneficiaries ages 65 and older receive both SSI and Social Security benefits in 2019, declining to 48 percent in 2029, compared to about 60 percent at present. At younger ages, we also project declines, with concurrence rates falling to 9 to 13 percent of SSI beneficiaries under age 65 (from about 21.6 percent at present).[38] While the aging of the children who were first allowed onto SSI in the 1990s may partially explain this, this finding deserves further study and may suggest a need for additional model calibration.

Table 4 also details the composition of the total and SSI participant populations by age, educational attainment, sex, nativity (born in the US or elsewhere), race/ethnicity, marital status, and income sources (earnings). As we would anticipate, DYNASIM projects that SSI recipients are much less educated than the population at large. They are much less likely to be married or have earnings, and are especially likely to be divorced or never married. SSI recipients are more likely to be women, black, Hispanic, and nonnative than nonbeneficiaries. They are also older than the population at large, and more likely to have a disability. These relationships hold true both for aged and non-aged SSI recipients and for all three years that we examine.

Projections of Social Security and Supplemental Security Income benefits under the options

Overview of the tabulations

Our first tabulation compares each of the five reform simulations to current law (Table 5). In it, we combine information across time to determine whether overall costs to the state and Federal governments decline as a consequence of reform. We must bear in mind, of course, that Social Security is not solvent over the 75-year long-term actuarial forecast horizon. This means that without (and perhaps even with) the benefit cuts we model, payroll tax increases or other government actions (for example transfers from general revenues) will almost certainly be

[36] The Social Security Administration's Office of the Chief Actuary (Social Security Administration 2004) also forecasts declines in aged participation rates. The simulation results will be sensitive to these sorts of baseline differences.

[37] To give some historical perspective on the plausibility of this decline, the aged participation level was 7.2 percent in 1980, so that the decline that we project over the next 20 years is roughly commensurate in absolute terms with the historical decline from the last 20 years.

[38] This figure excludes disabled adult children (DACs) who are eligible for Social Security benefits on the basis of a parent's record, as DYNASIM does not project this group. Including DACs, OASDI-SSI concurrence rates are about 29 percent at present.

required. These increases will have important distributional impacts for workers, which our analyses do not capture.

Our next tables (Tables 6 and 7) compare outcomes under all five options with current law (again, not constrained to solvency). The outcomes on which we focus in these tables are family income and then three measures of poverty risk: Social Security benefit as a percent of poverty, poverty status, and near poverty status. We define near poverty here as having household income of less than 125 percent of the poverty threshold. In these two tables, we define total family income as the sum of income from earnings, assets, pensions (including defined benefit pensions, defined contribution pensions, IRAs and Keogh accounts), Social Security, and SSI for individuals and, where applicable, their spouses and coresident family members.

For each of the five proposed reforms, we then provide two sets of estimates (Tables 8A through 12B). The first set shows Social Security benefit levels and the incidence and magnitudes of changes to these benefits in 2024 under the reform. In these tables, we report all benefit levels and benefit change values in constant (2004) dollars and limit the population to Social Security and SSI beneficiaries before the reform. The tables thus include persons below the Social Security early entitlement age (of 62) only if they are disabled and receiving SSI or DI benefits.[39] For married persons, benefit levels and changes reflect combined husband and wife amounts.

The second set of estimates/tables shows the effect of each reform on SSI benefits in 2024.[40] We present mean benefits and project how many more people would be newly eligible for SSI benefits as aged or blind/disabled recipients, as well as what the dollar impact would be on the Federal SSI program. We also identify how many of those already receiving SSI benefits would receive an increase in their benefits. To make the results easier to interpret, we limit the population in the table to persons who reside in households that have income of less than one and a quarter times the poverty threshold.[41] (We define this family income threshold as either pre- or post-reform, so that who did not have income below 125 percent of poverty before the reform but do under the reform are included in the table's universe.[42]) Most individuals or couples in higher income households have little if any risk of entering SSI. Because we want to more carefully examine those who are near the borderline for SSI, it is helpful to examine just persons in this group.[43] As in the tables on changes to SSI, we further limit the universe to persons in old age or suffering from a disability that qualifies them for SSI-Disabled or DI benefits.

DYNASIM's unique strength is in its production of detailed distributional estimates, so we include many independent variables in these tabulations of reform's impact on OASDI and

[39] Persons over age 100 are not included in the table. Upon request, we could alter the tables to exclude other members of earlier cohorts that do not experience the effects of most of the reforms (for example, cohorts prior to 1941 in the case of the computation years reform). For the sake of consistency, we have retained these older populations because one simulation—the COLA cut—does influence them.

[40] We have also prepared combined Social Security and SSI tables, which are available upon request.

[41] Other researchers have used higher thresholds when targeting at-risk households. Acs, Ross Phillips, and McKenzie (2000) for example, use 200 percent of the poverty threshold.

[42] This implies that the near poverty population represented in these tables will vary across the five reform proposals (while the table populations are constant across the proposals in the Social Security benefit tables).

[43] We have also prepared tables on the SSI participation of the full population, and they are available upon request.

SSI benefits. We tabulate most simulation impacts by age, educational attainment, marital status, and other characteristics of interest, like race and nativity (given the importance of SSI to immigrants). Tabulating impacts by lifetime earnings or income yields interesting results for the tabulations of Social Security benefit changes, but not for the SSI benefit changes, as SSI eligible persons by definition have low incomes and low lifetime earnings. We therefore exclude such classifications from the SSI tables. In the Social Security benefit change tables, we define lifetime earnings/income in two separate ways: shared lifetime earnings and per capita family income.[44]

Relative sizes of the options

The five options differ significantly in their impact on OASDI and SSI expenditures (Table 5). Table 5 summarizes the net costs or benefits of the changes under each of the five options in selected years. We report the OASDI reductions, the SSI increases, and then combine OASDI reductions with increases in federal and state SSI payments to come up with the annual summary measure. After considering these effects in different years, we sum the effects over the entire projection horizon (through 2050). This sum takes into account interest that would accrue on savings to the Social Security Trust Fund as a consequence of reform, using a gross discount rate of 6.0 percent, consistent with SSA Trustees' long-term assumptions.

The proposal that changes from wage to price indexing of initial OASDI benefits has the largest effects of the five reforms, followed by the one percent COLA reduction. This is not surprising, given that the COLA reduction is 1.0 percent annually and the wage indexing reduction is 1.1 percent annually over the long term, with somewhat higher reductions over the shorter term (through 2011). For the price indexing option, total Social Security benefits paid out decrease by over 10 percent in 2024, by over 17 percent in 2034, and by almost 25 percent in 2044. In the COLA case, total Social Security benefits paid out decrease by over 9 percent in 2024, by over 11 percent in 2034, and by over 12 percent in 2044.

The two proposals that increase the full benefit age have intermediate effects on Social Security benefits. While the proposal that raises the early entitlement age has larger effects on Social Security payouts in the shorter term (for example, a 4.3 percent reduction in benefits paid in 2024 compared to 3.9 percent without the early entitlement age increase), its effects are smaller in the long term (a 4.9 percent reduction compared to a 6.1 percent reduction without the EEA increase in 2044), when the members of the affected cohorts who would have retired at 62 and 63 have begun to collect their (now higher) benefits at age 64.

The proposal that increases the number of computation years in the AIME formula to 38 has the smallest effects of the five reforms. It reduces Social Security benefits by two and three quarters percent in 2024, and by about three percent in 2034 and 2044. The fact that we phase the reform in by cohort contributes to the modesty of effects for the change.

[44] Lifetime earnings are based on indexed earnings between ages 25 and 62 (or year of disability, where applicable and earlier than age 62). We define shared earnings as the average of husband and wife earnings for all years in which the couple is married, but the person's own earnings alone for the years in which he or she is single over this same age interval. Results using an individual earnings measure were also tabulated and are available upon request.

In all five cases, the effects of these OASDI cuts on total SSI benefits are surprisingly small. In contrast, the wage indexing and COLA reforms have the largest effects on SSI, just as on Social Security. SSI increases range from 1 to 8 percent over current law levels under the reforms in the years outlined for these two options. (Recall that SSI expenditures are much lower than Social Security's expenditures, so that SSI increases apply to a far smaller base.) The reform increasing computation years has very modest effects on SSI expenditures. As we phase the reform in by cohort, the earlier cohorts, who are more widely represented in the SSI population, do not feel the reform's effects (except, potentially via the benefits of a spouse). The full benefit age changes similarly are targeted toward certain cohorts. Without the early entitlement age increase, effects are fairly modest, averaging around one percent annually. With the EEA increase, they are more substantial, reaching as high as 2.3 percent in 2024.

Because of the relatively modest effects of these Social Security cuts on SSI benefits, we performed a sensitivity analysis to try to determine why the effects are not larger. We specifically explored the effect of the SSI asset test on SSI payments under the reform with the COLA cut. Table 5 reports results from this test as well (see the final column). The analysis reveals that elimination of SSI's asset test could enable the program to better offset the effects of the Social Security benefit cuts. Indeed, SSI expenditures could increase by about a quarter (24 percent), compared to only about 2 to 5 percent with the asset test in place. We discuss this simulation in more detail later.

Combining the Social Security and SSI effects, we see to what extent the SSI increases might offset the effects of the Social Security reductions. Here, we express the change as a percent of combined Social Security and SSI expenditures. In 2044, for example, the savings from price indexing drop from 24.6 percent of OASDI costs to to 24.2 percent of combined OASDI and SSI costs because of the SSI increases.

Aggregating these combined effects over the long term, savings under the price indexing reform amount to just over 6.2 percent of combined, accumulated Social Security and SSI benefits. For the COLA reform, the difference is 4.7 percent (which drops to 4.4 percent with the increase in the SSI asset test). Eliminating the hiatus for raising the full benefit age leads to reductions of just under 2.0 percent of combined, accrued benefits, which climbs to 2.6 percent when the reform is combined with the increase in the Early Eligibility Age. The computation years reform has an effect of just 1.4 percent of combined program costs.

Comparing individual outcomes under all five options

Directly comparing additional outcomes under these five simulations on less aggregated populations allows us to easily evaluate some of the reforms' relative merits and liabilities. A particularly important outcome for this analysis is total family income, which we examine as a fraction of the poverty threshold in 2024 (Table 6). Researchers sometimes refer to this measure as the income to needs ratio, as it takes into account the fact that couples have higher consumption needs than singles, but that couples can achieve economies of scale by pooling costly expenses like housing.

Under current law, total family income in 2024 averages 4.74 times the poverty threshold for persons receiving SSI or OASDI benefits. It varies greatly across subgroups of the population, increasing markedly with education (from 2.54 times poverty for high school dropouts to 7.20 for persons with at least some college) and declining with the presence of a disability (5.28 times poverty for those without a work limitation, compared to 4.02 for those with a work limitation). Non-OASDI beneficiaries are particularly vulnerable to poverty, with average total income to needs ratios that hover around poverty.

Total income as a percent of poverty under current law is also much higher for married persons than for most unmarried persons. For example, married women in dual beneficiary households have average ratios of 5.95,[45] compared to 3.96 for widows, 2.88 for divorced women, and just 2.48 for women who have never married.

Under the reforms, declines in the ratios of total income to poverty amount to between one and four percent. Post reform, average total family income ranges from 4.57 times the poverty threshold in the simulation that converts the system from wage to price indexing of initial benefits to 4.69 times the poverty threshold in the retirement age simulations and the simulation that increases the number of computation years in the benefit formula.

Averages of family income to needs ratios can of course mask conditions at the tails of the distribution, so we also directly examine the fraction of the population that has income below poverty or near poverty. Under current law, DYNASIM projects a poverty rate of 6.2 percent for the OASDI/SSI population in 2024 (Table 7), reflected in the column labeled "Total Income < 100%". Across the five reforms, we find that the poverty rate increases, ranging from 6.5 percent (under the computation years and first retirement age reform) to as high as 7.5 percent (under the COLA cut) in that same year. Interestingly, the COLA cut leads to higher poverty than the price indexing reform, despite the fact that the COLA cut saves less money for the system both in 2024 and over the long term.

While DYNASIM's projected poverty rates are quite low in 2024 relative to historical levels, many people have incomes that hover near poverty in that year (and in later years as well). We therefore present additional analyses of the near poverty population (also Table 7, reflected in the column labeled "Total Income < 125%"). Under current law, DYNASIM projects near poverty of 10.2 percent. We find that these near poverty rates climb as high as 12.1 percent (under the COLA reduction reform), a substantial increase both in absolute and percentage terms.

Under both current law and the reforms, more people still have Social Security benefits of less than poverty in 2024. The current law level is 18.3 percent. Interestingly, the price indexing reform leads to a higher percentage with benefits below poverty than the COLA reform (22.9 percent compared to 22.2 percent), even though the latter reform had led to higher total

[45] In this and the subsequent tables, we have divided the groups of married women and married men into two subgroups each: persons whose spouses receive Social Security benefits, and persons with spouses who do not receive benefits. This helps us to identify persons whose family Social Security benefits and thus total family income may be low only temporarily, for example before the spouse has taken up his or her retirement benefits. Most of the married persons in our 2024 sample live in dual beneficiary families.

poverty and near rates. This is possible because the two reforms target different cohorts, with the price indexing reform having greater impact on later cohorts, where income sources other than Social Security are higher on average. This pattern is reflected in the respective poverty measures for the two reforms by age. Under the COLA reform, increases in poverty and near poverty are much steeper at older ages than earlier in retirement.

Analysis of the poverty measures by other subgroups reveals the presence of some particularly vulnerable subgroups both under current law and, especially, in the presence of the benefit reductions. For example, under current law, the fractions of married persons with benefits of less than poverty tend to be quite low compared to their widowed and, especially, never married and divorced counterparts. Over two-fifths (42.9 percent) of never married women, for example, have benefits of less than poverty. This climbs as high as 50 percent under the price indexing reform and 49 percent under the COLA cut. Those with less than a high school education are also highly vulnerable, with over two-fifths with benefits of less than poverty under current law and half with subpoverty benefits under the COLA reduction and price indexing reforms. Non-Hispanic blacks and Hispanics are other high-risk groups both under current law and the options.

Option 1: Price indexing of the formula for assigning initial benefits

Our discussion of the DYNASIM projections of individual Social Security reform options begins with the largest of the five, the move from indexing initial Social Security benefits to prices from their current wage indexing. We find that under the reform, approximately four-fifths (80.9 percent) of Social Security and SSI beneficiaries in 2024 see a reduced Social Security benefit (Table 8A). Average reductions are $2,325 annually, or nearly $200 per month. About 18 percent of the population does not experience a benefit change. This occurs for one of several reasons: such persons are in cohorts in which benefits were determined before the simulation (i.e., they are from birth cohorts prior to 1942), they are receiving benefits on the record of a spouse whose benefits were grandfathered, or they are not eligible to receive Social Security benefits either before or after the reform. Due to an anomaly in the Social Security benefit formula (as implemented here), a small number of people (just one percent) actually gains Social Security benefits under the reform at this point in time. However, nearly all of these temporary gainers would have had lower benefits earlier in life under the reform.[46]

Younger beneficiaries see the largest benefit cuts relative to current law with the change to price indexing. For example, among women retirees, those ages 65 to 69 lose $2,720 per year on average, compared to $1,980 for those 70 to 74, and $1,130 for those 75 to 79. For men, declines are similar, from $3,210 per year for the 65 to 69 year olds, compared to $2,550 for those 70 to 74, and $1,550 for those 75 to 79. This age pattern is not surprising, given that the effects of this reform should compound over time. Among those reaching the early retirement age in 2024, for example, the reform has been in effect for 20 years, meaning that they lose a full

[46] This usually occurs when a person converts from worker only to survivor benefit status (upon the death of a spouse or former spouse). (As the final rows of the table indicate, the persons who appear as winners are overwhelmingly dually entitled survivors with spouses whose benefits were grandfathered under the reform, who were benefit losers at earlier points in their lives.) Except for the fourth reform, with the increase the EEA, we do not discuss these winners in detail.

20 years of wage growth in their initial Social Security benefits under the reform. Those who retired in 2005, in contrast, feel the impact of just one year of lost wage growth.

The price indexing reform appears to be somewhat progressive, in the sense that *absolute* losses are more common and much larger at the top of both the shared earnings and per capita income distributions than at the bottom. For example, 55 percent in the bottom shared earnings quintile lose an average of about $1,070 annually, compared to 91 percent of those at the top who lose $3,210. This is due in large part to the cohort effects just discussed and to the way that we have defined the quintiles. Those in later cohorts are more likely to be in higher quintiles, because of the greater wage growth that we assume they will experience.[47] In *percentage* terms, however, reductions are fairly similar across quintiles, averaging around 12 percent, arguing against the reform's progressivity. Results by per capita income quintile differ somewhat, and even suggest mild regressivity.

Despite these large cuts to Social Security benefits under price indexing of initial benefits, we find that SSI benefits in 2024 increase for only a fraction of the population, even among those with family income less than or equal to 125 percent of the poverty threshold (Table 8B). We would not expect that these increases would offset the full Social Security declines because most persons losing Social Security benefits still will not qualify for SSI because their income, their assets, or both are too high. Indeed, just six percent of those near poverty have SSI benefit increases, which average about $670/year (or just about $55/month). Gains are more common among persons who are already receiving SSI, over half of whom have higher benefits under the reform, than they are for persons newly eligible for benefits, only about two percent of whom gain benefits. Benefit gains do nearly offset the benefit declines for the dual beneficiaries. These gains average $670 annually, close to the $770 OASDI loss that joint OASDI-SSI beneficiaries experience (Table 8A). Considering other characteristics, most likely to gain SSI are persons with less than a high school diploma, those born abroad, and people in their 70s in 2024.

Option 2: Reduction in the cost-of-living adjustment

The next option reduces the Social Security cost-of-living adjustment by one percent below CPI-W (Table 9A). Under this scenario, we expect that virtually all persons who are in their second year or later of Social Security benefit eligibility will have lower benefits than they had under current law. This is because SSA increases PIAs by the COLA beginning with the first year of eligibility (age 62 for retirees, year of disability for the disabled). We see that virtually all continuing Social Security beneficiaries in 2024 lose under the reform, and the reductions are quite sizable, averaging about $1,870/year (in 2004 dollars), or $155/month. The size of average benefit losses increases steadily with age (until reaching persons older than 84, many of whom receive survivor benefits on the record of a persons who died prior to the phase-in of the reform). For example, we see that women ages 65 to 69 on average lose about $1,370/year (over $100/month) in benefits, while women ages 80 to 84 lose almost twice that, over $2,620 (over $200/month) on average. For men, whose benefits are higher on average, the increase in losses by age is just as dramatic, from $1,190 at ages 65 to 69 to over $3,200 at 80 to 84.

[47] Tabulations by cohort-specific income and earnings quintiles could tease out these differing effects.

Because the reform affects virtually all recipients, there is relatively little difference in the fraction that loses by shared lifetime earnings or per capita income quintile. The lowest quintiles have the lowest fraction of losers, in large part because non-beneficiaries are concentrated in this quintile. Magnitudes of *absolute* losses are greater, however, at the high end of shared lifetime earnings, $2,420 for those in the highest quintile compared to $1,360 for the lowest quintile. This again suggests absolute progressivity, though not as clearly as with the price indexing reform. In *percentage* terms, however, the reform appears to be regressive, with those in the bottom shared earnings quintile receiving losses averaging about 15 percent of current law benefits, compared to about 9 percent in the top three quintiles. Absolute losses are not as clearly patterned for per capita income quintiles. There, the third quintile experiences the largest losses, again suggesting an ambiguous story about progressivity. And in percentage terms, the bottom quintile again does worse under the reform, with the top quintile doing the best.

As our list of reform parameters in Table 2 notes, when reducing cost-of-living adjustments for OASDI benefits we did not correspondingly adjust SSI COLAs. We therefore expect that SSI increases will accompany Social Security declines under this reform as well, but that these increases should not offset the full Social Security declines. The changes to SSI are indeed relatively modest, about $730 per year ($60/month) among those with family incomes of less than 125 percent of poverty (Table 9B). As with the wage to price indexing reform, the table indicates that most of the gain goes to those who are already on SSI, 91 percent of whom get higher benefits, rather than from new entrants to the program, only 4 percent of whom see a benefit increase. For this former group of current law beneficiaries, Social Security losses once more approximate the SSI gains ($690 in average gains compared to $710 in average losses).

Option 3: Elimination of the hiatus for raising the full benefit age and subsequent indexing of the full benefit age to life expectancy

When we increase the full benefit age more quickly than is slated under current law (through elimination of the hiatus for the 1943 to 1954 cohorts) and subsequently index retirement age to life expectancy, we expect that Social Security benefits for persons born after 1943 (so ages 79 and younger in 2024) should fall. Overall Social Security benefits in 2024 fall by about 3 percent, from an average of $18,300 to an average of $17,800 (Table 10A). This reform does not affect persons who receive DI benefits, as their benefits are not subjected to the actuarial reductions that are the mechanism that cause the income losses.

The Social Security benefit cuts are proportionate to earnings, so that the cuts are concentrated among those in the highest shared earnings and per capita income quintiles. For example, 69 percent of persons in the top shared lifetime income quintile lose benefits, with an average loss of $1,300 annually, compared to 35 percent losing, with an average loss of just under $391 per year, in the lowest shared quintile (this is lower in percentage as well as absolute terms). This difference reflects, as in the prior scenarios, the higher concentration of members of earlier cohorts in the lower quintiles. Likewise, those with the most education experience large benefit losses, with an average annual loss of $1,200 for those with at least some college, compared to $560 for those with less than a high school diploma. Similarly, on average men lose substantially more than women ($1,150 annually compared to $700 annually), both in absolute and percentage terms.

At the same time, SSI benefits increase in 2024 with the NRA increase (Table 10B). Among persons with income less than 125 percent of the poverty line, about 4 percent experience SSI increases. The average increase in SSI benefit, however, is much lower than the average loss to Social Security. Those with higher SSI benefits only receive about $30 more per month, or $330 annually. As with the previous two reforms, increases predominantly are concentrated among current SSI beneficiaries, over a third of whom gain, rather than new applicants, with just under one percent of non-beneficiaries experiencing gains.

Option 4: Elimination of the hiatus for raising the full benefit age, subsequent indexing of the full benefit age to life expectancy, and an increase the early entitlement age to 64

The simulation in which we increase the full benefit age more quickly than is slated under current law (through elimination of the hiatus), subsequently index retirement age to life expectancy, and increase the early entitlement age to 64 has the potential for much more complex effects than the previous three simulations, even with our simplistic assumption of no increase in work effort under the reform. When one can no longer collect benefits at 62, the Social Security Administration essentially forces many beneficiaries to wait and claim benefits at a later point than they otherwise would have. In some cohorts, regardless of whether these would-be early recipients work in the interim, their Social Security benefits will necessarily be higher than they would have been under current law if they had had the option to take up earlier (because the reduction in their actuarial reduction more than offsets the reduction in their benefit from increasing the NRA). For example, as Tables 1 and 3c reveal, an individual from the 1957 birth cohort who claims benefits at the earliest possible moment would receive 72½ percent of PIA at age 62 under current law and 77½ percent of PIA at age 64 under this reform increasing the early entitlement age. So, defining well-being strictly on the basis of current income (say, comparing the person's option and current law benefits at age 64), many people are better off in financial terms under the simulation using a cross-sectional definition. This is only because they were not given the option of claiming earlier.[48] Indeed, they are worse off in the sense that they did not collect benefits for two whole years, as presumably would have been their preference (given their current law disposition toward early claiming).

We find that 26 percent of the population comprising SSI and Social Security beneficiaries have lower 2024 OASDI benefits under the simulation (Table 11A).[49] The average loss to beneficiaries is almost $3,740 annually (or over $300 per month). At the same time, 36 percent have increased benefits, but their increases are much smaller on average, about $1,160 per year, and recall that this increase only occurs at the expense of a year or two of lost benefits. As we would expect, changes are fairly narrowly targeted among persons ages 79 and under, but do not affect the disabled population (except via spouses' benefits for married/previously married persons).

Changes to SSI benefits in 2024 are likewise a complex mix of gains and losses (Table 11B). Just as more people have higher Social Security benefits, more have lower SSI benefits under this reform. The sizes of losses are fairly modest, averaging about $580 annually. Gains

[48] Of course, such a definition has limitations. Many people likely face liquidity constraints (e.g., they need income before 64, but cannot borrow against their future Social Security benefits).

[49] Upon request, we can change the population definition in this table to exclude people in the last two cohorts (who will no longer be eligible for benefits at age 62 under current law).

in SSI, while far less prevalent, are much more substantial in size. Indeed, they average nearly two-thirds the size of Social Security benefit losses, $2,950 annually, for those fortunate enough to qualify, just under 2 percent of the near poverty population. Persons who now receive SSI disability benefits in early retirement (ages 62 to 64) drive this high average.[50] For others, gains are more modest.

Option 5: Increase in the number of computation years in the AIME formula from 35 to 38

We see that over three-quarters (77.9 percent) of people have lower OASDI benefits in 2024 when the computation years in the AIME formula increase to 38 (Table 12A). The full population does not lose because, as Table 2 indicates, the reform is specified to only affect persons after 1940, and does not fully phase in until the 1946 cohort. Also, many in these cohorts have over 35 earnings years, so we are not filling in their earnings trajectories with zeroes (though we virtually always are filling in with a value that is lower than the average, as only a person with constant wages would not receive a value lower than their average).[51]

Percentages with OASDI losses are greater among men than among women (who are older on average, and thus more likely to have grandfathered benefits). The sizes of these losses vary widely in percentage terms, though absolute changes are not nearly as great as under the other reforms. Women lose less than men in absolute terms, but they lose more in percentage terms. Those in the top shared lifetime earnings quintile are more likely to lose benefits than those in lower earnings quintiles. Again, this is in part due to cohort effects (the persons with higher earnings are in later cohorts, which are affected under the phase-in provisions). However, percent reductions are larger at the bottom of the shared lifetime earnings distribution than at the top (4.9 percent compared to 2.7 percent). This is consistent with the fact that those with lifetime earnings below the first bend point would lose proportionately more.

Just as with the prior benefit reductions, we see that these reductions in Social Security lead to modest SSI increases, with about 5.7 percent of the population with income of less than 125 percent of poverty seeing increased 2024 SSI benefits (Table 12B). These increases average about $350 per year (just $30 month). About half of current beneficiaries see benefit increases, while only about one percent of non-beneficiaries become newly eligible for SSI as a consequence of the reform.

Does the asset test prevent SSI from doing more?

One of the more surprising findings from our analysis is how little SSI does to cushion vulnerable members of the population under these five reforms, even in the face of fairly large benefit cuts. To try to understand why SSI did not do more, we explore outcomes under the

[50] This change suggests a need for careful exploration of the possibility for increased DI and SSI claiming at ages 62 to 64 under this reform. Our assumptions are quite simplified, and lead to the anomaly of increased SSI disability without increased DI. While this could occur under current law because DI has a recency of work test (which could render some who are eligible for retired worker benefits and SSI disabled benefits ineligible for disabled worker benefits even though the SSI and DI disability tests are the same), a more complex response is far more likely.

[51] Tabulations from Social Security administrative data suggest that in 2000 about 72 percent of men and 20 percent of women entering retirement (i.e., ages 60 to 64) had 36 or more years of Social Security covered work (Burtless, Ratcliffe, and Moskowitz 2004). Numbers for women should be significantly higher for the cohorts under study here.

COLA adjustment reform, the reform that led to the most significant poverty increases, using an alternative SSI baseline. Specifically, we consider how SSI participation estimates change if the government were to maintain the program's asset thresholds at their 1974 levels (wage indexed for inflation). As we have already noted, the 2000 Social Security Administration report on Income and Resources Exclusions in the SSI program raised the profile of this issue, among others (SSA 2000a). Several other analysts have called for the expansion of important SSI parameters (see, for example, Kijakazi and Primus 2000). Recently, Rep. Cardin of Maryland proposed legislation (H.R. 2187 of the 108th Congress) that would increase SSI asset limits. Eliminating or raising the asset test would simplify program administration, potentially reducing administrative costs while increasing total costs substantially (Social Security Administration 2000b).

When we raise the asset threshold (Table 13), we find that SSI's impact for the near poverty population increases.[52] Many people who are income poor but have assets at a level that excludes them from SSI can see a substantial offset to their Social Security reduction under the reform. While 10 percent had received SSI increases under the COLA reduction alone, almost 12 percent received increases under this reform. The impact on average benefits for those experiencing a change is even larger. The average benefit change is $1,290 compared to $730 without the change in the asset test. This is possible because there are many new beneficiaries, whose benefits are higher than continuing beneficiaries' increases. This result is broadly consistent with work by Rupp, Strand, and Davies (2003), who find significant improvement of income through changes to the SSI asset thresholds.

Conclusions and Next Steps

We find that the percentage of the population receiving benefits from the SSI program should decline markedly over the next two decades under current law. The decline is more marked for the aged program than for the disabled program, but both components should see important changes. Despite the fact that they will be a smaller fraction of the population at large, SSI beneficiaries will remain extremely vulnerable, characterized by low education, high likelihood of disability, and limited earnings capacity/history.

The findings from the simulations underline the importance of Social Security to reducing poverty. We find that the reforms that reduce COLA and that change from wage to price indexing of initial Social Security benefits, reforms that could to bring the system into or close to long-term solvency, both have important effects on poverty. Distributionally, there is a good deal of similarity across the five reforms. This is because most are fairly uniform benefit reductions. One of the major differences is that some reforms (e.g., the full benefit age increases and the computation years option) exclude the disabled from cuts, while others (the two indexing reforms) do not. A second major difference is that some reforms are more targeted to certain

[52] In this simulation, we compare current law with the current asset test to the COLA simulation with the increased asset test. Results from this simulation thus capture both individuals who would have entered SSI under the COLA cut with and without the asset test increase. Additional simulations (from which tabulations are available upon request) in which we simulate this same increase in the asset test under current law (i.e., we simulate this change without the COLA cut) indicate that only a modest fraction of these new entrants would enter the program in the absence of the COLA cut. Put another way, most of those who entered SSI under the simulation entered as a result of the interaction of the COLA cut and the asset test increase, not because of the asset test increase alone.

cohorts than others. This leads to somewhat different patterns of progressivity/regressivity across the reforms.

The analyses also suggest several important areas for future research. The presence of "winners" in the analysis of increasing the NRA and EEA in tandem reveals the limitation of the cross-sectional measures that we use here (benefit changes in 2024). We could expand the analyses to include longitudinal measures of Social Security and SSI redistribution under reform, and thus better capture the additional losses imposed by the EEA increase.

The results from our sensitivity analysis, in which we coupled the COLA cut with elimination of the SSI asset test, also underline the need for SSI reform. Many at the low end of the income distribution who received significant benefit cuts were ineligible for SSI benefits that might cushion their losses because their assets were too high. (The on-going shift from defined benefit to defined contribution pensions may be a contributor to the lack of eligibility.) Further study of other SSI reforms (for example, indexing the earned and general income exclusions) could give insights into the most effective ways to shape such reform.

These results are sensitive to the DYNASIM projections of incidence and distribution of disability in the future. Analysts have conflicting views about what will happen to disability levels in the future. On one hand, health has improved and jobs have become less physically demanding. On the other hand, disability program rolls have surged in recent years. This area warrants further consideration, and perhaps sensitivity analysis.

Finally, given the relative lack of efficacy of SSI at alleviating the consequences of large Social Security cuts, it is worth considering the possibility of expanding minimum benefits under Social Security. Using the Social Security program would have the advantage of being less contingent on take-up, which still limits SSI's effectiveness because so many eligible persons do not claim benefits presumably because of transaction costs or perceived stigma. There are important design issues associated with minimum benefits, however, including how benefit levels will be tied to number of years worked. Also, program interactions (for example, with Medicaid) would need careful consideration.

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APPENDIX. DETAIL ON THE DYNASIM MODEL

DYNASIM

DYNASIM3, the version of the model that we use in these analyses, is a direct descendent of the original DYNASIM (Orcutt, Caldwell, and Wertheimer 1976). Unlike several other prominent microsimulation sources (for example MINT), DYNASIM relies fully on publicly available sources, and as a result researchers can use it without restriction. Because computing Social Security benefits requires information on a full lifetime of earnings, researchers often use administrative earnings records, which are not available to the public, when trying to model program reform. For DYNASIM, we use publicly available sources to create the equivalent of government earnings records. Specifically, we statistically match earnings histories (from 1951 through the model baseline of 1993) to members of the SIPP sample using donor records from the Panel Study of Income Dynamics (PSID) and an unrestricted Current Population Survey exact match to government earnings records from 1973. DYNASIM's developers extensively validated these imputed earnings to ensure that lifetime earnings patterns in the model are consistent with those found in Social Security Administration records (Smith, Scheuren, and Berk 2002).

SSI module of DYNASIM

The aged SSI module first determines each individual's SSI eligibility by applying the program's rules (income and asset tests) to individuals ages 62 and older on the basis of filing unit (individual versus couple), living arrangements, disability status (for those 62 to 64), and state of residence. Once the model has determined whether a unit is eligible for benefits, it forecasts take-up. This is necessary, as social science research has consistently shown SSI take-up rates of between one half and two thirds of those who are eligible among the aged (see footnote 13). We derived these participation functions from survey data from the early 1990s linked to administrative records. In predicting participation it is helpful to use administrative records, given high levels of underreporting of SSI participation on household surveys (see, for example, Huynh, Rupp, and Sears, 2002).[53] Consistent with prior literature, the DYNASIM take-up function ties SSI participation to need (i.e., those who are worse off economically are more likely to claim benefits than those who are better off) and to several other demographic and economic characteristics. We calibrated parameters in the model so that its predictions match historical participation patterns. Finally, the model uses an algorithmic approach to assign annual benefit levels given take-up. (For details, including sensitivity analyses, see Davies and Favreault 2004).

[53] Even though these parameters are estimated from restricted data, they are in the public domain because they were published in previous government reports (Toder et al. 2002). Parameter values from a regression equation of this type do not compromise the confidentiality of the restricted data, as individual records and life trajectories cannot be reproduced on the basis of such statistics.

DYNASIM also predicts SSI eligibility and participation in the population that is under age 62 (ages 25 to 61). [54,55] First, we assume that DYNASIM's disability indicator (after calibration), defined as the presence of a condition that limits the amount or type of work that one can do, corresponds to SSI's disability screen. Second, we assume that sources of income that DYNASIM does not project (that is, sources other than earnings and assets, for example federal-state transfer programs like TANF) do not impact SSI eligibility. Third, we predict benefit take-up among eligible persons using an algorithm that relates participation to expected benefits. We calibrate results to historical age-specific rates when the DYNASIM disability indicator and our take-up algorithm produced significantly different participation rates than have been observed historically.

DYNASIM's SSI model includes a representation of state supplements to SSI. The DYNASIM state supplements are based on values in the Urban Institute's Transfer Income Model (TRIM), which themselves originate from published sources (Social Security Administration 2001). As currently implemented, the model assumes that state programs have the same basic design as the Federal program. The estimated aged SSI participation functions we discussed above include the size of a state's supplement, and individuals in higher supplement states typically take up their benefits at faster rates than individuals in states with low or no supplements, all else equal.

Several caveats about using the DYNASIM model to examine state supplements to SSI are warranted, though. First, one cannot use the SIPP (on which DYNASIM is based) to make inferences at the state level. Indeed, the survey aggregates several of the smaller states.[56] Our projections therefore can give us a broad qualitative picture of how state supplements change, but cannot provide numbers of SSI beneficiaries or the sizes of their benefit changes in any specific state. Second, to make the model tractable, we assume zero net state-to-state migration. That is, we assume that people age in the place where they participated in the SIPP interview or, for new members to the sample, in the place where they were born. We do not believe that this assumption is highly problematic for our analysis of SSI interactions, given that state-to-state mobility is more common among those with greater resources (see, for example, Gober 1993), who would be less likely to fall into the SSI eligibility pool.[57]

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[54] We still ignore SSI benefits for children. As we noted earlier, children are the SSI recipients least likely to have Social Security benefits, and are thus least likely to be impacted by Social Security reform (though some may reside in households with Social Security beneficiaries, so reform could affect their family income). Also, SIPP does not include baseline SSI information on children. Further, full integration of the family incomes of children into DYNASIM would require addition of income sources that the model does not currently include (for example, TANF and income of coresiding relatives other than parents and siblings). Ignoring children's benefits is problematic, however, because persons under age 18 now represent almost 13 percent of the SSI caseload.

[55] We likewise ignore SSI benefits for young adults ages 18 to 24, as DYNASIM does not project wealth until age 25.

[56] Alaska, Idaho, Wyoming and Montana are a first group, Iowa, North Dakota, and South Dakota a second group, and Maine and Vermont a third group.

[57] We could in theory update DYNASIM's state-to-state migration module. However, modeling state-to-state migration is very challenging: indefinitely applying state-to-state transition matrices estimated using historical data to a population can lead to implausible results (e.g., very large proportions in the state that most recently had high population growth) within a few decades.

FIGURES

Figure 1. SSI Beneficiaries in Current Payment Status as a Fraction of the Social Security Area Population, by Age and Year, 1980-2003

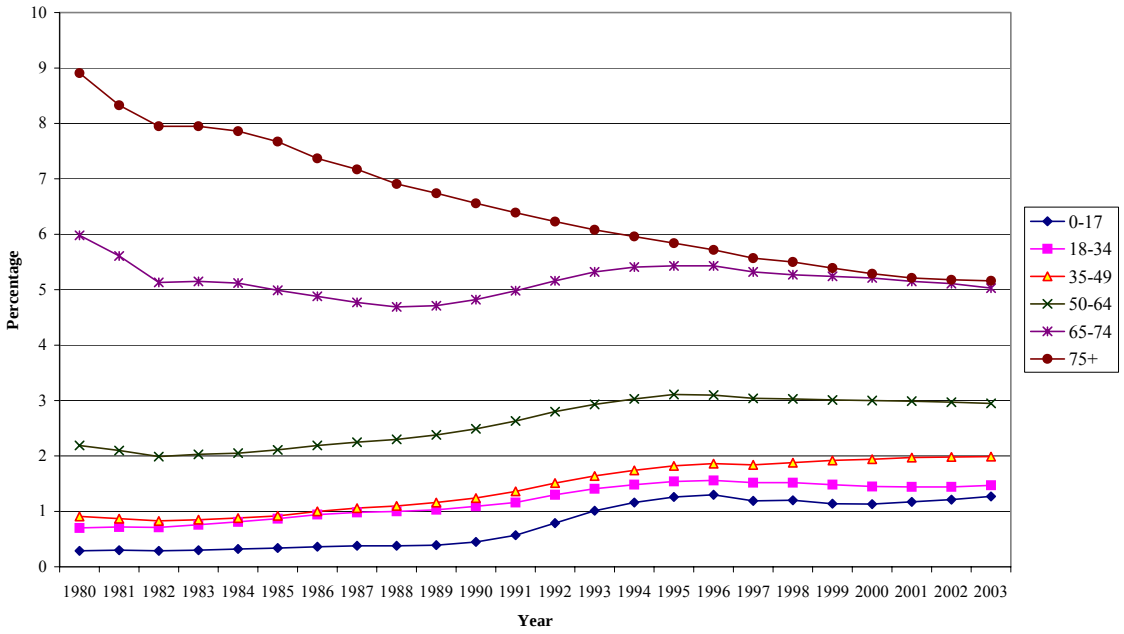

Figure source: Social Security Administration (2004): Table IV.B7
Note: Figure combines data from the aged and blind and disabled programs for the age 65 to 74 and age 75 plus series.

TABLES

Table 1: Social Security Parameter Details by Birth Cohort under Current Law

Birth cohort	Normal Retire-ment Age	Percentage of Primary Insurance Amount Available to Workers at Age:								
		62	63	64	65	66	67	68	69	70
1924	65	80	86⅔	93⅓	100	103	106	109	112	115
1925-26	65	80	86⅔	93⅓	100	103½	107	110½	114	117½
1927-28	65	80	86⅔	93⅓	100	104	108	112	116	120
1929-30	65	80	86⅔	93⅓	100	104½	109	113½	118	122½
1931-32	65	80	86⅔	93⅓	100	105	110	115	120	125
1933-34	65	80	86⅔	93⅓	100	105½	111	116½	122	127½
1935-36	65	80	86⅔	93⅓	100	106	112	118	124	130
1937	65	80	86⅔	93⅓	100	106½	113	119½	126	132½
1938	65, 2 mo	79 1/6	85 5/9	92 2/9	98 8/9	105 5/12	111 11/12	118 5/12	124 11/12	131 5/12
1939	65, 4 mo	78⅓	84 4/9	91 1/9	97 7/9	104⅔	111⅔	118⅔	124⅔	132⅔
1940	65, 6 mo	77½	83⅓	90	96⅔	103½	110½	117½	124½	131½
1941	65, 8 mo	76⅔	82 2/9	88 8/9	95 5/9	102½	110	117½	125	132½
1942	65, 10 mo	75 5/6	81 1/9	87 7/9	94 4/9	101¼	108¾	116¼	123¾	131¼
1943-54	66	75	80	86⅔	93⅓	100	108	116	124	132
1955	66, 2 mo	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔	122⅔	130⅔
1956	66, 4 mo	73⅓	78⅓	84 4/9	91 1/9	97 7/9	105⅓	113⅓	121⅓	129⅓
1957	66, 6 mo	72½	77½	83⅓	90	96⅔	104	112	120	128
1958	66, 8 mo	71⅔	76⅔	82 2/9	88 8/9	95 5/9	102⅔	110⅔	118⅔	126⅔
1959	66, 10 mo	70 5/6	75 5/6	81 1/9	87 7/9	94 4/9	101⅓	109⅓	117⅓	125⅓
1960 or later	67	70	75	80	86⅔	93⅓	100	108	116	124

Source: Committee on Ways and Means (2004) Table 1-20, p. 1-53 and author's calculations.

Table 2. Summary of Core Processes Modeled in DYNASIM3

Process	Data	Form and predictors
Birth	*Estimation:* NLSY (1979-94); VS; *Target:* OCACT	7 equation parity progression model; varies based on marital status; predictors include age, marriage duration, time since last birth; uses vital rates after age 39; sex of newborn assigned by race; probability of multiple birth assigned by age and race
Death	*Estimation:* NLMS (1979-81); VS (1982-97); *Target:* OCACT	3 equations; time trend from Vital Statistics 1982-1997; includes socioeconomic differentials; separate process for the disabled based on age, sex, age of disability onset, and disability duration derived from Zayatz (1999)
Schooling	NLSY (1979-94), CPS (Oct. 1995)	10 cross-tabulations based on age, race, sex, and parent's education
Leaving Home	NLSY (1979-94)	3 equations; family size, parental resources, and school and work status are important predictors
First Marriage	NLSY (1979-93)	8 equations; depends on age, education, race, earnings, presence of children (for females); use vital rates at older ages
Spouse Selection		Closed marriage market (spouse must be selected from among unmarried, opposite-sex persons in the population); match likelihood depends on age, race, education
Remarriage	VS (1990)	Table-lookups, separate by sex for widowed and divorced
Divorce	PSID (1985-93)	Couple level outcome; depends on marriage duration, age and presence of children, earnings of both spouses
Labor Supply and Earnings	*Estimation:* PSID (1980-93); NLSY (1979-89); *Target:* OCACT (LFP, wage/price growth)	Separate participation, hours decisions, wage rates for 16 age-race-sex groups; all equations have permanent and transitory error components; some wage equations correct for selection bias; key predictors include age splines, marital status, number and ages of children, job tenure, education level, region of residence, disability status, schooling status, unemployment level, and age spline-education level interactions
Disability	SIPP (1990)	Separate entry (by sex)/exit (pooled) equations; include socio-economic differences (education, marital status, earnings history)
DI Take-up	SIPP (1990-93)	2 separate equations (by sex) predict take-up of those eligible for disabled worker benefits (ages 19 though the full benefit age); key predictors include age, disability status, education, marital status, recent earnings

Table 2. Summary of Core Processes Modeled in DYNASIM3 (Continued)

Process	Data	Form and predictors
Pensions (Defined benefit, defined contribu-tion, IRAs, Keoghs)	BLS (1999-2000); EBRI/ICI; SIPP (1990-93); PENSIM (PSG) and PIMS models (PBGC)	Uses SIPP self-reports for initial values; simulate job changes and future pensions using PENSIM; use PIMS for defined benefit formulas (with separate procedure for DBs from government jobs); uses EBRI/ICI data for defined contribution plans, including asset allocation
Wealth	PSID (1984-94); SIPP (1990-93)	4 random-effects models for ownership/value given ownership separately for housing and non-housing wealth; additional models for spenddown after first OASDI receipt; key predictors include age, race, marital status, family size, birth cohort, dual-earner status, pension coverage, recent earnings
OASI Take-up	SIPP (1990-93)	Eligibility is deterministic; 3 separate equations (separate for workers by lagged earnings, and auxiliary beneficiaries) predict take-up of those eligible for retired worker benefits (ages 62 and older); key predictors include age, disability status, education, marital status, recent earnings, pensions, lifetime earnings, and spouse characteristics; take up of survivor benefits at 60 and 61 is deterministic (i.e., mandatory if earnings are below the exempt amount)
OASDI Benefits	Rule-based	Sophisticated calculator incorporates entire work and marriage histories, auxiliary benefits for spouses/survivors and former spouses, and the retirement earnings test.
SSI Benefits	SIPP (1991-96)	Eligibility is deterministic; 2 equations predict take-up of the aged; key predictors include demographics, state supplement, resources
Living Arrange-ments of the Aged	SIPP (1990-93)	Logistic regression that considers health, resources, and kin availability (number of children ever born); resources of coresiding family members are imputed using donor families sampled from current coresiding aged individuals in SIPP.
Immigra-tion	SIPP (1990-93)	Replicate historical distribution of immigrant life histories, using target levels from Dowhan and Duleep (2002), which are based on sex, country of origin, and age at immigration

Abbreviations: BLS: Bureau of Labor Statistics; CPS: Current Population Survey; EBRI: Employee Benefits Research Institute; NLMS: National Longitudinal Mortality Study; NLSY: National Longitudinal Survey of Youth; OCACT: Intermediate assumptions of the OASDI Trustees; PBGC: Pension Benefit Guarantee Corporation; PIMS: Pension Insurance Modeling System; PSG: Policy Simulation Group; PSID: Panel Study of Income Dynamics; SCF: Survey of Consumer Finances; VS: Vital Statistics

Table 3a: Social Security Reform Option Specifics

	Option	First Year in Effect	Phase in provisions?	Other details, including additional behavioral response
1	Shift from wage to price indexing of initial benefits	2004[58]	None beyond those implicit (by design, provisions increase markedly across cohorts)	Applies equally to retirement, survivors, and disability benefits. Implemented via indexing of the bend percentages (consistent with OACT analyses).
2	Reduce cost-of-living adjustment (COLA) by one percentage point below CPI–W each year	2004	Yes; 0.25 percent in 2004, 0.5 percent in 2005; 0.75 percent in 2006; 1 percent 2007 and after	Applies equally to retirement, survivors, and disability benefits. Note that by assumption the COLA cuts do not affect SSI.
3	Eliminate eleven-year hiatus for raising the full benefit age that exists in current law (for the 1943 to 1954 cohorts) and subsequently index the full benefit age to life expectancy	2006 (1944 cohort turns 62)	Yes (see Table 3b for details); spouse benefit reductions are computed analogously using current law reductions; widow's reductions retain current law feature of not falling below 82.5% at age 60	Indexation of NRA to life expectancy based on OACT intermediate cohort values at age 62 (not birth). For first few decades, should increase by one year over approximately 16 years (12 monthly shifts, plus 4 hiatus cohorts/years).
4	Same as above, but also increase the early entitlement age to 64	2006 (1944 cohort turns 62)	Yes (see Table 3c for details); spouse benefit reductions are computed analogously using current law reductions; widow's reductions retain current law feature of not falling below 82.5% at age 60	Indexation of NRA to life expectancy as above. Benefit take-up shifts to maximum of current law take-up age and 64.
5	Increase the number of computation years in AIME formula from 35 to 38	2004	Yes; 36 for 1942-43 cohorts, 37 for 1944-45 cohorts, 38 for cohorts after 1946 (inclusive)	Anologous changes for survivor or disabled worker recipients with lower numbers of computation years; no change to spouse beneficiaries with a grandfathered spouse.

[58] The President's Commission proposals would implement this change effective later, in 2009.

Table 3b: Social Security Parameter Details by Birth Cohort under the Third Simulation

Option 3: Eliminating the Hiatus	Normal Retire-ment Age	Percentage of Primary Insurance Amount Available to Workers at Age:								
Birth cohort		62	63	64	65	66	67	68	69	70
Prior to 1943	65 to 65, 10 mo	As under current law								
1943	66	75	80	86⅔	93⅓	100	108	116	124	132
1944	66, 2 mo	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔	122⅔	130⅔
1945	66, 4 mo	73⅓	78⅓	84 4/9	91 1/9	97 7/9	105⅓	113⅓	121⅓	129⅓
1946	66, 6 mo	72½	77½	83⅓	90	96⅔	104	112	120	128
1947	66, 8 mo	71⅔	76⅔	82 2/9	88 8/9	95 5/9	102⅔	110⅔	118⅔	126⅔
1948	66, 10 mo	70 5/6	75 5/6	81 1/9	87 7/9	94 4/9	101⅓	109⅓	117⅓	125⅓
1949	67	70	75	80	86⅔	93⅓	100	108	116	124
1950	67	70	75	80	86⅔	93⅓	100	108	116	124
1951	67, 1 mo	69 7/12	74 7/12	79 7/12	86 1/9	92 7/9	99 4/9	107⅓	115⅓	123⅓
1952	67, 2 mo	69 1/6	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔	122⅔
1953	67, 3 mo	68 3/4	73 3/4	78 3/4	85	91⅔	98⅓	106	114	122
1954	67, 3 mo	68 3/4	73 3/4	78 3/4	85	91⅔	98⅓	106	114	122
1955	67, 4 mo	68⅓	73⅓	78⅓	84 4/9	91 1/9	97 7/9	105⅓	113⅓	121⅓
1956	67, 5 mo	67 11/12	72 11/12	77 11/12	83 8/9	90 5/9	97 2/9	104⅔	112⅔	120⅔
1957	67, 6 mo	67½	72½	77½	83⅓	90	96⅔	104	112	120
1958	67, 6 mo	67½	72½	77½	83⅓	90	96⅔	104	112	120
1959	67, 7 mo	67 1/12	72 1/12	77 1/12	82 7/9	89 4/9	96 1/9	103⅓	111⅓	119⅓
1960	67, 8 mo	66 3/4	71 3/4	76 3/4	82 2/9	88 8/9	95 5/9	102⅔	110⅔	118⅔
1961	67, 9 mo	66⅓	71⅓	76⅓	81⅔	88⅓	95	102	110	118

Table 3b: Social Security Parameter Details by Birth Cohort under the Third Simulation (Continued)

Option 3: Eliminating the Hiatus	Normal Retire-ment Age	Percentage of Primary Insurance Amount Available to Workers at Age:								
Birth cohort		62	63	64	65	66	67	68	69	70
1962	67, 9 mo	66⅓	71⅓	76⅓	81⅔	88⅓	95	102	110	118
1963	67, 10 mo	65 11/12	70 11/12	75 11/12	81 1/9	87 7/9	94 4/9	101⅓	109⅓	117⅓
1964	67, 11 mo	65½	70½	75½	80 5/9	87 2/9	93 8/9	100⅔	108⅔	116⅔
1965	68	65 1/12	70 1/12	75 1/12	80	86⅔	93⅓	100	108	116
1966	68	65 1/12	70 1/12	75 1/12	80	86⅔	93⅓	100	108	116
1967	68, 1 mo	64 3/4	69 3/4	74 3/4	79 7/12	86 1/9	92 7/9	99 4/9	107⅓	115⅓
1968	68, 2 mo	64 1/6	69 1/6	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔
1969	68, 3 mo	63 3/4	68 3/4	73 3/4	78 3/4	85	91⅔	98⅓	106	114
1970	68, 3 mo	63 3/4	68 3/4	73 3/4	78 3/4	85	91⅔	98⅓	106	114

Table 3c: Social Security Parameter Details by Birth Cohort under the Fourth Simulation

Option 4: Eliminating the Hiatus, Increasing the EEA	Normal Retire-ment Age	Percentage of Primary Insurance Amount Available to Workers at Age:								
Birth cohort		62	63	64	65	66	67	68	69	70
Prior to 1943	65 to 65, 10 mo	As under current law								
1943	66	75	80	86⅔	93⅓	100	108	116	124	132
1944	66, 2 mo	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔	122⅔	130⅔
1945	66, 4 mo	73⅓	78⅓	84 4/9	91 1/9	97 7/9	105⅓	113⅓	121⅓	129⅓
1946	66, 6 mo	72½	77½	83⅓	90	96⅔	104	112	120	128
1947	66, 8 mo	71⅔	76⅔	82 2/9	88 8/9	95 5/9	102⅔	110⅔	118⅔	126⅔
1948	66, 10 mo	70 5/6	75 5/6	81 1/9	87 7/9	94 4/9	101⅓	109⅓	117⅓	125⅓
1949	67	70	75	80	86⅔	93⅓	100	108	116	124
1950	67	70	75	80	86⅔	93⅓	100	108	116	124
1951	67, 1 mo	0	74 7/12	79 7/12	86 1/9	92 7/9	99 4/9	107⅓	115⅓	123⅓
1952	67, 2 mo	0	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔	122⅔
1953	67, 3 mo	0	73 3/4	78 3/4	85	91⅔	98⅓	106	114	122
1954	67, 3 mo	0	73 3/4	78 3/4	85	91⅔	98⅓	106	114	122
1955	67, 4 mo	0	73⅓	78⅓	84 4/9	91 1/9	97 7/9	105⅓	113⅓	121⅓
1956	67, 5 mo	0	72 11/12	77 11/12	83 8/9	90 5/9	97 2/9	104⅔	112⅔	120⅔
1957	67, 6 mo	0	0	77½	83⅓	90	96⅔	104	112	120
1958	67, 6 mo	0	0	77½	83⅓	90	96⅔	104	112	120
1959	67, 7 mo	0	0	77 1/12	82 7/9	89 4/9	96 1/9	103⅓	111⅓	119⅓
1960	67, 8 mo	0	0	76 3/4	82 2/9	88 8/9	95 5/9	102⅔	110⅔	118⅔

Table 3c: Social Security Parameter Details by Birth Cohort under the Fourth Simulation (Continued)

Option 4: Eliminating the Hiatus, Increasing the EEA	Normal Retire-ment Age	Percentage of Primary Insurance Amount Available to Workers at Age:								
Birth cohort		62	63	64	65	66	67	68	69	70
1961	67, 9 mo	0	0	76⅓	81⅔	88⅓	95	102	110	118
1962	67, 9 mo	0	0	76⅓	81⅔	88⅓	95	102	110	118
1963	67, 10 mo	0	0	75 11/12	81 1/9	87 7/9	94 4/9	101⅓	109⅓	117⅓
1964	67, 11 mo	0	0	75½	80 5/9	87 2/9	93 8/9	100⅔	108⅔	116⅔
1965	68	0	0	75 1/12	80	86⅔	93⅓	100	108	116
1966	68	0	0	75 1/12	80	86⅔	93⅓	100	108	116
1967	68, 1 mo	0	0	74 3/4	79 7/12	86 1/9	92 7/9	99 4/9	107⅓	115⅓
1968	68, 2 mo	0	0	74 1/6	79 1/6	85 5/9	92 2/9	98 8/9	106⅔	114⅔
1969	68, 3 mo	0	0	73 3/4	78 3/4	85	91⅔	98⅓	106	114
1970	68, 3 mo	0	0	73 3/4	78 3/4	85	91⅔	98⅓	106	114