Comparing the Impacts of Social Security Benefit Reductions on the Income Distribution of the Elderly

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Abstract

Benefit reductions will likely be a part of the eventual Social Security reform in the United States. This research attempts to quantify the intragenerational and intergenerational impacts of different benefit reduction proposals on the incomes of the elderly. Reforms include across-the-board benefit cuts, price indexing, and reductions to the cost-of-living adjustment. Restoring the projected seventy-five year balance for the Trust Fund through benefit reductions will significantly lower benefits, though the impacts vary by type of reform. Nonetheless, the savings for the Social Security Trust Fund will exceed the accompanying increases in the poverty gap, leaving room to provide minimal income guarantees.

INTRODUCTION

Social Security in the United States is projected to remain solvent only until 2041,

according to the intermediate assumptions of the 2005 *Trustee's Report*. To prepare for the

anticipated subsequent shortfalls, a number of potential remedies have been identified. These

proposals generally cut benefits, increase taxes, or seek to provide greater returns to Social

Security assets. After his re-election in November 2004, President George W. Bush pushed

Social Security reform to the top of his domestic agenda. His thrust of reform stems from the

President's Commission to Strengthen Social Security's *Final Report*, which was published in

December 2001. President Bush directed the Commission to study Social Security reform

options under certain constraints, including that benefits could not be changed for retirees or near

retirees, that payroll taxes could not be increased, and that reform must include a role for

voluntary personal retirement accounts. The Bush administration's preferred path of reform is

related to Plan #2 of the Commission's report. In line with the president's ideas about an

"ownership society," Plan #2 would allow workers to voluntarily divert four percentage points of

their payroll tax (initially capped at $1,000 for people earning more than $50,000 a year) into a

personal account which could be vested into a range of financial assets.

But the personal accounts would do little to fix the long-run financing problems of Social

Security as conceded by the Administration (Furman and Greenstein, 2005). As such, since tax

increases could not be considered, the goal of achieving 75 year projected solvency for the Social

Security Trust Fund will be reached through benefit reductions in the President's plans. In

particular, Plan #2 includes a type of "price indexing" benefit reduction. For young workers,

payroll taxes would continue growing in real terms while benefits stay at the same real level.

Because of price indexing, someone presently aged 30 could expect an initial benefit that is 23

percent lower than the presently legislated values, while the corresponding reductions for 20-year-olds and 10-year-olds are 31 percent and 38 percent, respectively. Indeed, price indexing places an increasingly larger burden on younger people. Plan #2 would create sustainability for the Social Security Trust Fund by gradually reducing the replacement rate of initial benefits from traditional Social Security to career earnings under the assumption that workers could make up the difference with their personal accounts. Because initial Social Security benefits would no longer keep pace with wages, price indexing provides a way to gradually reduce the role of the traditional Social Security retirement benefits in American life, replacing it with the defined-contribution personal account.

But price indexing is not the only possible benefit cut, and our goal is to consider the effects of a variety of benefit cuts on the income distribution and poverty rates of the elderly. We are motivated by a desire to examine both the intragenerational and intergenerational implications of different benefit reductions. The benefit cuts we examine fall into three general categories: across-the-board benefit reductions, price indexing, and reductions to the cost-of-living adjustment (COLA). Furthermore, we will consider different versions of each type of benefit cut. Some benefit cuts are expected to provide full solvency for the Trust Fund over the 75 year horizon, while others will provide about 73 to 75 percent of the changes needed for solvency. Additionally, some of these benefit cuts will be progressive, because the degree of benefit reduction will be larger for those with higher lifetime incomes. For these reforms, we quantify the impact of benefit reductions on the income and poverty rates of the elderly. We also examine the impact of benefit reductions on the poverty gap, which is the dollar amount required to ensure that everyone has an income at least equal to their poverty threshold. We then compare

the savings for the Trust Fund to the increased poverty gap as a way to check whether the reform can improve the Trust Fund's status while still providing room to develop income guarantees.

We find that any of the benefit reductions we consider could be designed in a way to provide income guarantees to keep the elderly out of poverty, while still helping to fund significant portions of the future Social Security Trust Fund imbalances. Nevertheless, there are important differences between the types of reforms. Among the versions of the reform proposals that are expected to lead to Trust Fund balance, an across-the-board benefit reduction would force current and near retirees to share the benefit reductions with future generations, which will significantly help the plight of young people. These benefit cuts would reduce the incomes of the poorest elderly by 12 to 14 percent and would affect each generation equally. This is dwarfed, however, by the eventual impacts of price indexing. Price indexing does not affect current or near retirees, so that even after 20 years price indexing will have the least impact on incomes of the elderly. But the impact of price indexing will gradually compound in future years to produce bigger reductions as one's year of retirement extends further into the horizon. After 60 years, the poorest elderly stand to lose 35 to 42 percent of their income.

The COLA reduction, meanwhile, falls in between these two reforms. It applies to current and near retirees, but not to the extent of the across-the-board benefit reduction, because the COLA reduction would only begin to apply at one's current age for those over 62. Initial benefits available at age 62 would not be changed by this reform, only the subsequent growth rate of these benefits would be slowed. After 20 years, the COLA reduction will decrease the incomes of poorest elderly by more than 15 percent, and after 60 years by more than 16 percent. The COLA reduction also has the largest impact on the extreme elderly, who also tend to be positioned lower in the income distribution, which compounds the impact of the COLA

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reduction on elderly poverty. Progressive reforms do help to lessen some of these impacts, and it will be important for policy makers to design benefit reductions that limit the impact on the poor. This paper shows that there is ample ground for developing such reforms.

BACKGROUND

We consider three types of benefit reductions, each with different intergenerational implications. While these reforms may apply to current and near retirees to obtain the full contrast in possible intergenerational impacts, the starting dates of the reforms could be modified to reflect political realities.

Across-the-Board Benefit Reductions

The 2005 *Trustee's Report* finds that an immediate reduction of all Social Security benefit payments by 13 percent will restore 75 year solvency to the Social Security Trust Fund. This reform affects everyone in the same way. It has a relatively larger impact on current and near retirees than other reforms, which allows it to have a relatively smaller impact on future retirees. We also provide a progressive version of this reform, designed to close about 74 percent of the Trust Fund's imbalance. In the progressive reform, the size of the benefit reduction depends on one's position in the Social Security benefit distribution. For those in the bottom 30th percentile of the Social Security benefit distribution, there is no benefit reduction. Those with benefits in the 30th to 50th percentile of the distribution experience a 4 percent benefit cut. This cut is 9 percent for those in the 50th to 70th percentile, 15 percent for those in the 70th to 90th percentile, and 20 percent for those in the top decile.[1]

Cost-of-Living Adjustment

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[1] For progressive reforms, the specific reduction made for each percentile reflect two factors. First, the combined reductions were calibrated to produce the desired savings for the Social Security Trust Fund. Second, numbers were chosen to create a relatively smooth pattern.

Automatic Social Security COLAs became law in the early 1970s in an attempt to keep real benefits constant during a time of rapid and variable inflation. Prior to 1972, benefit increases were only occasional and intermittent. Under the current benefit formulation, workers collecting retirement benefits see COLAs starting at age 62, regardless of their actual age of initial benefit receipt. Subsequent benefits grow each year at the rate of the Consumer Price Index for Urban and Clerical Workers (CPI-W).

We consider five reforms related to changing the COLA. First, the standard modification to the COLA analyzed by the Social Security Administration (SSA) is a COLA of the CPI-W less one percentage point, though the COLA would not fall below zero. The COLA reductions would only begin at age 62, so that any non-retirement benefits received prior to this age would keep the present-law COLAs. This is expected to close about 73 percent of the 75 year Trust Fund deficit, as reported in Koitz et. al. (2001). To obtain a reform that would approximately fix the 75 year solvency problem, we use a COLA reduction that is 1.4 percentage points less than the CPI-W. We also consider a progressive COLA reduction that would close about 75 percent of the Trust Fund imbalance. Those in the bottom 30th percentile of Social Security benefits would not experience a COLA reduction. Meanwhile, those in the 30th to 50th percentile experience a 0.5 percentage point COLA reduction, and those in the top half of the Social Security benefit distribution experience a COLA reduction of 1.5 percentage points. Finally, we apply the "standard COLA" only until the ages of 75 or 85, respectively. Such a reform would close less of the Trust Fund gap, though it provides a way to limit the impact of the COLA reduction on the extreme elderly.

From an intergenerational perspective, the COLA reduction would apply to current and near retirees so that young people do not face the full burden of reform. In the stochastic model

developed for hypothetical workers in Pfau (2003), the COLA reduction was found to perform quite well in producing high rates of return from Social Security for a variety of workers relative to other reforms including price indexing, increases to the normal retirement age, and increases to payroll taxes. Several unique problems have been identified with choosing COLAs though, which must be considered. First, because the elderly spend more income on health care and prescriptions, Amble and Stewart (1994) find that a basket of goods designed more specifically for the elderly grew on average by 0.43 percentage points more per year than the CPI-W between 1988 and 1993. This weakens the common argument about the CPI overstating true price increases, when it applies to the elderly. Additionally, the compounding effects of the COLA reduction also create the unique characteristic of transferring income from those who live the longest to those who die shortly after retirement, and it is the extreme elderly who may be least able to afford this change. Steurle et al. (1999) also question the efficacy of a COLA reduction on account that it will provide young retirees with a false sense of security. Many new retirees may not realize that their benefits will not continue to grow with the rate of wages in the economy, or even with the general inflation rate, and so they will be less prepared to meet the financial costs of extremely old age.

Price Indexing

Price indexing is the method for reducing Social Security benefit growth used by the President's Commission to Strengthen Social Security (2001). It slows the rate of growth in future initial benefit levels by keeping initial benefits in line with inflation instead of the typically faster wage growth. The impact of price indexing compounds for each future generation as the replacement rate of Social Security benefits to income gradually declines. As real tax payments continue to grow over time while real benefits remain the same, such a reform

is infinitely sustainable for the Trust Fund and the payroll tax could be decreased over time while still maintaining the Trust Fund balance. Price indexing reduces the initial benefit level, but then benefits would continue to grow with the same COLA adjustment as with present law. There are several possible ways to implement price indexing, as outlined in Biggs et al. (2005). The method used by the President's Commission starts in 2009 by multiplying the bendpoint factor ratios of the Primary Insurance Amount[2] formula by the ratio of the price index to the wage index (approximately 0.989 on average) from two years prior.[3]

We consider three different price indexing reforms. According to the SSA in 1999, the "standard price indexing" approach used by the President's Commission is estimated to fix 116 percent of the Trust Fund imbalance over the next 75 years, as calculated using information provided in Biggs et al. (2005). In order to create a price indexing plan that it comparable to the other reforms, we consider a plan that is 80 percent price indexing and 20 percent wage indexing, which can be expected to close the Trust Fund imbalance. Additionally, we consider a progressive price indexing plan that will close about 75 percent of the Trust Fund imbalance. The idea of a progressive price indexing plan is motivated by Robert Pozen, a President's Commission member who popularized such a plan in 2005 (see Goss (2005) for details). Pozen's plan for progressive price indexing even received a recommendation from President Bush at an April 28, 2005, press conference. While our plan does not match the Pozen plan precisely, it captures the essence of the Pozen plan.[4] The bottom 30th percentile of the Social

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[2] The Social Security Administration provides a website explaining the formulas used to calculate Social Security benefits. It is accessible at: http://www.ssa.gov/OACT/ProgData/retirebenefit1.html.

[3] The President's Commission literature does not make clear whether the multiplicative factor used to update the PIA bendpoints will be capped at one. We do not cap the formula, which will allow benefits to increase after years in which prices grew faster than wages, which would bias results in favor of price indexing. This is an important point of contention, because since 1970 there have been eleven years in which prices grew more quickly than wages.

[4] The Current Population Survey does not provide details about a person's lifetime earnings or age of retirement, which makes it impossible to implement the exact Pozen plan. This issue is explained more fully in the Methodology.

Security benefit distribution will not experience any benefit reduction, because they keep full

wage indexing as provided by present law. Meanwhile, those from the 30th to 70th percentile of

the benefit distribution will experience one-half wage indexing and one-half price indexing.

Finally, those in top 30th percentile will experience full price indexing.

METHODOLOGY

The March 2004 Current Population Survey (CPS) of the Census Bureau is used to

consider a number of important questions about the viability of reforms that would alter the

presently legislated levels of Social Security benefits. The CPS contains information on income

sources for survey participants, as well as information about household and family relations. As

is consistent with the existing literature, such as Social Security Administration (2005) and

Johnson (1999a and 1999b), the analysis will be made in terms of "aged units." Aged units are

defined as any nonmarried persons aged 65 or older, or any married couples in which at least one

of the spouses is aged 65 or older. For married couples, the incomes are combined and assigned

to the male whenever he is at least 65, or to the female when the male spouse is under 65.

Persons who are married, but whom the CPS identifies as separated from their spouse, are

considered to be nonmarried, as is done in Social Security Administration (2005). There are

15,867 aged units in this sample. Accounting for two people in each married couple, there are

22,369 individuals in the sample. All percentages provided herein are weighted by the CPS

population weights, and the aged units represent 37.9 million people in the United States, 34.1

million of whom are recipients of Social Security benefits.

This paper follows the approach of Johnson (1999a and 1999b) in that we compare the

Social Security benefits for aged units to the hypothetical benefits that these aged units would

have received had the benefit reduction been enacted a pre-defined number of years ago. This

approach assumes that everything other than Social Security benefits remains the same. In other words, the aged units do not alter their behavioral responses to the potential loss of Social Security benefits, and there are otherwise no macroeconomic feedbacks to the policy change. As such, the measures of additional poverty created by benefit reductions are more representative of upper limits, because some people would certainly respond to the benefit reductions by developing other income sources, such as additional employment or applying for Supplemental Security Income benefits, or by living with others to share expenses. Expanded employment incentives created by the benefit reductions could also promote economic growth at the macroeconomic level. By applying reforms to the population of 2003, we are also implicitly assuming that the future age distribution[5] and income distribution of the aged units will remain the same. This is unlikely on account of current demographic and labor force trends, as well as because of the potential response to any benefit reductions.

If the benefit reduction had passed 10 years ago, then any aged unit would have experienced the reform for at most 10 years. Typically, results are shown assuming a benefit reduction passed 60 years ago. This length of time is only meant to indicate that the benefit reduction had been passed long enough ago that all aged units are fully impacted by the reform. Also, price indexing effects grow stronger as more years pass from the date of enactment, and 60 years is long enough to demonstrate a significant impact. This approach allows for a comparison of the benefits and incomes of aged units before and after the simulated benefit reductions.

Another important issue regards deciding the appropriate income distribution for use in making the progressive benefit cuts. We chose the distribution of average Social Security

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[5] Ages in the 2004 Current Population Survey are topcoded at 80 (for those aged 80 to 84) or at 85, which poses a problem for understanding the effects of COLA adjustments on the oldest members of the population. To deal with this problem, we use the Social Security Administration's life expectancy tables to impute an actual age for anyone with a topcoded age in the CPS.

benefits per aged unit (the total Social Security benefits of a married aged unit are divided by two). Ideally, we would use a measure of lifetime income.[6] Social Security benefits provide a suitable approximation for lifetime income, because benefits are proportional to a worker's average indexed earnings during their career. However, the measure is not perfect because benefits are reduced for people retiring before the normal retirement age, and benefits are increased for those who do not retire until after their normal retirement age. The CPS does not provide information on retirement age or lifetime income, which leaves Social Security benefits as the closest available approximation.

Finally, modified poverty thresholds are assigned to aged units. Poverty thresholds in the United States are calculated using several factors: the number of people in the household and the portion of these who are children under 18 years old, and for family units of size one or two, whether the householder of the family is 65 or older. Income used to determine poverty status is the same as the income calculated for the aged units.[7] However, because the definition of aged units in this paper excludes members of the family or household aside from spouses, the poverty threshold we use may also differ from the official CPS amount assigned to the household. In 2003, the relevant year for the March 2004 CPS, the poverty threshold for one person aged 65 or older was $8,825, while that for a married couple with the householder aged 65 or older was $11,122. The poverty threshold for a married couple in which the householder is under 65 years

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[6] We wish to use lifetime income, because annual income measures are too dependent on current earnings and income from assets, as well as policy rules, to provide a suitable measure for assigning benefit reductions. Aged units may experience large year-to-year fluctuations of their position in the current income distribution.

[7] The income of aged units consists of all their money income, before any deductions for taxes, union dues, or Medicare premiums. Sources of income include wages and salaries, self-employment income (including losses), Social Security, Supplemental Security Income, public assistance, interest, dividends, rent, royalties, estates or trusts, veterans' payments, unemployment and workers' compensation, private and government retirement and disability pensions, alimony, child support, and any other source of income that was regularly received. It does not include nonmoney transfers such as food stamps, subsidized housing, payments-in-kind, health benefits, or other fringe benefits.

old is $12,321. Since we do not include the incomes of other potential family members, the poverty thresholds used here consist of one of the above three values assigned accordingly.

The assigned poverty thresholds adequately reflect the situation for the 77.54 percent of the aged units who do not live in a household with others. The remaining 22.46 percent of aged units live with other people. In many cases, this larger family structure may allow members to share economic resources with one another and enjoy the economies of scale associated with cohabitation. For this group, the assigned poverty measures will tend to overestimate true poverty needs. Nonetheless, since we only consider the income of the aged unit, it is reasonable to reassign poverty thresholds that are applicable to these specific units, rather than using the larger thresholds that assume a possibility of income derived from other family members as well. These measures present, to some degree, the possibilities of self-sufficiency for the aged units. On the other hand, a small portion of aged units are responsible for the care of children under the age of 18 who need to share their parents' economic resources, and the assigned poverty thresholds may tend to underestimate their needs. Regarding the complete sample, 0.28 percent of aged units are single who live with children and no other adults, and 1.25 percent of aged units are married who live with children and no other adults.

RESULTS

First, we consider the economic resources available to the aged units in the March 2004 CPS. Then we quantify the reduction of income that would be caused by the various benefit reduction plans. This is followed by a consideration of the impact of the benefit reductions on poverty rates and the poverty gap. The section concludes with estimates of the savings these benefit reduction plans would provide for the Social Security Trust Fund, and whether the

various benefit reduction plans could present a sustainable solution to the solvency problems of Social Security.

Measuring the Economic Resources of the Elderly

Table 1 provides the sources of income available to the elderly, who are grouped in terms of the ratio of their total income to their assigned poverty threshold. Ten income subgroups are included, which range from those with income less than 50 percent of the poverty threshold, up to those with incomes more than five times the poverty threshold. The table includes the results only for those age units who receive Social Security benefits, since these are the people who will be affected by Social Security reform.[8] Sources of income are divided into six categories: Social Security benefits, pensions, assets, earnings, Supplemental Security Income benefits, and other. The pensions category includes retirement and survivor benefits from sources other than Social Security. Assets include the income from interest, dividends, and rents. Earnings include wages and salary or self-employment income. Supplemental Security Income (SSI) is a program which provides a guaranteed income to enrollees aged 65 and over, amongst others, with sufficiently low income and assets. The remaining "other" income is the total income of the aged unit less the sum of the previously mentioned categories.

The table demonstrates a number of important details which help explain the distributional effects of benefit reductions. First, over 90 percent of the retirement income of aged units with incomes less than 1.5 times the poverty level comes from Social Security benefits. For higher income groups, the importance of benefits gradually declines as other sources of income begin to dominate, though Social Security benefits provide over half of the income for those with incomes less than 3.5 times their poverty threshold. Lower income groups

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[8] There are 10 percent of the aged units who do not receive Social Security benefits, either because they are still working and have not claimed their benefits, or because they are otherwise not qualified.

also tend be older than the higher income groups. Related to this point, perhaps, as one moves

up the income distribution, employment earnings play an increasingly important role.

Additionally, those in the bottom income groups include a disproportionate number of unmarried

females (and, consequently, less single males and married couples), and of aged units living in

larger family groups. Reductions to Social Security can potentially have significant impacts on

the elderly.

Quantifying the Income Loss for Individuals

Table 2 shows how the benefit reductions would affect the total income of the aged units

across the income distribution. These are the simulated benefit reductions, assuming they began

either 20 or 60 years ago. The implication here is that because Social Security benefits play a

more significant role in the incomes of the poor, a loss of part of these benefits means losing a

larger portion of one's income. At the same time, progressive benefit reductions can help to

offset some of this impact.

First, consider reform proposals that could be expected to solve the 75 year funding

problem of the Social Security Trust Fund. These include a 13 percent benefit reduction (Benefit

Cut), a COLA reduction of 1.4 percentage points (COLA), or a plan that uses 80 percent price

indexing and 20 percent wage indexing (Price Indexing). All of these plans reduce the incomes

of the lower income groups by more, since Social Security benefits provide a larger portion of

the income for these groups. The across-the-board benefit cut has a standard effect not related to

the passage of time. For those with less than 1.5 times the poverty level, the benefit reduction

reduces incomes by 12 to 14 percent, while the COLA reduction will eventually decrease

incomes by 15 to 17 percent. After 20 years, price indexing produces the smallest decrease in

incomes across the distribution (only 4 to 7 percent), though after 60 years the income reductions from price indexing are significantly larger (35 to 42 percent).

Next, reforms that close about 73 to 75 percent of the Trust Fund gap include the progressive forms of the across-the-board benefit cut, the COLA reduction, and price indexing, as well as the standard COLA reduction of one percentage point less than inflation. The progressive benefit reductions all share the property that those aged units in the bottom 30th percentile of Social Security benefits per person do not experience any decrease in their benefits. This helps to limit the reductions in incomes for the lower income people. However, those with incomes between the poverty level and 1.5 times the poverty level would still experience substantial benefit reductions in line with other reform proposals. As for a standard one percentage point decrease in the COLA, the bottom income groups will tend to lose about 11 percent to 13 percent of their potential income had the COLA reduction begun at least 20 years ago.

Finally, the other reforms include standard price indexing, which more than solves the funding problems of the Trust Fund. As such, the impacts on the income distribution are even larger than before, as after 60 years the lower income groups stand to lose more than 40 percent of their incomes. Meanwhile, the standard COLA reduction applying only for certain age ranges can provide a small amount of additional relief by limiting the benefit reductions for the extreme elderly. After 60 years, a COLA reduction applying only to ages 62-75 would still remove about 9 percent of incomes for the lower income groups, while the reduction applying to ages 62-85 would reduce potential incomes by 11 to 12 percent.

Effects on Poverty Status

With such large and nontrivial impacts on income, could the elderly population be expected to maintain a suitable lifestyle? Table 3 provides evidence of the poverty rates for aged units after the benefit reductions. There are 34.1 million people included in the aged units who are receiving Social Security, and their overall poverty rate is 9.9 percent. Table 3 shows the poverty rates for different subgroups of the aged units 60 years after the reform begins. Of the reforms that close the Trust Fund imbalance, the benefit cut would increase poverty rates by 3.8 percentage points to 13.7 percent. The poverty rate with price indexing would be 27.6 percent, and the COLA reduction would increase the poverty rate to 16.4 percent. Of the reforms closing about 70 percent of the Trust Fund gap, the poverty rate for a progressive benefit cut is 11.4 percent, while progressive price indexing would lead to a poverty rate of 22.2 percent, and the progressive COLA would produce a poverty rate of 14.7 percent. The poverty rate with the standard COLA reduction is actually slightly less at 14.3 percent.[9]

Looking further down Table 3, we see several trends. Older people generally experience higher poverty rates than younger people, single people experience higher poverty rates than married couples, and women experience higher poverty rates than men. The highest poverty rates occur among unmarried females, who consistently experience poverty rates of more than 20 percent, regardless of age group. Among the reforms that close the Trust Fund imbalance, the COLA reduction produces the smallest increases in poverty for those aged 65-74, while the across-the-board benefit reduction produces the smallest increases for the older aged groups. Unmarried females aged 85 and older experience the highest poverty rates, and the benefit cut

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[9] This results because while Social Security benefits provide a decent approximation of lifetime income, they are not correlated with other sources of current income. Some people close to the poverty line have relatively large Social Security benefits because of high lifetime incomes, which is working at the margin to push poverty rates higher with

would push their poverty rate to 32 percent, while price indexing would increase it to 56.9 percent, and the COLA reduction would increase it to 52.1 percent. These benefit cuts are clearly having substantial impacts on elderly poverty, and these effects vary by age, gender, and marital status. Reforms including benefit cuts should include provisions to better deal with elderly poverty.

The Costs of Counteracting Poverty and the Effects on the Trust Fund

While benefit reductions can create rather significant increases in the poverty rates of the elderly population, comparing incomes to a poverty rate is somewhat arbitrary, as a higher poverty rate does not indicate how much income is being lost. This section examines the poverty situation in more detail through use of the poverty gap, which is a measure of the total dollar amount needed to raise all incomes to the poverty line. In this section, we seek to determine the cost of having all aged units receive at least a minimum income equal to the poverty threshold, in light of the benefit reductions. Then we compare this additional cost to the savings that the benefit reductions would generate for the Social Security Trust Fund. If the effects of the benefit reductions on the Trust Fund are larger than the addition to the poverty gap, then it may be possible for policy makers to improve the status of the Trust Fund without pushing more elderly into poverty.

The details of this analysis are found in Table 4. In the 2004 March CPS, the poverty gap for the aged units receiving Social Security benefits was equal to $7.7 billion. Among the reforms obtaining Trust Fund solvency, in the 60th year after reform the benefit cut increases the poverty gap by $4.5 billion to $12.1 billion, price indexing increases the poverty gap to $45.2 billion, and the COLA reduction increases the poverty gap to $16.8 billion. The progressive

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the progressive reform. The behavioral responses to the reform may lead such people to cultivate other sources of income.

benefit reduction reforms do better, though they also only close about 73 to 75 percent of the

Trust Fund gap. The progressive benefit cut leads to a total poverty gap of $8.4 billion, while

progressive price indexing produces a poverty gap of $28.4 billion, and the progressive COLA

produces of poverty gap of $12.4 billion, which is the same as the standard COLA reduction.

Table 4 also considers the effects of the benefit reduction plans on the expenditures of the

Trust Fund. The numbers presented in this section are meant to serve only as a rough estimate

created by a static analysis of one year, rather than tracking the dynamic evolution of the Trust

Fund. Because of the different intergenerational implications of each type of reform, the

budgetary impacts are estimated separately. The table provides Social Security expenditures and

savings for one year. In 2005, the Social Security Administration's best guess about the future is

that the Social Security Trust Fund would be in balance over the 75 year horizon if there is an

immediate across-the-board benefit reduction of 13 percent. With this reform, the Trust Fund

saves $42 billion (in the 60th year, this is not cumulative) compared to current law. Because the

progressive benefit cut saves $31 billion and has the same intergenerational implications, we

estimate that the impact on the Trust Fund is 100 times $31 billion divided by $42 billion, or

73.8 percent.

The same approach applies for price indexing. Biggs et al. (2005) describes how the SSA

last estimated the effects of price indexing using the assumptions of 1999, and they found that

the standard price indexing approach described here would close 116 percent of the imbalance.[10]

This corresponds to $153 billion of savings for the Trust Fund. Because other price indexing

reforms have the same intergenerational implications, we find that a proposal with 80 percent

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[10] It should be noted that while the other reforms can be calibrated to provide 75 year solvency, if the horizon is extended beyond 75 years, then additional cuts or tax increases would be needed. This is not the case with price indexing. Instead, price indexing provides infinite sustainability for the Trust Fund. Since price indexing slowly

price indexing would save $129 billion for the Trust Fund, which is about 97.8 percent of the Trust Fund gap. We also calibrate a progressive price indexing proposal that matches the spirit of the Pozen reform approach, and we find a savings of $99 billion, which closes about 75.1 percent of the Trust Fund gap.

Meanwhile, the Social Security Administration has estimated, as reported in Koitz et al. (2001), that the standard COLA reduction plan applying to all ages beyond 62 would eliminate 73 percent of the 75 year actuarial deficit. Because this approach saves $38 billion for the Trust Fund, and a COLA reduction of 1.4 percentage points savings $51 billion, we estimate that the later reform will close 98 percent of the Trust Fund gap. The same approach leads to estimates that the progressive COLA will also close 74.9 percent of the gap. For the COLA reduction of one percentage point applying only to ages 62 to 75, one could still expect that approximately 57.6 percent of the Trust Fund deficit could be closed, and the COLA reduction applying to ages 62 to 85 would close about 69.2 percent of the Trust Fund gap.

Comparisons of the Trust Fund savings to the increase in the poverty gap are quite favorable. For all of the reforms proposals, the savings to the Trust Fund exceed the increases in the poverty gap. Thus, any of the reform proposals could be used to shore up the entire poverty gap and still contribute to the long-run solvency of the Trust Fund. The across-the-board benefit cuts produce the biggest ratios because these reforms add less to the marginal poverty gap after 60 years. The COLA reductions also do well. For example, the savings to the Trust Fund of the progressive COLA are 8.26 times larger than the marginal increase of the poverty gap. Similar results hold for price indexing, though the effects occur on a much larger scale. If standard price indexing began sixty years ago, then the savings to the Trust Fund would be $153 billion (almost

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eliminates the role of traditional Social Security, it can be accompanied by large reductions of payroll taxes in the future.

half of the total expenditure of the Trust Fund at present), which is 2.69 times larger than the addition to the poverty gap of $56.8 billion. These results should help to alleviate concerns that benefit reductions would push the most vulnerable groups of the elderly into extreme poverty, as the benefit reductions could be combined with some other measures, such as an expansion of the SSI program, to provide relief both for the existing poverty among the elderly and for the projected Trust Fund deficits.

SUMMARY AND CONCLUSIONS

We have quantified the impact of different Social Security benefit reductions on the income distribution of the elderly. We have taken care to show the impact both from the intragenerational perspective of the income distribution, and from an intergenerational perspective. Our measures provide an upper bound for the likely poverty impacts, because benefit reductions would cause some behavioral changes as people look for alternative sources of income. Nonetheless, we have uncovered some interesting trends. The incomes of the poorest elderly will experience dramatic effects from Social Security benefit reductions, because large portions of the incomes for the poorest elderly come from Social Security benefits. There is an important intergenerational aspect to these income reductions. An across-the-board benefit reduction would impact current and future elderly in the same way, such that the poorest elderly of any generation could expect to lose 12 to 14 percent of their incomes. The COLA reduction, meanwhile, impacts the current elderly to a lesser extent, so that future generations will experience a 16 to 17 percent income reduction for its poorest members. Price indexing, on the other hand, delays the impact of reform for a number of years. Each year the impact will slowly grow, and after 60 years the poorest elderly could expect to lose 35 to 42 percent of their incomes.

At first, this situation appears somewhat bleak. However, the situation can be improved by using progressive benefit reductions. Additionally, the situation appears more promising when comparing the ratio of Trust Fund savings to the growth in the poverty gap caused by the reductions. For example, the COLA reduction that is expected to close the Trust Fund imbalance is estimated to save $51 billion for the Trust Fund in the 60th year after reform, while the corresponding increase in the poverty gap is $9.2 billion. On a larger scale, price indexing would raise the poverty gap by $37.5 billion in the 60th year after reform, but save the Trust Fund $129 billion that year. This demonstrates ample ground for fashioning a benefit reduction plan with income guarantees for the poorest beneficiaries that will still help to improve the financial situation of the Social Security Trust Fund.

Though the President's Commission uses price indexing as the tool for reducing the future obligations of the Social Security Trust Fund, the results of this paper should hopefully persuade policy makers not to ignore the possibilities of other types of benefit reductions. Price indexing will eventually produce such large reductions in the replacement rates of Social Security benefits to earned income that that the political feasibility of such a reform for future generations is highly questionable. If a benefit reduction is chosen as part of Social Security reform, then it is worth discussing more whether current retirees and near retirees should also share some of the burden of reform. Further research can estimate the behavioral responses to these reforms to uncover how workers and retirees will try to replace lost income. There are also grounds for considering a more complete picture of income that includes in-kind benefits and the shared resources within families.

Acknowledgements

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Table 1: Sources of Income for the Elderly, March 2004 CPS
By Ratio of Total Income to Assigned Poverty Threshold, For Aged Units who Receive Social Security Benefits

Income / Poverty Threshold	< 0.49	.5-.74	.75-.99	1.0-1.24	1.25-1.49	1.5-1.99	2.0-2.49	2.5-3.49	3.5-4.99	5.0 +
Number of People (Millions)	0.41	0.81	2.14	2.63	2.90	5.17	3.95	5.43	4.34	6.32
Average Age	75.66	77.50	76.96	77.17	77.56	76.78	76.14	74.73	73.43	72.23
Social Security	$3,207	$5,771	$7,454	$9,710	$12,106	$14,412	$16,109	$16,811	$17,381	$18,248
	106.6%	95.0%	91.6%	91.2%	91.5%	82.2%	68.9%	54.4%	39.1%	18.1%
Pensions	$87	$117	$121	$292	$528	$1,536	$3,568	$7,459	$12,504	$21,207
	2.9%	1.9%	1.5%	2.7%	4.0%	8.8%	15.3%	24.1%	28.2%	21.1%
Assets	-$183	$9	$95	$247	$316	$693	$1,633	$2,385	$4,637	$20,651
	-6.1%	0.2%	1.2%	2.3%	2.4%	4.0%	7.0%	7.7%	10.4%	20.5%
Earnings	-$204	$33	$25	$85	$103	$571	$1,413	$3,346	$8,440	$38,330
	-6.8%	0.6%	0.3%	0.8%	0.8%	3.3%	6.0%	10.8%	19.0%	38.1%
SSI	$53	$108	$389	$175	$48	$79	$28	$66	$11	$17
	1.8%	1.8%	4.8%	1.6%	0.4%	0.5%	0.1%	0.2%	0.0%	0.0%
Other	$49	$33	$56	$142	$117	$197	$512	$747	$1,218	$1,730
	1.6%	0.5%	0.7%	1.3%	0.9%	1.1%	2.2%	2.4%	2.7%	1.7%
Total	$3,010	$6,072	$8,140	$10,651	$13,237	$17,533	$23,368	$30,890	$44,417	$100,613
Receive SSI?	4.1%	6.9%	16.9%	6.5%	1.5%	1.7%	0.9%	0.9%	0.3%	0.3%
Any Employment Earnings?	3.1%	2.9%	2.8%	4.8%	5.4%	10.8%	17.3%	26.2%	41.6%	59.6%
Unmarried Male?	13.9%	15.1%	15.1%	16.5%	14.4%	10.7%	9.2%	9.0%	7.3%	7.5%
Unmarried Female?	58.4%	62.4%	67.7%	58.1%	52.4%	35.6%	23.5%	20.8%	16.2%	8.6%
Married Couple?	27.7%	22.5%	17.2%	25.4%	33.2%	53.7%	67.2%	70.2%	76.5%	83.9%
Lives with Others?	32.9%	37.1%	33.8%	29.1%	24.6%	20.1%	17.2%	16.7%	15.8%	15.5%

Table 2: Effects of Benefit Reductions on Mean Income, by Ratio of Total Income to Assigned Poverty Threshold for Length of Time Since Passage of Benefit Reduction (Aged Units who Receive Social Security Benefits)

Income / Poverty Threshold	< 0.49	.5-.74	.75-.99	1.0-1.24	1.25-1.49	1.5-1.99	2.0-2.49	2.5-3.49	3.5-4.99	5.0 +
Mean Income of Aged Units	$3,010	$6,072	$8,140	$10,651	$13,237	$17,533	$23,368	$30,890	$44,417	$100,613
Reforms Closing 100% of Trust Fund Gap										
Benefit Cut (20)	-13.9%	-12.4%	-11.9%	-11.8%	-12.0%	-10.9%	-9.4%	-7.3%	-5.6%	-2.8%
Price Indexing (20)	-6.5%	-5.0%	-4.8%	-4.7%	-4.8%	-4.7%	-4.5%	-3.7%	-3.4%	-1.9%
COLA (20)	-15.5%	-15.5%	-15.0%	-15.0%	-15.5%	-13.3%	-11.1%	-8.1%	-5.6%	-2.6%
Benefit Cut (60)	-13.9%	-12.4%	-11.9%	-11.8%	-12.0%	-10.9%	-9.4%	-7.3%	-5.6%	-2.8%
Price Indexing (60)	-42.2%	-37.2%	-36.0%	-35.7%	-36.1%	-32.5%	-27.6%	-21.9%	-16.2%	-7.8%
COLA (60)	-16.3%	-16.9%	-16.2%	-16.2%	-16.7%	-14.3%	-11.7%	-8.4%	-5.8%	-2.6%
Reforms Closing About 73 - 75% of Trust Fund Gap										
Prog. Benefit Cut (20)	-0.5%	-0.3%	-2.2%	-4.7%	-8.1%	-7.0%	-6.7%	-5.6%	-4.4%	-2.4%
Prog. Price Indexing (20)	-0.1%	-0.4%	-1.7%	-1.9%	-3.3%	-3.2%	-3.3%	-2.8%	-2.7%	-1.6%
Progressive COLA (20)	-1.0%	-0.4%	-3.5%	-9.2%	-11.7%	-9.3%	-8.4%	-6.4%	-4.6%	-2.1%
Standard COLA (20)	-11.4%	-11.4%	-11.0%	-11.0%	-11.4%	-9.9%	-8.3%	-6.0%	-4.2%	-2.0%
Prog. Benefit Cut (60)	-0.5%	-0.3%	-2.2%	-4.7%	-8.1%	-7.0%	-6.7%	-5.6%	-4.4%	-2.4%
Prog. Price Indexing (60)	-1.4%	-2.1%	-14.3%	-17.1%	-27.8%	-22.8%	-20.6%	-16.9%	-12.8%	-6.4%
Progressive COLA (60)	-1.1%	-0.4%	-3.9%	-10.2%	-12.8%	-10.0%	-8.9%	-6.8%	-4.8%	-2.2%
Standard COLA (60)	-12.0%	-12.5%	-12.0%	-12.0%	-12.4%	-10.6%	-8.8%	-6.3%	-4.4%	-2.0%
Other Reforms										
Standard P. Indexing (20)	-8.1%	-6.2%	-5.9%	-5.8%	-5.9%	-5.8%	-5.4%	-4.6%	-4.0%	-2.2%
COLA, Ages 62 - 75 (20)	-8.8%	-7.9%	-7.8%	-7.8%	-8.1%	-7.3%	-6.4%	-4.8%	-3.5%	-1.8%
COLA, Ages 62 - 85 (20)	-11.0%	-10.5%	-10.3%	-10.3%	-10.7%	-9.4%	-7.9%	-5.8%	-4.1%	-2.0%
Standard P. Indexing (60)	-50.3%	-44.3%	-42.9%	-42.6%	-43.0%	-38.7%	-32.8%	-26.0%	-19.2%	-9.2%
COLA, Ages 62 - 75 (60)	-9.5%	-9.2%	-8.9%	-8.9%	-9.2%	-8.1%	-6.9%	-5.2%	-3.7%	-1.8%
COLA, Ages 62 - 85 (60)	-11.7%	-11.8%	-11.4%	-11.4%	-11.8%	-10.2%	-8.5%	-6.1%	-4.3%	-2.0%

Note: The number in parentheses after the reform name represents the number of years since passage of the simulated reform. For example, a reform with (20) means that the benefit reduction began 20 years ago. Descriptions of these reform proposals are provided in the Background Section. Table 4 provides more specific details about the effects of each reform on the Trust Fund balance.

Table 3: Percentage of Aged Units with Incomes below the Poverty Level,
In the 60th Year After Reform Begins

	Number of People (Millions)	Poverty Rate	100% of Trust Fund Gap			73 - 75% of Trust Fund Gap				Other Reforms		
			Benefit Cut	Price Indexing	COLA	Prog. Benefit Cut	Prog. Price Indexing	Prog. COLA	Standard COLA	Standard Price Indexing	COLA, Ages 62 - 75	COLA, Ages 62 - 85
All Aged Units	34.10	**9.9%**	13.7%	27.6%	16.4%	11.4%	22.2%	14.7%	14.3%	32.3%	12.7%	13.9%
By Age												
Ages 65-74	17.60	**8.2%**	11.3%	22.2%	10.6%	9.2%	16.8%	9.4%	9.8%	26.0%	9.8%	9.8%
Ages 75-84	12.90	**10.8%**	14.9%	31.3%	19.2%	12.5%	25.3%	17.2%	16.4%	36.7%	14.5%	16.4%
Ages 85 +	3.59	**14.7%**	21.0%	40.9%	34.8%	17.9%	37.6%	31.8%	28.2%	48.1%	20.5%	25.2%
By Gender, Marital Status, and Age												
Married Couples, 65-74	12.00	**2.8%**	4.1%	11.9%	3.9%	2.8%	4.1%	2.8%	3.5%	15.5%	3.5%	3.5%
Unmarried Males, 65-74	1.66	**17.3%**	22.6%	40.8%	21.8%	20.1%	41.5%	20.7%	20.1%	44.6%	20.1%	20.1%
Unmarried Females, 65-74	3.93	**20.7%**	28.4%	45.9%	26.2%	24.2%	45.2%	24.8%	24.7%	49.9%	24.7%	24.7%
Married Couples, 75-84	6.92	**4.2%**	5.6%	16.8%	7.3%	4.2%	5.2%	4.3%	5.9%	21.9%	5.5%	5.9%
Unmarried Males, 75-84	1.40	**11.3%**	17.3%	37.1%	25.5%	15.2%	36.4%	25.0%	21.3%	41.3%	16.3%	21.3%
Unmarried Females, 75-84	4.60	**20.8%**	28.2%	51.4%	35.1%	24.2%	52.2%	34.3%	30.8%	57.5%	27.6%	30.8%
Married Couples, 85 +	1.24	**3.4%**	5.3%	15.7%	9.6%	3.4%	4.5%	3.4%	6.0%	26.2%	5.3%	5.6%
Unmarried Males, 85 +	0.49	**11.8%**	18.4%	43.5%	33.0%	14.6%	41.2%	29.7%	26.8%	47.3%	18.2%	24.9%
Unmarried Females, 85 +	1.86	**22.9%**	32.0%	56.9%	52.1%	28.4%	58.6%	51.2%	43.3%	62.9%	31.2%	38.3%

Note: Table includes the aged units who receive Social Security benefits. Table 4 provides more specific details about the effects of each reform on the Trust Fund balance.

Table 4: The Impact of the Benefit Reduction Plans on the Poverty Gap and the Trust Fund Balance,
In the 60th Year After Reform Begins

	Value of Poverty Gap ($billion)	Marginal Addition to Poverty Gap ($billion)	Total Value of Benefits Paid to Aged Units ($billion)	Savings from Present Law ($billion)	Portion of Trust Fund Gap Closed	Ratio of Trust Fund Savings to Increased Poverty Gap
Present Law	$7.7	---	$324	$0	0.0%	---
Benefit Cut	$12.1	$4.5	$282	$42	100.0%	9.38
Price Indexing (100%)	$45.2	$37.5	$195	$129	97.8%	3.44
COLA (100%)	$16.8	$9.2	$273	$51	98.0%	5.56
Prog. Benefit Cut	$8.4	$0.7	$293	$31	73.8%	44.48
Prog. Price Indexing	$28.4	$20.7	$225	$99	75.1%	4.78
COLA Progressive	$12.4	$4.7	$285	$39	74.9%	8.26
Standard COLA	$13.1	$5.4	$286	$38	73.0%	7.04
Standard P. Indexing	$64.5	$56.8	$171	$153	116.0%	2.69
COLA, Ages 62 - 75	$10.8	$3.1	$294	$30	57.6%	9.58
COLA, Ages 62 - 85	$12.4	$4.8	$288	$36	69.2%	7.55

Note: Table includes the aged units who receive Social Security benefits. The different intergenerational implications of the reform plans mean that the Trust Fund savings are not directly comparable between the three broad types of reform (benefit cut, price indexing, COLA reduction). For example, price indexing has to save much more for the Trust Fund in the 60th year to have the same effect on the 75 year actuarial balance. More details about this are provided within the paper.