United States General Accounting Office

GAO

Report to the Ranking Member, Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, Committee on Appropriations, U.S. Senate

January 2001

SOCIAL SECURITY REFORM

Potential Effects on SSA's Disability Programs and Beneficiaries

GAO

Accountability * Integrity * Reliability

GAO-01-35

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Abbreviations

AIME	average indexed monthly earnings
COLA	cost-of-living adjustment
CPI	Consumer Price Index
DI	Disability Insurance
IA	individual account
NRA	normal retirement age
OASI	Old-Age and Survivor Insurance
PIA	primary insurance amount
SSA	Social Security Administration
SSI	Supplemental Security Income

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Accountability * Integrity * Reliability

United States General Accounting Office
Washington, D.C. 20548

January 24, 2001

The Honorable Tom Harkin
Ranking Member, Subcommittee on Labor,
Health and Human Services, Education,
and Related Agencies
Committee on Appropriations
United States Senate

Dear Senator Harkin:

Although much has been written about the effects of reform on the solvency of the Social Security program and on the benefits of retired workers, little attention has been directed to the effects of reform proposals on the Social Security Disability Insurance (DI) program or on the benefits that disabled beneficiaries and their families receive. Yet, in 1999, disabled beneficiaries and their families accounted for about 17 percent of all Social Security beneficiaries. These 7.4 million beneficiaries included disabled workers, families of disabled workers, and adult disabled children who were dependents of disabled, deceased, or retired workers.

You asked us to assess the potential effects of Social Security reform options on the solvency of the DI trust fund and the benefits disabled beneficiaries receive. In this report, we analyze both the potential effects of comprehensive Social Security reform proposals on the solvency of the DI trust fund and on the benefits disabled beneficiaries receive and the likely contribution that individual proposal provisions would make to these effects. You also asked us to examine the potential implications of Social Security reform for the Supplemental Security Income (SSI) program, which provides significant income support for low-income individuals with disabilities.

In response to your request, we analyzed the five Social Security reform proposals that we have previously reviewed.[1] These proposals include that of President Clinton as well as four of the proposals discussed in the 106th Congress: Archer-Shaw, Kolbe-Stenholm (H.R. 1793), Gregg-Kerrey-Breaux-Grassley (S. 1383), and Kasich. In these proposals, we identified 11 major

[1]*Social Security: Evaluating Reform Proposals* (GAO/AIMD/HEHS-00-29, Nov. 4, 1999). With respect to the President's proposal, we evaluated the version that was presented in the President's fiscal year 2001 budget on Feb. 7, 2000.

types of provisions and examined their effect on trust fund solvency and DI benefits.[2] We compared the benefits under these reform proposals with benefits under two alternative current-program scenarios that also achieve trust fund solvency: one that would maintain current benefits while increasing payroll taxes and another that would maintain current payroll tax rates while reducing benefits.

To analyze the effects of Social Security reform on DI trust fund solvency, we used estimates produced by the Social Security Administration's (SSA) Office of the Chief Actuary as well as our estimates using the SSASIM policy simulation model.[3] We also used the SSASIM model to examine the effects of these reforms on benefits that disabled beneficiaries receive. Our estimates using the SSASIM model are based on the intermediate assumptions reported in the 1999 Social Security Trustees Report because the Office of the Chief Actuary has scored only a few of the proposals we studied using the assumptions in the 2000 Social Security Trustees Report.

We analyzed the effects of Social Security reform on the Old-Age and Survivors Insurance (OASI) program as well as on the DI program because the solvency estimates are generally available for the combined programs only and because many disabled beneficiaries receive benefits from the OASI program. For example, more than 90 percent of the adult disabled children who receive Social Security benefits are dependents of deceased or retired workers and therefore receive OASI benefits. Disabled workers who have reached retirement age and their dependents receive benefits from the OASI program because DI benefits are automatically converted to retirement insurance benefits at the normal retirement age (NRA).

Because little information is available about the earnings levels and work history of DI beneficiaries, we assumed the best possible case for disabled beneficiaries. Such an assumption would generally provide an upper limit to the benefits that most disabled beneficiaries could expect to receive under the Social Security reform proposals. We assumed they work full-time until they receive disability benefits. We also assumed they received

[2]See app. I for information on these provisions.

[3]The SSASIM model, developed by the Policy Simulation Group, Inc., can simulate a variety of policy reforms to the Social Security program from incremental changes in the Old-Age and Survivors Insurance (OASI) and DI programs to broader structural reforms that would introduce an individual account (IA) component to the Social Security system. Additional information on the model and the assumptions we made in using it are in app. II.

earnings equal to either the average economywide earnings of men or 45 percent of the average earnings of men. Following the approach taken in the Report of the 1994-96 Advisory Council on Social Security, we chose a low administrative cost for the individual account (IA), implicitly assuming a centralized system of recordkeeping and a limited number of investment options. We assumed that individuals self-annuitized by drawing down the balance in the IAs through periodic withdrawals. As a result, the benefit income for the disabled beneficiaries whom we studied in this report will clearly be greater than that for disabled beneficiaries with intermittent or less than full-time employment who pay annuitization costs and relatively higher administrative costs on their IAs.

We conducted our work between September 1999 and November 2000 in accordance with generally accepted government auditing standards.

Results in Brief

According to estimates of SSA's Office of the Chief Actuary, the Social Security reform proposals that we examined would improve the solvency of the combined DI and OASI trust funds. Table 1 shows that the extent of the improvement varies across proposals. Most of the individual proposal provisions, such as those that call for general revenue transfers or benefit reductions, would have a positive effect on the solvency of the DI trust fund by increasing revenues and decreasing costs, respectively. Only a few provisions, such as those redirecting payroll taxes to IAs, which would reduce trust fund revenues, and those establishing a minimum benefit, which would increase some benefits and therefore costs, would have a negative effect on the DI trust fund.

With regard to benefits, our analysis shows that three proposals—Kasich, Kolbe-Stenholm, and Gregg-Kerrey-Breaux-Grassley—would result in reduced benefit income for most of the disabled beneficiaries with the selected characteristics that we simulated when compared with a solvency scenario that maintains current-law benefits by increasing payroll taxes or other sources of revenue.[4] (See table 1.) However, most disabled beneficiaries would receive greater benefit income under any of these three proposals than under a scenario that would achieve solvency and maintain current payroll tax rates by reducing benefits.[5] These proposals distinguish between the insurance benefits received from Social Security and the income that would be received from the IAs created under these proposals.[6] The reform proposals would reduce insurance benefits while creating IAs, with the expectation that the income from an IA would largely offset reductions in the insurance benefits. In our estimates, the income from the IA was not sufficient to compensate for the decline in the insurance benefits that disabled beneficiaries would receive. This is especially true for the Kasich and the Gregg-Kerrey-Breaux-Grassley proposals, which would further reduce the insurance benefit in response to the potential income from the IA. Our estimates also indicate that the longer a beneficiary works before becoming disabled, the greater the income from the IA will be.

[4]President Clinton's proposal maintains current-law benefits and does not include an IA provision. The Archer-Shaw proposal differs from the other proposals that contain an IA provision in that it guarantees that individuals will receive at least the amount of their current-law benefits.

[5]Following the approach used in the Report of the 1994-96 Advisory Council on Social Security, we adjusted the benefit formula so that only the benefits at the higher levels are reduced while the benefits at the lowest levels are unaffected. For additional information, see app. II.

[6]In this report, we look at two kinds of benefits: the traditional benefit provided by Social Security, which we refer to as the insurance benefit, and the income from the IA. We refer to the sum of these two benefits as benefit income. The income from the IAs depends on assumptions as to rate of return, administrative costs, and so on, which we describe later in this letter and in app. II.

Table 1: Effect of Reform Proposals on Trust Fund Solvency and Benefit Income

Proposal	OASDI trust fund solvency[a]	Benefit income: average earner who first receives DI at age 45[b]	
		Maintain benefits	Maintain tax rates
Current law	–2.07	[c]	[c]
President Clinton's	–0.80	[c]	[c]
Kasich	+0.00[d]	–15.6	+28.1
Kolbe-Stenholm	+0.07	–17.7	+25.0
Archer-Shaw	+0.09	[c]	[c]
Gregg-Kerrey-Breaux-Grassley	+0.28	– 4.2	+45.3

[a]This column represents actuarial balance as a percentage of taxable payroll. OASDI, Old-Age, Survivors, and Disability Insurance, refers to the combined OASI and DI programs.

[b]These columns represent percentage change.

[c]Proposal does not affect the level and structure of benefits.

[d]Assumes everyone opts for the IA, which is voluntary in this proposal. If no one opts for the IA, the actuarial balance is +0.24

Source: Estimates are based on 1999 Social Security Trustees Report.

The Social Security reform proposals we reviewed could increase costs for the SSI program. Individuals receiving DI or OASI benefits who have low levels of income and assets could supplement their income with benefits from the SSI program. The SSI program could be affected in two different ways. First, for beneficiaries who already receive SSI benefits, a reduction in Social Security benefits resulting from reforms could lead to an increase in SSI benefits (up to the legislated maximum) and thus to an increase in costs for the SSI program.[7] Second, a reduction in DI and OASI benefits as a result of reform would likely make some individuals not currently receiving SSI newly eligible for its benefits.

In commenting on this report, SSA noted that we addressed an important topic that has until now received little attention. The agency specifically highlighted two points in our report as being important for policy makers

[7]If the individual account accumulations are treated as assets with regard to determining SSI eligibility, some low-income individuals may lose SSI benefits. Whether this loss of benefits in the case of disabled beneficiaries would occur when they first received benefits or when they reached retirement age depends upon the proposal.

considering changes to Social Security: IAs might not fully offset Social Security insurance benefit reductions for some beneficiaries, and SSI benefits might increase as they compensate for the decline in DI benefits resulting from Social Security reform. However, the agency had some concerns about our use of a "best case" scenario to estimate the effects of policy options and about the assumptions underlying this scenario. SSA also expressed concern regarding our focus on lifetime benefits, a measure that it believes does not adequately reflect differences in living standards across policy options at specific points in time. Finally, it suggested that we include a measure reporting on money's worth or internal rates of return in our comparison of costs and benefits of Social Security reform proposals.

Our use of a "best case" scenario demonstrated that even under the best of circumstances, Social Security reform proposals could reduce benefits to DI beneficiaries—people who would find it more difficult than most nondisabled retirees to replace lost benefits with other sources of income such as earnings. We did not examine "worse case" scenarios because the "best case" scenario demonstrates that most DI beneficiaries would be adversely affected by the reform proposals we analyzed. With respect to the agency's concern with our focus on lifetime benefits, we acknowledge that we do not address the issue of variations across plans in living standards before retirement age resulting from differences in the accessibility of income from the IAs. As for the inclusion of money's worth or internal rate of return measures, we agree that such analysis would be useful, but these measures are beyond the scope of this report.

Background

Working-age adults with disabilities may obtain cash benefits from a number of private and public programs.[8] After the onset of a disabling condition, workers needing long-term cash benefits may receive assistance from workers' compensation, private disability insurance, or DI. However, in 1996, only 26 percent of private sector employees had long-term disability coverage under employer-sponsored private insurance plans.[9] Thus, the DI program is an important provider of monthly benefits to workers who are no longer able to work because of a severe long-term disability.

[8] *SSA Disability: Return-to-Work Strategies From Other Systems May Improve Federal Programs* (GAO/HEHS-96-133, July 11, 1996).

[9] *Private Disability Insurance* (GAO/HEHS-00-18R, Nov. 5, 1999).

Most Social Security disabled beneficiaries, including disabled workers and their dependents, receive benefits from the DI program. However, adult disabled children who are dependents of deceased or retired workers, and disabled workers who have reached retirement age and their dependents, receive monthly benefits from the OASI program.[10] In 1999, about 6.5 million beneficiaries received DI cash benefits totaling about $51.3 billion, while about 38.0 million beneficiaries received OASI cash benefits totaling about $334.4 billion.[11]

Benefits Available Under Current Law

Benefits for both OASI and DI beneficiaries are based on the application of the Social Security benefit formula to the worker's average monthly lifetime earnings. The resulting monthly benefit is the amount payable to a worker who becomes entitled to disability benefits or retires at the NRA. Because monthly benefits for DI and OASI beneficiaries are based on the same benefit formula, any change in this formula, as has been proposed in some Social Security reform plans, could affect benefits disabled workers as well as retired workers receive. Both DI and OASI monthly benefits will also be affected by other proposed Social Security reform changes, such as decreases in the cost-of-living adjustment (COLA). However, only OASI monthly benefits are affected by proposed changes in the retirement age.[12]

Under current law, the age at which an individual is first eligible to receive full retirement benefits, or NRA, is gradually increasing from 65 to 66 for those who turn 62 in 2005 and to 67 for those who turn 62 in 2022. Benefits retired workers take before NRA are subject to an actuarial reduction. Benefits taken by workers who postpone retirement and work between NRA and age 70 are increased through a delayed retirement credit for each month retirement is delayed. The benefit formula is weighted in favor of

[10]Disability insurance benefits are automatically converted to retirement insurance benefits at the NRA.

[11]The 6.5 million beneficiaries receiving DI cash benefits do not include adult disabled children who are dependents of deceased or retired workers and, therefore, receive benefits from the OASI program. Consequently, this number differs from the 7.4 million disabled beneficiaries, reported earlier, who do include adult disabled children who are dependents of deceased or retired workers. The 38.0 million OASI beneficiaries include adult disabled children who are dependents of deceased or retired workers and disabled workers whose benefits have been converted to retirement insurance benefits.

[12]The decrease in OASI benefits as a result of the increase in the retirement age may prompt older workers to apply to the DI program in order to receive what would be relatively greater disability benefits.

workers with lower earnings, so that benefits replace a larger proportion of their earnings. Benefits are adjusted each year, based on increases in the Consumer Price Index (CPI) in order to account for inflation.

Auxiliary benefits are paid to eligible dependents and are 50 percent of the Social Security benefit that the disabled or retired worker receives, subject to a maximum family limit on benefits. Upon the death of an insured worker, the eligible spouse receives 100 percent of the worker's benefit (subject to reduction for age) and the eligible surviving child receives 75 percent of the benefit.[13]

Individuals who receive low levels of DI or OASI benefits can supplement them with benefits from SSI.[14] The SSI program, which was authorized in 1972 under title XVI of the Social Security Act, is funded through general revenues and provides monthly benefits to aged, blind, and disabled individuals who have income and resources below specified thresholds. The DI and SSI programs use the same criteria and procedures for determining disability. However, unlike DI beneficiaries, SSI recipients do not need to have a work history to qualify for benefits. The maximum federal SSI monthly benefit in 1999 was $500 for an individual. This monthly benefit level is reduced, depending on a recipient's income and other sources of support, such as Social Security benefits. In 1999, 36 percent of SSI recipients also received Social Security benefits from either OASI or DI. The average federal monthly benefit in 1999 was $249 for the aged, $351 for the blind, and $364 for the disabled. In addition to the federal SSI benefits, some states provide supplemental benefits that are intended to reflect regional differences in living costs.

Social Security is financed primarily on a pay-as-you-go basis, which means that the Social Security payroll taxes that current workers pay are used to pay for current benefits. In 1999, there were approximately 3.4 workers for every beneficiary, but this number is projected to fall to 2.1 by 2030.

[13]Spouses may also be eligible for benefits based on their own work records. In these cases, spouses receive their own worker benefits plus the difference between their spouse benefit and their own worker benefit. Children younger than 18 are eligible for insurance benefits. In addition, children who are full-time elementary or secondary students might receive insurance benefits until age 19. Children older than 18 might receive benefits if they are suffering a disability that began before age 22.

[14]An individual might also supplement DI benefits with benefits from private insurance. Benefits from private insurance might come from long-term disability insurance or from pension plans with disability pension features.

Because of this change in the ratio of workers to beneficiaries, and other factors, the Social Security trust funds will have a projected financial shortfall or funding gap of approximately $3 trillion over the next 75 years. According to estimates in the 2000 Trustees Report, the OASI trust fund is projected to have sufficient funds to fully finance benefits until 2039, while the DI trust fund is projected to have sufficient funds to fully finance benefits until 2023. After the trust funds are exhausted—that is, after 2039 for the OASI trust fund and 2023 for the DI trust fund—the annual tax revenues of the trust funds are expected to be sufficient to cover only about 70 percent of annual expenditures.[15]

Social Security Reform Proposals Address Solvency by Affecting the Level and Structure of Benefits

In order to address the solvency of the trust funds, a number of Social Security reforms have been proposed. We assessed five of these proposals, some of which maintain the level of current law benefits and some of which reduce and restructure these benefits. Table 6 in appendix I lists the provisions in each proposal.

Two of the proposals we studied, President Clinton's proposal and the Archer-Shaw proposal, maintain the current level and structure of benefits. (See table 2.) Three of the reform proposals we studied—Kasich, Kolbe-Stenholm, and Gregg-Kerrey-Breaux-Grassley—both reduce and restructure current benefits. (See table 3.)

[15]The OASI and DI trust funds, which together make up Social Security, are set up as two separate accounts in the U.S. Treasury. However, historically, there has been little real significance to this division with respect to the financing of the program since, over the years, there have been tax rate reallocations and loans between the two trust funds. The assets in the combined OASDI trust funds will be exhausted in 2037, according to projections by SSA's Office of the Chief Actuary as reported in the 2000 Trustees Report.

Table 2: Proposals That Maintain the Current Level and Structure of Benefits

Proposal	Description
President Clinton's[a]	• Maintains current-law benefits for current and future retirees and disability insurance beneficiaries by requiring additional general fund transfers to OASDI trust funds in each fiscal year beginning in 2011 through 2050. In addition, a portion of these transfers would be invested in equities.
Archer-Shaw	• Maintains current law benefits for current and future beneficiaries. Requires mandatory "add-on" individual accounts financed through a refundable tax credit paid from the general fund. The contribution to the IA equals 2 percent of taxable payroll. Beginning at retirement or disability, the account balance is gradually returned to the OASDI trust funds to finance benefits. • Actual retirement or disability income could be higher, depending on the account balance. The benefit amount paid each month is either the current law amount or the payout based on the annuitized account balance, whichever is higher.

[a]The version of President Clinton's proposal that was presented in his fiscal year 2001 budget on Feb. 7, 2000.

Table 3: Proposals That Affect the Current Level and Structure of Benefits

Proposal	Description
Kasich[a]	• Reduces current law benefits by indexing initial benefits to prices rather than average wages, as under current law.[b] • Restructures benefits by offering voluntary individual "carve-out" accounts with contributions financed by redirection of between 1 and 3.5 percent of individuals' taxable earnings, with a higher percentage available to lower-income earners. For workers choosing the account option, an additional benefit reduction is made at retirement to offset contributions to their accounts.[c]
Gregg-Kerrey-Breaux-Grassley	• Reduces current law benefits by reducing the COLA, increasing the NRA to 67 sooner than under current law, and increasing the benefit computation period.[d] • Affects current-law benefits of both retired and disabled workers by changing the primary insurance amount (PIA) formula to increase the progressivity of this formula.[e] Additional reductions in PIA formula factors apply only to retired worker benefits. • Restructures benefits by creating a mandatory individual "carve-out" account financed by redirecting 2 percent of individuals' taxable earnings.[f] • At retirement age, insurance benefits for both retired and disabled workers are reduced or offset by an amount equal to the contributions plus interest that would have accrued had these contributions been invested at the interest rate earned by the OASDI trust funds.[g] • Provides a minimum benefit for newly eligible aged surviving spouses of retired workers.
Kolbe-Stenholm	• Reduces current-law benefits by reducing the COLA, increasing the NRA to 67 sooner than under current law and indexing it to changes in average life expectancy, and increasing the benefit computation period.[h] • Reduces benefits for both retired and disabled workers by modifying the PIA formula. Additional reductions in benefits because of changes in longevity apply only to retired workers. Requires a report to the Congress in 2001 that may recommend similar reductions in DI benefits. Formula changes may increase the progressivity of the benefit structure. • Restructures benefits by creating a mandatory individual "carve-out" account financed by redirection of 2 percent of individuals' taxable earnings.[i] • Provides a minimum benefit for newly eligible retired and disabled beneficiaries. • Insurance benefits are not reduced or offset by individual account balances.[j]

[a]The Kasich proposal does not explicitly refer to DI beneficiaries.

[b]Because over time increases in wages have been, and are expected to continue to be, greater than increases in prices, indexing the benefit formula to prices rather than to wages would reduce initial benefits. Under current law, once the beneficiary receives the benefit, further increases in benefits are based on changes in the CPI. These increases in benefits are affected by changes in the COLA.

[c]Disabled workers who choose the account option have the additional benefit reduction when they receive DI benefits, according to Congressman Kasich's staff.

[d]Current and near retirees are excluded from the reduction in the COLA. NRA increases have no effect on benefit levels for those who receive disability benefits up to the age they are eligible for retirement benefits. Disabled beneficiaries are exempt from increases in the benefit computation period.

[e]The PIA is the monthly amount payable to a retired worker who begins to receive benefits on reaching the NRA or to a disabled worker who has never received a retirement benefit reduced for age.

[f]The proposal also allows additional voluntary contributions up to $2,000 annually. Lower-income and middle-income earners are also eligible for a partial match. These features were not included in our analysis.

[g]KidSave accounts are established for each child at birth with government contributions financed from the general fund; these continue until the child is 5 years old. Half of the KidSave contributions are included in calculating the offset when the individual with the KidSave account retires. This feature is

not included in our analysis because the KidSave accounts begin with the cohort born in 2000, whereas we analyze the cohorts born in 1986 and earlier.

[h]NRA increases have no effect on benefit levels for persons who receive disability benefits up to the age when they are eligible for retirement benefits. Disabled beneficiaries are exempt from increases in the benefit computation period.

[i]The proposal also allows additional voluntary contributions up to $2,000 annually. Lower-income earners are also eligible for a partial government match and may use the earned income tax credit to contribute. These features were not included in our analysis.

[j]The worker may purchase an annuity or request a monthly pay-out. If the monthly pay-out plus Social Security benefits guarantees a lifetime income equal to the poverty level, then the balance in excess of this requirement may be withdrawn.

The proposals we studied vary in the degree to which they explicitly refer to disabled beneficiaries. President Clinton's proposal refers to maintaining current-law benefits for both retired and disabled workers. The Archer-Shaw proposal implicitly refers to both disabled and retired workers when it states that beneficiaries will be guaranteed at least current-law benefits. However, it explicitly refers to disabled workers when it discusses distributions from the IAs. Workers can receive distributions from their IAs when they become entitled to either DI or OASI benefits.

The Kasich proposal does not explicitly refer to disabled beneficiaries when discussing changes in benefits or the establishment of IAs, although disability benefits are affected by the provisions in the Kasich proposal. Rather, it emphasizes that the provisions described will not affect the benefits of retired workers or those near retirement. The discussion of the expected returns to the IAs clearly refers only to retired workers, with their longer work history.

Most of the provisions in the Gregg-Kerrey-Breaux-Grassley and Kolbe-Stenholm proposals explicitly refer to disabled or retired workers. Under both proposals, the benefits of disabled workers are affected by one reduction in the PIA formula but are exempted from a second reduction. Benefits of both disabled and retired workers are affected by reductions in the COLA. However, the provision in both proposals that increases the benefit computation period amends a clause in the Social Security Act that refers only to retired workers. The provision increasing the retirement age affects only the benefits of retired workers. Under both proposals, the restrictions on IA distributions refer to receipt either at retirement age or at the attainment of a particular level of funds in the IA. Under the Gregg-Kerrey-Breaux-Grassley proposal, the insurance benefit is reduced by an offset related to the amount of contributions to the IA. DI beneficiaries are exempt from this adjustment to the insurance benefit when benefits are first received. However, at retirement age, when they are able to gain

access to the income from their IAs, insurance benefits are reduced by the appropriate offset.

Social Security Reform Is Likely to Improve DI Trust Fund Solvency

Estimates by SSA's Office of the Chief Actuary indicate that all the proposals would improve the solvency of the combined DI and OASI trust funds, with the extent of the improvement varying across proposals. In addition, most of the specific provisions in the proposals, such as transfers from general funds and reductions in benefit levels, would have a positive effect on the solvency of the DI trust fund. However, a provision such as the increase in the retirement age would have a negative effect on the DI trust fund while at the same time improving the OASI trust fund balance.

The Reform Proposals Differ in Their Effect on Solvency

The reform proposals we studied had a range of effects on the trust funds' solvency as measured by the actuarial balance. The actuarial balance as calculated by the Office of the Chief Actuary is the difference between the present value of the Social Security program's revenues and costs over a 75-year period and is expressed as a percentage of taxable payroll.[16] If revenues exceed costs, the actuarial balance is positive; if costs exceed revenues, the actuarial balance is negative, indicating a deficit. In 1999, under current law, the Social Security program faced an actuarial deficit equal to 2.07 percent of taxable payroll.[17] This figure represents the amount of the payroll tax rate increase in 1999 that would establish actuarial balance in the Social Security trust funds over the subsequent 75 years. In other words, increasing the payroll tax rate from the current 12.4 percent to 14.47 percent of payroll would establish actuarial balance in the trust funds.

The Office of the Chief Actuary provides annual estimates of the actuarial balance for the combined OASI and DI trust funds under current law and, when requested by the Congress or the executive branch, estimates of the

[16]The Social Security program's revenues include the sum of the trust fund balance at the beginning of the period plus the total income during the period. The costs include the outgo during the period plus the targeted trust fund level at the end of the period equal to the following year's outgo.

[17]This is the actuarial deficit as presented in the 1999 Trustees Report, based on the intermediate cost assumptions. We used it because the Office of the Chief Actuary scored the proposals we analyzed using the assumptions of the 1999 Trustees Report. According to the 2000 Trustees Report, the actuarial deficit is 1.89.

actuarial balance under reform proposals.[18] The estimates of the actuarial balance under current law and each of the reform proposals we studied are presented in table 4. The actuaries estimated that the trust funds' deficit of 2.07 percent of taxable payroll under current law would either be sharply reduced or become a surplus for the combined trust funds under the reform proposals we studied. A surplus in the combined trust funds could mean a surplus in one trust fund and a deficit in the other. However, a reallocation of payroll tax rates between the two funds would be expected in this case.

Table 4: Actuarial Balance of Social Security Trust Funds Under Current Law and Selected Reform Proposals

	OASI and DI trust funds
Current law	–2.07%
President's proposal	–0.80
Kasich	+0.00/+0.24[a]
Kolbe-Stenholm	+0.07
Archer-Shaw	+0.09[b]
Gregg-Kerrey-Breaux-Grassley	+0.28

[a]Under the Kasich proposal, the IA is voluntary. If everyone opts for the IA, the actuarial balance is 0. If no one opts for the IA, the actuarial balance is 0.24.

[b]Under the Archer-Shaw proposal, the payroll tax rate would be reduced from 12.4 to 9.9 in 2050 and 8.9 in 2060.

Source: Office of the Chief Actuary, memorandums to the chief actuary on the effects of selected Social Security reform proposals. Estimates are based on the 1999 Trustees Report.

The President's proposal would reduce the actuarial deficit but is not expected to eliminate it. This would be achieved through general fund transfers every year from 2011 to 2050 and by allowing some limited investment in equities, which have a higher rate of return than do the government bonds in which the trust funds have traditionally been

[18]The Office of the Chief Actuary does not necessarily provide estimates of the actuarial balance under the reform proposals separately for the DI and the OASI trust funds. For major solvency proposals, the OASDI program is generally considered on a combined basis, with the presumption of reallocation of the tax rates as needed.

invested.[19] Estimates for two other proposals result in a small surplus for the combined trust funds. The Kolbe-Stenholm proposal would generate its surplus through benefit cuts and general fund transfers.[20] In the Archer-Shaw proposal, general fund transfers would finance the contributions to the IAs that the proposal would establish. The proceeds from these accounts would be transferred to the trust funds when benefits are received. The proposal also calls for reducing payroll taxes in response to the additional trust fund revenue expected to accrue from the proceeds of these IAs.

The other proposals we examined would result in larger estimated actuarial surpluses for the combined trust funds. The Kasich proposal would accomplish this by reducing the initial level of insurance benefits and then further decreasing insurance benefits by a fixed percentage for each year of contribution to an IA, as well as by borrowing from the general fund. The Gregg-Kerrey-Breaux-Grassley proposal would achieve its surplus through a mix of benefit cuts and revenue transfers that would offset the loss of trust fund revenues resulting from the redirection of a portion of the payroll taxes to the IAs.

The reform proposals we studied differ in the magnitude of the stipulated transfers from general revenue. Transfers are smaller under the Kolbe-Stenholm and Gregg-Kerrey-Breaux-Grassley proposals, which contain a number of provisions to achieve solvency by changing benefits or revenues. Under the Kolbe-Stenholm proposal, general revenue transfers range from 0.03 percent of taxable payroll in 2000 to 0.80 percent of taxable payroll in 2060. General revenue transfers under the Gregg-Kerrey-Breaux-Grassley proposal range from 0.6 percent of taxable payroll in 2000 to 1.2 percent of taxable payroll in 2060. General revenue transfers are larger under the proposals with fewer alternative provisions for attaining solvency. Under the Kasich proposal, for example, the magnitude of the transfers ranges from 1.17 percent of taxable payroll in 2000 to 1.57 percent of taxable payroll around 2030.[21] Under the President's proposal, transfers range from a high of 2.41 percent of taxable payroll to a low of 0.52 percent

[19]The general fund means the accounts for receipts not earmarked by law for a specific purpose, the proceeds of general borrowing, and the expenditure of this money. Transfers between the general fund and the trust funds do not affect the surplus or deficit in the government's unified budget.

[20]These benefit cuts and revenue transfers would offset the loss of revenue to the trust funds that would result from the IAs.

of taxable payroll between 2011 and 2050. Finally, the Archer-Shaw proposal calls for a general revenue transfer equal to 2 percent of taxable payroll beginning in 2000.

Most, but Not All, Proposal Provisions Would Affect the DI Trust Fund Positively

Although most provisions in the proposals we examined potentially have a positive effect on the solvency of the DI trust fund, some provisions would have a negative effect. The President's proposal has two provisions—the transfer of funds from general revenue to the combined OASI and DI trust funds and the investment of a portion of these funds in equities. According to the Office of the Chief Actuary, both provisions would be expected to have a positive effect on the solvency of the DI trust fund. The Archer-Shaw proposal calls for a gradual transfer of the income from the IA balances, which are financed from general revenue, to the trust funds. In the case of disabled workers, the income from the IA balances would be transferred to the DI trust fund. This provision also would have a positive effect on the DI trust fund. The Kasich proposal contains three provisions that would have a positive effect on DI trust fund solvency: the indexing of benefits to prices rather than to wages, which reduces benefits; the reduction in benefits for individuals who opt to contribute a portion of their payroll tax to an IA; and the borrowing of funds from general revenue.[22] The loss of payroll tax revenue associated with individuals opting for IAs would increase the DI trust fund's deficit, and the general fund loans are designed to compensate for this.[23]

Both the Kolbe-Stenholm and the Gregg-Kerrey-Breaux-Grassley proposals contain multiple provisions that would affect DI trust fund solvency. Provisions that reduce the COLA and change the PIA formula so as to reduce benefits for disabled workers lower program costs and, therefore, improve the actuarial balance for the DI program. However, provisions such as the redirection of payroll taxes to IAs and the establishment of a minimum benefit have potentially a negative effect on the DI trust fund.

[21]Under the Kasich proposal, this general revenue transfer is considered a loan that will be paid off beginning in 2060.

[22]Although the Kasich proposal contains a provision describing a loan from general revenue, this loan is, in effect, very similar to a general revenue transfer. There would be no principal repayment or interest repayment on this loan until 60 years into the future.

[23]For the version of the Kasich proposal in which all individuals are assumed to opt for the IA, the version we analyze in this report, the Office of the Chief Actuary estimates only the effect of the entire proposal, not the effects of the individual provisions.

Redirecting payroll taxes reduces revenues to the trust fund while establishing a minimum benefit increases program costs for beneficiaries who were receiving benefits below the minimum. Even provisions that appear to be focused on retirement benefits can have an effect on the DI trust fund. For example, increasing the retirement age also increases the age at which disability insurance benefits are converted to retirement insurance benefits.[24] As a result, disability beneficiaries remain on the DI program longer, increasing costs to the DI program.[25]

We were able to use the SSASIM model to estimate the effects on solvency of certain of the provisions in the reform proposals. Our estimates using the model are based on the intermediate assumptions reported in the 1999 Social Security Trustees Report because the SSA's Office of the Chief Actuary used these assumptions to score the Social Security reform proposals we analyzed. Table 5 presents our results. Reductions in benefits have a positive effect on DI trust fund solvency. The increase in the retirement age results in the expected negative effect on solvency of the DI trust fund.

[24]Also, the resulting decrease in OASI benefit levels might cause some individuals to apply for DI benefits rather than waiting to retire and apply for OASI benefits, as they would otherwise do. If such an increase in applications were to result in an increase in DI beneficiaries, there could be an increase in costs to the DI program and a resulting increase in the actuarial deficit. According to recent estimates that SSA's Office of the Chief Actuary has made, this effect is relatively small.

[25]*Social Security Reform: Implications of Raising the Retirement Age* (GAO/HEHS-99-112, Aug. 27, 1999).

Table 5: Estimated Change in Current Law Actuarial Balance for Selected Reform Provisions

	OASI	DI
Actuarial balance		
Current law	–1.70%	–0.38%
Change in actuarial balance		
Reduction in COLA (Gregg-Kerrey-Breaux-Grassley)	+0.58	+0.06
Indexing benefits to prices (Kasich)	+1.90	+0.40
Raising retirement age (Gregg-Kerrey-Breaux-Grassley)	+0.18	–0.01

Source: GAO estimates using the SSASIM model. These estimates are consistent with independent estimates produced by the Office of the Chief Actuary.

Certain Reform Proposals Could Reduce Benefit Income for Disabled Beneficiaries

Two reform proposals we studied either maintain current-law benefits—the President's proposal—or guarantee that the beneficiary would receive at least the amount of current-law benefits—the Archer-Shaw proposal. The remaining three reform proposals—Kasich, Kolbe-Stenholm, and Gregg-Kerrey-Breaux-Grassley—would affect the levels of insurance benefits DI and OASI beneficiaries receive by changing the PIA formula for calculating initial benefits, reducing the COLA, raising the retirement age, or increasing the number of years of earnings used in computing benefits. How a beneficiary's total benefit income (reduced insurance benefits plus IA income) under these three proposals compares with the benefits received under a *maintain-benefits scenario* or a *maintain-tax-rates scenario* depends both on the extent of the decrease in the insurance benefits and on the amount of income received from the IA.

Our *maintain-benefits scenario* achieves solvency through increased payroll taxes while current-law benefits are maintained.[26] Our *maintain-tax-rates scenario* achieves solvency through benefit reductions while holding current payroll tax rates at today's levels. These two scenarios represent a range of benefit levels, with the maintenance of current-law benefits being

[26]The maintain-benefits scenario could also be funded through transfers from the general fund to the trust fund. For our analysis of the effect of Social Security reform on benefits, the funding source is not material. However, the source of funding—whether revenue transfers or payroll tax increases—will have implications for individuals' net earnings and for the economy as a whole.

at the upper end and the reduced benefits necessary for the maintenance of current payroll taxes being at the lower end.

We compared the benefit income received under each of the three proposals with that received under the maintain-benefits scenario and the maintain-tax-rates scenario for each of three beneficiary groups with the selected characteristics that we simulated: disabled workers, dependents of disabled workers (including spouses, children younger than 18, and adult disabled children), and adult disabled children who are dependents of retired workers.[27] We made the comparisons under each of several different assumptions about the year in which the worker was born, the worker's earnings level, and the worker's age when the worker first received DI benefits.[28] We chose the ages of initial benefit receipt to reflect SSA data indicating that individuals are receiving DI benefits at younger ages.[29] For the IAs in our analysis, we assumed that individuals would have portfolios with a smaller percentage invested in equities as they got older. We assumed the return on equities would be a constant, inflation-adjusted 7 percent per year, which reflects the long-term historical average return on equities.

Some Reform Proposals Would Reduce Benefit Income

According to our estimates, the disabled beneficiaries with the selected characteristics we simulated would, in general, receive higher benefits under the maintain-benefits scenario than they would under the Kasich, Kolbe-Stenholm, or Gregg-Kerrey-Breaux-Grassley proposals. Figures 1 and 2 present the results for workers as well as their dependents. The workers were born in 1986 and have low or average earnings and, in the

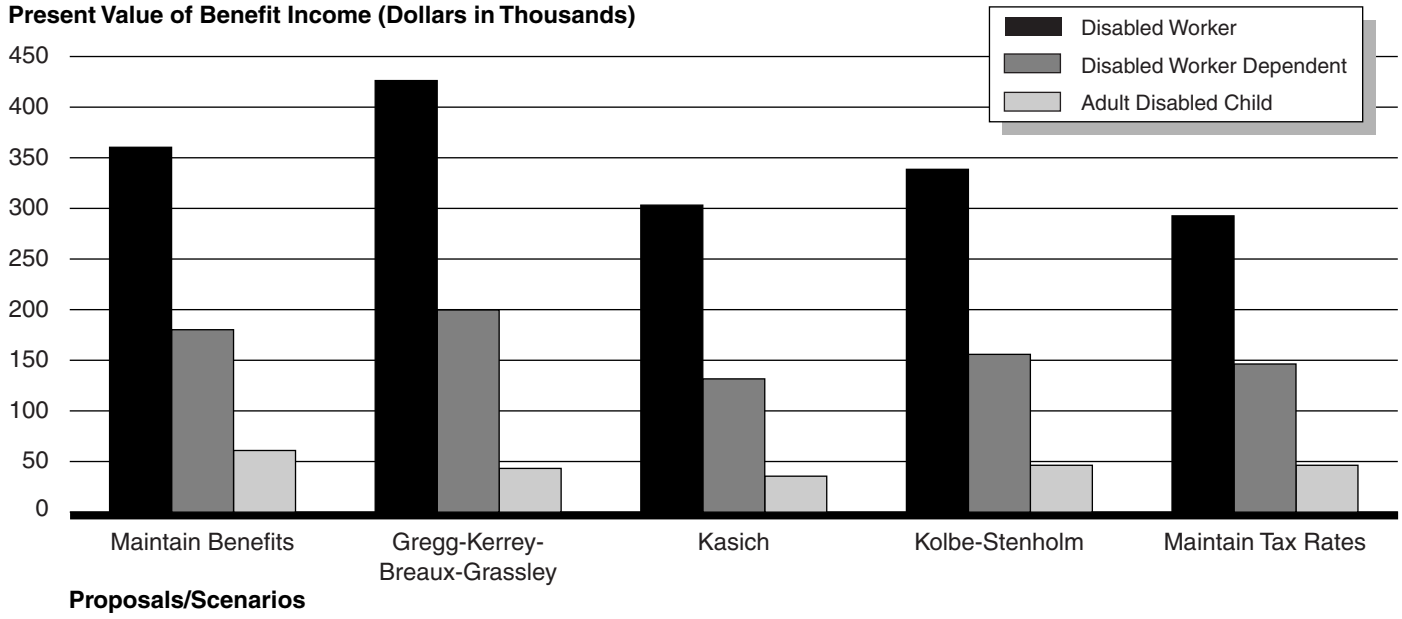
[27]In the following analysis, we use the present value of all lifetime benefit income received by the beneficiary to compare proposals and scenarios. The present value of benefit income is the equivalent value, at a point in time, of the entire stream of insurance benefits and IA income the individual receives in his or her lifetime. In our analysis, lifetime benefit income was discounted using the Treasury bond rate.

[28]See app. II for a discussion of these assumptions.

[29]We focus on individuals who begin receiving DI benefits at age 45 for the following reasons. The average age of new beneficiaries in 1999 was slightly younger than 50, compared with 30 years ago, when the average age was consistently above 50. Further, most terminations of benefits result from death or retirement. Thus, beneficiaries are staying in the program longer, and it is important to understand how Social Security reform affects these younger disabled workers. Additional information on the characteristics of DI beneficiaries is in app. II.

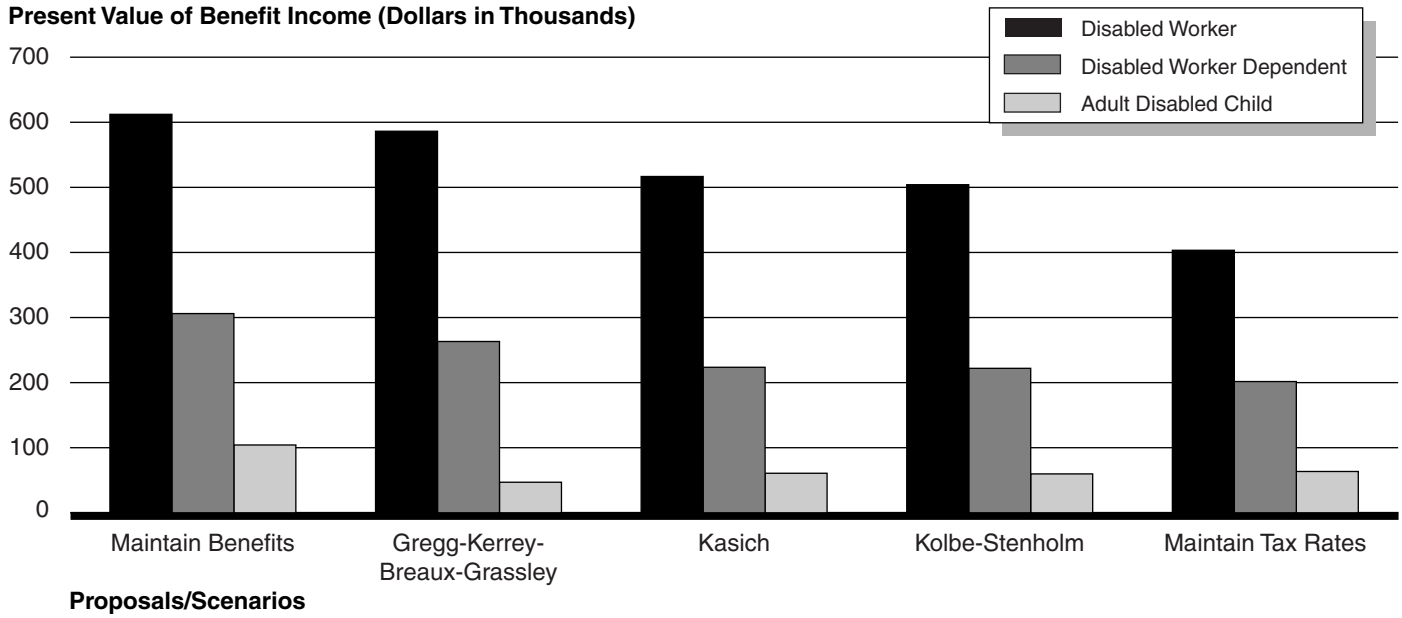
case of disabled workers, first receive DI benefits at the age of 45 and never work again.

Figure 1: Lifetime Benefit Income of Low-Earnings Worker and Dependents Under Selected Proposals and Alternative Solvency Scenarios



Note: Assumes 1986 birth cohort. Disabled worker receives DI first at age 45 and never works again. Adult disabled child benefit is based only on retired worker's benefit. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain-tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

Figure 2: Lifetime Benefit Income of Average-Earnings Worker and Dependents Under Selected Proposals and Alternative Solvency Scenarios



Note: Assumes 1986 birth cohort. Disabled worker receives DI first at age 45 and never works again. Adult disabled child benefit is based only on retired worker's benefit. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain-tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

These reform proposals would reduce insurance benefits while providing income from the IAs. Under these proposals, it is possible that the IA income might compensate for the decline in insurance benefits resulting from other provisions. However, this is less likely for disabled-worker beneficiaries than for retired-worker beneficiaries because disabled workers are likely to have shorter work histories and thus have smaller IA balances.[30] The reductions in benefits resulting from the decline in the COLA and the changes in the PIA formula are so great that the income from

[30]In addition, under the Gregg-Kerrey-Breaux-Grassley and Kolbe-Stenholm proposals, disabled workers would in most cases not be able to gain access to the income from their IA accounts until they reached retirement age. Therefore, depending on the age when they begin receiving DI benefits, they could be receiving reduced insurance benefits for a long time before receiving IA income. See table 7 in app. I and accompanying text for a fuller discussion of this issue.

the IA would be insufficient to completely compensate for this loss for the disabled-worker beneficiaries with the selected characteristics that we examined. Disabled workers with low earnings and their dependents would receive greater benefit income under the Gregg-Kerrey-Breaux-Grassley proposal than under the maintain-benefits solvency scenario. However, this higher benefit income is largely the result of changes in the PIA formula that increase the progressivity of the benefit structure.[31]

For the proposals we examined, we included the income from the IA only in the benefit income of the disabled or retired worker, not in that of the worker's dependents, since apportioning the IA income among family members is an individual matter and would vary by household.[32] Consequently, benefit income for dependents of disabled or retired workers would be reduced under the Gregg-Kerrey-Breaux-Grassley, Kasich, and Kolbe-Stenholm proposals not only because of reductions in the insurance benefit but also because it does not include income from individual accounts. In addition, the insurance benefits of dependents include only the amount received during the years in which the worker on whose earnings record the benefits are payable is receiving insurance benefits.

Contrary to the results of our comparisons with the maintain-benefits scenario, in our comparison of each of the three proposals with the maintain-tax-rates scenario, we found that in most cases the beneficiary would receive higher benefit income under the proposals than under the scenario. However, dependents of low-earner disabled workers under the Kasich proposal would receive benefit income that is less than under the maintain-tax-rates scenario. Also, adult disabled children of retired workers would receive somewhat lower benefit income under all three

[31]Adult disabled children who are dependents of retired workers also benefit from these changes in the PIA formula that increase the progressivity of the benefit structure. However, adult disabled children are also, as OASI beneficiaries, subject to another PIA provision in the proposal that decreases benefits.

[32]In this report, we do not consider the effect on benefits resulting from the application of the maximum family benefit. For further discussion of this issue, see app. II.

proposals in almost all cases.[33] These results are presented in figures 1 and 2.

The benefit income received under the three proposals would generally be greater than the benefits received under the maintain-tax-rates solvency scenario because the proposals have provisions for achieving solvency, such as general revenue transfers, in addition to reducing benefits. As a result, the insurance benefits would not have to decline as much as in the maintain-tax-rates scenarios. Further, the benefit income workers would receive under the proposals includes income from IAs.

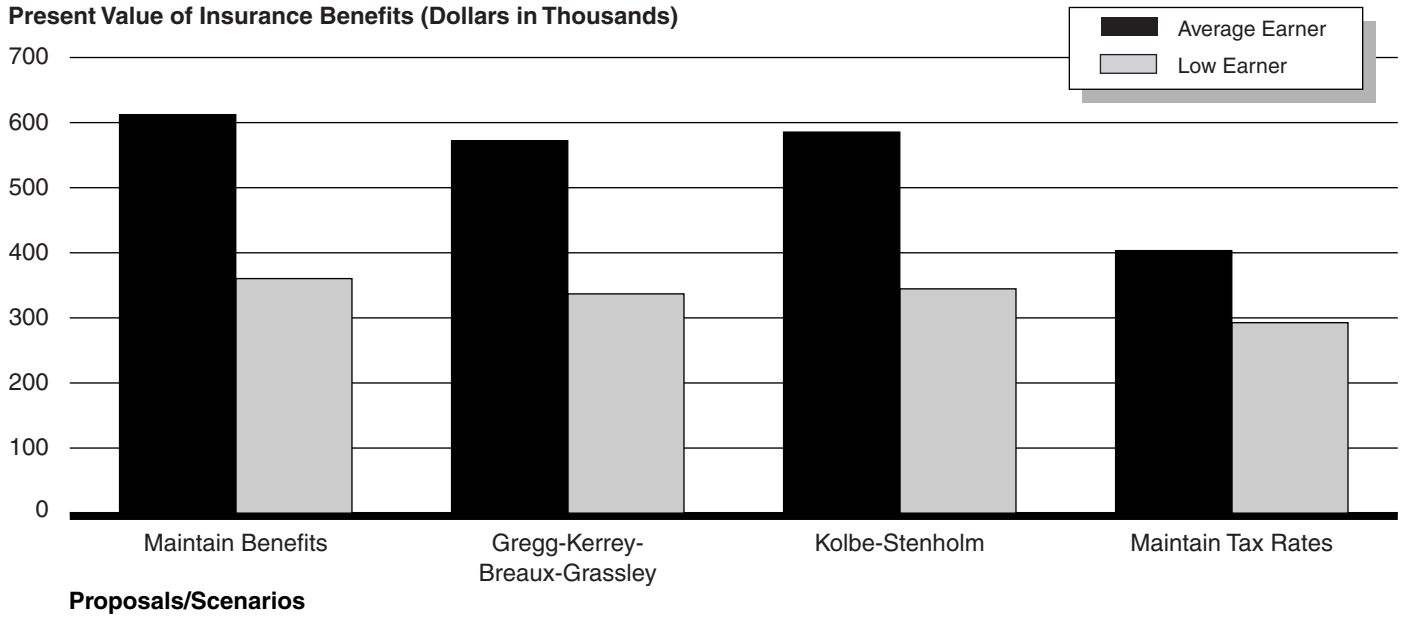
Most Proposal Provisions Would Reduce Insurance Benefits

We also examined individual provisions within the three proposals to assess their contribution to the change in the level of insurance benefits received. Reductions in the COLA instituted under the Gregg-Kerrey-Breaux-Grassley and Kolbe-Stenholm proposals would decrease insurance benefits relatively little compared with the maintain-benefits scenario for both disabled workers and their beneficiaries and for adult disabled children of retired workers.[34] Figure 3 presents the estimated effects of the decrease in the COLA on workers born in 1986 who first receive disability benefits at the age of 45 and never work again. The pattern of change in the present value of benefit income for dependents of disabled workers and for adult disabled children who are dependents of retired workers is similar to that shown in figure 3 for disabled workers.

[33]Under the Gregg-Kerrey-Breaux-Grassley and Kolbe-Stenholm proposals, the insurance benefits of adult disabled children are subject to the same reductions as those of disabled beneficiaries as well as to an additional PIA reduction from which disabled beneficiaries are exempt. The Kasich proposal adjusts the PIA formula so that benefits at all earnings levels are reduced. Under the maintain-tax-rates scenario, we adjust the PIA formula so that the benefits at the lowest levels are not reduced; only the benefits at the higher levels are reduced. Consequently, the benefits for lower earners would be smaller under the Kasich proposal than under the maintain-tax-rates scenario. For a more detailed description of how we adjusted the PIA formula, see app. II.

[34]The difference across proposals in the magnitude of the effect reflects the extent of reduction specified—0.33 percentage point in the Kolbe-Stenholm proposal and 0.5 percentage point in the Gregg-Kerrey-Breaux-Grassley proposal. The effect of a COLA reduction is compounded over time. The cumulative effect of a 0.5 percentage point reduction over a period of 30 years is 13.5 percent.

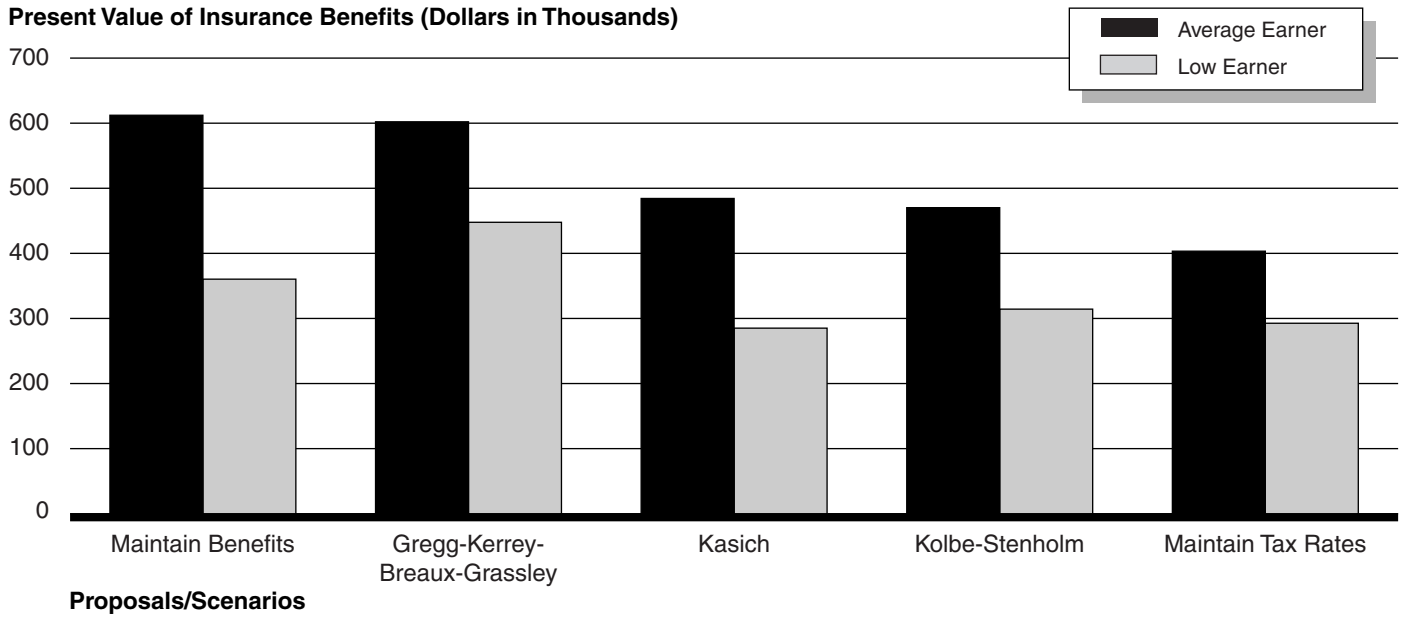
Figure 3: Comparison of COLA Changes to Lifetime Insurance Benefits of Disabled Workers With Alternative Solvency Scenarios



Note: Assumes disabled worker born in 1986, receives DI first at age 45, and never works again. The Kasich proposal is not included because it does not have a COLA provision. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

Changes in the PIA formula, however, generally result in large reductions in insurance benefits relative to the maintain-benefits scenario. The one exception is a provision of the Gregg-Kerrey-Breaux-Grassley proposal that would increase benefits for workers with certain levels of earnings, thereby increasing benefits for low earners and decreasing benefits by a relatively smaller amount for average earners. Figure 4 displays the effects on disabled workers of changes in the benefit calculation formula. The pattern in the present value of benefit income for the two other categories of beneficiaries is similar to that shown in figure 4 for disabled workers.

Figure 4: Comparison of PIA Changes to Lifetime Insurance Benefits of Disabled Workers With Alternative Solvency Scenarios

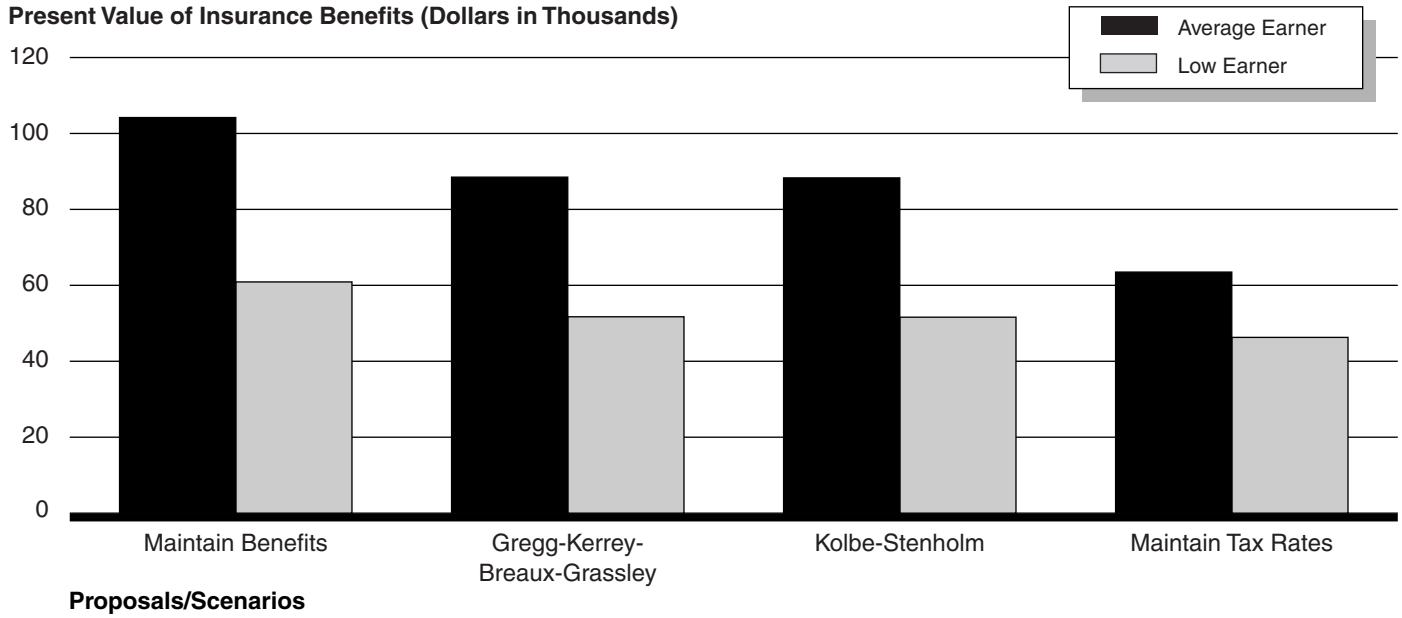


Note: For PIA changes that affect both disabled and retired workers. Assumes disabled worker born in 1986, receives DI first at age 45, and never works again. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

The insurance benefits of adult disabled children who are dependents of retired workers would also be significantly decreased by an additional change in the PIA formula applicable only to OASI benefits under the Gregg-Kerrey-Breaux-Grassley and Kolbe-Stenholm proposals. Figure 5 displays the effects on the insurance benefits of adult disabled children resulting from this PIA change.[35]

[35]We also analyzed the effect on benefits of increases in the NRA and in the number of years of earnings used to compute benefits. These provisions affect only the benefits of retired workers and their dependents. The provision increasing the NRA had little effect on benefits because the NRA (67) is the same for the 1986 birth cohort under the maintain-benefits scenario and the Gregg-Kerrey-Breaux-Grassley proposal and only slightly higher under the Kolbe-Stenholm proposal. The provision increasing the number of years in the benefit calculation had little effect because we assumed the retired worker was steadily employed with no years of low or no earnings.

Figure 5: Comparison of PIA Changes to Lifetime Insurance Benefits With Alternative Solvency Scenarios for Adult Disabled Child Dependent of Retired Worker



Note: For PIA changes that affect only retired workers. Assumes retired worker born in 1986. Kasich proposal does not have PIA changes that affect only retired workers. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

As we stated earlier and as is shown in figure 3, reductions in the COLA result in relatively small declines in the level of current-law benefits. Consequently, the levels of insurance benefits that would be received under this provision would be greater than the benefit income received under the maintain-tax-rates scenario, in which benefits would be reduced to levels supportable by current payroll tax rates. Despite the large reductions in insurance benefits resulting from the changes in the PIA formula, most disabled beneficiaries would be better off under this provision in the proposals than under the maintain-tax-rates scenario. The exception occurs for all three types of low-earner beneficiaries under the Kasich proposal's change in the PIA formula. This provision in the Kasich proposal indexes initial benefits to prices rather than to wages, resulting in a sharp decline in benefits. The effects of the PIA changes on the disabled worker are shown in figure 4.

Provisions for Individual Accounts Would Slightly Increase Benefit Income for Disabled Workers

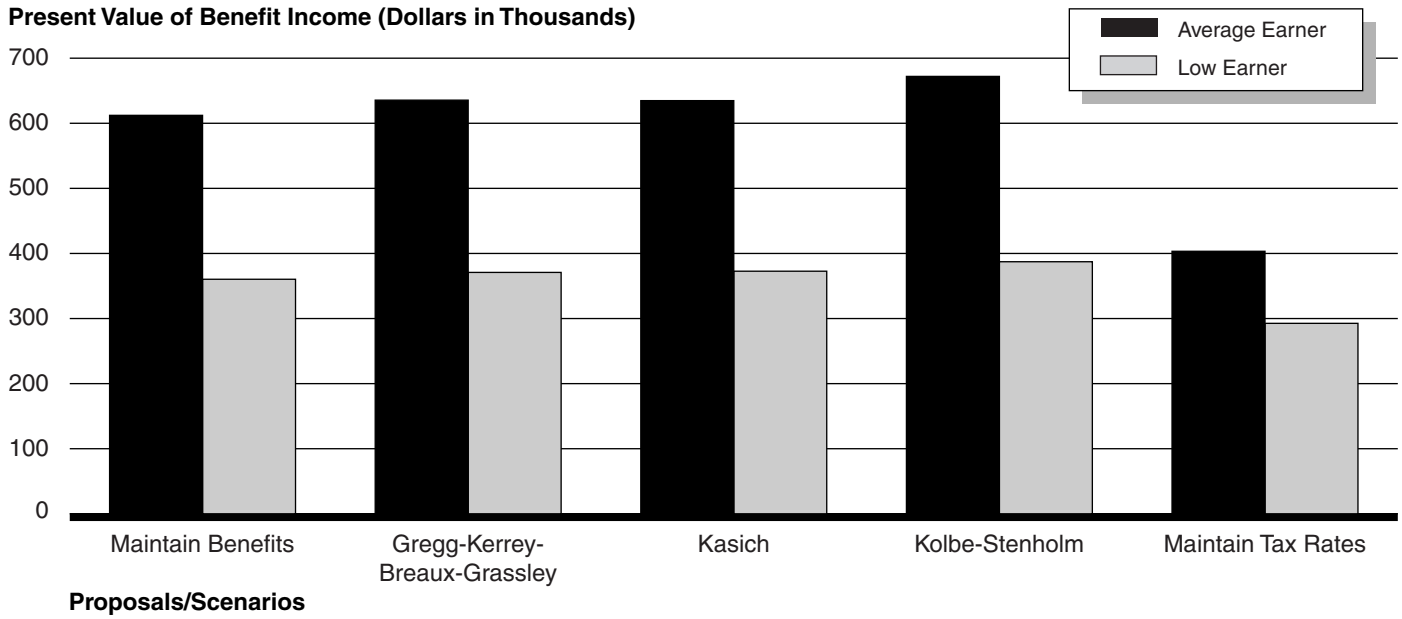
According to our estimates, the effect on the disabled worker's benefit income of the IA provision alone is positive under the Gregg-Kerrey-Breaux-Grassley, Kasich, and Kolbe-Stenholm proposals.[36] Benefit income would increase the most under the Kolbe-Stenholm proposal because the IA income does not reduce insurance benefits. Benefit income under the Gregg-Kerrey-Breaux-Grassley proposal would also increase but by less because the proposal reduces insurance benefits by an amount that reflects the present value of the government contributions to the IA plus the interest that would have accrued had these contributions been invested at the interest rate earned by the OASDI trust funds.[37] The benefit income received under the Kasich proposal would also be less than that received under the Kolbe-Stenholm proposal because under the Kasich proposal insurance benefits would be reduced by a fixed percentage for each year of contributions to the IA.[38] Figure 6 shows the effect of the IA provision for both the low-earning and the average-earning disabled worker.

[36]Our analysis assumes that the IA balance is used up by the account holder during his or her lifetime so that the treatment of the balance at death is not an issue.

[37]DI beneficiaries are subject to this offset when they gain access to their IA balances, which for most DI beneficiaries would occur at retirement age. (See app. I.) Until the beneficiary reaches retirement age, his or her benefits are unaffected by the balance in the IA.

[38]IAs under the Kasich proposal would be voluntary. Our analysis looked at beneficiaries who opt for the IA because we were asked to analyze the effects of IA provisions in the proposals.

Figure 6: Lifetime Benefit Income of Disabled Workers Under IA Provisions and Alternative Solvency Scenarios

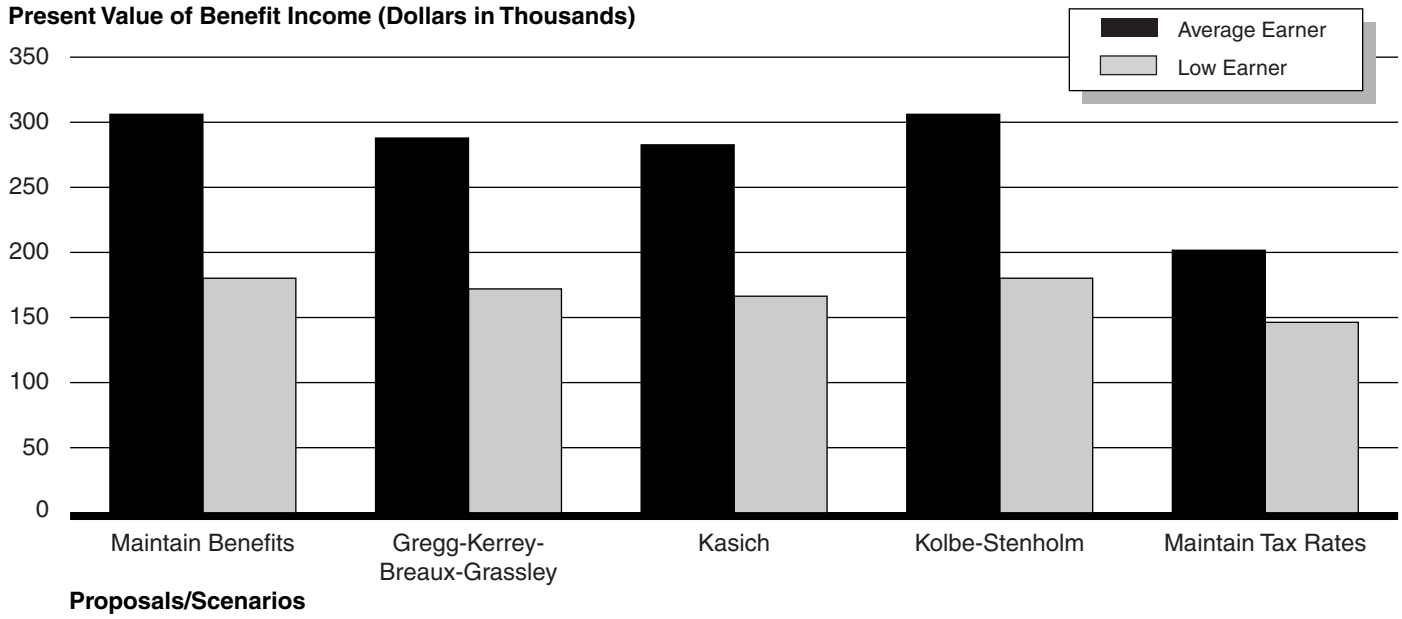


Note: Assumes disabled worker born in 1986, receives DI first at age 45, and never works again. Under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, the insurance benefit is reduced by an amount reflecting the contribution to the IA. We assume all IA income is received by the disabled worker and not by dependents. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

In our analysis, we assigned the income from the IA to the disabled or retired worker, not to the worker's dependents, because the apportionment of the IA income among family members is an individual matter and would vary by household. Thus, our estimates reflect the most that the worker would receive from the IAs, whereas our estimates for the dependents reflect the most that their benefits would be reduced under these proposals. Accordingly, for the dependent of the disabled worker and for the adult disabled child, the IA will not increase benefit income because we assumed that these beneficiaries, unlike the worker, receive no income from the IA. Under the Kolbe-Stenholm proposal, there would be no reduction in the benefit income of dependents because changes in IA income do not affect the level of insurance benefits. However, the Kasich proposal would decrease the insurance benefit of the worker by a set percentage for each year of contributions to the IA. The Gregg-Kerrey-Breaux-Grassley proposal would reduce the insurance benefit of the

worker by an amount that reflects the present value of the government contribution to the IA plus the interest that would have accrued had these contributions been invested at the interest rate the OASDI trust funds earn. The insurance benefit that the dependent receives is a proportion of what the worker receives. Consequently, the insurance benefit that the dependent receives would be reduced under our assumption that dependents receive no compensating income from the IA under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals. (See figures 7 and 8.)[39]

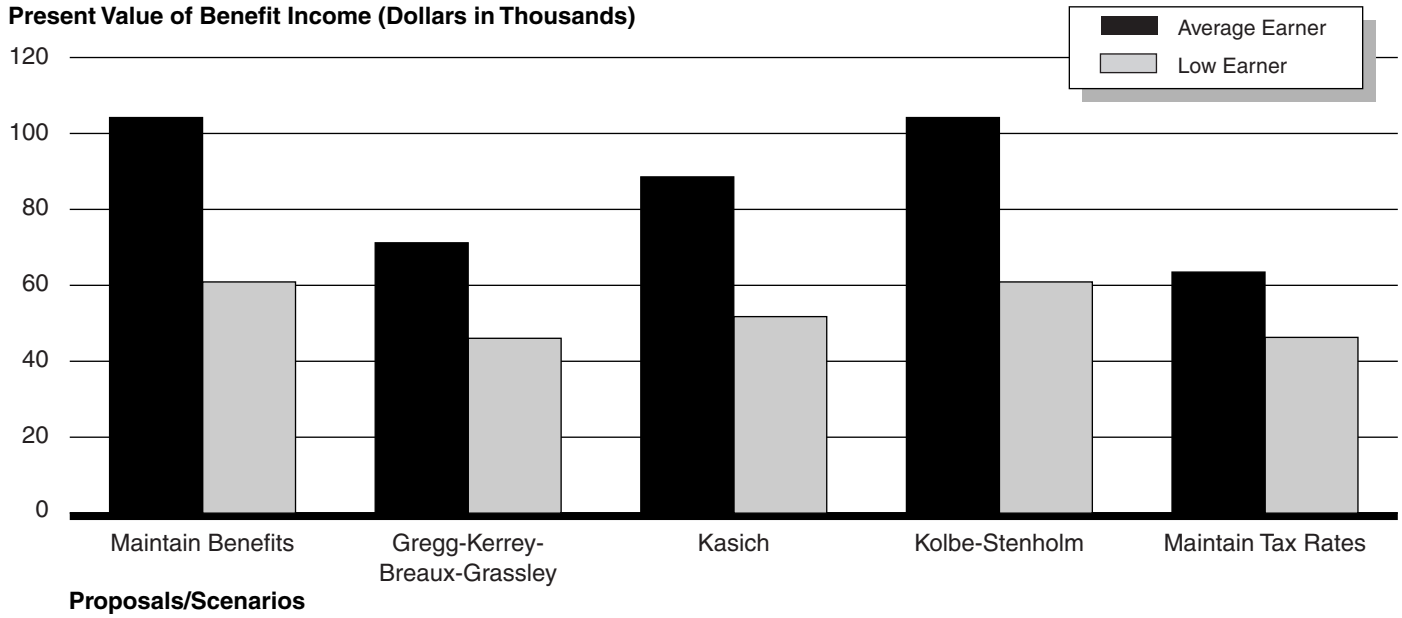
Figure 7: Lifetime Benefit Income of Dependent of Disabled Worker Under IA Provisions and Alternative Solvency Scenarios



Note: Assumes disabled worker born in 1986, receives DI first at age 45, and never works again. Under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, the insurance benefit is reduced by an amount reflecting the contribution to the IA. We assume all IA income is received by the disabled worker and not by dependents. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain-tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

[39]See app. I for how the IAs differ across proposals. The effect of IAs on lifetime benefit income also depends on the legislated characteristics of the IA (for example, how much can be invested and in what types of assets) and the assumptions about the return on investments, administrative costs, and so on.

Figure 8: Lifetime Benefit Income of Adult Disabled Child Dependent of Retired Worker Under IA Provisions and Alternative Solvency Scenarios



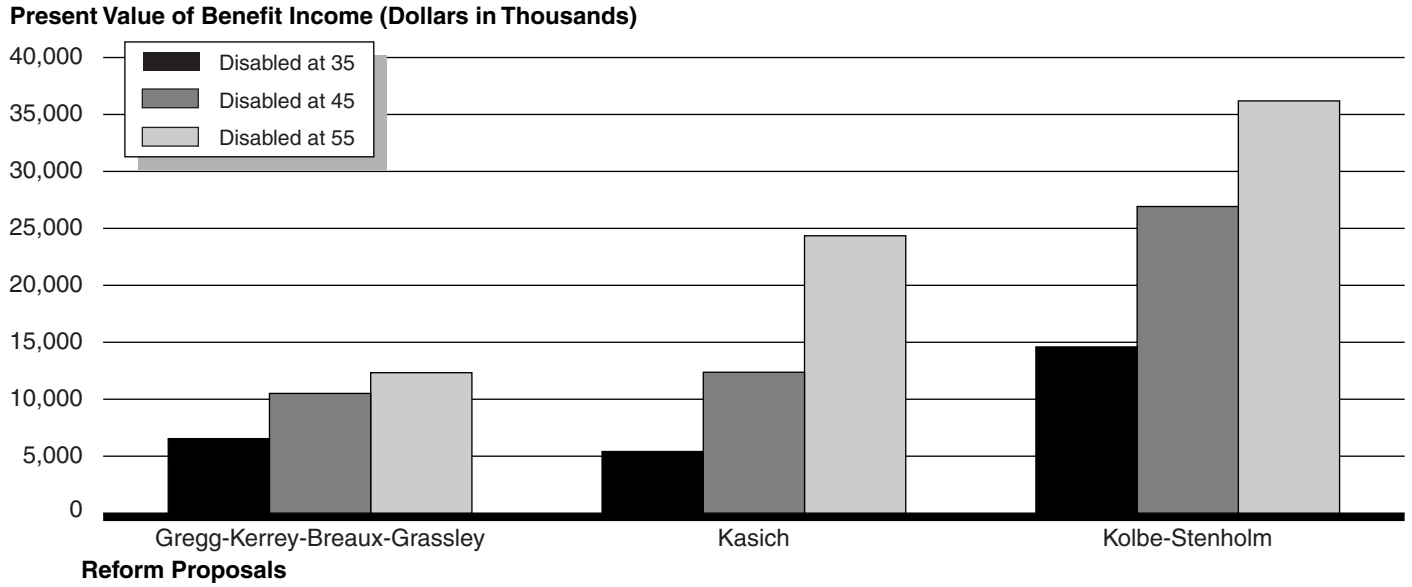
Note: Assumes retired worker born in 1986. Under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, the insurance benefit is reduced by an amount reflecting the contribution to the IA. We assume all IA income is received by the retired worker and not by dependents. The alternative solvency scenarios are the maintain-benefits scenario, which achieves solvency through increased payroll taxes while current-law benefits are maintained, and the maintain tax-rates scenario, which achieves solvency through benefit reductions while maintaining current payroll tax rates.

The IA provision would increase benefit income for disabled workers compared with the maintain-benefits scenario. Consequently, the benefit income of the disabled workers we examined would also be greater than the benefits available under the maintain-tax-rates scenario. In our analysis, we assigned all the IA income to the disabled or retired worker and none to the worker's dependents. As a result, under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, dependents would experience the reduction in insurance benefits related to the existence of an IA but would not receive any compensating income from the IA, under our assumptions. However, even the reduced insurance benefits that dependents would receive would be greater than the benefits they would receive under the maintain-tax-rates scenario.

In the analysis presented so far, we have provided graphs showing the effect of the reform proposals on the worker who first receives DI benefits at the age of 45 and never works again.[40] However, the income from the IA is affected by the number of years for which contributions are made to the IA and, therefore, by the age at which the worker leaves the labor force and begins receiving DI benefits. To see how the income received from the IA would vary by age of first receipt of DI benefits, we compared the income received from the IA by workers who began receiving DI benefits at different ages. Figures 9 and 10 provide the net addition of the IAs to benefit income—that is, the addition to benefit income after reductions are made in the insurance benefit in response to the income from the IA. Figures 9 and 10 indicate that the income received from the IA increases with the age of first receipt of DI benefits. The later that DI benefits are received, the greater the number of years in the labor force, the number of years funds are deposited in the IA, and the number of years the IAs accrue compound interest. The addition of IA income to benefit income across ages would be greatest under the Kolbe-Stenholm proposal, which would not reduce the insurance benefit in response to the income received from the IA. The Gregg-Kerrey-Breaux-Grassley proposal would reduce the insurance benefit by an amount that reflects the present value of the government contributions to the IA plus the interest that would have accrued had these contributions been invested at the interest rate earned by the OASDI trust funds. The Kasich proposal would reduce the insurance benefit by one-third of a percent for each year of participation in the IA.

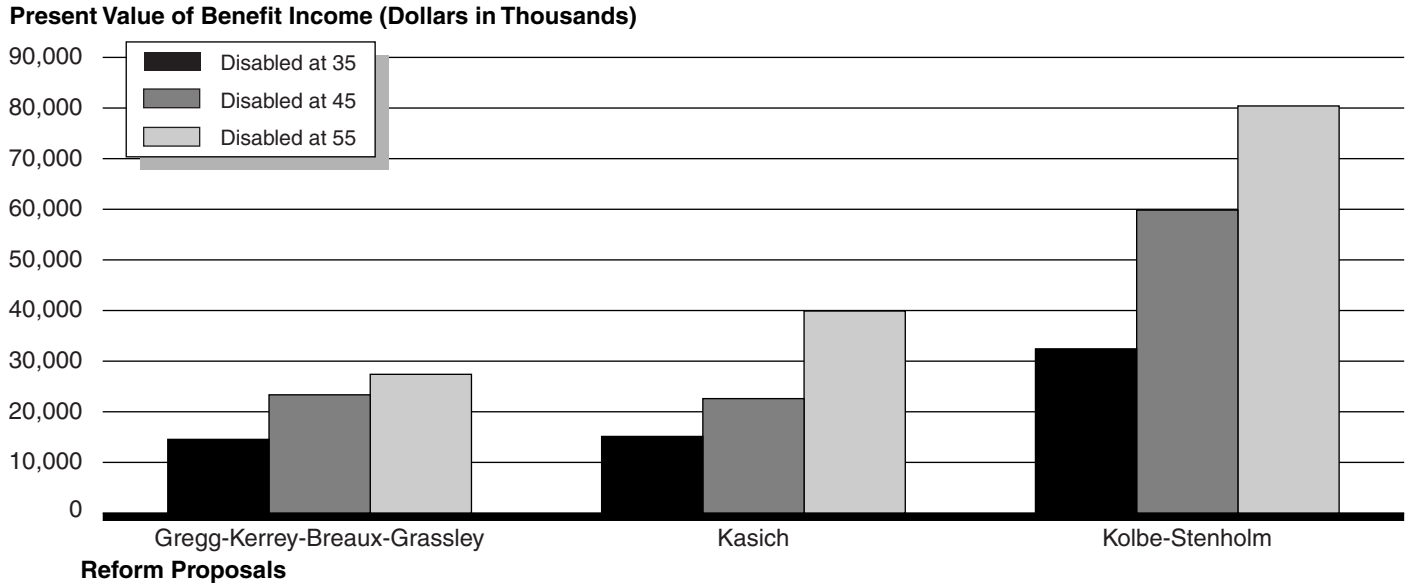
[40]We assumed in our analysis that the worker remains in the labor force until he or she begins receiving DI benefits.

Figure 9: Net Addition of IA to Current-Law Lifetime Benefit Income Under Selected Reform Proposals: Low-Earnings Worker Disabled at Various Ages



Note: Assumes 1986 birth cohort. Under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, the insurance benefit is reduced by an amount reflecting the contribution to the IA. We assume all IA income is received by the disabled worker, not by dependents.

Figure 10: Net Addition of IA to Current-Law Lifetime Benefit Income Under Selected Reform Proposals: Average-Earnings Worker Disabled at Various Ages



Note: Assumes 1986 birth cohort. Under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, the insurance benefit is reduced by an amount reflecting the contribution to the IA. We assume all IA income is received by the disabled worker, not by dependents.

Certain Reform Proposals Could Increase SSI Program Costs

Some Social Security reform proposals could increase costs for the SSI program. Individuals receiving benefits from both Social Security (DI or OASI) and SSI might become eligible for larger SSI benefits if their Social Security benefits decrease as a result of reform. In addition, some Social Security beneficiaries not currently eligible for SSI might become eligible if their Social Security benefits declined as a result of reform.

As we stated earlier, we estimated that three Social Security reform proposals—Gregg-Kerrey-Breaux-Grassley, Kasich, and Kolbe-Stenholm—would lower Social Security benefit income, which includes income from IAs, in most of the cases we studied. For DI and OASI beneficiaries who also receive SSI, the decrease in Social Security benefit income would lower their unearned income, which means that their SSI benefit would

increase.[41] This would have no effect on the number of recipients but would increase the cost to the program. For the beneficiaries who receive only Social Security and not SSI, the previously mentioned decrease in benefit income would lower unearned income, which would make some eligible for SSI benefits. This would increase both the number of beneficiaries and the cost to the program. However, the full effect on SSI would not be felt immediately because most of the individual provisions within these proposals are to be phased in over time and in many cases are not to be completely in effect until 2020. Given the complexity of the interactions between Social Security and SSI and the difficulty of projecting SSI caseloads so far into the future, it would be extremely difficult to estimate precisely what the effects of reform proposals would be on SSI program costs.

Concluding Observations

In the cases we studied, our analyses indicate that most disabled beneficiaries would receive higher benefits under Social Security reform proposals than under a solvency scenario that maintained payroll tax rates while reducing benefits. However, most disabled beneficiaries with the characteristics we studied would receive lower benefits under reform than under a solvency scenario that maintained current-law benefits while raising payroll taxes. This reduction in benefits under reform to levels below that of current law would occur even though we assumed an optimal set of conditions for disabled beneficiaries: full-time work until receipt of DI benefits and low administrative costs and no annuitization costs for the IAs. Consequently, the typical DI beneficiary could receive lower benefits than the DI beneficiaries with the selected characteristics we studied.

The proposals we studied treat DI beneficiaries similarly to OASI beneficiaries. However, the circumstances facing disabled workers differ from those facing retired workers. For example, the disabled worker's options for alternative sources of income, especially earnings-related income, to augment the reduced benefits are likely to be more limited than are those for the retired worker. Further, DI beneficiaries are entering the program at younger ages and remaining in the program in most cases until death or retirement. Thus, disabled beneficiaries could be subject to these

[41]If the individual account accumulations are treated as assets with regard to determining SSI eligibility, some low-income individuals may lose SSI benefits. Whether this loss of benefits in the case of disabled beneficiaries would occur when they first received benefits or when they reached retirement age depends on the proposal.

reductions in benefits for many years. They will also have smaller balances in their IAs because of fewer working years in which to make IA contributions and accrue compounded interest. In addition, under several proposals, disabled beneficiaries cannot gain access to income from individual accounts until they reach retirement age. These differences between disabled and retired workers suggest that Social Security reform proposals should be viewed not only in light of their effects on retired workers but also explicitly for their effect on disabled beneficiaries and their families.

Agency Comments

We provided a draft of this report to SSA. In commenting on this report, the agency noted that we addressed an important topic that has until now received little attention. Specifically, SSA highlighted two points in our report as being important for policy makers considering changes to Social Security: that individual accounts might not fully offset Social Security insurance benefit reductions for some beneficiaries and that SSI benefits might increase as they compensate for the decline in DI benefits resulting from Social Security reform. However, the agency had some concerns about our use of a "best case" scenario to estimate the effects of policy options and about the assumptions underlying this "best case" scenario, citing specifically earnings levels, life expectancy, and investment return assumptions that SSA thought did not reflect the actual situation of disabled beneficiaries. On the basis of these concerns, the agency suggested that we give the report balance by adding a "worst case" scenario. SSA also expressed concern regarding our focus on lifetime benefits, a measure that it believes does not adequately reflect living standards at specific points in time. Finally, SSA suggested that we include a measure reporting on money's worth or internal rates of return in our table 1 that compares costs and benefits of Social Security reform proposals. SSA also made a number of technical comments, which we incorporated where appropriate.

Our use of a "best case" scenario demonstrated that, even under the best of circumstances, Social Security reform proposals would reduce current-law benefits to DI beneficiaries—people who would find it more difficult than most nondisabled retired workers to replace lost benefits with other sources of income such as earnings. We did not examine "worse case" scenarios because the "best case" scenario demonstrates that most DI beneficiaries would be adversely affected by the reform proposals we analyzed. While including the "worst case" scenario SSA suggested could provide a specific lower limit to a range of possible benefit outcomes, that

lower limit would be useful only if accompanied by an evaluation of the adequacy of that benefit level, which is beyond the scope of this report.

In building a "best case" scenario, we used the earnings of men because they tend to have higher earnings than women do. To examine low-wage earners, we simulated workers who earn 45 percent of average earners, which is the standard low level of earnings the Office of the Chief Actuary uses. Benefits declined at this earnings level as they would for workers earning even less. We assumed individuals lived until 79 because almost one-third of individuals first receiving DI benefits at age 45 live that long, and the number of these individuals is significant enough to warrant study. With respect to SSA's concern about our use of an equity return of 7 percent, we note that this is a figure currently used in projections, including those of the Office of the Chief Actuary. We chose not to adjust for risk because there is no one risk-adjusted measure that everyone agrees is the best measure, and we believed that our analysis would be more clearly understood with the simplifying "best case" assumptions.

With respect to SSA's concern with our focus on lifetime benefits, we acknowledge that we do not address the issue of variations across plans in living standards before retirement age resulting from differences in account access rules. This is certainly an issue on which future reports could usefully focus. As for the inclusion of money's worth or internal rate of return measures, we agree that such analysis would be useful, but these measures are beyond the scope of this report. SSA's written comments are printed in appendix III.

We are sending copies of this report to the Commissioner of the Social Security Administration and others who are interested. We will also make copies available to others on request. If you or your staff have any questions concerning this report, please call me on (202) 512-7215. The

major contributors to this report are Carol Dawn Petersen, Assistant Director, (202) 512-7066; Barbara A. Smith, Senior Economist; Michael Collins, Economist; and Kim Granger, Economist.

Sincerely,

Barbara D. Bovbjerg, Director
Education, Workforce, and Income Security Team

The Social Security Reform Proposals and Their Provisions

Table 6 lists the provisions in the five proposals we studied.

Table 6: Social Security Reform Provisions

	Proposal				
Provision	**P**	**AS**	**GKBG**	**KS**	**K**
Reduce the cost-of-living adjustment (COLA)[a]			x	x	
Change the primary insurance amount (PIA) formula[a]			x	x	x
Establish a minimum level of benefits[a]				x	
Raise the normal retirement age (NRA)[a,b]			x	x	
Increase the benefit computation period[a]			x	x	
Introduce individual accounts (IA)[a]		x	x	x	x
Transfer funds explicitly from the general fund	x	x	x	x	x[c]
Credit benefit taxation revenue to the trust funds			x	x	
Maintain coverage of taxable earnings			x		
Establish a minimum level of spousal benefits			x		
Establish individual accounts for newborns			x		

Note: P = President's proposal, AS = Archer-Shaw, GKBG = Gregg-Kerrey-Breaux-Grassley (S. 1383), KS = Kolbe-Stenholm (H.R. 1793), K = Kasich.

[a]Affects benefits received by disabled beneficiaries, including disabled workers and their dependents and disabled dependents of retired workers.

[b]Raising the NRA refers to either accelerating the already scheduled increases in the NRA or immediately increasing the age of eligibility for retirement benefits.

[c]Although the Kasich proposal contains a provision describing a loan from general revenue, this loan is in effect very similar to a general revenue transfer. There is no principal repayment or interest repayment until 60 years into the future.

Source: Analysis performed and outlined in the SSA Office of the Chief Actuary memorandums.

Table 7 shows that the access to the IA and the relationship between the IA and the insurance benefit vary across the proposals we studied. Under the Archer-Shaw and Kasich proposals, individuals can obtain funds from their IAs at the age of retirement or when they become eligible for Disability Insurance (DI) benefits. Under the Gregg-Kerrey-Breaux-Grassley and Kolbe-Stenholm proposals, disabled individuals are able to obtain IA income before retirement age only if the funds in the IA are sufficient to provide a monthly income that, when added to the insurance benefit, is at least equal to 1/12 of the current poverty line. According to the Social Security Administration (SSA), this threshold for account access would be virtually impossible for workers disabled at a relatively young age to meet

because they would not have the time to build up an IA. In addition, insurance benefits are not affected by the presence of IA income under the Archer-Shaw and Kolbe-Stenholm proposals. Under the Gregg-Kerrey-Breaux-Grassley and Kasich proposals, there are reductions in the insurance benefit because of the existence of an IA.

Table 7: Individual Account Provisions

Proposal	Beneficiary access to IA income	Adjustment to insurance benefit	Effect on beneficiaries
Archer-Shaw	When individual attains normal or early retirement age or becomes eligible for DI benefits.	No reduction in insurance benefits. Proceeds from IA are transferred to Old-Age, Survivors, and Disability Insurance (OASDI) trust funds.	Beneficiary receives larger of current law benefit or monthly income from IA.
Gregg-Kerrey-Breaux-Grassley	When individual attains normal or early retirement age or when funds in IA are sufficient to provide monthly benefit that, when added to insurance benefit, equals or exceeds 1/12 of poverty line.	Insurance benefit reduced or offset by amount of contribution plus interest accrued at rate earned by the OASDI trust funds.	When IA income is received, beneficiary also receives reduced insurance benefit.
Kasich	When individual attains normal or early retirement age or becomes eligible for DI benefits.	Insurance benefit reduced by 1/3 percent for each year contributions are made to IA.	At qualifying age, DI beneficiary receives both reduced insurance benefit and income from IA. IA income could make up for reduction in insurance benefit.
Kolbe-Stenholm	Same as Gregg-Kerrey-Breaux-Grassley.	None, no offset due to IA. But insurance benefit is less than current-law benefit because of other provisions in bill.	Beneficiary receives income from IA in addition to insurance benefit. IA income could compensate for decline in insurance benefit because of other provisions.

Alternative Solvency Scenarios and the Social Security Simulation Model

The Calculation of Alternative Scenarios

Maintain Tax Rates and Decrease Benefits

This scenario maintains current payroll tax rates while reducing Social Security benefits to levels supportable by these tax rates. There are many ways to reduce benefits, including waiting until the trust funds are exhausted and abruptly reducing benefits by the full amount necessary to be supported by current payroll taxes. We decided to follow a more gradual approach similar to that used in the "MTR (maintain tax rates) Proposal" presented in the Report of the 1994-96 Advisory Council on Social Security. The Council's proposal reduces the 0.32 and 0.15 PIA formula factors by 0.5 percent for 1998-2011 and 1.5 percent for 2012-30. The PIA adjustments used in this report also reduce the 0.32 and 0.15 formula factors but by 2.0 percent for 2000-13 and 3.0 percent for 2014-32, which results in the percentage reductions in benefits shown in table 8.

Table 8: Reductions in Benefits

	OASI and DI	
Year	**Women**	**Men**
2005[a]	3.17%	5.88%
2016	8.68	16.07
2022	11.87	21.98
2034	16.74	31.01

[a]The year in which the benefit reduction amount is realized, based on the PIA reductions. For example, a woman retiring in 2005 would receive a benefit that is 3.17 percent lower than current law. Because the SSASIM model has benefit relative to earnings by gender, reductions are calculated separately for men and women.

These percentage declines in benefits result in trust fund solvency through 2074 under the 1999 Trustee's Report intermediate assumptions. We assume no behavioral changes in response to the decline in benefits because it is not clear how individuals will respond to the decline in benefits—whether they will continue to retire at younger ages or will postpone retirement to later ages in order to receive larger benefits.

We instituted benefit reductions in the maintain-tax-rates scenario by reducing only the 0.15 and the 0.32 brackets of the PIA formula, following the approach used by the Advisory Council. (The PIA formula is described below.) This is important to take into account when comparing benefits under the maintain-tax-rates scenario with benefits for disabled beneficiaries under the Social Security reform proposals. Kasich reduces all three brackets, the 0.90 bracket as well as the 0.15 and 0.32 brackets. These reductions apply to both disabled and retired workers and their dependents. This is why benefits for lower earners under Kasich's PIA provision are below those calculated in the maintain-tax-rates scenario. The Kolbe-Stenholm proposal, however, reduces only the upper two brackets for disabled-worker beneficiaries and does not reduce these brackets by as much as the maintain-tax-rates scenario does.[1] Therefore, benefits for disabled low earners and their dependents under the Kolbe-Stenholm proposal are greater than benefits under the maintain-tax-rates scenario. The Gregg-Kerrey-Breaux-Grassley proposal creates an additional bracket and increases the 0.32 bracket to 0.70. This explains the increase in benefits for low earners above the benefits received under the maintain-benefits scenario.

The full unreduced monthly benefit amount for worker beneficiaries is determined by using the PIA formula. This formula consists of three brackets separated by two bend points. In 1999, these bend points were $505 and $3,043 for newly eligible beneficiaries. A worker's PIA is calculated as 0.90 of the first $505 of career-average indexed monthly earnings (AIME), plus 0.32 of any AIME amount between $505 and $3,043 and 0.15 of any AIME amount in excess of $3,043.

Maintain Benefits and Increase Tax Rates

This scenario maintains current-law benefits while increasing payroll tax rates to levels that support those benefits. There are many ways to increase payroll tax rates, including waiting until the trust fund is exhausted and then abruptly increasing payroll tax rates to levels that would support current-law benefits. We follow an approach similar to that used in the "PL PAYGO Proposal" presented in the Report of the 1994-96 Advisory Council on Social Security in which payroll tax rates are increased more gradually. The PL PAYGO option modifies the present law payroll tax rate schedule

[1]Under Kolbe-Stenholm, retired workers face an additional benefit reduction to all three PIA factors (0.90, 0.32, and 0.15) of 0.5 percent. These PIA reductions also affect benefits for adult disabled children of retired workers.

from 12.4 percent beginning in 1995 and reaching 17.1 percent in 2060. The present law payroll tax rate adjustments used for this report are in table 9.

Table 9: Payroll Tax Rates

Year[a]	OASDI	OASI	DI
2000-24	12.4	10.6	1.80
2025-29	15.4	13.12	2.28
2030-49	16.2	13.79	2.41
2050-59	17.1	14.55	2.55
2060-73	18.0	15.31	2.69

[a]The year the adjustments are made to payroll taxes in the SSASIM model.

These payroll tax rates result in trust fund solvency through 2074 under the 1999 Trustees Report intermediate assumptions. Note that 85 percent of the OASDI payroll tax rate is assigned to the OASI program, 15 percent to the DI program.

The SSASIM Model

To assess how the Social Security reform proposals affect the solvency of the Social Security trust funds and the level of benefits individuals receive, we conducted a variety of simulations using the SSASIM model, developed by the Policy Simulation Group. The initial version of the model was developed under a series of contracts from SSA as part of the 1994-96 Advisory Council on Social Security's activities. The model was subsequently enhanced with major support from the American Association of Retired Persons, the Employee Benefit Research Institute, and SSA as well as other organizations. The model can simulate a variety of policy reforms to the Social Security program, from incremental changes in the OASI and DI programs to broader structural reforms that would introduce an IA component to the Social Security system.

The SSASIM model simulates the dynamic interaction of the labor force, the economy, and the Social Security programs and can be used to generate aggregate program cost and income estimates as well as estimates for the OASI and DI trust funds. Changes in program structure can be analyzed for any specified future time periods. Consistent with SSA's annual projections, we explored the effect of such changes on OASI and DI trust fund solvency for the 75-year period 1999-2074. The implications of a reform relative to

one of the alternative scenarios that achieve solvency are determined by comparing the output results from a simulation that assumes the reform policy with results from a simulation that assumes one of the two alternative scenarios.

Assumptions Used in the Analysis of the Effects of the Social Security Reform Proposals on Solvency

In our analysis, we made a number of assumptions. With respect to population and economic projections, we used the intermediate assumptions in the 1999 Annual Report of the Board of Trustees of the federal OASI and DI trust funds. We use the assumptions in the 1999 Trustees Report because the Office of the Chief Actuary used these assumptions to score the Social Security reform proposals we analyzed. (See table 10.)

Table 10: Economic and Demographic Intermediate Assumptions From the 1999 Trustees Report

Assumption	Ultimate value	Year ultimate value was attained[a]
Annual percentage		
Labor force participation		
Women	60.6	2075
Men	73.8	2075
Unemployment rate	5.5	2009
Inflation rate	3.3	2007
Labor productivity growth	1.3	2008
Growth rate of wages as share of compensation	–0.2	2008
Growth rate of hours worked	–0.1	2008
Nominal interest rate	6.3	2007
Mortality rate decline	0.6	2023
Annual number		
Total fertility rate	1.9[b]	2023
Net immigration	900,000[c]	1999

Note: The intermediate assumptions represent the trustees' "best estimates" of likely future economic and demographic conditions. We used these numbers throughout our analysis.

[a]The ultimate value is maintained for the remainder of the 75-year projection period.

[b]Number of children per woman.

[c]Number of persons per year.

Assumptions in the Analysis of the Effects of the Reform Proposals on Individual Benefits

We analyzed how the reforms affect individuals born in 1946, 1966, and 1986 in order to assess the effects of provisions that are phased in over time. We analyzed how the reforms affect individuals with average earnings and with 45 percent of average earnings to see how the reform provisions affect workers at different earnings levels. The model contains information on earnings separately for men and women. The user can specify a gender-related earnings pattern. Our analysis uses the earnings pattern for men. These earnings are based on the national average annual earnings of covered workers with earnings. Using 1998 data from SSA, we compared our choice of earnings levels with the earnings levels of actual new beneficiaries. We did so by calculating the DI benefit corresponding to our selected earnings levels and comparing these benefit levels with the distribution of benefits actual DI beneficiaries received in 1998. We found that about 42 percent of all new beneficiaries in 1998 received benefits that correspond to earnings that are less than 45 percent of average earnings, about 38 percent of new beneficiaries received benefits corresponding to earnings that are between 45 percent of average earnings and average earnings, and about 20 percent of new beneficiaries received benefits corresponding to earnings that are greater than the average level.

We analyzed how the reforms affected individuals with three different ages of first receipt of DI benefits (35, 45, and 55) to compare the experiences of people disabled at younger ages with those disabled at older ages. These three ages reflect the experiences of individuals with different lengths of time in the DI program and with different lengths of time in the labor force. According to SSA, the average age of a new male DI beneficiary in 1999 was 49.6 years, down from 51.2 years in 1980. In 1999, 19.3 percent of men's new benefits were awarded to individuals younger than 40, 24 percent to those in their 40s, and 40 percent to those in their 50s.[2] DI benefits for disabled workers are terminated mostly because of the death of the beneficiary or the attainment of retirement age and conversion of benefits to the OASI program; only half of 1 percent of DI beneficiaries leave the program each year because of work.[3]

[2] *2000 Annual Statistical Supplement to the Social Security Bulletin.*

[3] *2000 Annual Statistical Supplement to the Social Security Bulletin* and *Work Incentives for Blind and Disabled Social Security Beneficiaries* (GAO/HEHS unnumbered correspondence, Aug. 8, 2000).

According to SSA data on awards made to DI beneficiaries in 1998, the type of disability that new DI beneficiaries claimed is somewhat associated with age. In 1998, mental disorders were the most common diagnosis for new DI awardees younger than 35, while diseases of the musculoskeletal system were the most common diagnosis for those aged 50 and older. For new awardees younger than 35, mental disorders accounted for 34 percent while diseases of the musculoskeletal system accounted for 11 percent. For new DI awardees aged 50 and older, diseases of the musculoskeletal system accounted for 27 percent while mental disorders accounted for 11 percent.[4]

We assumed that individuals enter the workforce at age 22 and work full-time until disability or retirement with no years out of the labor force. We chose these assumptions because they represent a "best case" for the disabled individual. Many disabled individuals are likely to work less than full-time and to have periods of time out of the labor force.[5] However, little information is available on the wages, earnings histories, and periods of nonwork of the disabled. This makes it difficult to choose a "typical" earnings level and earnings pattern for them. The benefit income for our "best case" disabled individuals will clearly be greater than that for disabled individuals receiving lower earnings from intermittent and less than full-time employment. Our results, therefore, represent a maximum level of benefit income that disabled beneficiaries could expect to receive under the Social Security reform proposals that we modeled.

We also assumed that the nondisabled workers we simulated retire at age 67 and that all the individuals we simulated die at age 79. We made these assumptions so that in our simulations the retired workers and all disabled workers with a given age of first receipt of DI benefits would have the same number of years of receiving benefits. Thus, differences in benefit income across individuals would be the result of differences in reform proposals and not the result of differences in individual characteristics. Because of the possibility that actual disabled individuals might have a lower life

[4]See SSA, *1999 Annual Statistical Supplement to the Social Security Bulletin* (Washington, D.C.: 2000).

[5]In an earlier report, we found that an increasing number of new DI applicants need supplementary SSI benefits, which suggests that these applicants are less well off and might have less extensive and less highly paid work histories than DI applicants had in the past. See *Social Security: Disability Rolls Keep Growing, While Explanations Remain Elusive* (GAO/HEHS-94-34, Feb. 8, 1994).

expectancy than we assumed for our simulation, we asked SSA's Office of the Chief Actuary to send us death rates for men who were born in 1986 and began receiving DI benefits at age 45. We then calculated the proportion who would still be alive at ages 46 to 79. According to our calculations, 49 percent of these individuals would still be alive at 70, and 31 percent would still be alive at 79.

We assumed that the benefits workers and their dependents received were not affected by the application of the maximum family benefit. The maximum family benefit refers to the maximum amount that can be paid on a worker's earnings record. In the case of retired or deceased workers, the maximum varies from 150 to 188 percent of the PIA. In the case of disabled workers, the maximum family benefit is the smaller of 85 percent of the worker's AIME or 150 percent of the worker's PIA. The family maximum cannot be exceeded, regardless of the number of beneficiaries entitled on that earnings record, although any benefit payable to a divorced spouse is not included. Whenever the total of the individual monthly benefits payable to all the beneficiaries entitled on one earnings record exceeds the maximum, each dependent's or survivor's benefit is reduced in equal proportion to bring the total within the maximum.

For the analysis of IAs, we assumed that administrative costs are 0.105 percent of assets. Our estimate of administrative costs is that used in the Report of the 1994-96 Advisory Council on Social Security. The Council considered an option to create IAs alongside the Social Security system with a centralized system of recordkeeping and limited investment choices. The estimate of 0.105 percent of assets was a consensus of the Council members. We also assumed that individuals do not annuitize but, rather, draw down the balance in the IA through periodic withdrawals.[6] Consequently, the balance in the account is not reduced by the costs associated with purchasing an annuity. We also assumed that individuals know how long they are going to live and thus determine the schedule of periodic withdrawals so as to use up the entire balance in the IA by the time they die. These assumptions result in the largest balance possible in the IAs.

[6]Very few individuals in the United States purchase life annuities, according to the studies we consulted.

For the Kolbe-Stenholm, Gregg-Kerrey-Breaux-Grassley, and Kasich proposals, we used the same assumptions that SSA's Office of the Chief Actuary used in scoring the Kolbe-Stenholm proposal. Following the approach taken in the Report of the 1994-96 Advisory Council on Social Security, we varied the percentage invested in equities according to age. We assumed that persons younger than 40 would invest 55 percent of their account in equities, with an average real return of 4.8 percent for the portfolio. We assumed that those 40 to 49 would invest 50 percent of their account in equities, with an average real return of 4.5 percent. We assumed that those 50 to 59 would invest 40 percent of their account in equities, with an average real rate of return of 4.1 percent. We assumed that those 60 to 69 would invest 20 percent of their accounts in equities, with an average real return of 3.1 percent. We assumed the portion not invested in equities would be invested in Treasury bonds and the return on equities would be a constant, inflation-adjusted 7 percent per year, which reflects the long-term historical average return on equities. We note that the assumption of a 7 percent return on equities in the future has been criticized by some as being optimistic.[7]

We did not adjust the rates of return on equities for risk. As we stated in a recent report, there are numerous ways to adjust for risk but no clearly best way, and there is no one risk-adjusted measure that everyone agrees is the correct measure.[8] As a result, the returns on equity that we use are likely to be higher than the risk-adjusted returns.

[7]See the *1999 Technical Panel on Assumptions and Methods.*

[8]*Social Security: Capital Markets and Educational Issues Associated With Individual Accounts* (GAO/GGD-99-115, June 28, 1999).

Comments From the Social Security Administration

SOCIAL SECURITY
Office of the Commissioner
December 18, 2000

Barbara D. Bovbjerg, Director
Education, Workforce, and Income Security Issues
United States General Accounting Office
Washington, DC 20548

Dear Ms. Bovbjerg,

Enclosed are our comments on the General Accounting Office's (GAO) draft report Social Security Reform: Potential Effects on SSA's Disability Program and Beneficiaries (GAO/HEHS-01-35). We appreciate the opportunity to review the report and hope these comments will prove useful.

We are pleased that this GAO report analyzes the possible effects of Social Security reform proposals on Disability Insurance (DI) beneficiaries. Few others have focused on this important topic. In addition, the report makes two points that are important for policy makers to understand and take into consideration when making changes to Social Security. We recommend highlighting them:

1. For some, individual accounts might not fully offset Social Security insurance benefit reductions—especially for families that are eligible for auxiliary benefits.
2. For concurrent DI and Supplemental Security Income (SSI) beneficiaries, SSI benefits may increase as DI benefits decrease. In addition, some individuals may become qualified for concurrent benefits if DI benefits are reduced.

Although it raises some important issues, we have a number of concerns about this report. As acknowledged by its authors, their assumptions about DI beneficiaries create a "best case" scenario for estimating the effects of policy options. In addition, we found several of their other assumptions to be very optimistic. We recommend giving the report balance by adding a "worst case" scenario to provide policy makers with a range of estimates to consider.

We also recommend fully explaining key assumptions and limitations at the beginning of the report. Specifically, by focusing on stylized workers who are probably representative of very few actual DI beneficiaries, the report substantially understates the magnitude of its reported effects on benefit levels. First, workers are assumed to have steady earnings until their disability onset. However, data show that the work histories of DI beneficiaries include more low or zero earnings years than do those of other workers. Because the stylized workers do not experience low or zero earnings years, they accrue larger account balances than the vast majority of actual DI beneficiaries would accumulate. The importance of estimating benefits by using realistic earning profiles, rather than assuming constant earnings, has been demonstrated in recent research by Bosworth, Burtless and Steuerle ("Lifetime Earnings Patterns, the Distribution of

SOCIAL SECURITY ADMINISTRATION BALTIMORE MD 21235-0001

Future Social Security Benefits, and the Impact of Pension Reform," Center for Retirement Research at Boston College CRR WP 1999-06, December 1999).

Second, the analysis focuses on men, who tend to have higher earnings than women. In addition, as Appendix 2 of the report indicates, data suggest that the low-earner example has average indexed lifetime earnings that are closer to those of an actual average-earner than those of an actual low-earner. In effect, the report examines no low-earners.

Third, by focusing on lifetime benefits, the analysis does not examine differences in living standards across policy options at specific points in time. We expect that living standards prior to retirement age would vary across plans due to differences in account access rules. Some plans would prohibit DI beneficiaries from accessing their individual accounts prior to retirement age or until total benefits payable exceeded a certain level. Assessing living standards prior to obtaining account access is particularly important when examining DI beneficiaries. Because they have higher mortality rates than the general population, many would never receive account benefits under plans that delay account access. However, the effect of those higher mortality rates are not reflected in this report, because it assumes all beneficiaries live until age 79. As the report itself notes, fewer than one-third of DI beneficiaries could expect to attain that age.

Fourth, because the report assumes that disabled workers live to age 79, it not only provides an unrealistically high estimate of the value of account benefits (because many would not survive to receive them), but it also provides an unrealistically high estimate of the value of Social Security insurance benefits for those who would survive to retirement age (because many would not attain age 79). That is because the lifetime value of social insurance benefits depends on longevity (that is, how many years one is alive to collect monthly benefits).

Other assumptions and limitations that should be explained at the beginning of the report pertain to how the authors estimate benefits levels. First, the report should at least note that its assumed equity return of a constant 7 percent may be optimistic. The 1999 Technical Panel on Assumptions and Methods recommended to the Social Security Advisory Board (p. 59) using a 3 percent premium over SSA's benchmark real rate. Under the intermediate assumptions of The 2000 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, that recommendation would suggest using an equity return assumption of 6 percent.

Second, the effect of using a possibly optimistic equity assumption is exacerbated by not addressing the additional market risk associated with equities compared with Treasury bonds. Because the report does not illustrate the nature of this risk through stochastic simulation, by risk-adjusting benefit estimates, or providing estimates based on a range of yields, any proposal with a larger investment in equities appears more favorable than one with a smaller one, all else equal.

Our final recommendation pertains to Table 1 of the report, which shows a side-by-side comparison of the cost and benefit effects of proposals. Although we commend the report for presenting these differences, we believe that providing an additional measure that captures both

effects may be more helpful to policy makers. In addition to reporting cost effects next to benefit levels, we recommend reporting a money's worth or internal rates of return measure.

Our specific comments are detailed in the enclosed document. If you should have any questions concerning our comments, you may contact Jane L. Ross, the Social Security Administration's Deputy Commissioner for Policy, at (202) 358-6082 in Washington, or (410) 966-6756 in Baltimore. Again, we appreciate the opportunity to review the draft report and request an opportunity to review the revised report. We look forward to the GAO's continued involvement in this vital debate.

Sincerely,

Kenneth S. Apfel
Commissioner
of Social Security

Enclosure

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