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Social Security Reform Options

March 2014

American Academy of Actuaries
Social Security Committee



AMERICAN ACADEMY *of* ACTUARIES

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Overview and Recommendations

This paper describes and analyzes Social Security reform options that address the program's financial challenges. It is intended to be comprehensive but emphasizes proposed reforms that have received the greatest attention in the Social Security debate. This is an objective analysis of these options and not intended to favor any particular position.

The federal government operates a number of social insurance programs, of which Social Security is currently the largest, as measured by annual benefits paid. Social Security consists of the Old-Age, Survivors, and Disability Insurance (OASDI) programs, which protect against the loss of earnings due to retirement, death, or disability.

When the Social Security program was designed in the 1930s it was based on the following general concepts:

- Benefits are based on a balance between individual equity and social adequacy.¹
- Financing from, and on behalf of, participants make the program self-supporting.
- Participants have, to some degree, an earned right to benefits without a means test.²
- With the exception of certain state and local government employers, participation is mandatory, with payroll contributions that provide nearly universal coverage for all workers, regardless of individual circumstances.

A number of current proposals would modify these characteristics.

Nearly all workers in the United States participate in Social Security and have a clear interest in its financial viability. The 2013 OASDI Trustees Report describes the financial viability of Social Security based on a 75-year projection of income and expenses. To determine whether Social Security is expected to receive income that is reasonably close to the expected cost over the next 75 years, tests of “long-range close actuarial balance” are applied. The failure of the program to pass these tests does not necessarily mean that insolvency is imminent. Rather, the results of these tests warn policymakers that changes are necessary to preserve the long-term financing of the program.

The 1983 Social Security amendments were enacted to provide a long period of adequate financing, but Congress acknowledged at the time that further attention would be needed. It was clear then that even after the enacted changes, the trust fund would be exhausted shortly after the end of the 75-year projection period ending in 2058. Since 1983, the expected date of trust fund exhaustion has grown closer, and numerous efforts have been undertaken to provide not just 75-year solvency but also sustainable solvency³ beyond the 75th year. The projected shortfalls in the

¹ Pg. 6

² Pg. 6, 14, and 23

³ Pg. 2

most recent trustees report reinforce the need to make further efforts to strengthen and reform the financing and/or change the benefits of the program for future generations.

Changes recommended by President George W. Bush's Commission to Strengthen Social Security, including the introduction of individual accounts, did not gain wide support either with the public or in Congress, resulting in the issue being moved to a lower legislative priority. In 2009, President Obama established the National Commission on Fiscal Responsibility and Reform to recommend strategies for putting the nation's long-term finances in order. The co-chairs of the commission in their December 1, 2010, report (Bowles-Simpson report) included a package of 10 changes to Social Security which, if adopted in total, would turn the current 75-year deficit into a small surplus and make the program sustainable beyond 75 years. As of the date of this report, no legislation based on the co-chairs' proposals has been introduced in Congress. Debate on this issue is sure to continue because, while Social Security is one of the largest and most prominent federal programs; its financial problems remain unaddressed.

Recommendations

The American Academy of Actuaries' Social Security Committee believes that Congress should act soon to adopt changes that will result in sustainable solvency. Sustainable solvency means that not only will the program be solvent for the next 75 years under the reform methods adopted, but also that the timing of changes will result in stable trust fund reserves as a percentage of annual program cost at the end of the 75-year period.

Delaying changes in the short term would require more drastic changes later because a larger increase in the payroll tax or taxable earnings and/or greater reduction in promised benefits would be required. Delaying reform and sparing the current generation of workers would also place a greater burden on future generations, either in the form of higher taxes or lower benefits, or both.

However, it is equally important that potential changes be carefully and thoroughly analyzed, and that all stakeholders in the system have adequate opportunity to provide input to legislators. It's also important to recognize that changes can be devised soon but phased in over long timeframes. That gives those affected time to adjust and plan accordingly. Finally, it is essential to maintain a continuing balance between social adequacy and individual equity, preserving the program's nearly universal support among the population.

Social Security's Financial Status

The OASDI program is financed essentially on a pay-as-you-go basis. That is, current taxes are used to provide current benefit payments. The retirement of the baby boom generation will greatly increase benefit payments, with no corresponding increase in the amount of payroll taxes collected.

In 2013, the payroll tax rate for the OASDI program is 12.4 percent (6.2 percent paid by employers and 6.2 percent by employees).⁴ This tax rate is not scheduled to change. Although temporary programs in 2011 and 2012 reduced the payroll tax by 2 percentage points for employees and for self-employed workers, the general fund of the U.S. Treasury reimbursed Social Security for the 2%, and workers' benefit amounts were unaffected by the decrease in taxes.⁵

In addition to the payroll tax, the OASDI program receives interest income from trust fund assets and income from the taxation of Social Security benefits. From the enactment of the 1983 amendments until 2009, the program's revenue exceeded its costs each year. However, since 2009, total program costs, including benefit payments and administrative expenses, have exceeded non-interest income. Costs are expected to continue to exceed revenue in 2013 and beyond. However, the OASDI trust fund assets are still increasing because of interest income.

Each year, the Board of Trustees of the Social Security trust funds reports on the program's financial condition. The trustees report presents in great detail the trustees' assessment of Social Security's financial condition over the next 75 years. The trustees report shows financial projections based on three sets of assumptions: high-cost, low-cost and intermediate. The projections based on the intermediate assumptions are the trustees' best estimate. The intermediate projections from the 2013 report show the following:

Highlights

- Benefits and administrative expenses exceed tax income. As a result, some of the interest on the treasury securities held in the trust funds must be used to supplement payroll tax income. However, the trust fund continues to grow, albeit more slowly, since some interest income is still reinvested in the trust funds.
- In 2021, total program income including investment income, is expected to be less than total program outgo, thus drawing down the dollar amount of trust fund assets.
- In 2033,⁶ the combined OASDI Social Security trust fund reserve is expected to be depleted. Separately the OASI trust fund reserve is expected to be depleted in 2035 and

⁴ All Social Security financial results presented in this section can be found in *The 2013 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*. <http://www.socialsecurity.gov/OACT/TR/2013/index.html>.

⁵ The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act reduced the OASDI payroll tax rate for 2011, and the Middle Class Tax Relief and Job Creation Act of 2012 extended it for 2012.

⁶ Under the low-cost projection, the trust fund reserve is not depleted at all in the long term. Under the high-cost projection, the trust fund reserve is depleted in 2027.

the DI trust fund reserve is expected to be depleted in 2016. At that point, only tax income will be available to pay benefits, and that will not be sufficient to pay benefits in full, as scheduled under current law.

Actuarial Balance

An actuarial deficit (negative actuarial balance) of 2.72 percent of taxable payroll is projected for the long-range 75-year period, 2013-2087. This represents the net difference between a summarized income rate of 13.88 percent and a summarized cost rate of 16.60 percent. Both rates are calculated as a percent of the summarized taxable payroll. Social Security is said to be “out of close actuarial balance” over that period because the actuarial deficit is more than 5 percent of the summarized cost rate.

Magnitude of Changes Required

Social Security has a long-range actuarial deficit of 2.72 percent of taxable payroll. If action were taken this year, long-range solvency could be achieved if the combined employee-employer payroll-tax rate, currently 12.40 percent, were increased immediately by 2.66 percentage points to 15.06 percent.⁷ This increase differs from the 2.72 percent deficit because the actuarial balance calculation includes an amount at the end of the 75-year period equal to one year’s worth of outgo that is not included in the tax rate calculation. Long-range solvency could also be achieved with an across-the-board benefit cut of about 16.5 percent for all current and future benefit recipients.

Sustainable Solvency

Neither an increase in the tax rate to 15.06 percent nor a decrease in benefits of 16.5 percent, however, would keep Social Security in actuarial balance permanently. The projection periods for future trustees reports will include years beyond 2087. In all years after 2087, projected expenses will significantly exceed projected income. Any proposed change in Social Security intended to extend solvency beyond the 75-year projection period would certainly need to address those ongoing deficits. One way of doing this is to require (in addition to a positive actuarial balance over the projection period) that the trust fund balance, as a percentage of annual expenses, be stable or rising at the end of this period.

Cost Versus GDP

The cost of Social Security (total benefits plus expenses) rises from 5.1 percent of the gross domestic product (GDP) in 2013 to about 6.2 percent in 2035, and then declines to 6.0 percent by 2050.

Even though the projected date of exhaustion for Social Security’s trust fund is 20 years in the future under the intermediate assumptions, Social Security still faces long-term financial problems that should be addressed sooner rather than later. This conclusion is consistent with those reached in reports from past decades. While insolvency is not imminent, the program will continue to have long-range financial shortfalls under the trustees’ intermediate assumptions.

⁷ The 2013 Trustee Report defines solvency as follows: “A program is solvent at a point in time if it is able to pay scheduled benefits when due with scheduled financing. For example, the OASDI program is solvent over any period for which the trust funds maintain a positive level of asset reserves.”

The fundamental demographic forces that are expected to cause long-term financial problems for Social Security have not changed.

Those who want to learn more about the financial condition of the Social Security program can view the 2013 OASDI trustees report on the Social Security Administration's web site at <http://www.socialsecurity.gov/OACT/TR/2013/index.html>. The Academy's Social Security Committee publishes an annual issue brief, *An Actuarial Perspective on the Social Security Trustees Report*, which summarizes and explains the most important results presented in the trustees report. The issue brief is available on the Academy's web site at http://www.actuary.org/files/SS-Com_Trustees-Report-2013_IB_08-12-13.pdf.

Social Security Basics

The following presents a brief outline of the most important features of the Social Security program as it is now constituted.

Earned Right and Universality

The Social Security benefit formula starts with the earnings on which the worker and employer have made contributions, as well as covered earnings from self-employment. This link between the earnings that have been taxed during a worker's career and the benefits the worker receives after retirement establishes an earned right in the minds of program participants, which is part of the foundation of the program's popular support.

Since Social Security's inception, the program has paid benefits to all those who have worked in covered employment for a sufficient period, and to their family members and beneficiaries, without regard to wealth or other income. This universality reinforces the idea of Social Security as an earned right, and is another part of the foundation of the program's popular support.

These twin concepts, earned right and universality, have distinguished the Social Security program from other government income-maintenance programs that provide benefits to more narrowly defined populations, such as welfare program (e.g., Temporary Assistance for Needy Families, food stamps, and Medicaid) beneficiaries. While these programs have all been subject to major overhauls or benefit cutbacks in recent years, Social Security has not changed significantly since 1983 and still retains its basic design from the 1930s.

Individual Equity and Social Adequacy

Investment is generally defined as putting money to use with an expectation of income or profit in return. In the Social Security context, the term individual equity has traditionally been used to describe the investment aspects of the program. If individual equity were the sole objective of the program, benefit levels would directly relate to contribution levels. For example, a retiring worker with twice the accumulated contributions of another worker in otherwise identical circumstances would receive twice the old-age benefit.

In the Social Security context, the term social adequacy has traditionally been used to describe the welfare and insurance aspects of the program. If social adequacy were the sole objective, benefits might have been set at the same level for all workers, regardless of earnings and contribution levels. They might also have been lower (or zero) for higher earners, or for those who had saved more for retirement.

Social Security was designed to contain elements of both individual equity and social adequacy. Social Security retirement benefits are higher for workers with a history of higher pre-retirement earnings (individual equity), but they provide a proportionately greater benefit for lower-income workers to help mitigate indigence among the elderly (social adequacy). The balance between these two elements has been maintained to varying degrees since Social Security first began.

The current system provides individual equity in two important ways:

- Receipt of benefits is based on a worker's age and employment history, and on the occurrence of events such as death, disability, and retirement. Benefits are paid without regard to need.
- The benefit formula provides higher benefits to workers with higher earnings or longer working careers, even though these workers are more likely to have pension and insurance coverage from their employers and may be more able to save for retirement on their own.

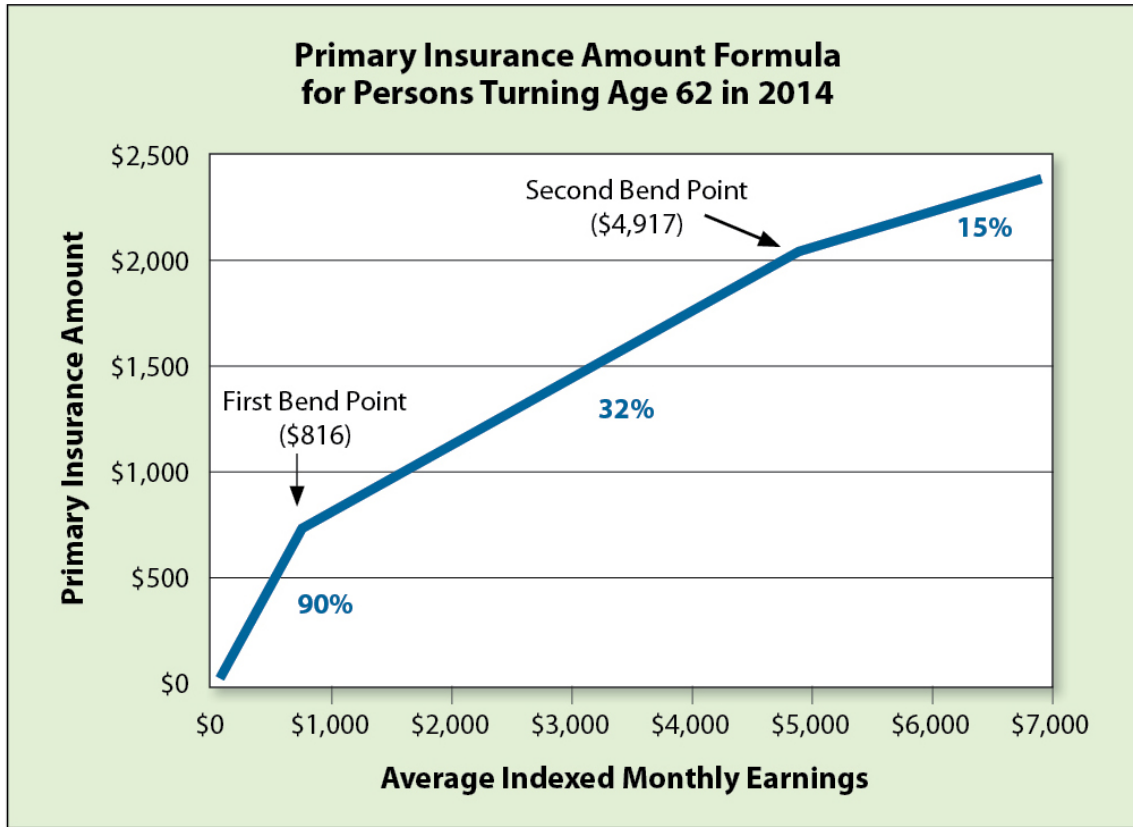
The current system also serves the demands of social adequacy. The amount of the basic "pension" (called the primary insurance amount, or PIA) is skewed to favor lower-paid employees. A worker's PIA is determined by his or her career-average earnings. Before averaging, earnings from years before the worker's 60th birthday are indexed to changes in the national average wage, up to the year the worker turns 60. Earnings at ages 60 and later are included in the calculation of average earnings without indexing. The 35 highest indexed and age 60 and later earnings are averaged and then divided by 12, and the resulting amount is called the average indexed monthly earnings (AIME). For workers reaching age 62 in 2014, the PIA is calculated using the following formula:

90% of AIME up to \$816, plus
32% of AIME from \$816 up to \$4,917, plus
15% of AIME exceeding \$4,917.⁸

The PIA formula percentages (90 percent, 32 percent, and 15 percent) remain the same from year to year, but the "bend points," the dollar amounts where the percentages change (\$816 and \$4,917), increase each year based on increases in the national average wage. The PIA is indexed to changes in the "consumer price index for urban workers and clerical workers" (CPI-W) beginning with December of the year the worker attains age 62, and this indexing continues once a worker has retired. Indexing earnings to changes in the national average wage helps to ensure that initial Social Security benefits incorporate changes in living standards over a worker's career, and indexing benefits to changes in the CPI helps to ensure that the buying power of Social Security benefits remains the same after a worker begins receiving benefits.

⁸ <http://www.ssa.gov/OACT/cola/piaformula.html>

Chart 1



Examination of the PIA formula shows that Social Security benefits replace a far higher percentage of pre-retirement earnings for lower-paid workers than for higher-paid workers. The following table makes that comparison at age 65 for workers with four hypothetical wage histories both currently and projected to 2090. Note that most of the decrease in the replacement percentage in 2090 is due to scheduled increases in the full retirement age.

Average Wage Level	Replacement Percentage	
	2013	2090
Low (about 45% of each year's national average wage*)	56%	49%
Medium (about 100% of each year's national average*)	42%	36%
High (about 160% of each year's national average*)	35%	30%
Maximum (the maximum Social Security taxable wage)	28%	24%

*The estimated national average wage in 2013 (using intermediate assumptions) was about \$44,826.

In addition to favoring lower-paid workers, the system favors less healthy workers and workers with spouses and dependent children. For example:

- The worker's spouse is eligible to receive an amount equal to 50 percent of the worker's benefit while the worker is alive, and generally 100 percent after the worker's death (provided that the spouse is not entitled to a higher benefit based on his or her own earnings history). Benefits extend to divorced spouses to whom the worker was married for at least 10 years. These benefits are paid without any reduction in benefits to the worker or to other family members.
- If a worker is unable to work due to disability, Social Security may pay disability benefits to the worker and family members.
- If a worker dies before becoming eligible for retirement, Social Security may pay survivor benefits to the worker's spouse and other family members.

The social adequacy features of Social Security can be viewed as a web of cross-subsidies among various groups of participants at various points in time. Members of groups that are net subsidizers may feel that they don't get their money's worth from their Social Security contributions, although they often do not realize the main reason is because they are providing subsidies which benefits others. For example, high-income couples with two wage earners are generally net subsidizers, and would likely not realize a high implicit return on their Social Security contributions. Low-income couples with one wage earner generally benefit from these subsidies, and may in some circumstances receive more than their money's worth from their Social Security contributions. Because classes of subsidizers and those subsidized overlap, determining whether any particular worker is a net subsidizer or a net beneficiary of subsidies can be difficult, and situations can change over time as life events occur.

Financing

The primary source of Social Security's financing is a payroll tax on the earnings of covered workers up to a maximum annual amount of \$117,000 in 2014. The payroll tax rate for the OASDI program is 12.4 percent, 6.2 percent paid by employers and 6.2 percent by employees. Self-employed workers pay both the employer and employee shares. This tax rate has remained the same since 1990 and is not scheduled to increase. In addition to the payroll tax, the OASDI program receives income from the taxation of Social Security benefits and from investment earnings on assets in the trust funds.

The income tax that finances most government programs other than Social Security and Medicare is progressive. That is, the rate of taxation applied to a taxpayer's income in a given year starts at zero for the first dollars of income and increases as income passes specified dollar thresholds, or brackets. In contrast, the Social Security payroll tax is a level rate on earnings up to the maximum taxable amount and does not apply to non-wage income, such as investment earnings. Some people say, for this reason, that the Social Security payroll tax represents an unfair burden on the poor, who pay an equal or higher portion of their total income to Social Security than the wealthy. However, because the benefit formula is progressive, providing proportionately higher benefits to workers with lower career earnings, as described above, the overall program contains progressive elements.

In 1972, Congress stated its intention that Social Security was to be financed on a pay-as-you-go basis. This means that income from the payroll tax and taxation of Social Security benefits would be just sufficient to pay benefits and administration expenses and to maintain a small trust fund as a buffer against short-term fluctuations in income and expenses. Under such a system, income from investment earnings would be negligible compared to other program income. To maintain a true pay-as-you-go financing regime, the payroll tax would need to change periodically to track changes in the benefit payments.

However, when Congress adopted the last major changes to Social Security in 1983, it elected to maintain a level tax rate beginning in 1990. This level tax rate was intended to keep the system in actuarial balance through the end of the 75-year actuarial projection period, which at that time ended in 2058. Because benefit payments were expected to be lower during the first part of this period and higher later, the inevitable result has been that, since 1983, the system has built up a sizable trust fund, and will continue adding to the trust fund for many more years. The 2013 trustees report projects that the trust funds, now containing \$2.7 trillion, will reach a peak in 2020, and be drawn down to zero in 2033, more than two decades earlier than projected in 1983.

Some say that, because of this large trust fund build-up, Social Security's financing is no longer pay-as-you-go, but rather includes a significant degree of pre-funding. Whether one characterizes Social Security's financing as pay-as-you-go or partially pre-funded is a matter of personal preference. The important point is that the ongoing gradual build-up of assets in the trust funds is expected to be a temporary phenomenon, which will be followed by a more rapid draw-down to zero unless changes are made to the program.

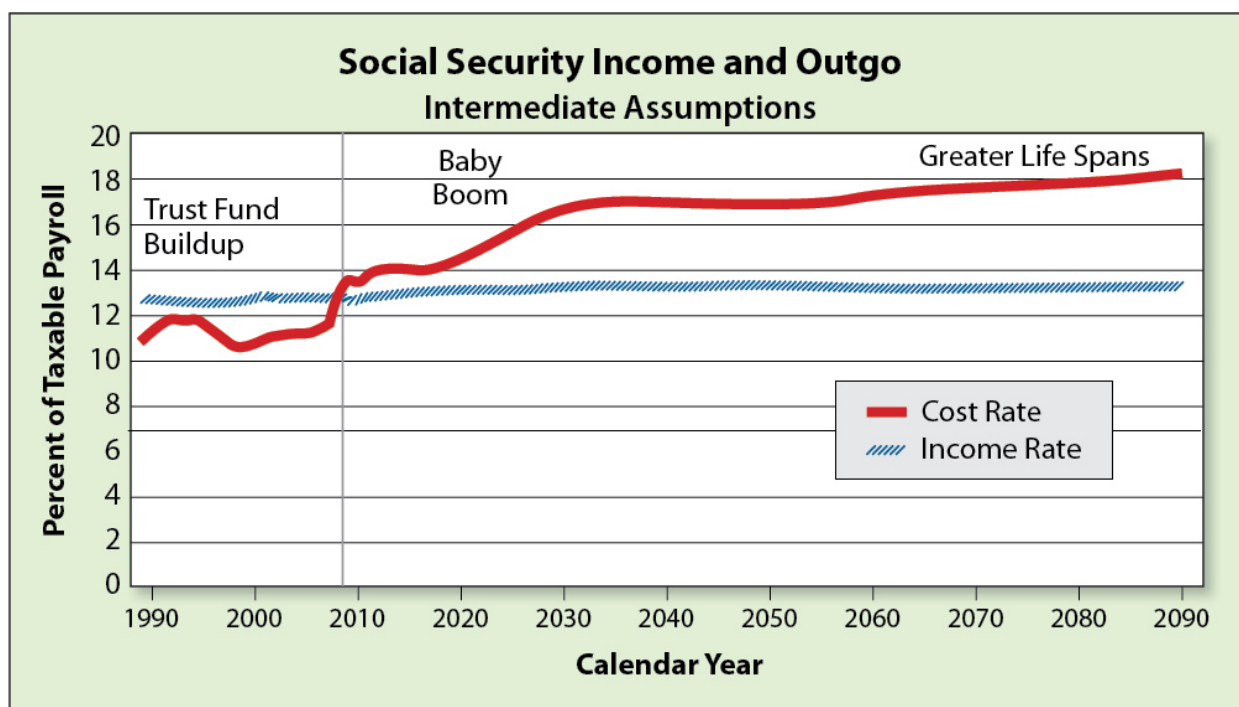
Social Security's trust fund assets are invested almost entirely in non-marketable special-issue U.S. government securities that represent loans to the U.S. Treasury's general fund. Thus, one result of the trust fund build-up has been that Social Security is financing a portion of the deficit spending from the general fund. Some economists believe the availability of this large pool of assets on loan to the Treasury encourages the government to spend more than it otherwise would. When the trust funds are drawn down, the Treasury must then find an alternate source for this financing. This line of thinking makes some people wary of large trust fund accumulations and resistant to program changes that may further increase the buildup of assets in the trust funds.

Chart 2 illustrates expected program income and outgo as determined using the intermediate assumptions from the 2013 trustees report. Program income (excluding investment income) is expected to fall short of program outgo in all future years. This chart shows that immediate increases in program income or immediate decreases in program outgo will produce larger trust fund accumulations in the near-term. This can be avoided by delaying any tax-rate increases or benefit decreases until permanent deficits under the current-law program have begun, in which case they would need to be much larger than if the changes were made effective immediately.

Chart 2 also shows that using the intermediate assumptions from the 2013 trustees report, the rate of increase in scheduled expenditures is expected to decline once the wave of baby-boomer retirements has ended. After increasing rapidly for almost 25 years, from a current level of 13.95 percent of taxable payroll to a projected 16.98 percent in 2035, scheduled expenditures are expected to decrease to 16.83 percent in 2050, then begin a much slower upward trend to 18.16

percent in 2090. Therefore, a level tax rate can track expenditures more closely in the future than now. After the current trust fund buildup is drawn down, it is not likely that a surplus of comparable size would develop in the future as long as the defined-benefit structure is maintained.

Chart 2



Data from Table IV.B1 of the 2013 Trustees Report

Once the country moves beyond the baby-boomer hump, Congress could reduce the rate of increase in expenditures still further, or even eliminate the increase altogether, by designing benefit changes that offset the projected increases in expenditures. This would allow for a return to a more pure pay-as-you-go financing approach while maintaining a level tax rate. The desirability of such a strategy is open to debate. Some believe the current trust fund buildup has encouraged government overspending by giving the Treasury access to a huge pool of cash without the necessity of external borrowing or raising income taxes. However, the alternative of investing trust fund assets in private securities may not be appealing either because the emergence of a new major source of assets for investment could distort the capital markets. On the other hand, setting as a goal a level rate of expenditures as a percent of taxable payroll could unduly constrain program design, so any benefit change that favors one group of participants would need to be offset by a change that disadvantages another group. All these factors must be weighed carefully when addressing Social Security's long-term financial problems.

Changes Within the Current Structure

Assuming that the existing defined-benefit structure and investment policy of the OASDI program is maintained, there are two basic options for restoring financial soundness: increase tax income or reduce benefit outgo. In general, increasing payroll taxes has the effect of transferring buying power from workers during the period of time they are working, to current beneficiaries and to the same workers once they become beneficiaries. Reducing benefits enables workers to retain buying power during the period of time they are working at the expense of current beneficiaries and of the same workers once they become beneficiaries. A combination of tax changes and benefit changes could be enacted, so the impact of any reform is shared by workers and beneficiaries.

Tax Changes

Increase the Payroll Tax

Payroll tax rates have been raised many times in the past. The tax rate for Social Security is 12.4 percent, split equally between employers and employees. In theory, changes to the tax rate could solve as much of the long-range problem as policymakers choose. Also, the changes could be tailored to meet Social Security's cash-flow needs.

Even if workers were required to pay the higher payroll taxes necessary to place Social Security on a sound financial footing, their net incomes after payroll taxes could still continue to increase as long as the payroll tax increase is phased in over a sufficiently long period. For example, increasing the payroll tax rate by 0.1% per year for a sufficiently long period would lead to sustainable solvency while the after-tax income of worker would continue to increase. This assumes worker real wages increase by 1.1% per year as assumed in the Social Security Trustees' intermediate projections. However, the costs of other social insurance programs that benefit Social Security beneficiaries, particularly Medicare and Medicaid, are increasing much more rapidly and will also require additional funding in the future unless eligibility and/or benefits are drastically reduced.

As noted above, immediate tax increases would increase the current surplus, eventually increasing the trust funds, increasing loans to the general Treasury, and increasing the amount of bonds to be redeemed in the future.

Increase the Limit on Taxable Earnings

In 2011, about 83 percent of earnings in covered employment were below the 2011 limit on taxable earnings of \$106,800. This limit also applies to earnings taken into account in the benefit formula. The Bowles-Simpson report includes a proposal to raise the earnings limit gradually so that by 2050 Social Security taxes 90 percent of all earnings in covered employment. This would require raising the limit by about 25 percent in addition to annual adjustments based on increases in average wages. This proposal would eliminate about 35 percent of Social Security's deficit. Alternatively, some of the payroll tax could be paid on all earnings (similar to Hospital Insurance (HI) program – Medicare). Removing the limit for taxes on both employees and employers but

retaining the limit for calculating benefits would eliminate the long-range actuarial deficit entirely and leave a small surplus. Removing the limit both for taxes and calculating benefits eliminates most, but not quite all, of the long-range actuarial deficit.

If adopted right now, such proposals would increase the projected trust fund buildup because income would increase immediately, but any resulting benefit increases would be phased in gradually over a long period. Finally, accounting for earnings with no limit in the benefit formula increases individual equity but raises questions about the appropriateness of the government providing very high retirement benefits to workers with the highest incomes.

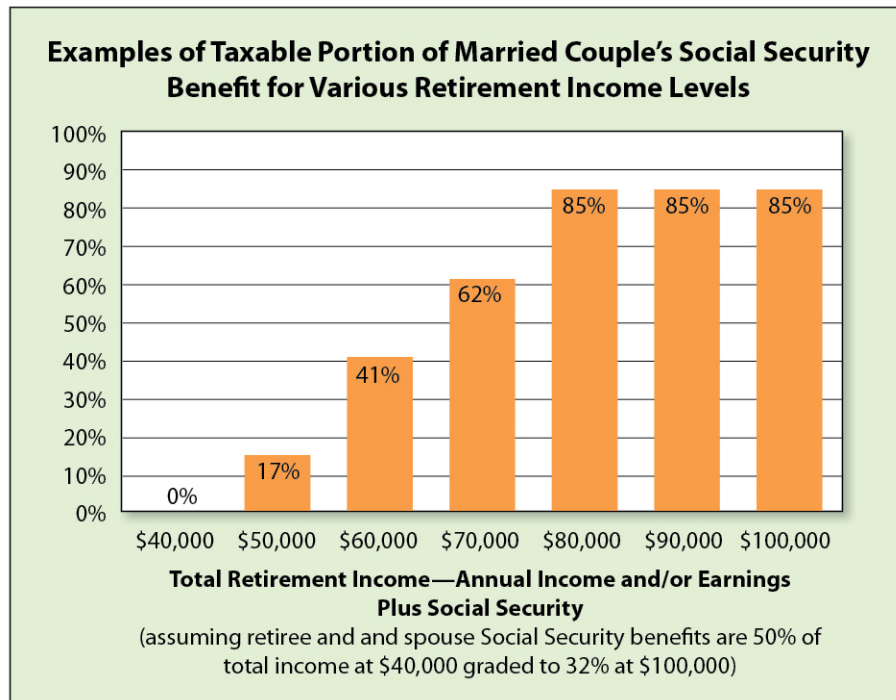
Increase Taxation of Benefits

The tax on a person's benefit is based on the annual Social Security benefit and income from other sources. If a recipient's adjusted gross income exceeds a specified threshold, a portion of the Social Security benefit is added to taxable income. This threshold is \$25,000 for a single person and \$32,000 for a married couple filing jointly. Up to 50 percent of the Social Security benefit is included in taxable income for recipients whose applicable income exceeds this threshold but is less than \$34,000 for a single person and \$44,000 for a married couple. For recipients whose applicable income exceeds this higher threshold, up to 85 percent of the Social Security benefit is included in taxable income. Revenue from the 50-percent taxable portion goes to the OASDI trust funds, while additional revenue from the 85-percent taxable portion goes to Medicare's HI trust fund. None of the four threshold amounts, unlike most dollar limits and thresholds in Social Security and tax law, are indexed to either price inflation or average wage growth.

Examples of Taxability of Social Security Benefits

Annual Retirement Income	Estimated Monthly SS Benefit	Maximum Couple's Annual Benefit	Annual Income Less ½ of SS Benefit	Taxable Percentage of SS Benefit
\$40,000	1,100	19,800	30,100	0 %
\$50,000	1,200	21,600	39,200	17%
\$60,000	1,300	23,400	48,300	41%
\$70,000	1,500	27,000	56,500	62%
\$80,000	1,600	28,800	65,600	85%
\$90,000	1,700	30,600	74,700	85%
\$100,000	1,800	32,400	83,800	85%

Chart 3



Because the dollar thresholds are not indexed, 85 percent of most participants' benefits will ultimately be subject to income tax under current law. The revenue that could be raised through additional benefit taxation is relatively modest. Taxing Social Security benefits the same as benefits from private retirement plans (i.e., treating benefits as ordinary income except for that portion that represents the recovery of previously taxed participant contributions) would reduce Social Security's long-range actuarial deficit by about one-eighth. Taxation of benefits can be viewed as a benefit cut, rather than a tax. Also, it can be regarded as an alternative to a means test that preserves the "earned right" to benefits but treats them more like private pensions.

Expand Coverage

Originally, Social Security did not cover employees of state and local governments (or federal employees). Later, coverage of state and local government employees became voluntary on a state by state basis. The 1983 Amendments to Social Security prohibited termination of state coverage agreements, but still did not require coverage. Requiring coverage for all state and local government employees has frequently been suggested. The Bowles-Simpson report includes a proposal extending coverage to newly hired state and local government employees after 2020. Because the additional revenue from an expansion of coverage precedes by many years additional benefit payments, such a change would reduce the long-term deficit. The Bowles-Simpson proposal reduces the deficit by 8 percent.

Benefit Changes

Reduce Benefits Across the Board

A benefit cut of about 16.2 percent for all current and future recipients would increase the trust funds greatly today, and bring 100 percent solvency to Social Security over the next 75 years, but would not make Social Security sustainable thereafter. This is because benefits in 2084 (even with a 16.2 percent reduction) would still be much larger than Social Security's annual income and would quite quickly exhaust the one year of benefit payments in the trust funds in the 75th year.

Raise the Full (Unreduced) Retirement Age

The full retirement age (FRA) is the earliest age at which unreduced old-age benefits are payable. For 60 years, starting in 1940, the FRA was 65. The monthly benefits payable to workers who elect to receive benefits before the FRA are reduced to compensate for the resulting longer payout period. Benefits are payable as early as age 62, and the proposals to increase the FRA often keep the earliest retirement age (ERA) at 62.

Since 1940, cohort life expectancy at age 65 has increased about 6 years for both men and women.⁹ In 1983, Congress enacted increases in the FRA, partially recognizing the fact that life expectancy has increased substantially since 1940. As a result, current law increased the FRA gradually to age 66 for workers born in 1943 (they reached the earliest eligibility age for retirement benefits, age 62, in 2005). The FRA remains at age 66 for 12 years and then gradually increases to age 67 for workers born after 1959 (who will reach age 62 in 2022 and later).

Life expectancy is projected to continue increasing, although the rate of increase is the subject of much debate among actuaries and demographers. For those seeking to level out program expenditures after the retirement of the baby boomers, further changes to the FRA could be designed with that purpose in mind. Based on the assumptions in the trustees report, the FRA would need to be increased by about one month every two years in order to offset the effects of increasing life spans on the system. That could be accomplished either by adopting a fixed schedule of increasing retirement ages or by indexing the FRA to increases in life expectancy. The Bowles-Simpson report includes a proposal to index both the FRA and the ERA to increases in longevity after 2027, the first year workers receive unreduced benefits at age 67 under current law. The proposal also directs the Social Security Administration to create a "hardship exemption" for workers who cannot continue working past age 62 but who do not qualify for disability benefits. The proposal would reduce the long-range actuarial deficit by 18 percent.

The Bowles-Simpson proposal does not fully offset increases in longevity since 1940. This could be accomplished by ad hoc increases to the FRA instead of or in addition to indexed increases. The FRA could be increased fast enough to eliminate Social Security's long-range actuarial

⁹ A cohort is a group of people that are born in the same year (or grouped year period) and who experience the same events that impact mortality for those people. Cohort life expectancy is measured at each age as the group moves through time.

deficit entirely and still not take into account the full extent of improvements in longevity, but few proposals under serious consideration eliminate more than about a third of the deficit. This is due in large measure to concern for workers in strenuous jobs, who might not be able to continue working beyond the current FRA. Increasing the FRA is really a benefit reduction because benefits would be available at the same ages after the change but at reduced amounts. The big difference is that raising the FRA does not affect disability benefit amounts, while reducing the formula does lower them.

Raising the ERA does not improve Social Security's financial position much because early retirement benefits are already reduced to the actuarial equivalent payments. However, if the FRA were raised, but not the ERA, the effects on benefit adequacy of greater benefit reductions at the earliest retirement ages become an important factor.

One recent proposal involving a change in the FRA would allow workers to choose annually whether to have their payroll tax reduced by 2 percent for both the employee and employer in exchange for an increase in their FRA by one month for any year in which they choose to have their tax rate reduced. This proposal is unique in that it allowed individuals a choice in their FRA.

Change the Benefit Formula: PIA Formula Percentages

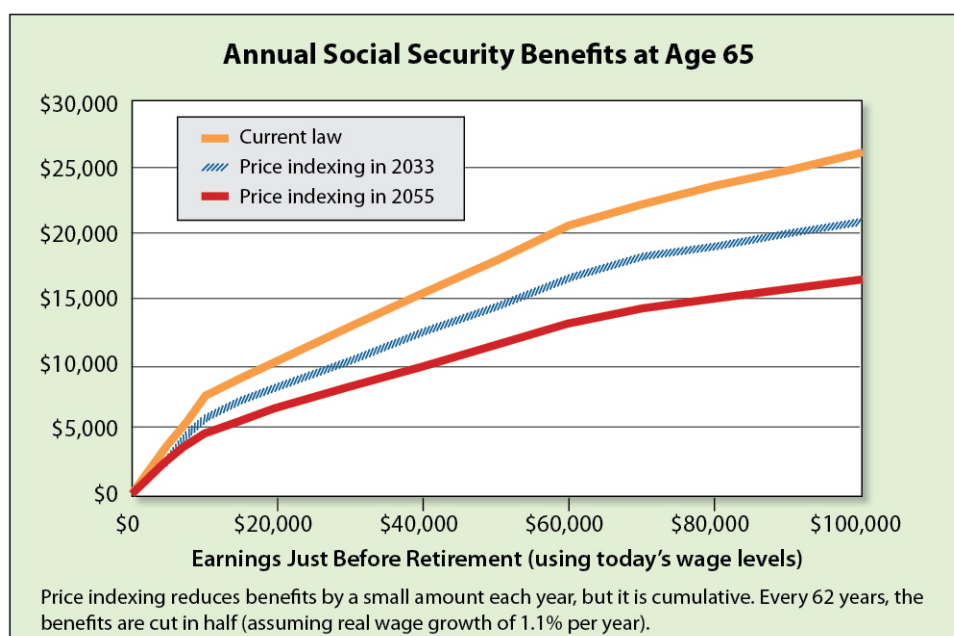
One way to improve Social Security's financial condition is to gradually reduce the current PIA formula percentages (90 percent, 32 percent, and 15 percent) while keeping the ratios between the factors constant. For instance, the three PIA formula percentages could be reduced by multiplying each factor by 0.99 each year. Under this scenario, after 10 years had passed, the PIA formula would use percentages of about 81, 29, and 14. This approach would maintain the progressive nature of the program but reduce the program's adequacy, especially for lower earners and their families.

The change described above would reduce newly awarded Social Security benefits by about 1.1 percent per year compared with the current formula. Because wage inflation has historically averaged about 1.1 percent higher than price inflation, initial Social Security benefits would be expected to keep pace with inflation under this approach but fall behind in replacing pre-retirement income. For example, the replacement ratio (Social Security benefits divided by pre-retirement income) for low-income workers would decline after 10 years from 60 percent to 54 percent, although the buying power of a worker's Social Security benefits would be expected to remain about the same as benefits awarded today under the current formula. However, a worker's Social Security benefits would not reflect the real (adjusted for inflation) increases in wages during those 10 years. For this reason, proposals along these lines are often referred to as price indexing, to distinguish them from the current formula, where initial benefits are indexed to wages up to age 60.

Reducing the PIA formula percentages by 1.1 percent each year without a specified end date would eliminate Social Security's long-run deficit if carried on long enough, but would dramatically reduce replacement rates from the levels that would result from the formula under current law. For example, the replacement ratio of low-income workers would be roughly cut in

half in 62 years. Chart 4 shows the impact on benefits in today's dollars if the 15 percent, 32 percent and 90 percent PIA formula percentages are reduced by 1.1% each year from 2013 through 2033 and through 2055.

Chart 4



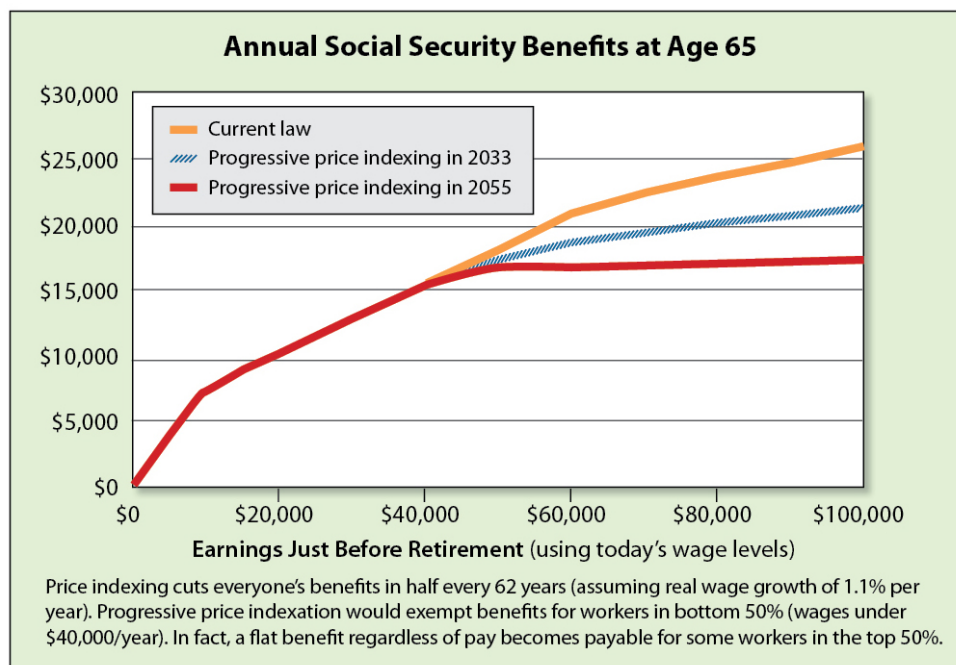
Another option is progressive price indexing (see Chart 5), which applies price indexation to workers at the maximum career average wages, but holds harmless workers at the lower average wage levels. The proposal introduces a new bend point, chosen so that 50 percent of covered workers would have total AIME below this level (and would not be hurt by this proposal). The 32-percent and 15-percent factors would be reduced as necessary (recalculated each year, rather than indexed in the traditional sense) so that the benefit of a worker who has always earned the maximum taxable amount would be the same as if wage indexing of the initial benefit had been replaced by price indexing.

The effect of these changes would be to preserve current-law benefits for the lowest paid 50 percent of covered workers and introduce price indexing for workers who have always earned the maximum taxable amount or above, with a blending of these results for workers who fall in between. Over time, these changes would dramatically increase the progressivity of the benefit formula. By the time price indexing stops under a recent proposal in 2055, the replacement ratio for low-paid workers would remain the same as under current law, but the benefit would be a flat amount regardless of pay for many in the highest paid 50 percent of covered workers.¹⁰ This changes the nature of Social Security (i.e., workers with larger wages would have larger payroll

¹⁰ The description and financial effects on Social Security of Representative Jason Chaffetz's proposal can be found in a November 9, 2011 letter from Steve Goss, Chief Actuary of Social Security. http://www.ssa.gov/OACT/solvency/JChaffetz_20111109.pdf.

taxes, but would get the same benefit amount as lower wage workers). On the other hand, the proposal would decrease the deficit by about 0.92% of taxable payroll.

Chart 5



Alternatively, the PIA formula percentages could be selectively reduced on an ad hoc basis. These reductions could also be designed to increase the progressiveness of the formula and thereby maintain adequacy for very low earners. The Bowles-Simpson report includes a proposal that creates a new bend point between the current two bend points and applies formula percentages of 90 percent, 30 percent, 10 percent and 5 percent to the resulting four segments of the AIME. The new formula would be phased in gradually by 2050. Adopting this formula would eliminate 45 percent of the long-range deficit.

Some proposals go further by guaranteeing low-wage workers Social Security benefits at least equal to the poverty level. The Bowles-Simpson report offers a minimum benefit of 125 percent of the poverty level for a worker with 25 years of covered employment. This minimum benefit increases the long-term deficit by 8 percent, offsetting some of the savings from the formula change described in the preceding paragraph. Some critics have noted that such an enhanced benefit could exceed a covered worker's pre-retirement earnings, discouraging workers eligible to retire from continuing to work and disabled workers from returning to work. A possible solution would be to cap the minimum at the person's average indexed wage. More fundamentally, some people could view the combination of a more progressive benefit formula and the addition of a guaranteed minimum benefit as changing the nature of Social Security from an income replacement program to an anti-poverty program. This could erode public support for the system.

Another method for adjusting the formula percentages is called longevity indexing. Under this method, the formula percentages are adjusted by multiplying them by the ratio of life expectancy at a given age (usually age 67) in a base year over life expectancy at that same age a fixed number of years (usually four) before initial benefit eligibility. Recent proposals of this nature eliminate about a quarter of the long-range deficit. Longevity indexing is another way to take into account increases in life expectancies without raising the retirement age. Longevity indexing is used by some European countries in their national pension systems. In an analogy to progressive price indexing, progressive longevity indexing applies longevity indexation to workers at the maximum career average wages, but not to workers at the lowest average wage levels, with linear interpolation at wage levels in between.

Change the Initial Benefit Formula: AIME

As stated previously, AIME amounts, on which benefits are now based, are calculated over an averaging period of the highest 35 years of earnings. Some proposals would increase the averaging period to 38 or 40 years. This change would reduce projected future benefits for individuals with shorter work histories. For example, the 40-year proposal would reduce benefits an average of 3 percent and would eliminate about a quarter of the 75-year long-range actuarial deficit.

This proposal also would strengthen the relationship of lifetime contributions to benefits and increase incentives to extend working careers, thus increasing the individual equity aspect of the program. However, increasing the averaging period would have especially adverse consequences for individuals who have extended periods when they do not work for wages, particularly workers who leave paid employment to care for children. One modification that addresses this concern is to allow dropout years for childcare, although the practicality of administering such a provision is open to question.

Other proposals would change the way earnings are indexed to account for inflation, from the time they are earned up to age 60. For example, instead of indexing by changes in the national average wage, earnings would be indexed by changes in the consumer price index (CPI). This change would be fully phased in within 40 years as today's youngest workers retire. Because prices generally increase more slowly than wages, this change would have the effect of reducing workers' AIMEs in almost all circumstances. However, this change would have a smaller effect than reducing the bend points or the PIA formula percentages as described above.

Reduce Cost-of-Living Adjustments (COLAs)

A 1996 congressionally appointed commission chaired by economist Michael Boskin suggested that the annual increase in the CPI was overstated by 1.1 percent. In response, the Bureau of Labor Statistics has modified its methodology in recent years to account for consumers' tendency to substitute, among similar products, those whose prices have increased more slowly for those whose prices have increased more rapidly. Most economists agree this adjustment has greatly reduced, if not eliminated, the overstatement of inflation.

However, some economists think the CPI still overestimates annual increases in the cost of living. They suggest using another Bureau of Labor Statistics price index referred to as the “chained CPI” as a more accurate measure of price inflation. This index takes into account the tendency for consumers to substitute products whose prices have increased more slowly for those whose prices have increased more rapidly, even among unrelated categories of goods and services. Using the chained CPI would lower the annual increase for inflation by an estimated 0.3 percent. The Bowles-Simpson report recommends adopting the chained CPI for Social Security and President Barack Obama’s administration has supported this change. This proposal would reduce Social Security’s deficit by 26 percent.

Others have suggested using a separate CPI for Social Security purposes that uses the typical basket of goods and services purchased by retirees. An experimental CPI-E based on a typical basket of goods and services for retirees was constructed by the Bureau of Labor Statistics. Over the past 15 years, it has been approximately 0.3 percent higher per year than the CPI that is currently used to index Social Security benefits. The assumption in future years is that the CPI-E will be approximately 0.2 percent higher per year.

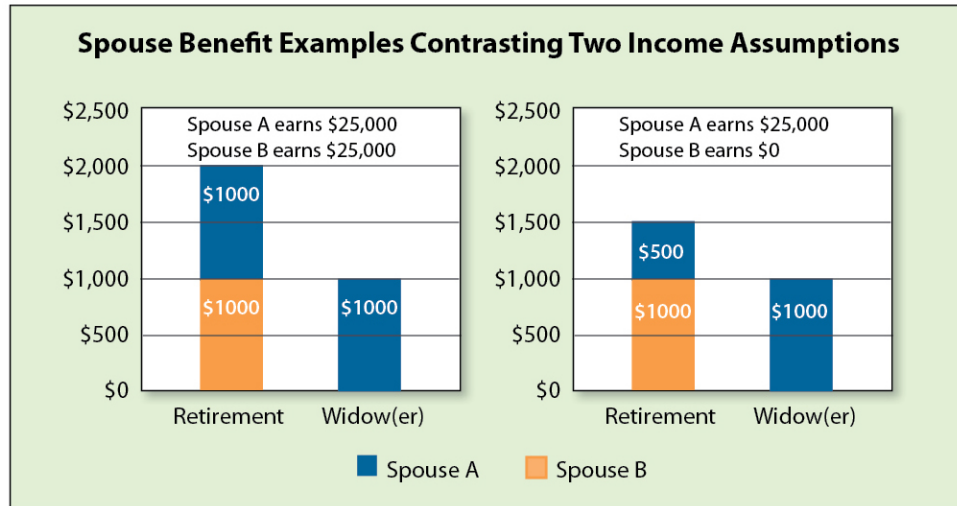
If a change in the COLA was enacted, it could be instituted quickly without radically restructuring the program, and, unlike other changes, it could be applied to people already retired. That would provide a more immediate improvement to Social Security’s finances. Some policymakers suggest that any reform should allocate benefit reductions among all program participants, including current retirees.

On the other hand, it is more difficult for retirees to handle changes because much of their income is often fixed and most of them cannot return to work. A reduction in the COLA relative to current law would have a cumulative effect on existing beneficiaries. For example, if the rate of future COLA increases were 0.3 percent per year less than current law increases, projected benefits at age 72 would be about 3 percent less than those projected under current law; at age 82, the benefits would be about 6 percent less than projected under current law. This change would eliminate about 20 percent of Social Security’s 75-year deficit. However, such a change would have its greatest impact on the future very elderly. If a change to the CPI overstates the CPI error, it could reduce the standard of living of lower-income beneficiaries and others who derive most of their income from Social Security. However, if the economists are correct that the CPI overstates inflation, older individuals have been enjoying cumulative increases that are higher than real inflation.

Change Auxiliary Benefits

The present structure of Social Security auxiliary benefits was established when single-wage-earner families still predominated. At full retirement age, the lower-paid, or non-working, spouse receives 50 percent of the higher-paid spouse’s benefit (PIA) unless the lower-paid spouse can receive a higher benefit based on his or her own earnings history. When one spouse dies, the surviving spouse receives the greater of 100 percent of the deceased spouse’s benefit or the surviving spouse’s own benefit. Social Security also pays benefits to other family members in certain circumstances, including former spouses, dependent children, and parents.

Chart 6



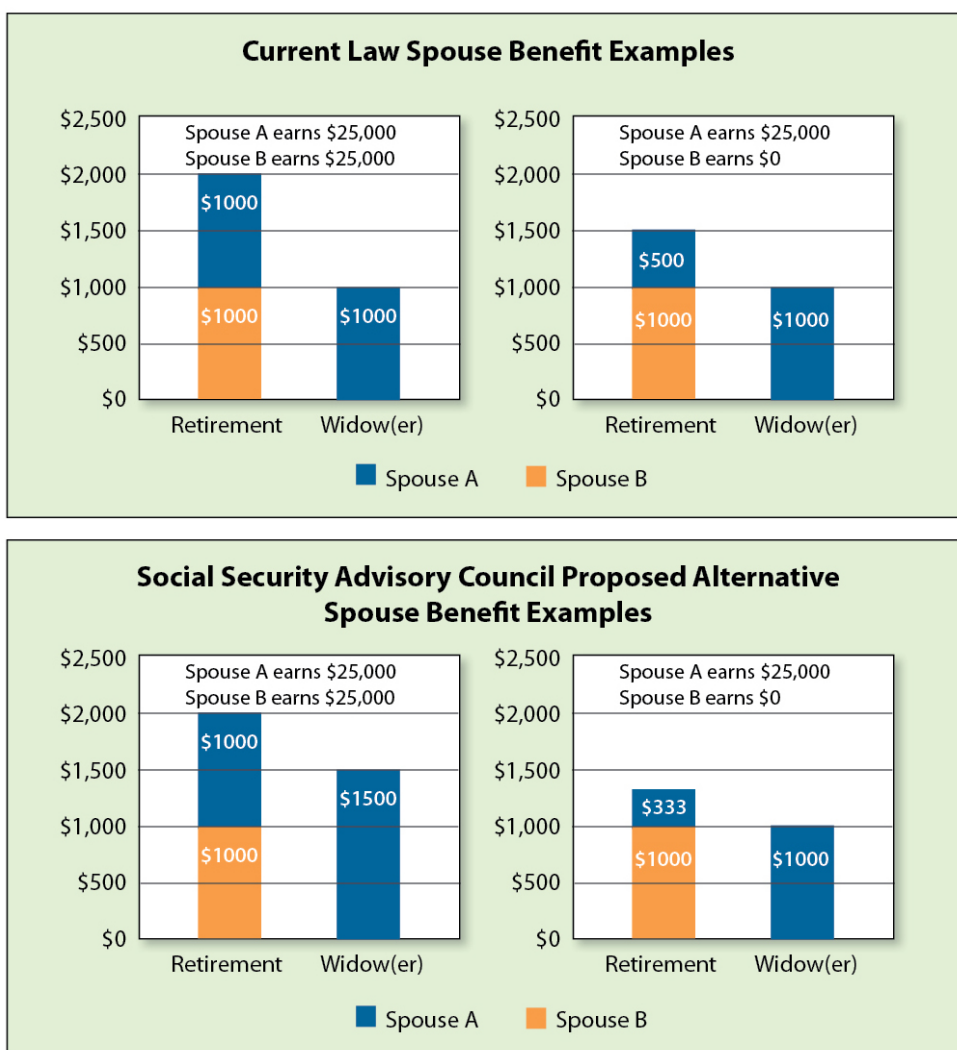
Many people have pointed out that Social Security may no longer need the same level of spouse benefits since most workers now qualify for a benefit based on their own earnings. For example, suppose the two spouses have similar earnings. When both spouses are alive, the couple together receives twice the benefit either would receive alone. If one spouse had never worked in covered employment, the couple would still receive one and a half times the benefit the working spouse would receive alone. Thus, the two-earner couple pays twice the taxes of the one-earner couple, but receives benefits only a third higher. The inequity is greater after one spouse dies. In the two-earner couple, the surviving spouse receives about half of what both received as a couple. In the single-earner couple, the surviving spouse receives two thirds of what both received as a couple, which is the same amount as the surviving spouse of the two-earner couple. Thus, after the death of one spouse, the two-earner couple gets no benefit from the additional payroll taxes they paid. (See the illustration above).

Many proposals have been made to modify the structure of auxiliary benefits for family members. These proposals are often motivated at least as much by the desire to achieve greater equity between single-earner and two-earner families as to address Social Security's financial problems. For example, reducing the benefit for a non-working spouse (while both are living) from 50 percent to 33 percent of the PIA would eliminate about 6 percent of OASDI's 75-year long-range actuarial deficit. It would also partially address the concern of two-earner couples whose second income buys little, if any, in additional benefits. Further, if the survivor benefit remains 100 percent of the working spouse's benefit, the survivor would receive 75 percent rather than two thirds of the couple's benefit. This is in line with studies that show surviving spouses require about 75 percent of the income both spouses were receiving to maintain the same standard of living.

The 1994-96 Social Security Advisory Council developed a more complex proposal for restructuring auxiliary benefits. This proposal would also reduce spousal benefits to 33 percent of the primary worker's PIA and maintain the current survivor benefit rules, under which the survivor receives the greater of the survivor's own worker benefit or the deceased spouse's

worker benefit. The proposal would provide a minimum benefit of 75 percent of the couple's combined benefit to the survivor. This would increase survivor benefits for many working spouses, particularly in situations where the spouses' career earnings are comparable. This proposal would improve equity between one-earner and two-earner couples through a combination of benefit increases and decreases, but at a net cost of increasing the estimated long-range cost of OASDI by about 0.18 percent of payroll, according to actuarial studies prepared for the Advisory Council. Placing a cap on the 75 percent survivor benefit guarantee equal to the average survivor benefit can reduce this cost. With the cap, the guarantee would primarily help low- and middle-income workers who might otherwise have less adequate survivor benefits. The following charts illustrate how this would change current law.

Chart 7



Alternatives Within the Defined Benefit Structure

Investment of Trust Fund Assets

Social Security trust fund assets are invested almost entirely in non-marketable special-issue U.S. government securities that represent loans to the U.S. Treasury's general fund. Those bonds pay market rates of interest. But many analysts believe that greater returns could be achieved, on average, in the more volatile equity markets. For example, investing 40 percent of trust fund assets in equities, phased in over 15 years, would reduce the 75-year deficit by about a third, assuming a 6.4 percent real rate of return over the long term.¹¹ Investment procedures could be changed to allow such investment – with appropriate safeguards against market manipulation or political lobbying on investment decisions – through the use of indexed funds, using just one example. However, equity returns are highly variable and short- and long-range actuarial projections could fluctuate significantly from year to year.

Still, the vast sums involved under the current-law tax rates could have unintended effects on the securities markets. Initially, the trust funds would be major purchasers of equities, but later they would become major sellers. Further, the Treasury would have to find alternative buyers for government bonds that otherwise would have gone into the trust funds. Economists have debated the potential effects of such changes on the prices of both equity and non-equity securities, and the reaction of other investors to these changes. Even if equity investment reduces Social Security's deficit, it could reduce returns in employer-sponsored retirement plans and individual savings.

Of course, the potential additional income from changing the investment procedures would depend on the size of the fund. If at some time in the future, as seems likely, the program is returned more closely to pay-as-you-go financing, the additional income would constitute a smaller portion of program financing.

Means testing

Social Security expenditures could be reduced over the long term by applying a means test to retired workers and their dependents and beneficiaries otherwise eligible for benefits under the program. Means testing would reduce or eliminate benefit payments to participants whose income or assets exceed specified thresholds. There are many ways this could be done. For example:

- An income test could take into account all income or only “wealth-related” income, such as investment income or income from a business.
- An asset test could include all assets or exclude widely held assets such as houses and cars.

¹¹ This references a study by the Social Security Office of the Actuary in response to a proposal by the Social Security Advisory Board. An assumed rate of return of 3.0% would not reduce the deficit at all.
<http://www.ssa.gov/OACT/solvency/provisions/index.html>.

- A means test could be applied one time when benefits begin or at regular intervals after benefits begin.
- A test could eliminate benefits altogether for those exceeding the threshold, or phase out benefits gradually as income or assets increase beyond the threshold.

The Medicare reform package enacted by Congress in 2003 included means testing provisions, which increase the Part B premium for high-income retirees and base the cost to the participant of the Part D drug benefit in part on income and assets.

Several proposals for applying means testing to Social Security benefits have been made, but the one that has gained the most public attention came from the Concord Coalition, a non-partisan group of fiscal conservatives. The Concord Coalition made its proposal, which it calls “affluence testing,” in the mid-1990s and has not updated it recently, so some of the specific dollar thresholds are now outdated. Under affluence testing, Social Security benefits would begin to be reduced if family income exceeds \$40,000, with reductions reaching 85 percent if family income exceeds \$120,000.

In late 2011, Rep. Jason Chaffetz (R-Utah) offered a plan to restore sustainable solvency for the Social Security program by a reducing Social Security benefits for beneficiaries whose modified adjusted gross income (MAGI) exceeds \$60,000 for individual taxpayers or \$120,000 for taxpayers filing jointly.¹² For this purpose, MAGI equals adjusted gross income less taxable Social Security benefits plus nontaxable interest income. Benefits would be reduced on a sliding scale starting at 0 percent for beneficiaries whose income is exactly at the threshold and increasing to 50 percent for those whose incomes are at or above three times the threshold. The reductions would start in 2019, and the thresholds would be indexed thereafter by changes in the national average wage.

The conservative Heritage Foundation also has come up with a version of means testing as part of a comprehensive proposal for improving the country’s long-term fiscal outlook called “Saving the American Dream.” The Heritage proposal would start reducing Social Security benefits when non-Social Security income reaches \$55,000 for individual taxpayers or \$110,000 for taxpayers who file jointly, and eliminate benefits entirely for those with non-Social Security income exceeding these thresholds by \$55,000 or more. The reductions would begin taking effect immediately upon enactment of the proposal. At the same time, current-law taxation of some Social Security benefits would cease.

A number of objections have been raised to the concept of means testing including: erosion of public support for Social Security, particularly among the wealthy; disincentives from savings and incentives for consumption; administrative complexity; and the potential for fraud and abuse. Many of the same results could be achieved more simply through changes in the benefit formula described above or through changes in the income taxation of Social Security benefits.

¹² <http://www.ssa.gov/OACT/solvency/index.html>.

General Revenue Financing

Many social insurance programs in other countries receive some financing from general treasury funds, and that approach could be adapted for the U.S. Social Security program. For example, some have suggested that general revenue financing should pay for the subsidies that Congress gave to the early beneficiaries of the system who received more than they paid in. Because general revenues come from a progressive tax base, this form of financing would be more progressive than the current payroll tax, which many contend is regressive because it does not tax income over the maximum taxable wage base.

General revenue financing would require higher income tax collections and/or government borrowing. Alternatively, new non-payroll-based taxes, such as a value-added tax (VAT), could be earmarked for the program. Although general revenue financing could solve Social Security's financing problems completely, it would compromise the basic principle of a self-supporting program that is financed by participants who "earn" their right to benefits. It might also be too tempting to increase the general revenue going to Social Security when other solutions prove more difficult to enact.

Individual Accounts

Some Social Security proposals call for American workers to accumulate contributions in individual accounts as a source of retirement income. While creating individual accounts will not by itself address Social Security's financial problems, proponents of this approach cite the following advantages: workers would have direct control and ownership of their accounts; workers would be able to obtain a better return on their Social Security contributions by investing all or part of their accounts in the stock market; and this additional investment would boost the economy and make it easier for future generations to bear the burden of Social Security and other social insurance programs. Opponents cite the inability of most workers to take total control of their own retirement planning, especially at advanced ages; the greater uncertainty of benefits tied to the performance of the securities markets; and the shift in emphasis from social adequacy toward individual equity inherent in a system based on individual accounts. Actuaries are concerned about shifting the inflation and longevity risks from the large pool of Social Security participants to the individual. With the shift in employer plans from annuities to lump sums, there is a need for inflation-protected lifetime income solutions for individuals.

The following presents a brief outline of the most important issues in designing an individual account program for Social Security.

Types of Design

When most people think of individual account plans, they have in mind employer-sponsored plans such as 401(k)s or the Thrift Savings Plan (TSP) for federal employees. These are "pure" individual account plans with the following characteristics:

1. They have been individual account plans from inception, and all contributions made by or on behalf of participants go into individual accounts.
2. All investment earnings and administrative expenses are allocated to individual accounts.
3. The individual accounts comprise all plan assets, and participants' benefits are paid exclusively from their own accounts.

If Social Security were a pure individual account arrangement, ultimate individual benefits would be derived completely from each individual's payroll tax contributions and earnings from investment of those contributions. Therefore, theoretically no deficit could develop. Because Social Security has been operating as a defined benefit plan for over 75 years, it would be impractical to convert it immediately into a pure individual account plan, and no proposal has been made to do so.

Various proposals made during the 1980s and 1990s sought to expand the current system by introducing individual accounts without changing the existing defined benefit program. These so-called “add-on” accounts fall broadly into two categories:

- Mandatory accounts funded by an increase in the payroll tax.
- Voluntary accounts funded by workers through elective wage deferrals, often supplemented by matching contributions funded by the government from general revenues. In most proposals, matching contributions are available only to lower-paid workers or the contributions are capped at such a low amount that they provide a meaningful incentive to contribute only to lower-paid workers.

Any plan calling for additional individual contributions would give participating workers greater benefits, but by itself would do nothing to alleviate the issues with Social Security financing. Matching contributions made from general revenues would only contribute to greater federal deficits or require higher taxes.

More recently, most individual account proposals follow a ‘carve-out’ approach. Under such approaches, a portion of the payroll taxes, typically 2 percent of earnings each from the employer and employee, is diverted from the defined benefit trust funds to individual accounts. An offset, or carve-out, representing the hypothetical benefits available from the individual account reduces a worker’s benefit under the current Social Security program.

This offset is computed by assuming that the worker’s individual account earns a specified target investment return every year and converting the resulting hypothetical account balance to a retirement annuity based on that same rate of return. A worker whose account actually earns a higher average rate than the target rate would get higher benefits because the real account would be larger than the hypothetical account. Conversely, someone who earns a lower rate would get lower benefits, although some proposals include a guarantee to protect workers against any reduction in total benefits.

Like add-on accounts, the carve-out approach does nothing by itself to ameliorate Social Security’s financial problems. However, most carve-out proposals reduce trust fund expenses through a decrease in the current program benefit using one of the mechanisms described earlier in this report. The theory behind the proposals is for workers to make up some or all of their losses resulting from the decrease in the current program benefit through individual account investment earnings that average more than the target rate. If workers can make up the entire loss, the effect would be that benefits comparable to those under the current program are financed without raising the payroll tax. However, investment earnings cannot be guaranteed, and even attempting to achieve some target rates on average—for example, three percentage points more than the rate of inflation—may require having riskier investments. Workers would be giving up the certainty of the current program and accepting additional investment and annuity conversion risk.

An important design issue for any carve-out proposal is whether the intent is for the current program formula to continue indefinitely for some or all participants, or whether the intent is that ultimately, after a lengthy transition, the carve-out will fully offset the current program benefit for all or most participants. The key design features here are the size of the carve-out and the rate of decrease in the current program benefits – the greater the contributions diverted to individual accounts, and the more rapid the decrease in current program benefits, the more likely the hypothetical benefit attributable to these accounts will fully offset the current formula benefit. As described earlier in this monograph, some mechanisms for decreasing benefits affect the higher paid more severely than the lower paid. If such a mechanism is employed in conjunction with an individual account carve-out, the result might be that the current program benefit would provide a minimum for lower-paid workers indefinitely but be phased out eventually for higher-paid workers. This could be expected to reduce support for the residual defined benefit component among higher paid workers.

A great number of carve-out proposals have been made, including three by the 2001 President's Commission on Social Security, and many by members of Congress. These proposals include a variety of combinations of provisions, and more creative ideas pop up occasionally. The above description gives only a broad outline of how these proposals might work.

Individual Equity and Social Adequacy

Proposals to replace the current system, at least partly, with a system of individual investment accounts raise anew the question of individual equity and social adequacy. Individual investment accounts, by their nature, stress individual equity. Provisions that preserve social adequacy must be explicitly designed into such a system.

All recent individual account proposals include provisions that mitigate the swing away from social adequacy toward individual equity inherent in moving to an individual account design. An example of such a provision has already been described, namely, retaining the current program benefit as a minimum for the lower-income workers. Most proposals also retain current program disability and survivor benefits, sometimes with changes such as those described earlier in this report, as a minimum at all earnings levels. Other mechanisms for preserving a greater degree of social adequacy under an individual account plan include:

- minimum guaranteed benefits,
- providing above-market interest rates or more favorable annuity purchase rates to accounts of lower-paid workers, and
- diverting a greater share of payroll taxes to individual accounts for the lower-paid while calculating their carve-out on the same basis as the higher-paid.

As described earlier, the current Social Security program provides social adequacy through a variety of transfer payments among groups of covered workers: from the higher-paid to the lower-paid, from single to married workers, from dual-earner to single-earner married couples, from the short-lived to the long-lived, from the healthy to the disabled, and so forth. Many participants are in both subsidizing and subsidized groups. This complexity obscures, to some extent, the subsidies built into the system. One difficulty of preserving social adequacy under an

individual account system is that the various subsidies become more explicit, making it more likely that potential subsidizers will not support changes to enhance social adequacy.

Financing

An individual account is fully funded at all times because a participant's benefit is based on his or her account balance. However, individual accounts exacerbate the problem of funding current program benefits because they divert payroll tax income away from the trust funds immediately, while resulting decreases in current program benefits occur much later. Most proposals preserve the current program benefits for workers at least age 55 when individual accounts are first funded. Therefore, for seven years after the initiation of individual accounts, until the first participants with accounts reach age 62, there is no decrease in current program benefits. Even when workers with individual accounts begin retiring, their account balances and the resulting carve-outs will be small at first. Many decades will pass before decreased benefit payments from the current program are commensurate with decreased funding for that program.

There is another way to explain this transition. Under the system as now constituted, each generation largely pays for the benefits of the preceding generation. Under an individual account system, each generation pays for its own benefits. During the transition from defined benefit to individual account, there will inevitably be a transition generation that must pay for both the preceding generation's benefits and its own.

This additional burden is called the "transition cost." While the amount varies among proposals, liabilities in the range of \$10 trillion are not atypical. Proponents of individual accounts often say this liability already exists and is not created by the transition to individual accounts. However, the issue here is not the existence of the liability, but the timing of when it comes due. The transition to individual accounts places the burden of the Social Security liabilities of two generations on one. Like many federal liabilities, this one can be passed down to future generations through borrowing, but the sheer magnitude of the additional government debt that must be issued, on top of an already rapidly growing national debt, has further complicated consideration of such proposals.

Voluntary or Mandatory Accounts

A voluntary individual account program would have obvious appeal for many workers. Still, a voluntary program has formidable issues that do not arise under a single, mandatory plan.

For example, what benefits would participants who stay in traditional Social Security receive? Social Security will be unable to pay full benefits within a few decades, and this raises difficult questions if individual accounts are voluntary. Should workers who opt out of individual accounts get a scaled-back version of Social Security? Should workers be told that the program they choose is subject to unspecified changes?

In virtually all voluntary proposals to date, a worker's decision about whether to participate in individual accounts is one-time and irrevocable. In practice, it seems reasonable to expect that over time the public would insist on having open seasons in which to change their elections. Workers could say that they were not properly informed, that circumstances had changed,

especially if either Social Security or the individual account plan has been modified in any way. This is by no means a fatal flaw of voluntary proposals but should be recognized and considered accordingly.

Some proposals avoid this problem by guaranteeing the greater of the benefits under the old and new programs. However, this solution adds to benefit costs and complicates program administration.

Some proposals make individual accounts voluntary only for workers already participating in Social Security when the accounts are first offered; individual accounts would be mandatory for future workers. In such proposals, once all current participants and their beneficiaries have ceased receiving benefits, the program will have made the transition to a pure individual account design.

Making individual accounts voluntary would raise total program costs compared with a similar mandatory individual account design. Sources of additional cost include:

- Tracking workers' choices and maintaining parallel systems for workers opting in and opting out.
- Handling initial and ongoing communications with workers about their alternatives.
- Paying additional costs caused by workers who opt in or out to maximize their benefits based on their particular circumstances (called "anti-selection").
- Providing payout options that meet the dual requirement of ensuring adequacy and placing workers at ease, while addressing the risk that they and their spouses will die before their entire account balances have been distributed.

Educating workers to make rational and informed decisions would be a challenge for any voluntary individual account program. Most employers could not do an adequate job of educating employees, so the government would have to create ways to do this directly. Even so, some workers who find in retrospect they did not make the most advantageous choice would seek to undo it. Experience under other programs, such as the one-time option for federal employees to transfer from the Civil Service Retirement System (CSRS) to the newly created Federal Employee Retirement System (FERS), suggests that many people who would theoretically benefit from electing the new plan are likely to stay in the old plan. In that event, the new program would not fully accomplish its objective of strengthening Social Security.

Managing Individual Accounts

Designing an individual account plan for Social Security presents several administrative challenges. Such a plan should help workers choose from among attractive investment options, with an administrative structure that handles their accounts efficiently and economically. Moreover, politicians seem to agree in principle that such a plan should operate solely in the interests of participants, not allowing elected officials to help choose the appropriate stocks to buy or sell. A basic question is whether an individual account plan for Social Security could better satisfy these objectives by decentralization, as in the Individual Retirement Account (IRA) model, or by centralization along the lines of the TSP model.

Compared to the IRA model, a centralized investment structure for the individual accounts has advantages and disadvantages:

- A centralized plan would limit workers' freedom of choice. Such a plan could start out offering only a few investment choices and later offer more if warranted. Opinions differ on whether offering more choices would represent an advantage or a disadvantage. Offering a smaller number of funds may give workers meaningful choices while limiting the number of funds to be explained and administered. A wide range of private-sector investments could be represented in index funds.
- Simplicity and low costs are major advantages of centralization. Private-sector financial firms might have a smaller role than in a decentralized system, acting as outsourcing providers rather than full-service investment brokers or money managers.
- Keeping politics out of investments would be an ongoing problem for a centralized plan. Investment authority could reside in an independent board with broad power to set investment policy and choose investments, although such a board might be difficult to insulate from politics. Alternatively, the TSP has addressed this issue by using index funds to make such decisions more or less automatically under the direction of an independent board with little investment authority.
- Communications and employee education would be extremely important. Centralizing the management of these functions and offering a limited number of choices may be more cost-effective and reduce problems with independent vendors who over-sell investment products.

The TSP experience to-date shows that an independent board can be difficult to manage. Soon after creating the TSP, Congress had to amend the law several times to keep the Thrift Board members from resigning because of concerns about fiduciary liability. Other startup problems involved the Thrift Board's (1) insisting that Treasury issue debt securities with interest yields of long-term bonds but with durations of only one day, (2) submitting its annual budget to Congress without White House review, and (3) deciding how to handle proxy voting for its individual stock holdings. The Thrift Board's independence is an ongoing policy experiment that can always be changed by lawmakers wishing to impose their own values. In view of Social Security's much greater political prominence, it would seem that Congress should give careful thought to any statutory rules about independent government administration of individual accounts, recognizing that a future Congress could always rewrite such rules.

Payout of Funds

During the accumulation phase, many workers would want loans or withdrawals from their individual accounts. Some of these individuals or their families may have suffered great personal and financial misfortune. Policymakers should decide at the outset whether to offer access to funds, or to rely on other programs and resources instead. Making exceptions in hardship cases is likely to open the door to other cases, weakening the ability of the plan to fulfill its objectives.

In the event a worker dies during the accumulation phase, it makes sense that the account balance be preserved for the benefit of survivors. In such cases, a surviving spouse and children should be given priority over other beneficiaries.

However, once the accumulation phase has ended and a worker retires, should lump-sum payments be made available, or should all workers instead be required to convert their account balances to annuities?

- *Mandatory annuities limit freedom of choice.* Such a restriction on the use of their funds could be unpopular among workers with large account balances, other sources of retirement income, great confidence in their own ability to invest profitably, or poor health that limits their life expectancy.
- *Mandatory annuities favor people with a longer life expectancy,* generally including people in good health, women, high earners, and members of long-lived racial or ethnic groups. People with the opposite characteristics would tend to have shorter lives and collect less from annuities.
- *Mandatory annuities ensure that retirees do not outlive their resources.* Nobody knows how long his or her retirement savings must last, and an annuity removes the guesswork. An annuity also avoids the problem of people spending their money too rapidly, and then living many years in poverty.
- *Mandatory annuities address the widespread lack of investment skills* needed to manage a large sum of money and produce a steady rate of income, especially at an advanced age.
- *Mandatory annuities reduce the cost of annuities.* Under the voluntary system that now exists in the individual annuity market, only people in excellent health are willing to buy an annuity. This above-average life expectancy drives up the cost of annuities and makes them impractical for someone whose health is impaired. In contrast, mandatory annuities would cover a cross-section of workers with average longevity, making annuities less costly. Mandatory annuities with standard features also reduce administrative costs, which would be reflected in annuity pricing.
- *Mandatory annuities make pricing not based on individual life expectancy feasible.* If annuities were voluntary, as they are now, a free and competitive annuity market would give those with expected longer life expectancy less attractive rates than those with expected shorter life expectancy. That is, when insurance companies can charge whatever rates they want, some individuals always pay more for an annuity because they tend to live longer. Unfavorable treatment of those with longer life expectancy could be a major barrier to public acceptance of individual accounts, replacing Social Security benefits that treat everyone alike.

The preceding points demonstrate that mandatory annuities have both advantages and disadvantages. Some proposals require annuitization only in certain circumstances, for example, if the income from an annuity is necessary to keep the worker's income above the poverty level. This could result in Social Security splitting into two separate programs – an anti-poverty program for the poor and a capital accumulation program for the rich. Such a result could erode public support for the program over the long run.

An annuity could take a great many forms, including payments for a specified number of years, or payments over the life of one or more persons. Variable annuities are a possibility, with the amount of income varying with the performance of an underlying investment portfolio, although the accompanying risks seem inappropriate for a program intended to provide a basic level of

support in retirement. Policymakers may want to consider a standard form of annuity, which may include the following:

- Payments are made for a worker's life in a fixed amount, not varying with the stock market, but are adjusted annually to keep pace with the cost of living.
- After the death of a married worker, payments to a surviving spouse continue at a two-thirds rate for life.
- After the death of a worker and any surviving spouse, a cash refund is paid that is equal to the account balance at retirement, less annuity payments already made. This of course, has a cost. It reduces the monthly income while the workers and spouse are alive.

This annuity form is consistent with the current Social Security program, paying benefits for life to the worker, with two-thirds of the couple's benefit paid to a surviving spouse and with annual COLAs. The cash refund death benefit is consistent with preservation of the account balance in the event of death before retirement, providing similar death benefits if an unmarried worker dies shortly before retirement or shortly after. Also, the cash-refund feature may be necessary to obtain broad popular support for annuitization. Low-income individuals make up a disproportionate share of those with shorter life expectancies; the cash refund would ensure that each worker's family would get back at least the amount the worker paid in.

There are three possible sources for annuities purchased by individual accounts: the private annuity market; the federal government working through an agency, such as the Social Security Administration; and the federal government working through private firms. The TSP now contracts with one insurer to issue annuities to the few retirees who want them, using rates that are the same for men and women. For Social Security individual accounts, some kind of centralized annuity program, operated or sponsored by the federal government, could have major advantages over the traditional private annuity market, as follows:

- Compared to the existing "retail" annuity market, a centralized "wholesale" system would have substantial expense savings and could cover a cross-section of the population instead of just the healthiest people, permitting more attractive annuity rates. Some administrative and financial tasks could be contracted out to private firms or consortia.
- The existing annuity market entails some risk of insurer insolvency that could reduce or stop payment of annuities, though states sponsor guaranty funds that provide substantial backup. For annuities derived from a Social Security individual account program, any such risk would seem unacceptable. A federal guarantee of private annuities would require a new framework of federal regulation, controls, and occasional bailouts. A simpler and more direct approach is for the federal government to take full responsibility for paying the annuity benefits, similar to the government's role in the current Medicare program, which uses private insurers to pay claims using government funds.
- Few if any annuity providers in the private sector now issue annuities with full protection against inflation. Meanwhile, the federal government provides annuities fully indexed to the CPI under Social Security, the Civil Service Retirement System, and the Military Retirement

System. This experience strongly suggests that the government can readily extend such inflation protection to annuities paid from an individual account program.

- As noted above, unisex rates and options are politically desirable, but are not consistent with a free and competitive private market for individual annuities. The TSP experience shows that the government can contract with private firms for annuities at unisex rates, and perhaps could do so under a much larger program involving Social Security.

Annuities would be more economical to administer if their payments were combined with payments of other Social Security benefits. Combining the payments would make it feasible to administer annuities derived from small account balances.

A separate issue is the timing of annuity purchases, such as by spreading the conversion of the account balance to an annuity over several years to smooth out fluctuations in investment performance and interest rates. This would protect a worker who is preparing to retire from sudden changes in investment markets that could sharply reduce the annuity income. An alternative would be to convert any stocks to long-term, fixed-income securities over several years before retirement.

Effect on Capital Markets

Retirement savings in tax-qualified vehicles such as defined benefit and defined contribution plans, and Individual Retirement Accounts (IRAs) totaled \$19.4 trillion¹³ at year-end 2012 and are often considered inadequate. This does not include savings in regular accounts intended by their owners for retirement. Social Security individual accounts would, over time, add tens of trillions of dollars more to dedicated retirement savings. It is difficult to see how available investment vehicles could accommodate all this retirement money seeking investment opportunity. Enormous as they are, capital markets in the U.S. are finite and are already adequately subscribed from existing sources of investment.

A likely consequence of investing Social Security individual accounts in the capital markets would be lower returns on investment, undermining one of the main attractions of individual accounts. While the participants would bear investment risk, they would not be compensated for this risk as well as investors have been in the past. Alternatively, if individual accounts were invested in risk-free securities, such as U.S. Treasury securities, government debt would need to grow considerably to accommodate the demand, and the goal of greater capital buildup would not materialize.

¹³ [2013 Investment Company Fact Book](#)

Conclusion

The problems facing Social Security, when placed in the context of the enormous U.S. economy, are not nearly as daunting as they might seem when presented in stark dollar terms. In the 75-plus-year history of Social Security, the tax rate has increased from 2 percent to 12.4 percent of taxable payroll; the estimated tax increase required to fund the current system over the next 75 years is far less. Further, the need for such tax increases can be reduced, or even eliminated, by changes in benefits and other features; and any required changes can be phased in gradually.

Does this mean we can do nothing and just wait to see what develops? Waiting until the last minute to make changes is not a good idea and can lead to inequities, intended or not, in the distribution of benefit reductions. Drastic benefit changes would not give current beneficiaries or workers near retirement sufficient time to change their retirement plans. This, in turn, could lead to needless dissatisfaction with and loss of confidence in the system. With a longer lead time, changes can be designed with greater care and introduced more gradually. Although a longer lead time may not change the ultimate level of benefit cuts or tax increases required to eliminate the deficit, reductions introduced gradually can be less abrupt and therefore less onerous to those who have planned accordingly.

For these reasons, the American Academy of Actuaries' Social Security Committee believes that Congress should act soon to make changes that include sustainable solvency *as an ultimate goal*. For example, consider workers who are age 45 when the program is changed. When these workers reach the Social Security retirement age of 67, they will have been paying increased taxes, or saving more to compensate for lower expected benefits, for 22 years. Each year reform is delayed means these workers will have fewer years to be part of the solution, and fewer years to prepare for the changes that reform will inevitably bring.

There are numerous potential reforms that could address Social Security's financial problems. Options within the current defined-benefit structure include increasing the tax rate, reducing benefits by changing the benefit formula, reducing benefits by changing the way they are automatically adjusted for inflation, reducing benefits to dependents, changing the way trust fund assets are invested, and raising the age at which unreduced benefits are paid. Alternatively, the system could be fundamentally changed so that all or some of the benefits are paid from individual accounts. This report presents the committee's analysis of these and other options, without the endorsement of any particular change.

Appendix

Annual Trustees Report and related Social Security Administration publications
<http://www.ssa.gov/OACT/pubs.html>

American Academy of Actuaries Resources on Social Security

- [**An Actuarial Perspective on the 2013 Social Security Trustees Report**](#) (August 12, 2013)
- [**A Guide to Analyzing Social Security Reform**](#) (December 17, 2012)
- [**Means Testing for Social Security**](#) (December 11, 2012)
- [**Understanding the Assumptions Used to Evaluate Social Security's Financial Condition**](#) (May 31, 2012)
- [**Significance of the Social Security Trust Funds**](#) (May 31, 2012)
- [**Automatic Adjustments to Maintain Social Security's Long-Range Actuarial Balance**](#) (August 4, 2011)
- [**Raising the Retirement Age for Social Security**](#) (October 4, 2010)
- [**Social Security Reform: Possible Changes in the Benefit Formulas and Taxation**](#) (June 1, 2010)
- [**Social Security: Evaluating the Structure for Basic Benefits**](#) (September 1, 2007)
- [**Women and Social Security**](#) (July 2, 2007)
- [**Investing Social Security Assets in the Securities Markets**](#) (March 1, 2007)
- [**A Guide to the Use of Stochastic Models in Analyzing Social Security**](#) (October 1, 2005)
- [**Social Adequacy and Individual Equity in Social Security**](#) (January 1, 2004)
- [**Social Security Individual Accounts: Design Questions**](#) (October 1, 2003)
- [**Quantitative Measures for Evaluating Social Security Reform Proposals**](#) (April 1, 2002)
- [**Annuitization of Social Security Individual Accounts**](#) (November 1, 2001)