



Key Points

- The Social Security trustees have been reporting for many years that the system is not in long-range actuarial balance
- Many proposals have been made to restore long-range actuarial balance, although no legislative consensus has been reached
- When legislation to achieve actuarial balance is adopted, Congress could include automatic adjustment mechanisms designed to prevent the system from again falling out of actuarial balance, thereby reducing the chance that future corrective legislation will be required
- Under an automatic adjustment approach, small changes would be made automatically on a regular schedule if needed to maintain actuarial balance
- Automatic adjustment mechanisms that contribute to maintaining long-range solvency are used by many industrialized nations in their national pension systems

Automatic Adjustments to Maintain Social Security's Long-Range Actuarial Balance

The Social Security Amendments of 1983 were the last comprehensive changes made to the Social Security program. These amendments raised the program's taxes and reduced certain benefits. The changes were intended to enable the program to finance scheduled benefits from payroll tax income for at least 75 years, until 2058. The changes, however, did not address sustainable solvency beyond this 75-year time horizon.

In every year from 1984 to 2009, Social Security's income from taxes has exceeded benefit payments and administrative expenses, and the system has accumulated a large fund of special-issue Treasury bonds. The retirement of members of the baby boom generation, coupled with the recession of 2008–2009, has eliminated this surplus. As a result, the system will need to begin drawing on the fund assets to supplement its other sources of income to continue making all scheduled benefits payments. Unless the law is changed, the system ultimately will run out of assets and be unable to make all scheduled benefit payments from payroll tax income and fund assets.

Over the past decade, Congress has considered various reform options to restore Social Security to actuarial balance—not only over the 75-year valuation period, but also for the foreseeable future beyond. But regardless of the reforms that are enacted and when, actual experience inevitably will diverge from the demographic and economic assumptions on which the changes are based, and Social Security again may slip out of actuarial balance.

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Congress can choose to address such imbalances by enacting new ad hoc changes or by establishing a mechanism to automatically adjust the program back into balance.

Under an automatic adjustment approach, changes needed to keep the system in long-range actuarial balance would be made on an annual or periodic basis. These changes would apply to the payroll tax that finances Social Security benefits, specified Social Security benefits, the normal retirement age, or some combination of the three. An automatic adjustment approach could address the system's financial problems over the 75-year valuation period and beyond, since the adjustments would remain in effect past the end-point of the valuation period. Automatic adjustment approaches that contribute to maintaining long-range solvency are used by many industrialized nations in their national pension systems. This issue brief examines automatic adjustment options, including their advantages and disadvantages. The Social Security Committee of the American Academy of Actuaries does not take any position regarding the advisability of adopting automatic adjustment mechanisms for Social Security.

Background

The long-term financial status of the Social Security program (Old-Age, Survivors and Disability Insurance, or OASDI) historically has been expressed in terms of the long-range actuarial balance as described in the annual reports of the Board of Trustees. Actuarial balance, as defined by the trustees, compares projected income, including the starting fund balance, to projected outgo, including the ending fund balance, over the 75-year period beginning with the year of the report. The balance is computed under three sets of assumptions: an intermediate or "best estimate"

assumption set, a low-cost assumption set and a high-cost set.

The long-range actuarial balance under the intermediate assumptions traditionally has been considered the benchmark for determining Social Security's long-term financial status.¹ When major changes were made to bring the program into long-range actuarial balance, such changes were based on the intermediate assumptions. This occurred most recently with the 1983 Social Security Amendments, when benefit decreases and tax increases combined to move the long-range actuarial balance from a deficit of 1.82 percent of taxable payroll to a surplus of 0.02 percent. As a result, the program revenues were projected to be sufficient to finance scheduled benefit payments through 2058, the end of the 75-year projection period at that time.

Under the 1983 Amendments, the program's combined employee-employer tax rate rose over three years from 11.4 percent of pay in 1987 to 12.4 percent of pay in 1990 and later. Because income from taxes has exceeded benefit payments and administrative expense in every year from 1984 to 2009, a relatively large trust fund has accumulated, although for reasons given below, the trust fund will not grow as large as once anticipated. This surplus situation is in the process of reversing itself—payroll taxes alone no longer are sufficient to cover program expenses. First interest income from the trust funds will be needed to supplement the payroll tax, and later the principal of the trust fund assets will need to be drawn down for the system to continue making all scheduled benefit payments.

Social Security's Long-Range Financial Problems

The projected long-range actuarial balance for Social Security unfortunately has deteriorated since 1983 because of: (1) actual experience since 1983 that was less favorable than expected; (2) changes in the assumptions and methods from those used to calculate the 1983 actuarial balance; (3) the addition of deficit years in the moving 75-year valuation period; and (4) other relatively mi-

¹During the 1980s, there were two intermediate assumption sets. The numbers cited in this paragraph, describing the 1983 changes, are based on set II-B, the less optimistic of the two intermediate assumption sets.

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nor changes, such as the effects of legislation. The trust fund now is projected to run out of money well before 2058.²

Under the current approach for maintaining Social Security's long-range actuarial balance, when the trustees report shows the system to have financial problems, congressional action is needed to restore actuarial balance. Although all trustees reports since 1984 have shown the system to be out of long-range actuarial balance, Congress has not yet taken action to address the situation.

If Congress again restores Social Security's long-range actuarial balance, it also could adopt an automatic adjustment approach to maintain actuarial balance, thereby greatly lessening or eliminating the need to make further ad hoc changes. Under an automatic adjustment approach, actions to address changes in the actuarial balance would be taken each year, at some other specified interval, or when triggered by a predetermined threshold of deviation from actuarial balance.

The actuarial analysis underlying the 1983 amendments did not look beyond the 75-year valuation period. As noted, one reason for the current long-range deficit is that all the years added to the valuation period beyond 2058 are deficit years. To address this problem, the Social Security Board of Trustees has developed the concept of "sustainable solvency," under which payroll taxes not only can finance scheduled benefits over the 75-year valuation period, but the trust fund also is stable or increasing toward the end of that period. Automatic adjustments, because they continue operating through all future valuation periods, help maintain sustainable solvency as advocated by the trustees.

Automatic Adjustment Mechanisms

Approaches to automatically return the program to long-range actuarial balance would involve either automatic increases (or decreases) in taxes, in certain specified benefit provisions, in the normal retirement age, or some combination of these three. Some lead time generally would be needed before any change is implemented, and any benefit reductions could be phased in gradually to allow participants time to adjust to lower benefit expectations. In addition, some built-in flexibility in the adjustment trigger could allow policymakers to exercise

discretionary control over minor changes.

Social Security already has some automatic adjustment features, but these serve to keep benefits in line with changes in wages and the cost of living. Although not their primary intent, these adjustments also contribute to keeping the program's income and cost in balance. By themselves, however, they cannot maintain the system in actuarial balance, because they do not address those demographic factors that contribute to the program's increasing cost, primarily lower birth rates and higher life expectancies among participants compared to recent historical norms.

Automatic Adjustment Features in the Current Program

WAGE ADJUSTMENT: A worker's covered wages for years prior to the worker's attainment of age 60 are adjusted—or indexed—to reflect changes in the national average wage up to that year. A worker's benefit at retirement is based on average indexed earnings in his or her best 35 years. This adjustment means that, when computing the initial Social Security benefit, workers' earnings early in their careers are measured relative to contemporary prevailing wages rather than prevailing wages at retirement. This ensures that lower earnings early in a worker's career do not pull down the average earnings merely because prevailing wages were lower.

EARNINGS BASE ADJUSTMENT: The maximum amount of earnings subject to the Social Security payroll tax and used for calculating Social Security benefits also is automatically adjusted each year to keep pace with changes in the national average wage.

BENEFIT FORMULA (OR BEND POINT) ADJUSTMENT: The initial Social Security benefit is computed by applying a factor of 90 percent to average indexed earnings up to a specified dollar amount, 32 percent to average indexed earnings over that amount up to a second specified dollar amount, and 15 percent to average indexed earnings above the second amount. The two specified dollar amounts are called the "bend points" in the benefit formula. The bend points are adjusted each year for changes in the national average wage, so that the wage brackets defined by the bend points expand in proportion to prevailing wages. The bend points are frozen for each worker

¹²All actuarial analyses in this issue brief are derived from the best estimate projection in the 2011 Trustees Report or from actuarial studies published on the website of the Office of the Chief Actuary as of May 2011.

in the year the worker attains age 62 (or becomes disabled or dies).

COST-OF-LIVING ADJUSTMENT: Beginning in the year a worker attains age 62, benefits are adjusted for changes in the cost of living as measured by the consumer price index (CPI-W). This adjustment ensures that workers' benefits keep pace with inflation after retirement. These adjustments relate to the worker's age rather than retirement status so that wage and benefit indexation does not influence the decision regarding when to retire. The two-year period from age 60 to age 62 with no indexation results from the two-year lag in availability of national average wage statistics.

New Automatic Adjustment Features

The following automatic adjustment approaches could help solve Social Security's financial problems:

Adjustments to Benefit Amounts

A straightforward approach to maintaining Social Security's actuarial balance is to change the amount of benefits payable. An across-the-board reduction to current and future benefits of about 14 percent currently would be required to bring the program into actuarial balance over the 75-year valuation period. Once legislation has been passed to restore actuarial balance, however, subsequent automatic adjustments to benefit amounts needed to maintain that balance probably would be small relative to the current annual adjustments to wages and benefits described in the previous section. Most proposals affect only the initial benefits workers would receive, not the post-retirement cost-of-living adjustments. For example, the adjustment could be implemented as a modification to wage and/or price indexing. Even in years when the actuarial balance otherwise would turn negative, initial benefit amounts still would increase under an automatic adjustment mechanism. But the increase would be smaller than called for under full wage and price indexing.

Some proposals would adjust the bend points in the benefit formula by changes in the cost of living, rather than by changes in prevailing wages as is currently the case. Under these proposals, the rate of increase in the average benefit amount awarded each year would be expected to slow down by about one percentage point. While this might not seem like much, after 75 years the average benefit amount would be less than half the amount scheduled under present law. This change

alone would not just restore actuarial balance, but would put the program in a surplus position.

While incorporating automatic benefit adjustments in the wage and/or price indexing formula would take some of the sting out of the benefit amount decreases, such adjustments would ultimately reduce the buying power of seniors, many of whom rely on Social Security as the source of all or most of their retirement income. For this reason, some policymakers may be reluctant to approve any reduction in benefit amounts. Automatic adjustment mechanisms could be devised to apply only to higher-income beneficiaries, for example, by applying full indexing to the first bend point but not the second one. This, however, would require larger adjustments to maintain actuarial balance than if all benefit amounts were adjusted, and would add complexity to an already complex system. In addition, focusing benefit reductions on high income workers could erode the broad base of support the system currently enjoys among workers across the entire income spectrum.

Adjustments to Taxes

Another frequently mentioned automatic adjustment is changing the payroll tax rate. At this time, an increase in the combined employer-employee tax rate of approximately 2.15 percentage points (split evenly between employer and employee) would bring the program into actuarial balance. Once actuarial balance has been achieved, only small annual adjustments would be required thereafter to maintain that balance.

When Social Security taxes first were collected in 1937, the earnings base was set at \$3,000, and about 92 percent of the earnings of covered workers fell under the earnings base and were subject to taxation. Despite several ad hoc increases to the earnings base, by the 1960s the proportion of earnings that fell under the earnings base had declined to approximately 80 percent. In the 1977 Social Security amendments, Congress enacted three successive ad hoc increases to the earnings base, effective in 1979, 1980, and 1981, which restored the proportion of earnings in covered employment that were taxable to about 90 percent. Since then, despite the automatic adjustments to the earnings base described above, this proportion has fallen to about 83 percent because higher income workers have received proportionately greater wage increases than lower income workers. The automatic adjustment mechanism for the earnings base could be changed to focus on

maintaining the proportion of earnings in covered employment subject to taxation. Gradually restoring this proportion to 90 percent (by adding 2 percent each year to the current-law scheduled adjustment) and maintaining that proportion indefinitely into the future would eliminate about a third of the program's current actuarial deficit.

In general, automatic tax-adjustment approaches would affect retired (or soon-to-be-retired) participants less than the automatic benefit-adjustment approach. Automatic increases in taxes, however, likely would be unpopular among workers. Congress could place constraints on the amount or rate of any tax increase, or reserve the right to approve or modify any increase but such constraints could defeat the purpose of maintaining actuarial balance.

Adjustments to the Normal Retirement Age:

Another approach to automatic adjustments is changing the normal retirement age—the age at which nondisabled workers may retire and receive unreduced benefits. From the beginning of Social Security in the 1930s until the implementation of the 1983 amendments, the normal retirement age was 65. The 1983 amendments included a schedule of gradual increases in the normal retirement age to age 67, beginning with workers born in 1938 and ending with workers born in 1960 and later. Since Social Security was enacted, average life expectancy at age 65 has increased from approximately 12 years to approximately 17 years. So even with the 1983 amendments, the average worker retiring at the normal retirement age today would receive benefits for many more years than would an average worker retiring at age 65 in 1940, when retired worker benefits were first paid.

Further increases in the normal retirement age could be part of any legislation designed to restore the system to long-range actuarial balance. For example, immediately beginning the increase in the normal retirement age from age 66 to age 67, followed by a continued increase by one month every two years until the normal retirement age reaches age 70, would reduce the long-range actuarial deficit by about a third. Once actuarial balance has been achieved, any further adjustments to the normal retirement age necessary to maintain that balance almost certainly would be less than increases in the life expectancy at the normal retirement age. Although any upward adjustment in the normal retirement age would represent a benefit decrease relative to current law, it still

would occur in the context of an increase in the total value of lifetime benefits, since the period over which benefits would be paid would continue to increase.

Raising the normal retirement age would place some workers in financial difficulty if not enough suitable jobs are available to allow most seniors to remain longer in the labor force. Many economists believe that, as the baby boom generation approaches retirement age, employers will begin providing incentives for them to work longer, since not enough new workers will be entering the labor force to replace those retiring, if current retirement patterns persist. So far, this has not occurred. In fact, for decades, men were retiring earlier despite increases in longevity. Only since 1995 have retirement ages among men begun to creep upward. (Retirement patterns among women are different due to the large influx of women into the labor force during the 1960s and 1970s.) One objection to increasing the normal retirement age is that the labor force may not be able to accommodate more senior workers.

Another objection to raising the normal retirement age is that this could cause hardships for individuals with physically demanding jobs or who have become partially disabled. To be eligible for Social Security disability benefits, a worker currently has to be unable to perform any substantial gainful activity. A possible solution to this problem would be to provide an alternative disability benefit for workers no longer able to perform the jobs they are qualified for by experience or training once they reach a specified age. The current schedule of retirement age increases, for instance, could be frozen for workers who qualify for this alternative disability benefit. Another option is to roll back the age for an unreduced benefit to age 65 for the alternative disability benefit. This would ensure that a worker who qualifies only under the alternate definition of disability be no worse off than a nondisabled worker before the 1983 amendments. These additional disability benefits, of course, would offset some of the cost savings from raising the normal retirement age.

Adjusting the normal retirement age differs from the other adjustment mechanisms described above in that it specifically addresses one of the reasons the cost of Social Security is increasing—rising longevity among program participants. This suggests that automatic adjustments to the normal retirement age should be limited to neutralizing cost increases due to rising longevity. Since rising longevity is not the only reason for

the system's long-range actuarial deficit, adjustments to the normal retirement age limited in this way would not be sufficient alone to maintain actuarial balance. These issues are discussed in greater detail in the Academy's issue brief *Raising the Retirement Age for Social Security*.

Trigger Mechanisms

As noted in the Background section, the commonly considered actuarial balance reflects the valuation results using the intermediate assumptions. While the intermediate assumptions represent the trustees' best estimate of future economic and demographic conditions, this is not the only possible outcome. The trustees also publish the valuation results using the low-cost and high-cost assumptions to illustrate possible alternative outcomes. Automatic adjustments based on the intermediate assumptions would produce lower benefits and/or higher taxes than necessary to maintain actuarial balance if the actual costs are lower than expected under the intermediate assumptions, and, conversely, higher benefits and/or lower taxes than necessary if the actual costs prove higher than expected. Given the great uncertainty regarding how the economy and society will evolve over the 75-year valuation period, it can be argued that it is not appropriate to base automatic adjustments on actuarial balance as measured in the trustees reports.

The trustees sometimes make changes to their assumptions in response to emerging economic and demographic trends that differ from past projections and to other developments, such as medical advances and changes in immigration law, that may affect future program costs. The process for setting assumptions is discussed in the Academy's issue brief *Assumptions Used To Project Social Security's Financial Condition*. It would not be sound policy to base automatic adjustments on changes to the long-range actuarial balance due only to changes in assumptions rather than to actual changes in experience.

In addition, an increase in Social Security's projected deficit due to unfavorable economic conditions may be alleviated in the short term by a normal cyclical return to more favorable conditions. If adjustments are made too sensitive to short-term fluctuations in the economy, benefit levels, taxes and/or the normal retirement age could bounce up and down unpredictably. If the lag time in implementing the adjustments is similar to the length of the economic cycle, the adjust-

ments could come into force just when they no longer are needed.

These objections could be addressed if automatic adjustments are based only on trends in the actuarial balance that emerge over periods no shorter than the length of a typical economic cycle. The adjustments could be triggered, for example, by changes in the moving average of valuation results over a suitable period rather than on the results of individual valuations. If, in addition, the adjustments are phased in gradually over time, most of the difficulties described above would be mitigated.

Automatic Adjustments under Pay-As-You-Go Financing

An alternative approach would base automatic adjustments on the current value of the trust fund or on short-range projections of trust fund performance. Such an approach would necessitate a return to strict pay-as-you-go financing. Following strict pay-as-you-go financing, the trust fund maintains assets sufficient only to pay benefits for a short time, usually no more than one year. Under this arrangement, tax rates would need to change regularly to track changes in benefit payments.

As noted above, the system has built up a large trust fund as the result of past surpluses. In the future, the trust fund will be used to supplement payroll-tax income to enable the system to continue paying all scheduled benefits. This arrangement, called partial advance funding, enables the payroll tax rate to remain constant over long periods while benefit payments fluctuate. Many economists and actuaries contend, however, that the trust funds do not represent real assets, since they comprise only debt the government owes to itself. They further argue that, by reducing the amount of debt the government must issue to the public, the trust funds encourage higher levels of overall government spending. These issues are currently being discussed by the Social Security Committee.

Noted social insurance actuary Robert J. Myers, during his service as executive director of the National Commission on Social Security Reform (1982–1983), proposed an automatic adjustment mechanism based on pay-as-you-go financing. Myers's approach was designed to keep trust fund accumulation relatively small. Under his plan, automatic 0.4-percent increases (or decreases) in the tax rate would be implemented whenever the

ratio of the year-end trust fund balance to annual outgo dropped below 55 percent or increased above 60 percent. This automatic adjustment method prevents the accumulation of a large trust fund. Based on the actuarial projections in the 1982 Social Security Trustees Report and beginning in 1983, the tax rate under this approach would have been lowered from 12.4 percent in 1998 to 10.4 percent during the period 2003-07. Based on these same projections, starting in 2008, the rate would have been increased in 0.4-percent annual increments (with a 0.4-percent reduction in 2017) to 17.6 percent in the year 2027.

By using the current trust fund ratio as the triggering index instead of long-range actuarial balance, Myers' plan avoids basing Social Security benefits and/or taxes on long-range economic and demographic assumptions. It also avoids large temporary build-ups in trust fund assets, which can distort the budgeting process for government programs financed by general tax revenues. This plan, however, would cause the tax rate to change more frequently and by larger amounts than under partial advance funding. A risk is that Congress will be all too happy to allow the tax rate to go down, but will bend to constituent pressure to reduce or eliminate scheduled increases in the tax rate.

The trust fund ratio also could be used to trigger automatic adjustments to benefits or to the normal retirement age. Such an arrangement would need to limit decreases in benefits or increases in the normal retirement age for participants receiving or about to receive benefits, since these individuals would have little or no time to adjust their retirement budgets for abrupt decreases in benefits. This could require unacceptably large adjustments for workers further from retirement age. Combinations of adjustments to benefits, taxes, and the normal retirement age possibly could be devised that would be perceived as equitably distributing the burden of any adjustments required to meet financial difficulties as they arise.

Fail-safe Mechanisms

Automatic adjustments to benefits, taxes, or the normal retirement age could solve Social Security's long-range financing problem permanently and automatically—and restore public confidence in the system. Without automatic adjustments, any legislation to restore the system to long-term financial stability might fall short of this goal if

experience is less favorable than assumed, or if assumptions are changed, as happened after the 1983 legislation. Proponents of automatic adjustment approaches point out that, without such adjustments, Congress usually allows Social Security's problems to mount until a crisis is reached, at which time the need for immediate, large-scale changes to the system inevitably causes some beneficiaries unnecessary financial harm.

Some opponents observe that automatic adjustments allow for tax increases or benefit decreases without the consent of elected officials. This is not really the case, since elected officials retain the ultimate authority to set tax rates and benefit levels. This authority could be made explicit if imposition of automatic adjustments when the trust funds fall out of close actuarial balance were subject to acceptance, modification, or denial by Congress.

Automatic Adjustment Mechanisms in Other Nations

Many other industrialized nations have adopted automatic adjustment mechanisms designed to ensure the long-term viability of their national pension systems. This is true even in countries whose national pension systems provide a much higher proportion of retirement income than the U.S. Social Security system. These mechanisms range from simple solvency testing to complex multifactor approaches designed to spread the burden of any benefit reductions equitably over all segments of the population. As an example of the former, in Canada the scheduled tax rate increases automatically if the Canada Pension Plan chief actuary determines that the system is not sustainable over the long run at the scheduled tax rate and government ministers cannot reach a consensus on other actions to sustain the system. In Sweden, on the other hand, there are automatic adjustments to the retirement age (based on changes in life expectancy), to benefits in pay status (based on measures of worker productivity), and to initial benefits (based on long-range solvency testing). Indexing benefits and/or retirement age to changes in life expectancy has become increasingly common among European countries. These adjustment mechanisms, however, have not yet been in place long enough to test whether they will work as intended over the long term.

Conclusion

The main question to be answered in considering automatic approaches for maintaining Social Security's long-range actuarial balance is whether it is better to make small changes automatically and frequently or make larger changes on an ad hoc basis. The last comprehensive change to the program under the current, largely ad hoc, basis was made in 1983. Advantages and disadvantages are associated with automatic approaches for maintaining Social Security's long-range actuarial balance once it has been achieved.

The advantages include:

- Frequent small changes make it easier for participants to adjust to changes and may make the changes more palatable;
- Knowing the system has built-in solvency features may make workers more confident the system will still be available when they retire;
- Automatic adjustments can help insulate Social Security from the contentious political process.

The disadvantages include:

- It is difficult to design a set of adjustment mechanisms that will respond appropriately to all possible circumstances that may arise over the long-term future—the adjustments themselves may require adjustment;
- Despite the gridlock that proposed changes to Social Security often provoke in Congress, the case can be made that any changes to a program so important to the well-being of so many should be debated and acted on by the people's elected representatives rather than implemented by an automatic process.

Even if an automatic adjustment approach were adopted, the expected cost of the program still would need to be carefully monitored by policymakers to ensure that the program continues to meet the ongoing needs of America's retirees at a cost that the American public is willing and able to pay.

Additional Resources

American Academy of Actuaries Issue Briefs on Social Security <http://www.actuary.org/briefs.asp#soc>

Raising the Retirement Age for Social Security (October 2010 update) http://www.actuary.org/pdf/socialsecurity/Social_Sec_Retirement_Age_IB_FINAL_10_7_10_2.pdf

Assumptions Used to Project Social Security's Financial Condition (September 2009 update) http://www.actuary.org/pdf/socialsecurity/assumptions_sept09.pdf



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