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Understanding the Assumptions Used to Evaluate Social Security's Financial Condition

Key Points

- Since the 1980s, the *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* consistently has indicated that, in the absence of corrective legislation, assets currently in the trust funds plus future payroll tax income will not be sufficient to finance all scheduled benefits over the 75-year valuation period.
- The trustees are not the only ones making projections about Social Security's future. Within the federal government, the Congressional Budget Office makes its own projections. Outside experts from think tanks and academia also weigh in with their opinions.
- All of these projections rely on assumptions about future demographic and economic trends because the future cannot be known with any certainty. The selection of assumptions affects the results of any projection and, hence, the policy prescriptions of anyone relying on such a projection. The trustees report describes in detail the assumptions used by the trustees and the rationale behind these assumptions.
- It is important that any report about Social Security's future include a description of the assumptions used in the calculations. And that anyone citing the report understands how differences in assumptions affect the results. Facilitating such an understanding is the purpose of this issue brief.

Every recent annual report from Social Security's Board of Trustees projects that, under the board's intermediate (best-estimate) assumptions and in the absence of corrective legislation, assets currently in the trust funds plus future payroll tax income will not be sufficient to finance all scheduled benefits over the 75-year valuation period. The trustees report uses long-term financial projections the results of which depend on assumptions adopted by the board. In addition, Social Security reform proposals introduced in Congress or developed by outside experts sometimes are evaluated for their potential effect on the program's financial condition using the same or similar projection methods and assumptions.

The Congressional Budget Office (CBO) makes its own projections of Social Security's financial condition. CBO uses the demographic projections produced by Social Security's actuaries, but applies its own economic assumptions. CBO projections have yielded a long-range deficit somewhat smaller than the long-range deficit that results from the trustees' intermediate assumptions.

Experts outside the government have also performed independent analyses of various reform proposals. These experts also use assumptions in their projections of Social Security's financial future, which may differ from those used by the trustees. Because small changes in assumptions can have large effects on cost estimates over long periods, even when the assumptions used in these

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analyses appear to closely match those used by government actuaries, it is possible to skew the results, intentionally or unintentionally, to favor one proposal over another.

The nature and extent of any changes designed to resolve the program's financial shortfall depend, of course, on the magnitude of the problem. Although the projection based on the trustees' intermediate assumptions generally is quoted when discussing Social Security reform proposals, the range of alternative assumptions used by the trustees illustrates the considerable uncertainty about the future.

This issue brief describes the major assumptions used in projections of Social Security's financial condition and how variations in the assumptions affect the results. This issue brief also encourages policy advocates to disclose the assumptions underlying their reform proposals and to apply assumptions consistently.

Background

Since Social Security's earliest days, its Board of Trustees has reported annually to Congress on the projected long-range financial status of the system. The trustees base their projections on actuarial assumptions. The actuaries at the Social Security Administration make initial recommendations for these assumptions, which then are modified as deemed necessary by the trustees and their staffs. The final assumptions selected by the trustees are subject to review by the chief actuary of the Social Security Administration, whose Statement of Actuarial Opinion in the report includes an opinion as to whether the assumptions are reasonable. Based on these assumptions, the actuarial staff of the Social Security Administration prepares the projections that are presented by the trustees.

The trustees evaluate the program over a 75-year long-range projection period to view the adequacy of financing over the lifetime of virtually all current program participants. The actuaries typically use year-by-year assumptions about a number of critical economic and demographic parameters for the first 25 years of the projection period and then apply "ultimate" rates over the remainder of the 75-year period. The trustees report describes in detail the assumptions and methods used.

Each year, the Social Security program gains another year of actual experience that can affect the projections in two ways. First, everything else being equal, if experience is more favorable than projected, the system's financial forecast improves, and, if less favorable, the forecast worsens. Second, emerging experience constitutes additional evidence that can be used for setting assumptions. For example, if mortality improves more rapidly than expected, then future mortality expectations might be adjusted to reflect that trend. The normal process provides for monitoring experience to detect any differences between actual experience and past projections and for fine-tuning assumptions based on the results

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of this analysis. The actuaries and trustees must use their own judgment about the reliability of the past for projecting the future.

When a change occurs in some demographic or economic factor, no one can determine immediately whether the change represents a short-term fluctuation or a long-term trend, just as no one can know if a week without rain is the beginning of a drought. For this reason, changes in assumptions generally lag behind changes in the underlying demographic and economic experience.

Every four years since 1999, the Social Security Advisory Board has appointed a technical panel composed of leading economists, demographers, and actuaries from outside the Social Security Administration to review the trustees' assumptions. The technical panel provides independent analysis of the trends affecting Social Security's finances. In the past, these panels have concluded that the trustees' assumptions are reasonable. The technical panels, however, frequently recommend specific changes to the assumptions. The trustees weigh these recommendations carefully and often make changes to their assumptions along the lines of these recommendations—although they sometimes choose not to follow some of the recommendations. In the end, the trustees have the final say regarding the assumptions.

The trustees report presents three projections: intermediate, low-cost and high-cost. The intermediate, or "best-estimate," projection is the one usually cited by policymakers and the news media. The low-cost and high-cost projections show how the results of the projection would change under alternative sets of assumptions. Although these alternative assumption sets differ substantially from the best estimate assumptions, the trustees believe they represent reasonable possible scenarios for a future either more or less favorable to Social Security's finances than that predicted by the best estimate assumptions. The trustees report also includes sensitivity analyses that show how the results of the projection would change if each major assumption is changed one by one to its value under the low-cost or high-cost assumption set while the other assumptions remain at their intermediate-cost values. Finally, the trustees report includes an analysis of the results from a stochastic model of the system. In this analysis (as described in the Academy's 2005 issue brief, *A Guide to the Use of Stochastic Models in Analyzing Social Security*), the projection is run multiple times under different sets of assumptions and the results analyzed statistically to draw conclusions about the probabilities that actual long-term system performance will lie in different ranges.

In addition to the projection for the trustees report, the Office of the Chief Actuary (OCACT) regularly provides analyses of legislative proposals for changing Social Security submitted by members of Congress and, sometimes, by experts outside the government. To the extent possible, these analyses use the same assumptions as the most recent trustees report. When a proposal requires introduction of an assumption not required for the trustees report, that assumption is chosen by OCACT consistent with the best estimate assumptions. For example, proposals that involve investing some or all of the trust fund assets in private sector securities require adding an assumption regarding the future investment returns from such securities.

This issue brief describes the assumptions that must be made in any actuarial projection of Social Security's finances and explains how

different assumptions affect the projections. Its purpose is not to describe the specific assumptions used in the trustees report. After publication of the trustees report each year, the Social Security Committee of the American Academy of Actuaries updates its issue brief, *An Actuarial Perspective on the Social Security Trustees Report*, which describes the specific assumptions the trustees used in their most recent report and any major changes since the previous report.

Assumptions

The assumptions used for Social Security's financial projections fall into two broad categories—demographic and economic. Demographic assumptions are used to project the future population of Social Security participants and provide a basis for estimating the number of workers paying into the system, the number of retired- and disabled-worker beneficiaries, and the number of family members and survivors receiving benefits. Economic assumptions are used to project wages and the resulting taxes paid into the program, benefit payments, and the investment income on the system's accumulated assets. Together, these factors are used to calculate the system's projected annual income and expenses.

Although the assumptions are described one by one, they are not independent of each other. Factors underlying the various economic assumptions tend to move together as the economy experiences short-term cyclical ups and downs and longer-term trends. For example, real wage growth, interest rates, and labor force participation rates all tend to be higher and unemployment rates lower when the economy is vigorous. Factors underlying many of the demographic assumptions also respond to changes in the economy. For example, birth rates and immigration rates tend to be higher and disability rates lower when the economy is vigorous. In all these examples, the effect is the opposite when the economy falls into recession. The trustees take these relationships into account when setting the intermediate assumptions. When setting the low-cost and high-cost assumptions, however, the assumptions that yield the lowest and highest costs are grouped together even though the resulting combinations may not yield a plausible scenario.[1]

Major Demographic Assumptions

FERTILITY: As workers retire, they are replaced by new entrants into the labor force, most of whom were born in this country. The fertility rate, or average number of children born to a woman during her lifetime (if she survives the child-bearing years), is the primary determinant of whether the number of new workers will be sufficient to pay for the benefits promised older workers, assuming current-law tax rates. A higher fertility rate increases the number of workers coming into the system, improving overall finances. The fertility rate fell from 3.7 in 1957 to an all-time low of 1.74 during the mid-1970s, but has increased somewhat since then to slightly above 2.0. Recent trustees reports project the fertility rate will stabilize near this level under the intermediate assumptions.

When the fertility rate is adjusted to exclude children who do not survive to age 10, and who therefore never participate in Social Security, the rate stays generally constant at

[1]There is one exception to this rule: The inflation assumption is higher in the high-cost estimate and lower in the low-cost estimate, although higher inflation improves the actuarial balance.

approximately 3.0 from the early 20th century up to the 1960s, except for a period of low fertility during the depression and World War II and a period of high fertility during the baby boom of the late 1940s and 1950s. With improvements in health care, sanitation, and nutrition, the adjusted fertility rate today is only slightly lower than the unadjusted rate. The decline in the adjusted fertility rate from 3.0 to 2.0, which occurred remarkably quickly during the 1960s and 1970s, is one of the principal factors underlying the expected increase in benefit payments as a percentage of gross domestic product (GDP) from the historical range of 4.0 to 4.5 percent to around 6.0 percent by the middle of the 21st century.

IMMIGRATION: Immigration also accounts for some new entrants into the labor force. Indeed, if the fertility rate remains at or below the replacement level (approximately 2.1 births per woman), then any long-term population growth must come from net immigration (i.e., immigration less emigration). Most immigrants are young and have all or most of their working lifetimes ahead of them when they enter the country, while emigrants are more likely to be in the older part of the age spectrum. As a result, a higher net immigration rate, like a higher fertility rate, tends to improve overall system finances.

Social Security projections take into account both legal and other than legal immigration. (The latter includes those who entered the country legally but overstayed or otherwise violated the terms of their visas.) Legal immigration has increased substantially since World War II, driven primarily by legislative increases in immigration quotas. Under the intermediate assumptions, net legal immigration levels off at approximately the current rate. Rates of net other than legal immigration are subject to much uncertainty. A decline in the number of individuals apprehended attempting to cross into the United States illegally as well as anecdotal evidence indicates that the rate of other-than-legal immigration declined during the recent recession. In recent reports, the trustees expect a return to the pre-recession level in the immediate future followed by a long-term gradual decline.

Before the 2008 report, the actuarial projection took into account individuals other than legal permanent residents only on a net basis, so that the assumed age profile of immigrants and emigrants was effectively the same. Beginning in 2008, the trustees have made separate assumptions for other-than-legal immigration and emigration, with a younger age profile for immigrants. This was the major factor in the reduction of the projected long-range actuarial deficit in that year from 1.95 percent to 1.70 percent of taxable payroll.

MORTALITY: The mortality assumptions are perhaps the most publicly debated of the demographic assumptions. The mortality assumptions are used to estimate, among other things, how long retired and disabled workers and their survivors are projected to receive benefits. Mortality assumptions also determine how many workers are expected to die before retirement, often resulting in payments to survivors. Although reductions in pre-retirement mortality reduce the cost of survivor benefits, they also increase the number of workers who will reach retirement age. Reductions in post-retirement mortality result in longer lifetimes for those receiving benefits and generally have a much greater impact on the total cost of benefits. Increases in longevity accelerated greatly in the 1970s, leading the trustees to update frequently the mortality assumptions used for Social Securi-

ty projections. Since 1982, however, longevity has increased more slowly, and the projected reduction in mortality rates has changed less dramatically than in the past.

The rate at which longevity will continue to increase is the subject of much debate. There certainly is potential for more rapid decrease in mortality based on medical advances that slow disease development or allow better management of chronic conditions, such as heart disease, cancer, and stroke. But it is also difficult, if not impossible, to anticipate new diseases that may surface in the coming decades, the effect of lifestyle changes (e.g., less smoking but more obesity), how rapidly medical breakthroughs will be accessible to the general population, and whether new treatments will be affordable. There is widespread agreement that death rates will continue to decline in the future—the issue is the pace at which these declines will occur.

DISABILITY: The disability-incidence assumption is the most important determinant of the projected cost of the disability insurance (DI) portion of Social Security. Social Security law provides objective criteria for determining when covered workers become eligible for disability benefits, although some degree of subjectivity is inevitable in applying the law. Partly for this reason, disability-incidence rates tend to be cyclical, depending on the health of the economy and, to some extent, political and social attitudes toward disability. The trustees set the disability incidence assumption initially by looking at past trends and making projections about the future without regard to the increases in the Social Security normal retirement age (SSNRA) or the age at which workers can receive unreduced benefits scheduled under present law. These rates then are adjusted upward to reflect the additional workers who are expected to file for disability benefits because of the scheduled increases in the SSNRA.

Major Economic Assumptions

WAGE INCREASES: The nominal (i.e., without adjustment for inflation) increase in wages earned by workers from year-to-year affects both the revenue received and benefits paid by Social Security. As wages increase, taxes on those wages go up proportionately, raising revenue immediately. The formula for determining initial benefits is indexed to wage increases, however, so higher wages gradually result in higher benefits.

Wage increases are made possible by increases in worker productivity. Productivity is defined as the ratio of real GDP to hours worked by all workers. Since production is the ultimate source of workers' compensation, it should not be surprising that increases in productivity give rise to higher compensation. Wage increases, however, do not exactly track increases in productivity due to the following factors:

- ***Change in Average Hours Worked:*** Over the past 40 years, the average annual hours worked has declined at an average rate of 0.3 percent per year, partly because the work force has included an increasing proportion of women and older workers, who work fewer hours on average. This trend has offset some of the effect of improvements in productivity on workers' compensation. The trustees assume the average hours worked will level off at approximately the current rate for the indefinite future. This reflects their assessment that factors underlying the past trend will not continue into the future.
- ***Wages as a Percent of Compensation:*** Social Security benefits are based only on cash compensation, i.e., wages and self-

employment income. From 1969 to 2009, the portion of total compensation paid to employees as wages declined on average 0.2 percent per year, due largely to increases in the cost of employer-provided health insurance. This trend further offsets the effect of productivity improvements on annual wage increases. Before 2010, the trustees expected the 0.2 percent per year trend to continue. Due to the passage of the Patient Protection and Affordable Care Act of 2010 (PPACA), however, the trustees now expect growth in the cost of employer-provided health insurance to moderate somewhat, and have changed the assumed rate of decline in earnings as a percent of compensation from 0.2 percent to 0.1 percent per year once the PPACA becomes fully effective.

- *GDP Price Index:* The nominal value of worker production also increases due to inflation, which is measured by the price index for gross domestic purchases (also known as the GDP deflator). This is different from price inflation measured by the consumer price index (CPI), because it applies to goods produced in the United States, while the CPI applies to goods consumed in the United States, including imports but excluding exports. There are other technical reasons why the two indices differ. The GDP deflator generally is a few tenths of a percent less than the CPI.

CONSUMER PRICE INDEX: Legislation enacted in 1973[2] provides for annual cost-of-living adjustments (COLAs) in Social Security benefits. These benefit adjustments are intended to keep pace with inflation. COLAs are calculated based on increases in the CPI for urban wage earners and clerical workers (CPI-W)[3], which are calculated on a monthly basis by the Bureau of Labor Statistics. A COLA effective for December (applicable to the following January benefit payment) of a given year is equal to the percentage increase (if any) in the average CPI-W for the third quarter (July, August, and September) of that year over the average CPI-W for the third quarter of the last year in which a COLA was effective. If there is an increase, it is rounded to the nearest tenth of one percent. If there is no increase, or if the rounded increase is zero, there is no COLA.[4] The assumed annual increase in the CPI affects projected future benefit payments. Since 1975, when automatic adjustment of benefits began, the annual rate of increase in the CPI has varied widely, from double digits in 1979–1981 to 0.1 percent in 2008.

INCREASES IN REAL WAGES: The increase in nominal wages minus the increase in the CPI is called the real-wage differential—the increase in the buying power of wages after adjustment for price increases. If wages were used for indexing benefits after commencement, as well as for calculating initial benefits, then the increases in revenue and benefits resulting from real-wage increases would offset each other. But because benefits after eligibil-

[2]Public Law 93-66 enacted in 1973 provides for cost-of-living adjustments, or COLAs, determined annually. Effective in 1983, the increases were determined each December.
[3]The CPI-W is strictly an index and no single monthly amount is of any value. It is the changes in these index values over time that is used to determine COLAs.
[4]For example, prior to 2011, the last year in which a COLA became effective was 2008. The average CPI-W for the third quarter of 2008 was 215.495, which is used as the base from which the increase (if any) in the average CPI-W effective December 2011 is measured. For the third quarter of 2011, the average CPI-W was 223.233. Because this average exceeds 215.495 by 3.6 percent (rounded to the nearest one-tenth of 1 percent), the COLA effective for December 2011 was 3.6 percent. Benefits were increased effective January 2012 by this percentage.

ity are indexed to the CPI, any excess of wage increases over CPI increases causes the program's cost to be lower than would be the case if benefits after eligibility rose at the same rate as wages. The average future rate of increase in real wages is one of the most important factors affecting the financial health of Social Security.

INTEREST RATES: Social Security's assets are invested in special-issue Treasury securities, the interest rates of which are pegged to the rates on securities issued to the public. The interest-rate assumption approximates the yields on intermediate-term Treasury securities. Interest rates affect Social Security in two ways. First, higher interest rates raise the return on the system's accumulated assets and thus improve the financial condition of the program; lower rates have opposite effect. Second, higher interest rates reduce the present value of the program's long-term actuarial deficit. Real interest rates (i.e., nominal interest rates less inflation) have varied widely over the past several decades. In the mid-1980s, the real interest rate rose to 9 percent. It has declined since then and has been particularly low since the 2008-2009 recession. But over the longer periods, it generally has averaged around 3 percent.

LABOR FORCE PARTICIPATION RATES: Labor force participation rates measure the proportion of the working-age population that is employed, self-employed, or looking for paid work. The labor force includes workers with earnings covered by Social Security, those not in covered employment, and the unemployed. Everything else being equal, a higher labor force participation rate improves the program's financial condition for two reasons. First, it increases tax revenue earlier than it increases the resulting benefits, which improves the actuarial balance due to the time value of money. Second, it increases tax revenue more than it increases benefits, primarily because the proportion of two-earner married couples increases, and the additional payroll tax paid by the lower earning spouse provides additional benefits only to the extent that worker benefits based on that spouse's own wage record exceed spouse benefits based on the higher-earning spouse's wage record.

An important consideration for Social Security is labor force participation rates at ages when old age benefits are payable, i.e., beginning at age 62. When workers leave the labor force at these ages, they generally are considered to have retired. Participation in the labor force among potential workers at these ages therefore varies according to patterns of retirement—earlier retirement leads to lower participation rates. Labor force participation rates at ages 60 through 64 have changed considerably for both men and women. Before 1985, the labor force participation rate for men at ages 60 through 64 had been decreasing dramatically, from more than 80 percent in 1962 to 56 percent in 1985. The rate then leveled off for a period before beginning a slow increase, due in large part to improved health and the need to work longer to save for a longer period of retirement. The pattern for women has been steadily increasing labor force participation rates at all ages since the early 20th century, with particularly dramatic increases from the late 1960s until about 1980. Since then, the rates for women have leveled off at rates somewhat lower than for men. Increased labor force participation rates among older women reflect this long-term trend. The trustees have concluded that the incentives for remaining longer in the labor force are permanent and, as a result, have increased the assumed labor force participation rates at middle and higher ages in recent reports.

Possible changes in labor force participation rates in response to demographic changes predicted for the next several decades are among the greatest uncertainties in projecting the future financial condition of Social Security. With expected slower growth in the population at traditional working ages, will older workers want to work longer? And will their employers want to maintain an older workforce?

UNEMPLOYMENT: The unemployment rate measures the proportion of workers in the labor force unable to find work. Higher rates of unemployment reduce projected future income. Unemployment also generally reduces benefits, but the effect is much smaller and is largely deferred. High unemployment therefore adversely affects the program's financial health. But unemployment does not have as significant an impact on system finances as do some of the other factors discussed here. The spike in the unemployment rate due to the recession that began in 2008 caused benefit payments to overtake payroll tax income about five years earlier than predicted before the recession hit—but the spike in the unemployment rate did not have a large effect on the system's long-range finances.

GDP GROWTH: The trustees do not directly make an assumption regarding the growth of GDP, which is the total dollar value of all goods and services produced in the United States. The trustees indirectly arrive at their estimate of GDP growth by estimating growth in the labor force and growth in productivity (which is closely related to growth in real wages), both of which are discussed above. GDP growth was high in the 1960s and 1970s, due primarily to the large increases in the labor force. But if the retirement of the baby boomers leads to a shortage of workers, the labor force component of GDP growth could decrease dramatically. If the labor force growth rate was to slow and productivity did not rise to compensate, GDP growth would decline significantly.

Long-range GDP growth will depend on a variety of factors, such as whether workers retire at a different rate than projected, whether future workers will be more or less productive than assumed, and whether a shortage of workers will lead to a change in immigration law. At present, a wide divergence of views exists on these questions.

Taken together, these assumptions underlie the projections of the program's short-term and long-term financial condition. These projections provide policymakers with an indication of whether reform is needed.

Social Security Reform and the Stock-Yield Assumption

Some Social Security reform proposals would invest all or a portion of the assets accumulated to fund future benefits in private-sector securities, particularly stocks. Some of these proposals would allow workers to set up individual accounts; others would continue the current arrangement in which the government directly invests all of the system's accumulated assets. Advocates for these reform plans assert that investing payroll taxes in common stocks would provide a better return than the special U.S. government securities used by the current program. This claim is based on historical data showing that stocks have consistently outperformed U.S. government interest-bearing securities over long periods—20 years, for example. Although the annual real yield on stocks is not an assumption used in the annual report, such an assumption must be made to evaluate any reform proposals involving stock investments. It is not surprising that the higher the assumed real yield on stocks, the more

proposals for investing Social Security assets in stocks appear to be favorable. In its formal analyses of legislative proposals that include investment of trust fund assets in private sector securities, OCACT chooses yield assumptions that are consistent with the best-estimate assumptions from the most recent trustees report.

Many economists question whether the past superior long-term performance of stocks over other investment alternatives will continue. In addition, recent volatility in the securities markets has focused investors' attention on the greater risks inherent in equity investments. These issues are explored in depth in the 2007 Academy issue brief *Investing Social Security Assets in the Securities Markets*. Given the high degree of uncertainty regarding the future performance of the securities markets, it is important when evaluating any reform proposal that changes the way Social Security assets are invested to use a range of possible yields to illustrate this uncertainty.

Assumptions over an Infinite Time Horizon

Since the 2003 report, the trustees have included the program's unfunded obligations and actuarial balance over an infinite time horizon. Given the uncertainty of projections 75 years into the future, extending these projections into the infinite future can only increase the uncertainty— so that the results can have only limited value for policymakers. This is due largely to anomalies and incongruities that inevitably arise from extending any set of long-range actuarial assumptions to infinity. For example, extending to infinity the assumptions used for labor force participation rates and mortality improvement leads ultimately to a situation in which the typical worker is expected to receive benefits for a period longer than he or she pays into the system. It is not surprising that, at the current payroll-tax rate, the OASDI program cannot sustain itself in this situation. It seems unreasonable, however, to argue that workers will not extend their working years longer than currently projected, based on extended years of ability to work and the need to save more (beyond Social Security benefits) for the lengthened period of retirement.

Mortality improvement by itself has a major impact on Social Security's projected financial status and presents great difficulties when making long-range projections. The controversy surrounding the assumed rate of mortality improvement in the 75-year projection already has been described. Given these sharp disagreements among experts over projecting mortality for 75 years, the futility of reliably projecting mortality over an infinite time horizon becomes apparent.

Conclusion and Recommendations

As Yogi Berra once observed, "It's tough to make predictions, especially about the future." Reasonable people can and do disagree about economic and demographic conditions 25, 50, or 75 years into the future. Yet making such assumptions is critical for evaluating the current status of the Social Security program and the various proposals for reforming it.

There always have been some observers who have questioned whether the Social Security trustees' assumptions are the best basis for evaluating the financial condition of Social Security and the impact of various reform proposals. Other assumptions certainly may be reasonable. And even small changes in assumptions over a 75-year period can lead to large changes in the projections. Any projection over a 75-year period is subject to a high

degree of uncertainty. The trustees' intermediate assumptions are what they are described to be—a best estimate of future demographic and economic trends based on careful study and analysis of all available data.

A number of different proposals for Social Security reform are before the public. When evaluating these plans, policymakers should be aware of the demographic and economic assumptions that underlie the analyses. In some cases, the potential advantages of a particular reform proposal may depend as much on the assumptions used as on the proposal's actual provisions. In addition, policymakers should take care that assumptions are being used consistently across all proposals that are being compared.

To remove some of the uncertainty about the effects of Social Security reforms, we offer the following recommendations:

1. All analyses of Social Security reform proposals that include financial projections should also disclose the assumptions used.

2. Any such analysis of proposals should use assumptions that are internally consistent.

3. In cases in which substantial uncertainty exists as to the appropriate level of a critical assumption, sensitivity analysis or a range of assumptions should be provided.

4. When calculations for competing reform proposals use different sets of assumptions, comparisons of these proposals should recognize the effects of the differing assumptions.

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