### ISSUE BRIEF NO. 1

# SOCIAL SECURITY REFORM: THE NATURE OF THE PROBLEM

### INTRODUCTION

This is the first in a series of issue briefs that the Treasury will release on Social Security reform topics. This brief explains the magnitude of the financial challenge facing Social Security and why acting sooner and spreading the burden of reform across more generations is fairer to future generations.

#### THE KEY POINTS IN THIS ISSUE BRIEF ARE:

- Social Security faces a shortfall over the indefinite future of \$13.6 trillion in present-value terms, an amount equal to 3.5 percent of future taxable payrolls. Looking at the gap over a shorter horizon provides only limited information on the financial status of the program.
- Social Security can be made permanently solvent only by reducing the present value of scheduled benefits and/or increasing the present value of scheduled tax revenues. Other changes to the program might be desirable, but only these changes can restore solvency permanently.
- Delaying changes to Social Security reduces the number of cohorts over which the burden of reform can be spread. Not taking action is thus unfair to future generations. This is a significant cost of delay.
- By itself, faster economic growth will not solve Social Security's financial imbalance—realistically, there is no way to "grow out of the problem."

# OVERVIEW OF THE SOCIAL SECURITY PROGRAM

The Social Security Act of 1935—which became the basis for the current Social Security system—created a program to provide lifetime payments to retired workers beginning at age 65. In signing the Social Security Act, President Roosevelt stated that the law sought to "give some measure of protection to the average citizen…against poverty-ridden old age." Although the modest benefits provided for by the original program were not intended to be the sole source of income for retirees, Social Security has become a *de facto* retirement plan for many Americans.

Social Security has grown to become by far the single largest social program of the federal government, with expansions in coverage, increases in benefits, and the extension of the program to provide benefits to workers' spouses and minor children, the survivors of deceased workers, and disabled workers. Currently, more than 49 million retired or disabled workers, their families, and their survivors receive monthly Social Security benefits. Total benefits in 2007 will amount to approximately \$576 billion—about 20 percent of the entire federal budget—comprising roughly 40 percent of all income received by indi-

viduals aged 65 and older.1

Social Security includes two parts: old age and survivors insurance (OASI), for which the federal government began collecting taxes in 1937 and which provides retirement benefits; and disability insurance (DI), for which the government began collecting taxes in 1957. The programs together are referred to as OASDI; this issue brief will refer to them collectively as "Social Security."

Both OASI and DI are financed with payroll taxes levied on earnings up to a maximum that grows every year in line with average economy-wide wages. In 2007, maximum taxable earnings are \$97,500 with payroll tax rates of 10.6 percent for OASI and 1.8 percent for DI, implying a total tax rate of 12.4 percent. For individuals employed by others, half of payroll taxes are paid by the employer and half are paid by the employee. Nearly all economists agree, however, that the employer's portion of the tax reduces employees' take-home wages one-for-one, so the employee bears the entire burden of the tax regardless of how it is ostensibly divided between employers and employees. Self-employed individuals pay both halves of the tax, though half of a self-employed worker's tax payment is deducted from his or her adjusted gross income.<sup>2</sup>

Social Security taxes are used to pay benefits; the program is self-financing in the sense that revenues collected from other parts of the government are not directly used to finance benefit payments. To the extent that taxes exceed current benefit payments, the resulting surpluses are used to purchase special-issue federal securities that are held in the Social Security trust funds (technically, the separate OASI and DI trust funds) and that are redeemed as needed to pay benefits. The trust fund is credited with interest comparable to interest paid on federal debt issued to the public. Social Security benefit payments are automatically authorized provided sufficient funds are present in the pertinent trust fund.

Individuals can begin collecting retirement benefits as early as age 62, although the normal retirement age—when a full benefit can be claimed—is currently 66 years. Benefits are calculated in three steps.

- First, the Social Security Administration calculates a special average of an individual's taxable wages while working—called "average indexed monthly earnings," or AIME. This measure uses data on national wage growth to scale up earnings throughout a worker's lifetime so that the wages a worker earned at, say, age 25 are more closely comparable to the wages a worker earns later in life.<sup>3</sup>
- Second, a progressive formula is used to convert AIME into a baseline benefit or "primary insurance amount" (PIA). In general, workers with higher lifetime earnings receive benefits that are larger than those received by workers with low lifetime earnings, so benefits rise with earnings. However, workers with low lifetime earnings receive a benefit that represents a higher percentage of their lifetime earnings relative to high-earning workers, implying that the benefit formula is progressive. For example, if one worker has lifetime earnings that are twice as high as another's, the first worker will receive retirement benefits that are higher, but not twice as high. It is important to note that benefits are derived from lifetime earnings, not what a person makes in a single year. Box 1 considers one confusion that can arise from the use of lifetime income.

<sup>1</sup> Current population survey data for 2005 tabulated by the U.S. Census Bureau (http://pubdb3.census.gov/mac-ro/032006/perinc/new09\_006.htm)

This mimics the treatment of the employer's share of the payroll tax, which is not considered individual income for tax purposes.

<sup>3</sup> Technically, only earnings up to age 60 are wage-indexed; earnings after age 60 are included in the AIME measure in nominal terms.

• Finally, the actual amount of initial benefits is determined by 1) adjusting the primary insurance amount (PIA) for retirement before or after the normal retirement age and 2) adjusting for price inflation between age 62 and the time the individual begins collecting benefits. These adjustments ensure that people receive lower benefits if they retire before the normal retirement age or higher benefits if they retire after it, and that they are compensated for inflation based on when they retire. After benefit payments commence, they are adjusted for price inflation each January.

### BOX 1 LIFETIME VERSUS SINGLE-YEAR EARNINGS

Social Security benefits are computed on the basis of *lifetime* earnings, and thus do not relate directly to earnings in a particular year. While this appropriately ensures that benefits reflect contributions to the system over the course of a person's working years (in practice, the top 35 years of earnings are used), the computation can prove confusing in some contexts. For example, only 15 percent of all workers have average *lifetime* annual taxable earnings of at least \$60,000 (average indexed monthly earnings of at least \$5,000), even though a considerably larger fraction of workers earn more than \$60,000 in a given year. Intuitively, workers with average lifetime earnings of \$60,000 per year were typically making much less than this at the start of their career. In addition, wages above the taxable maximum do not count in the calculation of lifetime earnings for Social Security; people making six-figure incomes in 2007, for example, would be counted as making \$97,500.

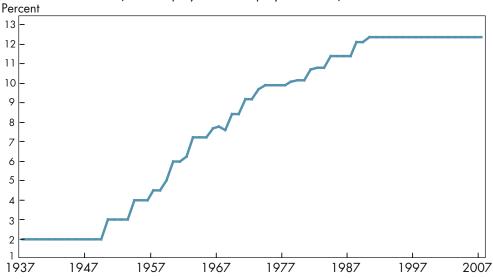
This point about lifetime earnings should be kept in mind when assessing the consequences of reform proposals that include benefit adjustments. A hypothetical proposal that reduces the benefits of the top 15 percent of earners might be seen as affecting workers with Social Security lifetime earnings of "only" \$60,000. Without understanding that the \$60,000 figure is calculated in a particular way, one might mistakenly believe that this hypothetical reform proposal is affecting middle-class workers rather than being limited to workers in the top 15 percent of the lifetime earnings distribution.

Disability benefits are computed in a similar fashion. The principal difference, however, is that the number of years used to compute the AIME amount is reduced to take into account the person's shorter work history.

Social Security has been very generous to early birth cohorts who were in the middle or later part of their working life either at the time the program began or on the several occasions when the program's taxes and real benefit levels were increased. (Figure 1 shows how the OASDI tax rate has been raised numerous times over the history of the program.) It was decided from the outset that birth cohorts in mid-to-late working life at the time of the program's inception would be paid large benefits relative to the taxes they had paid in. In addition, each time new legislation has ratcheted up taxes and real benefits, substantial windfalls have been conveyed to individuals in mid-to-late working life at the time of the change, as these individuals face increased taxes for only a relatively few years but are entitled to receive the full advantage of the benefit increases. For example, people born in 1954 faced tax rates between the ages of 25 and 46 that were 1.6 percentage points higher on average than the tax rates faced at the same ages by people born in 1943 (Figure 2). This is so even though the benefit formula is equally generous on average to both cohorts. People born before 1943, such as the 1930 birth cohort shown in the figure, were still more advantaged, as the tax rates they faced were even lower than those faced by people born in 1943 and beyond.

Figure 1: OASDI Tax Rates by Year

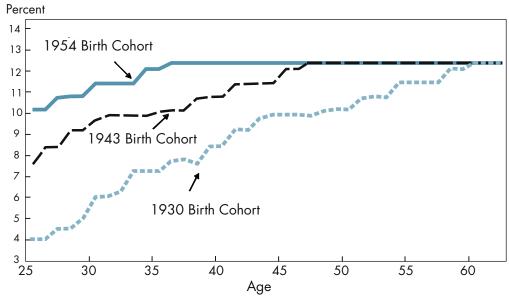
(Total Employer and Employee Shares)



Source: Social Security Administration

Figure 2: OASDI Tax Rates Paid by 1930, 1943 and 1954 Birth Cohorts

(Total Employer and Employee Shares)



Sources: Social Security Administration and Department of the Treasury

Because Social Security benefits paid to the earliest Social Security beneficiaries were more generous than what could be financed out of the proceeds from their own contributions, those benefits were largely financed with taxes paid by younger birth cohorts. And because the younger birth cohorts' taxes were paid out rather than saved, their benefits must in turn be financed by the taxes of still younger birth

cohorts. This method of financing benefits is referred to as "pay-as-you-go," in which each generation's taxes finance the benefits of the generation that preceded it. The alternative to pay-as-you-go finance is pre-funding, in which each generation accumulates assets to be drawn upon to pay that generation's future benefits.<sup>4</sup>

Figure 3 shows that Social Security has been financed almost entirely on a pay-as-you-go basis for most of its history (currently, a small amount of potential pre-funding of benefits is also involved). As a share of tax revenues, program outlays rose very rapidly in the early years of the program, reaching 100 percent in 1958 and staying near 100 percent through 1983. Social Security's cash surpluses since 1983 reflect reforms that resulted in the large baby-boom generations paying more taxes than were needed to finance the benefits of earlier birth cohorts. Whether these surpluses resulted in true pre-funding of future benefits is discussed in Treasury's second issue brief. Between the end of 1983 and the end of 2006, Social Security costs averaged 88 percent of non-interest income, and the inflation-adjusted trust fund balance rose from \$50 billion to \$2 trillion (in 2006 dollars). In 2006, Social Security brought in \$87 billion more revenue than it paid out in benefits and administrative costs. As shown in Figure 4, Social Security's annual cash surplus is projected to peak in 2009, and then to decline steadily, reaching zero in 2017. After that point, Social Security's cash flows are negative, as costs will exceed revenues. Even so, full benefits will be paid under current law until the trust fund is exhausted. These benefits will be funded from non-Social Security taxes or by issuing new public debt to redeem debt held by the trust fund.

Percent 120 Outflows > Receipts 100 Outflows < Receipts 80 60 40 20 1967 1977 1937 1947 1957 1987 1997 Fiscal Year

Figure 3: OASDI Cash Outflow as a Share of Non-Interest Receipts

Source: Office of Management and Budget

The special Treasury securities in the present trust funds represent claims on the government and—ultimately—the public, in the form of future general tax revenues. Whether these trust fund accumulations constitute *true* pre-funding is an open question, and is discussed in Treasury's second issue brief.

Billions of dollars Peak in 2009: \$99 Billion

Figure 4: Actual and Projected Social Security Balances

200 100 0 -100 First Becomes Negative in 2017 -200 -300 Historical | Projected -400 1980 1995 1975 1985 1990 2000 2005 2015 2020 2025 2010

Source: Social Security Administration

# SOCIAL SECURITY'S FINANCIAL IMBALANCE

Social Security is officially solvent so long as the trust fund balance is positive. Based on economic and demographic assumptions from the Social Security Board of Trustees, the Social Security Administration projects that the OASDI trust fund (the combined OASI and DI trust funds) will have insufficient funds to pay currently scheduled benefits beginning in 2041. The projected trust fund exhaustion date can change from year to year as new data and assumptions are introduced into the Social Security Administration's calculations. For example, the 2000 Trustees Report projected a trust fund exhaustion date of 2037; since then, the date has been pushed back four years, to 2041. That said, if the current projections prove accurate and if no program changes are made, then current law mandates that benefits actually paid be scaled back to a level that is consistent with then-current payroll tax income when the trust fund is depleted. In other words, if no action is taken, current projections imply that all beneficiaries will have their benefits reduced in 2041 by 25 percent compared to what is promised. The share of scheduled benefits that would be payable would then slowly decline from 75 percent in 2041 to 70 percent in 2081.

The financial challenge Social Security faces has implications for the federal budget even before 2041. As shown in Figure 4, Social Security cash flows become increasingly negative after 2017; as a result, Social Security will have a larger and larger impact on the rest of the federal budget, as general revenues and/or greater public debt issuance are needed in order to redeem trust fund bond holdings and fund full benefit payments until 2041.

The projected time path for the trust fund balance reflects projected future cash flows. Figure 5 shows historical and projected values for income (excluding interest) and costs expressed as shares of projected taxable payroll; these concepts are referred to as the income rate and the cost rate, respectively. In 2006, the income rate was 12.73 percent, the cost rate was 11.02 percent, and the difference—the surplus rate—was 1.71 percent. The surplus rate is projected to peak in 2008 at 1.74 percent and then to decline steadily; the rate becomes negative starting in 2017, reaching –5.35 percent in 2085.

Percent 20 Projection 18 16 Cost Rate 14 12 Income Rate (Excludes Interest Income) 10 8 1990 2020 1980 2000 2010 2030 2040 2050 2060 2070 Source: Social Security Administration

Figure 5: Historical and Projected OASDI Income and Cost as a Share of Taxable Payroll

The most widely cited single measure of Social Security's financing shortfall is the 75-year actuarial deficit, which is currently estimated at \$5.1 trillion in present-value terms, or 1.95 percent of the present value of taxable payroll over the 2007 to 2081 period.<sup>5</sup> This estimate implies that Social Security can achieve actuarial balance by reducing the present value of Social Security's 75-year net outflow (benefits less taxes) by \$5.1 trillion. One way to do this would be to immediately raise the payroll tax rate by 1.95 percentage points (i.e., to 14.35 percent); alternatively, scheduled benefits could be immediately reduced by 13 percent.

Either of these two steps would bring Social Security into 75-year balance, but it would not make the system permanently solvent. Under a hypothetical tax increase of this size, Social Security could pay scheduled benefits through to the end of the 75-year projection period, but continuing cash deficits would imply that the trust fund would drop below the threshold required for actuarial balance in the following year (see Figure 6). Put differently, just one year after implementing such a reform, Social Security would again be out of 75-year actuarial balance—that is, if reform were implemented in 2007, the system would fall out of balance in 2008. Moreover, with each passing year the Trustees would report

This measure requires the trust fund balance to be sufficient to pay 100 percent of program costs in the final year of the 75-year period; without this requirement the unfunded obligation would equal \$4.7 trillion. Note that all present values referred to in this brief are computed as of the start of 2007.

an ever-larger financial imbalance as the 75-year scoring window moves forward to include years with ever-larger gaps between expected system costs and income.

700 Raise Payroll Tax Rate 600 1.95 Percentage Points in 2007 500 End of 75-Year Horizon -400 2007 Intermediate Projection 300 200 Threshold for Actuarial Balance 100 2007 2017 2027 2047 2057 2067 2077 2037

Figure 6: Projected OASDI Trust Fund Balance as a Share of Cost

Sources: Social Security Administration and Department of the Treasury

As this example makes clear, estimates made over a 75-year horizon do not fully capture the financial status of the Social Security program. In fact, no finite forecast period completely embodies the financial status of the program because people pay taxes in advance of receiving benefits; at any finite cutoff date, people will have been promised benefits that have not yet been paid. For example, the current 75-year projections include nearly all of the taxes that people born in 2010 are expected to pay over their working lifetimes but virtually none of the benefits that they will receive in retirement. In order to get a complete picture of Social Security's financial problem, the time horizon for calculating income and costs must be extended to the indefinite future. Such a calculation is provided in the 2007 Trustees Report, where it is estimated that the present value of scheduled benefits exceeds the present value of scheduled tax income by \$13.6 trillion; this is the financing gap that program reforms must ultimately close. To put this figure in perspective, eliminating the permanent deficit could be accomplished with an immediate and permanent 3.5 percentage point increase in the payroll tax rate (to 15.9 percent), or with roughly a 20 percent reduction in current-law scheduled benefits.<sup>6</sup>

It is important to understand that the magnitude of the infinite-horizon actuarial deficit is not driven by the use of distant or speculative long-range projections. Rather, the smaller size of the 75-year (or any finite-period) deficit results from its use of a truncated time horizon. The Trustees Report indicates that Social Security's unfunded obligation for *only* past and current workers equals \$14.4 trillion, which is actually

The benefit reduction to achieve infinite horizon balance is calculated assuming that the ratio of income to taxable payroll is the same between 2081 and the infinite future as it is between 2007 and 2081.

slightly greater than the infinite-horizon shortfall. As soon as one accounts for the full amount of benefit obligations that have been promised to past and current participants, it becomes apparent that Social Security's \$13.6 trillion financing gap is already "on the books" in an important sense, and does not merely arise from looking far beyond a 75-year horizon.

# PERMANENT SOLVENCY AND THE INFINITE-HORIZON ACTUARIAL BALANCE

Having a non-negative infinite-horizon actuarial balance does not by itself assure that Social Security is permanently solvent. For Social Security to be technically solvent over a given period, it must have a trust fund balance that is sufficient to pay scheduled benefits over that period. By contrast, a non-negative actuarial balance could be achieved even if the trust fund were insolvent during certain periods, so long as the program's revenues were to exceed its payments *on average*.

The Trustees Report has for many years made reference to an approximate test for permanent solvency called "sustainable solvency." Sustainable solvency is said to be achieved if the ratio of the trust fund balance to projected annual benefit payments (the "trust fund ratio") is positive throughout the 75-year projection period and is stable or rising at the end of the period. Implicitly, the idea is that if trends at the end of the 75-year projection period persist, then sustainable solvency implies that the trust fund ratio will be forever positive.

A fully satisfactory solution to Social Security's long-term solvency problem will both meet the criterion of sustainable solvency and include a mechanism for *ensuring* that trends at the end of the projection period are in fact sustained. For example, ensuring Social Security remains permanently solvent could mean taking into account that increasing longevity is likely to forever increase the gap between Social Security's benefits and revenues unless benefit levels, tax rates, or both are somehow indexed to longevity. This is because increased longevity means that retirees are collecting benefits for additional years but not paying additional taxes (if workers continue to retire at the same age). Also, sustainable solvency does not necessarily provide for permanent solvency if past demographic changes such as changes in fertility or immigration rates cause the age distribution of the population to be unstable at the end of 75 years.

# THE ORIGINS OF SOCIAL SECURITY'S FINANCIAL SHORTFALL AND ITS IMPLICATIONS

The fundamental reason Social Security must be reformed is that the benefits promised to the public have a present value that is \$13.6 trillion greater than the present value of the revenues that the system is projected to receive. Relative to scheduled benefits and taxes, therefore, the present value of benefits less taxes (what might be referred to as "net payments to the public") must be reduced by \$13.6 trillion. This can be done by increasing revenues relative to what is provided for under current law and/or by lowering benefits relative to what is currently promised (but not actually payable given that the system is insolvent). There is no alternative to these two choices.

It might be surprising that Social Security promises to pay out so much more than it takes in. As is well known, the program promises current and future workers a below-market rate of return on contributions in the sense that most workers would do better by directly investing their contributions (i.e., the taxes

they pay into the system) into U.S. Treasury bonds.<sup>7</sup> Why must the system increase net receipts by \$13.6 trillion if it is already requiring current and future workers to pay in more than they will receive? The answer relates to the system's generosity to early birth cohorts—generations of workers now either retired or deceased. Social Security paid these previous cohorts benefits that exceeded their lifetime contributions by more than \$13.6 trillion. In order to finance this gap, later birth cohorts must receive benefits whose value (relative to the value of the taxes they pay in) is lower by the same amount—that is, they must pay a net tax (again, the difference between the present value of taxes and benefits) of more than \$13.6 trillion. Under current law, a portion of this net tax is being levied already; in order to make the system solvent, the net tax needs to be increased by an additional \$13.6 trillion.

These observations are supported by estimates made by the Social Security Administration and the Congressional Budget Office (CBO). The Social Security Administration has broken down the infinitehorizon actuarial imbalance into imbalances attributable to net payments to two broad generational groupings. Generations born after 1992—those aged zero to 14 years in 2007 and those not yet born in that year—are estimated to receive net payments (the difference between their lifetime benefits and taxes) from Social Security with a present value that is slightly negative (the shortfall is \$0.8 trillion). This implies that the excess of benefits over taxes made to generations born before 1993 accounts for essentially all of the \$13.6 trillion infinite-horizon actuarial imbalance. In addition, estimates made by the CBO and others suggest that generations born between 1940 and 2000 will receive less in lifetime benefits than they pay in as taxes (that is, their net benefits from Social Security over their lifetime will have a negative present value).8 The bottom-line implication of these estimates (which are summarized in the last two rows of the first column of figures in Table 1) is that cohorts subject to reform—roughly people born in 1953 or later—will receive net lifetime scheduled benefits under current law that are negative.<sup>9</sup> The value of these net lifetime benefits is given as -X trillion dollars in the table (their exact magnitude is not known). This in turn implies that cohorts not subject to reform—that is, current and near retirees and earlier cohorts—receive positive net lifetime benefits of \$13.6 + X trillion under current law.

The second column of figures in Table 1 shows the implications of these findings for the ultimate generational breakdown of Social Security's net benefits. In the end, the present value of all Social Security cash flows must be zero, with the present value of revenues equal to the present value of benefits. In addition, most proposals for Social Security reform start with the assurance that those in and near retirement will not be affected (again, this is assumed to include persons born in 1952 or earlier); hence, net lifetime benefits for these individuals are unlikely to change much from scheduled current-law levels. The \$13.6 trillion-plus net benefit received by current and near retirees and the generations preceding them thus must be financed by later birth cohorts. Relative to current law, therefore, these later cohorts—the "reform cohorts"—will face an additional net tax of \$13.6 trillion in the form of either lower benefits than promised under current law or higher taxes. There is no escaping this budget arithmetic.

<sup>7</sup> Technically, this implies that the program as currently constituted levies a "net tax" on current and future workers: The present value of their benefits is less than the present value of their contributions.

<sup>8</sup> See Congressional Budget Office, "Is Social Security Progressive?" December 15, 2006.

<sup>9</sup> In defining the cohorts subject to reform to be those born in 1953 and later, only those aged 55 or younger at the time the reforms take place are counted as being subject to their provisions.

#### Table 1

Estimates of Net Social Security Payments Made to Birth Cohort Groups (Trillions of 2007 Present Value Dollars)

Value of payments under:

Birth cohort	Current law	Ultimate program
Estimates		
All birth cohorts, total	13.6	- 0 -
Cohorts born 1993 and later (total)	-0.8	
Cohorts born 1992 and earlier (total)	14.4	
Cohorts born 1940 to 2000 (each cohort)	< 0	
Inferred totals		
Cohorts subject to reform (born 1953 and later)	-X	- (13.6 + X)
Cohorts exempt from reform (born 1952 and before)	13.6 + X	13.6 + X

**Source**: Lines 1 to 3 are derived from the infinite-horizon actuarial imbalance reported in the 2007 Trustees Report, Table IV.B7. Line 4 is based on a December 15, 2006 paper by the Congressional Budget Office (CBO) entitled "Is Social Security Progressive?"

### REFORMING THE SYSTEM: SOONER IS BETTER THAN LATER

Viewing Social Security from the perspective of how it affects current and future individuals and generations explains why reform can be fairer to future generations the sooner it is implemented. Delay reduces the options for distributing the financial burden of reform across generations because delay exempts additional generations from sharing in the financial consequences of reform.

To make this point more concretely, consider a policy of closing Social Security's permanent financing gap by immediately increasing the payroll tax rate by 3.5 percentage points. This policy would affect all current and future workers. If the tax increase were instead delayed until 2041, when the trust fund is projected to be depleted, the requisite tax increase would be 5.8 percentage points rather than only 3.5 percentage points—the difference being that there are fewer cohorts (and therefore less resources) to tax the longer one waits. Similarly, all retirees' benefits would have to be cut by 20.4 percent in 2007 to make Social Security permanently solvent—but this would rise to a benefit adjustment of 30.4 percent if reform were initiated in 2041. These examples show that fairness to future generations requires that action be taken sooner rather than later.

### FAIRNESS TO FUTURE GENERATIONS REQUIRES TRUE PRE-FUNDING

An issue that will be discussed in Treasury's second issue brief is whether trust fund accumulations (i.e., Social Security surpluses) increase the government's capacity to pay future Social Security benefits and the implications that the answer to this question has for Social Security reform. Social Security surpluses increase the government's capacity to pay future benefits only to the extent that they result in less debt issued to the public than would have been issued in the absence of Social Security surpluses. In that case, near-term surpluses increase the government's capacity to issue public debt in the future to

finance Social Security benefits.

Many analysts believe Social Security surpluses do not result in smaller levels of publicly held debt, but instead result in some combination of higher spending or lower taxes in the non-Social Security budget. To the extent that this is true, attempting to make Social Security fairer to future generations by running near-term Social Security surpluses would not succeed; only if pre-funding is "real" can this goal of fairness be achieved.

# INCREASED ECONOMIC GROWTH BY ITSELF CANNOT HELP SOLVE THE PROBLEM

More rapid economic growth cannot, by itself, close Social Security's infinite-horizon financing gap. Realistic increases in productivity or population growth are simply not sufficient to have more than a modest effect on the program's long-range shortfall, especially over the very long term.

In this context, it is important to note that the ultimate effect of faster growth on Social Security's financing gap will be overstated by the 75-year estimates that are given in the Trustees Report. Because each person's taxes precede their benefit payments by about 30 years on average, the 75-year horizon captures a large share of the increased revenues that come about because of increased real wage growth or fertility, but a relatively smaller share of the resulting future increase in benefit payments. Hence, a finite-horizon measure will capture only a portion of the effect that faster economic growth has on future benefit promises; by contrast, an infinite-horizon calculation fully captures both the tax and benefit implications of Social Security reforms.

### INCREASED ECONOMIC GROWTH DOES MAKE REFORM EASIER

While increased economic growth cannot solve the problem of Social Security's current-law financial shortfall, it does make the reform burden easier to bear. Higher fertility and/or immigration means that there are more people over whom to distribute the \$13.6 trillion burden of reform. And higher real wage growth means that disposable income (income after taxes) will be higher for future generations. This increase in disposable income makes it easier for them to shoulder the burden of reforming Social Security, since what they have left after the reform is greater than it would otherwise be.

#### CONCLUSION

Because Social Security paid or promised more to early birth cohorts than they paid in, and because it is neither feasible nor desirable to go back on those promises, the burden of ensuring the system's solvency can only fall on current and future workers. This burden will be imposed one way or another—under current law, when the trust fund reaches its projected exhaustion date in 2041, benefits will be automatically cut to a level that is consistent with then-current payroll tax income. However, the manner in which this would occur will be drastic and unfair, with low-earning retirees facing benefit reductions in the same proportion as high earners. By contrast, taking action now will allow people who most depend on Social Security for their retirement income to be shielded, and will allow a more gradual transition to a sustainable system. The sooner that reform is implemented, the more birth cohorts there will be that can contribute to making Social Security solvent, and the fairer Social Security will be to future generations.