UNDERSTANDING SOCIAL SECURITY BENEFIT ADEQUACY: MYTHS AND REALITIES OF SOCIAL SECURITY REPLACEMENT RATES

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ABSTRACT

Discussions of Social Security benefit adequacy are often framed in terms of the replacement rate, defined as the ratio of one's retirement benefits to pre-retirement income. Three aspects of Social Security replacement rates are often misunderstood. First, the rising tax costs of maintaining constant replacement rates cause pre-retirement standards of living to decline relative to post-retirement standards of living. Second, Social Security's actual replacement rates are substantially higher than many understand because they are not reported as defined by most financial planners. Third, the Social Security benefit formula causes replacement rates to rise over time for a given level of real wages. Removing these quirks that arise under the current benefit formula could both reduce projected cost growth and strengthen system finances, while still honoring the replacement rate concept.

JEL codes: H1, H2, H3

A FULL UNDERSTANDING of the ongoing debate concerning future Social Security policy requires a familiarity with the concept of the "replacement rate." The replacement rate is a frequently invoked measure of the value of the program's benefits to recipients. For many decades, it has been central to many policy makers' evaluations of Social Security benefit adequacy. Indeed, many Social Security policy advocates define benefit adequacy almost exclusively in terms of replacement rates.[1]

Virtually every Social Security policy decision, from the floor of income protection the program provides to the balance of additional taxes and cost constraints to be employed in correcting its projected financing shortfall, is affected by the replacement rate discussion. One's attitude towards replacement rates can establish the frame of reference for determining whether all, some, or none of the program's future shortfall can reasonably be closed by constraining the growth of its expenditures. Accordingly, the replacement rate concept cuts to the heart of whether advocates from different perspectives can reach a compromise agreement to strengthen program financing.

A replacement rate, loosely defined, is the amount of one's retirement benefit as a percentage of one's pre-retirement earnings, as illustrated below:

$$\frac{(\text{Retirement Income})}{(\text{Pre-retirement Earnings})} \times 100\% = \text{Replacement Rate}$$

1. See for example Virginia Reno and Joni Lavery, "Social Security and Retirement Income Adequacy" (National Academy of Social Insurance, May 2007), http://www.nasi.org/sites/default/files/research/SS_Brief_025.pdf; and Bruce Schobel, "The 1996 Bowles Symposium, Chapter 9: Declining Adequacy of Social Security Retirement Benefits," 1996, http://66.216.104.121/search.aspx?go=True&q=&page=1&pagesize=10&or=True&docvector=%5Bbid+audits%2C+1%5D%5Bbid+documentation%2C+0.917663%5D%5Bbid+audit%2C+0.858395%5D%5Bbid+submission%2C+0.858395%5D%5Bnon%2C+0.839799%5D%5Boriginally+disabled%2C+0.82717%5D%5Brisk+score%2C+0.82717%5D%5Besrd%2C+0.807856%5D%5Bmedicare+bid%2C+0.794719%5D%5Brisk+scores%2C+0.794719%5D%5Boact+bid%2C+0.794719%5D%5Bpart%2C+0.774597%5D%5Bdiagnosis+data%2C+0.760886%5D%5Bnew+enrollee%2C+0.725476%5D%5Bdesk+review%2C+0.725476%5D&refine=AQ9CcnVjZSBEIFNjaG9iZWwwAWF1dGhvcnNzZWFyY2hhYmxlXVsdGkbAl4iAiIk&taxid=446.

This concept can be applied either to one's total retirement income or to the amount deriving from a particular source such as Social Security.[2] Financial advisors will often refer to the replacement rate in retirement planning discussions. Working individuals are frequently encouraged to save at a rate sufficient to ensure that their post-retirement income "replaces" a given amount of their pre-retirement annual earnings. The prescribed target is often less than 100 percent because some pre-retirement income is saved rather than consumed (and so does not contribute to one's pre-retirement standard of living), and also because certain expenses such as housing payments and taxes tend to become proportionally less in old age. As a result, a replacement rate of 70 percent to 80 percent is often deemed sufficient as a general rule of thumb to ensure that one's consumption expenditures can be smoothed over one's lifetime.[3] This paper will refer principally to the more frequently cited 70 percent standard.[4]

The current Social Security initial benefit formula is designed to hold replacement rates constant for workers with the same relative earnings retiring at the Normal Retirement Age (NRA) in different years.[5] The current formula essentially aims to provide the same replacement rate, for example, to a medium-wage worker retiring at the NRA in 2055 as it paid to the medium-wage worker who retired at the NRA in 1985.[6]

For reasons that will be detailed later in this paper, the current benefit formula (in the contexts of demographic realities and Social Security's historical financing mechanism) results in costs that, over time, rise substantially faster than the program's tax base. If the value judgment is made that replacement rates should continue to be held constant from one generation's medium-wage earner to the next

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2. The replacement rate concept can also be used to analyze disability, unemployment, or other benefit adequacy. For simplicity, this study focuses on retirement income replacement rates. Many of the points made in this study apply similarly to Social Security disability benefits, which are derived from the same basic benefit formula as Social Security old-age and survivors' benefits.

3. In one typical example, Kathy Ruffing and Paul Van de Water use 70 percent. See their "Social Security Benefits are Modest" (Center on Budget and Policy Priorities, January 2011), http://www.cbpp.org/cms/index.cfm?fa=view&id=3368. Alicia Munnell, Francesca Golub-Sass, and Anthony Webb rely principally upon a standard of 80 percent. See their "How Much to Save for a Secure Retirement" (Center for Retirement Research, November 2011), http://crr.bc.edu/wp-content/uploads/2011/11/IB_11-13-508.pdf. Several other examples of both commonly employed standards exist.

4. Andrew Biggs and Glenn Springstead cite multiple sources for the 70 percent figure. See "Alternative Measures of Replacement Rates for Social Security Benefits and Retirement Income," *Social Security Bulletin* 68, no. 2 (2008), U.S. Social Security Administration, Office of Retirement and Disability Policy, http://www.ssa.gov/policy/docs/ssb/v68n2/v68n2p1.html.

5. The NRA is now 66 but is scheduled to rise to 67 in the future. Here "relative earnings" is defined in relation to the average wage as it changes over time, as discussed later in this study.

6. The Social Security Office of the Actuary defines a "medium-wage worker" as one with career average earnings equal to the Average Wage Index (AWI). This medium-wage earner is not actually at the median in a given year, per http://www.ssa.gov/OACT/NOTES/ran7/index.html. Among 2010 retirees, this so-called medium-wage worker had career earnings at roughly the 56th percentile of all workers (i.e., higher than the median).

FIGURE 1. THE COMBINATION OF POPULATION AGING, CURRENT FINANCING METHODS AND BENEFIT INDEXING CAUSES SOCIAL SECURITY COSTS TO RISE

Soc Sec Costs as a % of the Tax Base
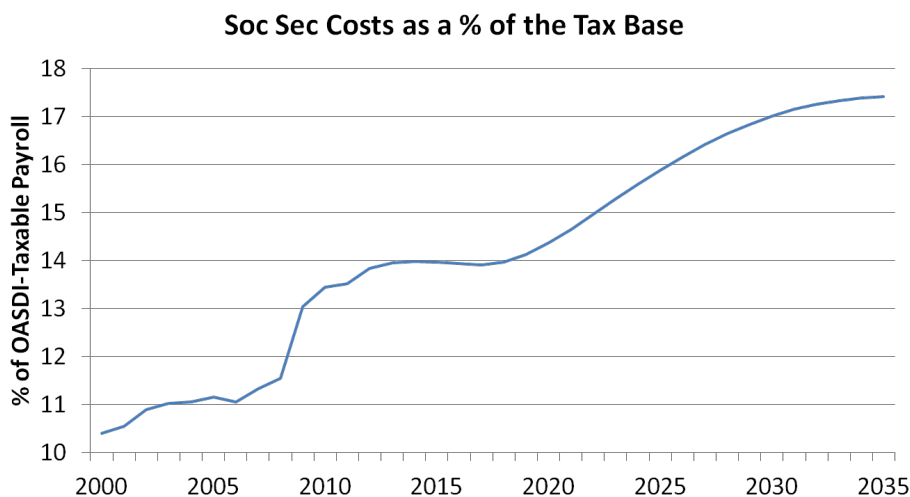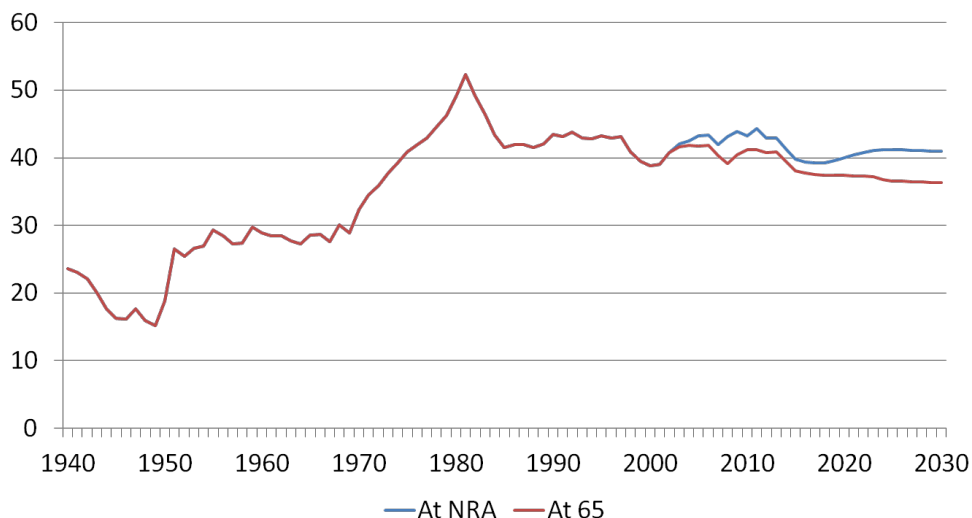

Source: Board of Trustees' Annual Report, 2012

generation's medium-wage earner, the result will be that each subsequent generation will face higher Social Security cost burdens as society continues to age as shown in figure 1.[7]

Closely related to this issue is the ongoing policy argument over what truly constitutes a Social Security "benefit cut." A benefit cut could theoretically be defined to refer either to a reduction relative to today's nominal benefit levels, or relative to today's levels in real (price-adjusted) terms, or relative to currently scheduled future benefits, or yet another concept. If any reduction in Social Security replacement rates as now defined is judged to be an unacceptable benefit cut (even if real per-capita benefits continue to rise) then the only possible policy outcome is for younger generations to face substantially higher Social Security tax burdens than previous ones faced. Framing the discussion in terms of the necessity of maintaining replacement rates thus carries the potential to confine the available policy options exclusively to those that lead to higher taxes.

Even beyond this, many policy advocates define benefit adequacy not in terms of the replacement rates individuals receive if retiring at the statutory NRA, but in terms of what they receive if retiring at the constant age of 65 years. The two concepts produce different results because the NRA is changing under current law,

7. Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds, *Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (Washington, DC: U.S. Government Printing Office, 2012), http://www.ssa.gov/oact/tr/2012/tr2012.pdf. This would not necessarily be true if the NRA rose to keep pace fully with population aging. Under both existing law as well as the full spectrum of congressional reform proposals, however, statutory eligibility age changes would lag considerably behind population aging. Also, though the statement in the text is true for current Social Security it is not necessarily true for an advance-funded pension system.

FIGURE 2. HISTORICAL AND SCHEDULED SOCIAL SECURITY REPLACEMENT RATES (MEDIUM-WAGE EARNERS)

Source: Board of Trustees' Annual Report, 2012

and because annual Social Security benefit levels are partially a function of when an individual claims benefits in relation to the NRA. For example, a worker who retires today at age 65 (when the NRA is 66) is considered to have retired one year early and her annual benefit is adjusted downward accordingly. A worker in 2030 who retires at 65 (when the NRA is 67) will be considered to have retired two years early, so her early-retirement penalty will be larger.[8]

Publications of influential organizations, such as the National Academy of Social Insurance, the Center on Budget and Policy Priorities, and AARP, assert for example that Social Security benefits will effectively *decline* under current law, an assertion based on defining benefit levels in terms of replacement rates at the constant age of 65 rather than in relationship to the NRA.[9]

8.   If an individual claims benefits prior to NRA, the annual benefit is reduced to adjust for the greater number of years that it will be received.

9.   See Virginia Reno and Joni Lavery, "Fixing Social Security: Adequate Benefits, Adequate Financing" (National Academy of Social Insurance, October 2009), http://www.nasi.org/research/2009/fixing-social-security: "American retirees will get less adequate wage replacement from Social Security in the future ... The decline is due to a legislated increase in the age for receiving unreduced Social Security benefits and the fact that Medicare premiums will grow faster than Social Security benefit levels." The NASI calculations are based on replacement rates at age 65. See also Kathy Ruffing and Paul Van de Water, "Social Security Benefits are Modest" (Center on Budget and Policy Priorities, January 2011), http://www.cbpp.org/cms/index.cfm?fa=view&id=3368: "Future retirees already face lower benefits (relative to their past earnings) as a result of a rising Social Security retirement age and escalating Medicare premiums." The CBPP calculations are also performed with respect to the assumption of retirement at the constant age of 65. See also John A. Turner, "Social Security Financing: Automatic Adjustments to Restore Solvency" (AARP Public Policy Institute Pension Policy Center, February 2009), http://assets.aarp.org/rgcenter/econ/2009_01_socsec.pdf.

Defining the value of benefits in terms of replacement rates at the constant age of 65 leads one to the conclusion that future Social Security benefits will decline under current law (see figure 2).[10] Doing so, however, ignores the reasons why the NRA is scheduled under current law to increase; to partially account for increasing longevity. A failure to increase the NRA to reflect increasing longevity would result in a *de facto* increase in lifetime benefits relative to previous generations. The alleged future benefit "decline" arises solely from lawmakers' 1983 decision to gradually increase the NRA and not from any decline in benefits to workers who retire at the NRA. Maintaining constant replacement rates at age 65 would reverse this policy decision and increase program costs even more rapidly than those shown on the earlier graph. It would also mean effectively gutting the financial improvements now projected as a result of Congress having scheduled an NRA increase as part of the 1983 reforms.

This cost-increasing standard of benefit adequacy is nevertheless one that some advocates have adopted. For example, a 2009 publication of the AARP asserts:

> Life expectancy indexing of benefits results in a falling replacement rate over time when measured at a fixed retirement age. For this reason, social security will provide a less adequate benefit over time as traditionally measured by the replacement rate concept…a system that achieves solvency with a declining replacement rate does not prevent the need for future reforms.[11]

This passage is predicated on the value judgment that it will prove unacceptable for Social Security benefits to grow at any rate slower than what is needed to maintain constant replacement rates at a never-changing age of retirement (65). Coupling the standards of constant replacement rates and constant ages in this way considerably raises the bar for perceived benefit adequacy.

It is clear, then, that just as bipartisan negotiations are often said to depend on whether the possibility of additional tax revenues is on the table, attitudes toward replacement rates determine whether Social Security cost restraints are achievable. For an agreement to be possible, there must be the potential for a mutually acceptable resolution of trade-offs between the competing concerns of benefit adequacy and cost growth.

This discussion also carries important implications for considerations of intergenerational equity. Maintaining constant replacement rates, whether at NRA or at

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10. *2012 Annual Report*, supplemental online Table V.C7, http://www.ssa.gov/OACT/TR/2012/lr5c7 .html. Replacement rates as defined on this graph rose during most of Social Security's early history due to repeated instances of legislated benefit increases. The rapid increase in replacement rates in the 1970s and brief decline after 1980 occurred as a result of an inadvertent double-indexing of benefits in the 1972 Social Security amendments and its subsequent correction in 1977.
11. "Social Security Financing."

a fixed age of retirement, would lock in substantial net income losses (excesses of contributions over benefits) for younger participants under Social Security.

A table published with the annual Social Security Trustees' reports gives a sense of the magnitudes of these net income losses. If current benefit schedules are left in place, generations now entering the Social Security system would contribute roughly 4.2 percent of their wage income to the program more than they ultimately receive in benefits.[12] This is because of the tax burdens required to maintain current benefit schedules. If benefits were increased to provide current participants with constant replacement rates at age 65, younger Americans' net income losses would be greater than 4.2 percent.

It is questionable whether Social Security can adequately provide intended income insurance protections in the future if it subtracts a net of over four percent from the lifetime earnings of younger generations. Advocates on various sides will thus see the replacement rate discussion as critical to Social Security's long-term functioning, with some advocates concerned that Social Security cannot function adequately if replacement rates decline, and others fearing that Social Security cannot function reasonably *unless* replacement rates decline. A common framework for evaluating benefit adequacy must be found.

Social Security's current statutory formula for maintaining constant replacement rates was not an original feature of the program. The original formula was not indexed to grow automatically. As a result, *de facto* replacement rates historically tended to decline gradually as wages rose, until the next time that lawmakers enacted an *ad hoc* benefit increase. This pattern can be seen by examining figure 3, a close-up of the 1955–65 period taken from the previous graph of historical replacement rates (figure 2). It reveals isolated spikes in benefit levels (intermittent legislated increases), each followed by a gradual decline (until the next benefit increase).

With time there came a bipartisan desire to index Social Security benefits to grow automatically and predictably, rather than be subject to the recurrent whims of biannual politics. Syl Schieber has noted that both ends of the political spectrum had reason to support such a change:

> Conservatives suspected that Congress was inclined to increase benefits every other year coinciding with elections and wanted to limit benefit growth to no more than inflation. Liberals were worried that when Congress was distracted by other pressing matters it often failed to keep or protect benefits from inflation so they saw automatic indexation as an expansion of system protections.[13]

12. *2012 Annual Report*, table IV.B7, http://www.ssa.gov/OACT/TR/2012/IV_B_LRest.html#457442.

13. Sylvester J. Schieber, *The Predictable Surprise: The Unraveling of the U.S. Retirement System* (Oxford: Oxford University Press, 2012), 74. See also Jason J. Fichtner, "Artificially Sweetening the COLA" (Mercatus Center at George Mason University, November 30, 2010), http://mercatus.org/publication/artificially-sweetening-cola.

FIGURE 3. SOCIAL SECURITY REPLACEMENT RATES, 1955-65 (MEDIUM-WAGE EARNERS)
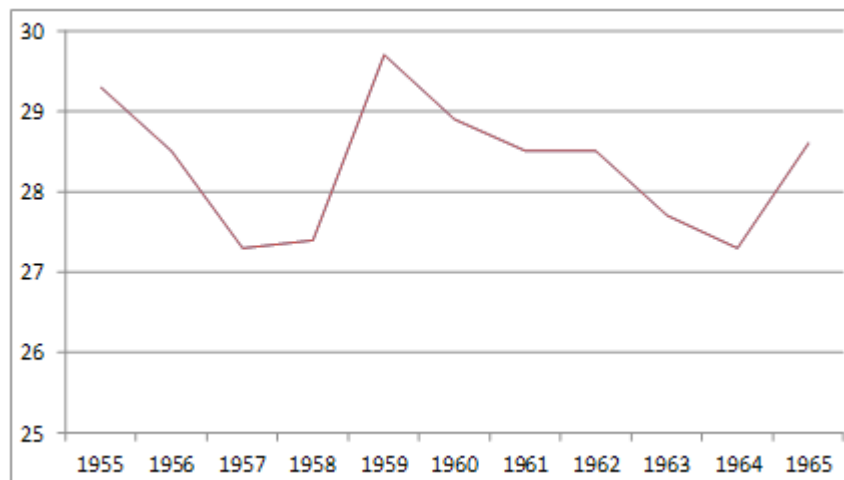
Source: Board of Trustees' Annual Report, 2012

The current method of indexing the benefit formula came about as a result of a serious legislative misstep. In 1972, Congress enacted comprehensive Social Security amendments, increasing benefits by 20 percent across the board and adding automatic inflation-indexing of the benefit formula. This inflation-indexing was designed to increase benefits automatically for both current and future retirees each year.

Unfortunately the new formula contained a technical flaw producing results for newly eligible retirees that departed considerably from congressional intent. To understand this flaw, realize that the program's benefit formula as of 1972 consisted of a set of brackets somewhat analogous to a set of income tax brackets. Low-wage earners received benefits that were a higher percentage of their earnings, while high-wage earners received benefits that were a lower percentage of theirs. The 1972 amendments automatically adjusted all of the percentages in the formula each year for changes to the CPI, so that benefits for those already in retirement would rise with annual price inflation.

Because the 1972 law automatically increased all the percentages in the formula whenever a minimum amount of price inflation occurred, and because the 1970s turned out to be a period of exceptionally high price inflation, later retirees consequentially stood to receive benefits that grew not only with their wages but also as a percentage of their wages.[14] Had the formula been allowed to stand, average replacement rates for low-income workers would have risen to exceed 100 percent

14. A 1977 report of the Congressional Budget Office described the problem thus: "For those who are already retired and who therefore have fixed wage histories...this adjustment mechanism achieves the desired effect: it simply adjusts the value of the social security benefit for cost-of-living increases. The same benefit rate table applies for those who are still working, however, and for this group the provision results in an unintended over-indexing of future benefits. This occurs because workers who are still employed do not have fixed wages. Rather, their wages typically increase by the rate of inflation plus a productivity factor of one percentage point or two. Thus, without any adjustment of the benefit schedule for inflation, the benefits of future retirees would rise, because inflation tends to push up the worker's wages, and benefits rise with wages. The automatic indexing

in the twenty-first century.[15] This threatened an immediate financial catastrophe for Social Security and is not what lawmakers had intended in 1972.

Faced with the problem of how to correct the flawed 1972 formula, Congress enacted the 1977 amendments, essentially creating the Social Security initial benefit formula in use today.[16] It consists of a 90 percent benefit bracket, a 32 percent bracket and a 15 percent bracket. The amount of wage income covered by each bracket (not the formula percentages) is adjusted annually for the Average Wage Index (AWI) to produce benefits that remain constant (rather than rising, as the 1972 amendments had permitted) as a percentage of rising worker wages. The other indexation implemented in 1972—post-retirement protection from price inflation through an annual CPI-based adjustment (the COLA)—continues, but no longer affects the formula that determines initial benefits upon retirement.

Though switching to this formula corrected the most extreme, immediate problems associated with the 1972 amendments, it did not resolve all of Social Security's financing problems. Such a wage-indexed benefit formula still creates costs that rise more rapidly than the program's tax base, if that tax base consists of worker wages and if the ratio of workers to beneficiaries declines.

This phenomenon will be explored at greater length later in this study; here I will simply note that this adverse financial consequence did not escape the attention of policy experts at the time of its adoption. In 1976 a consultant panel was hired by the Congressional Research Service to prepare a report on various options for benefit indexing for the House Ways and Means Committee as well as the Senate Finance Committee. The panel noted that attempting to maintain constant wage-replacement rates would leave a substantial financing problem in place:

> The wage-indexing method proposed by President Ford may require a future generation of workers to pay a payroll tax that is 70 percent higher than the present level. This panel gravely doubts the fairness and wisdom of now promising benefits at such a level that we must commit our sons and daughters to a higher tax rate than we ourselves are willing to pay.[17]

of the rates in the benefit schedule thus represents a second adjustment for inflation. In sum, inflation raises wages, and as a result, workers move higher up in the benefit schedule; but at the same time, the benefit rates are adjusted so that each step in the schedule is also associated with a higher dollar benefit." Congressional Budget Office, *Financing Social Security: Issues for the Short and Long Term* (Washington, DC: Congressional Budget Office, 1977), http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/101xx/doc10137/77doc565.pdf.

15. Sylvester J. Schieber and John Shoven, *The Real Deal: The History and Future of Social Security* (New Haven, CT and London: Yale University Press, 1999), 168.

16. Geoffrey Kollmann, *Social Security: Summary of Major Changes in the Case Benefits Program* (CRS Legislative Histories 2, May 18, 2000), http://www.ssa.gov/history/reports/crsleghist2.html.

17. Consultant Panel on Social Security, *Report of the Consultant Panel on Social Security to the Congressional Research Service* (Washington, DC: U.S. Government Printing Office, 1976), 8.

The concern expressed by the consultant panel encapsulates a central dilemma associated with the policy goal of maintaining constant benefit replacement rates in a program financed in the manner of Social Security: that doing so inflicts higher tax rates on later generations.[18] This and other consequences of the current benefit-indexing method will be explored in the pages that follow.

SOCIAL SECURITY REPLACEMENT RATES ARE RISING RELATIVE TO WORKER STANDARDS OF LIVING

A WIDESPREAD MISCONCEPTION concerning Social Security benefits is that maintaining constant replacement rates ensures comparable treatment of successive generations of Social Security beneficiaries. It does not. It ensures that *benefits* are comparable in certain respects, but it also means higher tax rates on (and allows worsened money's worth treatment of) younger generations as society ages.[19]

Recognition of these adverse effects is routinely omitted from explanations of the rationale for holding replacement rates constant.[20] These explanations often neglect to mention that, under existing financing methods, younger generations must shoulder considerably higher tax burdens to receive the same replacement rates. Though *gross* benefits might be held constant by one measure, net benefits

18. In theory this need not be true in a wholly pre-funded system, as earlier noted. The relationship between pay-as-you-go financing, population aging, and program finances will be further explored in the following section.

19. "Money's worth" is a term of art employed in Social Security analyses; it refers to the ratio of the present values of benefits received to tax contributions made. "Worsened money's worth treatment" means that this ratio declines: that younger generations are returned a smaller fraction of tax contributions as eventual benefits.

20. For example, a publication of the American Academy of Actuaries states that, "Indexing to wages both workers' earnings and the bend points helps ensure that initial Social Security benefits remain comparable over time for workers with similar earnings histories relative to prevailing wage levels." See American Academy of Actuaries, *Issue Brief*, "Social Security Reform: Possible Changes in the Benefit Formulas and Taxation," June 2010. A publication of the National Committee to Preserve Social Security and Medicare similarly states that "The current benefit formula is intended to ensure that the replacement rate – the percentage of workers' pre-retirement earnings that are replaced by Social Security – remains constant whether someone retires today or in the future." See National Committee to Preserve Social Security and Medicare, *Social Security: Wage-Indexing versus Price-Indexing of Benefits,* January, 2005, http://graypantherssf.igc.org/priceindexing.htm. Though these passages are technically precise in noting only that the benefits are comparable in a sense, they do not reference the accompanying rising tax burdens and could easily be misread as implying that wage-indexation produces comparable overall treatment of different generations. Going further is a publication of the AARP, which states, "The following principles will guide AARP's approach to improving the adequacy and equity of Social Security benefits ... The Social Security program should strive to ensure that similar lifetime earnings generate similar benefit streams." See AARP, "Retirement Income," chap. 4 in *AARP Policy Book* 2011–2012, http://www.aarp.org/content/dam/aarp/about_aarp/aarp_policies/2011_04/pdf/Chapter4.pdf. Again, left out of this statement is that under current financing methods these respective lifetime earnings and benefit streams can be construed as "similar" in some respects, but the same cannot be said of the tax burdens facing different generations.

(benefits net of contributions) decline under the current formula. A thorough evaluation of benefit "equity" must take this phenomenon into account.

This is perhaps most easily understood by examining the following equation, which relates the essential factors of demographics, benefit levels, and tax burdens under a pay-as-you-go system such as Social Security in which benefits are financed from incoming worker tax contributions.[21]

$$\frac{\text{(Individual benefits as \% of current worker wages)}}{\text{(Ratio of workers to beneficiaries)}} = \text{(Cost rate as \% of current worker wages)}$$

This equation portrays critical relationships between key factors in program financing. In a pay-as-you-go system, the ratio of workers to beneficiaries affects the relationship between benefit levels and worker tax burdens. For example, if benefits were set to average 40 percent of a typical worker's wage and if there were four workers to support each beneficiary, then each worker would face a tax rate of 10 percent. By contrast, if there were only two workers to support each beneficiary, then each worker would face a tax rate of 20 percent.

This equation thus also illustrates a key relationship between wage-indexing of the benefit formula and system demographics. If benefits are indexed to grow with worker wages, then the numerator on the left side of the equation will remain constant across time. If, however, the denominator declines as a consequence of

21. It is generally agreed that Social Security is financed predominantly on a pay-as-you-go basis, with the preponderance of benefit expenditures financed from taxes paid by current workers. There is a greater diversity of interpretations of the extent to which benefits are financed by redeeming assets of the Social Security Trust Fund, which under current law would be a significant (though smaller) source of financing from 2010–33. The divergence in interpretations hinges on whether past Social Security surpluses from 1984–2009 had the effect of reducing government dissaving or of stimulating additional government consumption. If past surpluses reduced government dissaving, then the portion of financing deriving from redeeming trust fund assets from 2010–33 would not represent pay-as-you-go financing. Alternatively, if past Social Security surpluses served to stimulate additional consumption, then Social Security remains entirely pay-as-you-go before, during, and after the 2010–33 period. Most comprehensive academic studies have concluded that past Social Security surpluses were not saved, substantiating the assumption of pay-as-you-go financing employed in this study. See for example Sita Nataraj and John B. Shoven, "Has the Unified Budget Undermined the Federal Government Trust Funds?" (NBER Working Paper No. 10953, December 2004); and Kent Smetters, "Is the Social Security Trust Fund Worth Anything?" (National Bureau of Economic Research Working Paper No. 9845, July 2003). These studies generally found that the generations that produced the annual operating Social Security surpluses used them simultaneously to increase their own consumption of other government services. Another paper by Douglas W. Elmendorf and Jeffrey B. Liebman similarly concluded that the main historical effect of Social Security surpluses was to reduce pressure to constrain other federal consumption, though the authors also considered that this phenomenon might then be in the process of changing. See "Social Security Reform and National Saving in an Era of Budget Surpluses" (Brookings Papers on Economic Activity 2, 2000), http://www.brookings.edu/~/media/Projects/BPEA/Fall%202000/2000b_bpea_elmendorf.PDF.

population aging, then the cost rate on each worker will rise.

In sum, as older Americans become an increasing share of the total population, wage-indexation of benefits does not result in comparable treatment of different generations of workers. It instead means that later generations, working when the ratio of workers to beneficiaries is smaller, will face higher tax burdens to earn the same replacement rates. And though their benefits may hold *constant* as a percentage of their pre-retirement *earnings*, these benefits will nevertheless *decline* as a percentage of their pre-retirement *tax contributions*. This also means that their benefits will *rise* as a percentage of their pre-retirement *after-tax income*.

Though the current wage-indexing method does not create net benefit equity between different generations, neither is it the cause of the system's existing intergenerational inequities. Declining money's worth treatment under Social Security is instead a consequence of the interactions between pay-as-you-go financing and population aging. In such a system, younger generations must pay higher tax rates if benefit replacement rates are to be held constant. If tax rates are alternatively held constant, then benefits for younger generations must become a *smaller* percentage of their pre-retirement wages.[22] Under either scenario, returns on Social Security contributions would inevitably decline over time.

There is nothing inevitable, however, about this worsening treatment being manifested as higher tax burdens because of wage-indexing of benefits. Nor is it clear that lawmakers knowingly intended to generate benefit replacement rates that persistently rise as a percentage of pre-retirement after-tax income, as the current indexing method causes to happen.

Presented in table 1 are projected benefit replacement rates and approximate career cost rates for medium-wage workers turning 65 in 1985, 2020, and 2055 respectively, each of whom claims benefits at the NRA.[23] The policy assumption underlying this table is that the current wage-indexed benefit formula is left in place and that taxes have been raised as necessary to fund full scheduled benefits.

22. Evidence of this is quickly found by examining Social Security's declining money's worth ratios for younger generations in the notes of the Social Security Administration Actuary's Office, at http://www.ssa.gov/OACT/NOTES/ran7/index.html. Money's worth values decline for younger cohorts in both the tax-increase and benefit-reduction scenarios for balancing program financing. This would not be true if Social Security had been designed as a wholly advance-funded system, for example of personal savings accounts. In such a hypothetical system, each individual's benefit would be primarily a function of his or her pre-retirement contributions and no intergenerational inequities would be introduced by aiming to hold benefit replacement rates constant. A money's worth decline nevertheless inevitably arises under Social Security's existing financing methods and demographics.

23. Benefit replacement rates here are calculated as a percentage of wage-indexed career average earnings per Social Security Administration conventions though alternative measures will be discussed later in this study. The cost rate is the average annual cost of financing Social Security benefits, as a percentage of workers' earnings.

TABLE 1. CURRENT BENEFIT AND COST SCHEDULES, TOTAL SOCIAL SECURITY

Year Worker Turns 65	Benefit Replacement Rate as % of Pre-Retirement Earnings[24]	Approximate Career Cost Burden[25]	Benefit Replacement Rate as % of After-Social-Security-Tax Pre-Retirement Earnings[26]
1985	41.5%	5.9%	44.1%
2020	40.0%	11.8%	45.4%
2055	41.1%	16.2%	49.0%

Source: Board of Trustees' Annual Report, 1961, 1971, 1983, 2012

As seen above, though each worker is scheduled to receive a benefit at the NRA that is between 40 percent and 42 percent of his pre-retirement (wage-indexed) earnings, each would have faced a starkly different cost rate to receive those benefits.[27] The worker retiring in 2055 faces a lifetime cost rate over 16 percent for the same benefit replacement rate that cost the retiree of 1985 less than 6 percent of his career average wages.

The figures above pertain to Social Security as a whole, which includes both disability insurance benefits and costs. The preceding table may indeed present the most appropriate comparison, given that all three workers are eligible for disability benefits but the later cohorts would have faced substantially higher tax costs to finance them. On the other hand, the 1985 retiree would only have been eligible for disability benefits for a portion of his career. It could thus be argued that it is more appropriate to compare respective costs facing each participant solely for the old-age and survivors portion of Social Security (OASI). Table 2 presents this comparison:

24.　*2012 Annual Report.*
25.　Calculated on the basis of annual Social Security cost rates published at http://www.ssa.gov /OACT/TR/2012/lr4b1.html. The benefit numbers correspond to a prototypical "scaled earner" (one with a career earnings pattern reflective of a typical medium-wage worker) whereas the cost rate for ease of computation more closely approximates that faced by a prototypical "steady earner" (one who earns the average wage in each year of one's career). The qualitative trend across generations is clearly unaffected by the approximation. Cost rates assume that workers must finance the entirety of Social Security benefit costs with their taxes, including both payroll and income tax dollars, consistent with academic studies finding that the trust fund does not constitute effective pre-funding or mitigate tax burdens associated with redeeming trust fund assets. For years prior to 1970, cost rates are taken from the 1983 report of the Social Security Trustees (56), the 1971 report (33), and the 1961 report (21, 25). These reports are available at http://www.ssa.gov/history /reports/trust/trustreports.html. Figures from earlier trustees' reports do not exactly match those in later trustees' reports due to changing definitions and interpretations of taxable earnings. Where two figures conflict, the later-published figure has been used. Differences are small enough (never more than 0.5% a single year) so that inconsistencies do not threaten the basic qualitative point made in the table, of rising cost rates over time.
26.　Only Social Security taxes (rather than total taxes) are considered here, pursuant to the analytical objective of measuring consistency of treatment under Social Security in isolation.
27.　Throughout this section, all replacement rates are given in terms of average wage-indexed earnings, per Social Security Administration conventions. Alternative measures of replacement rates are explored in the following section.

TABLE 2. CURRENT BENEFIT AND COST SCHEDULES, OASI ALONE

Year Worker Turns 65	Benefit Replacement Rate as % of Pre-Retirement Earnings	Approximate Career OASI Cost Burden[28]	Benefit Replacement Rate as % of After-OASI-Cost Pre-Retirement Earnings
1985	41.5%	5.3%	43.8%
2020	40.0%	10.1%	44.5%
2055	41.1%	14.0%	47.8%

Source: Board of Trustees' Annual Report, 1961, 1971, 1983, 2012

Either way, because the current formula leads to higher career tax burdens for later cohorts, it produces the counter-intuitive outcome of replacement rates that *rise* over time relative to after-tax income, as shown in the two rightmost columns of the preceding tables. In other words, even if accepting the wage-indexed terms that are the basis of current policy, the existing formula forces later generations into a relatively lower pre-retirement standard of living without any net improvement in their relative post-retirement standard of living. The final section of this paper explores hypothetical alternative approaches to better maintaining intergenerational benefit equity.

CURRENT SOCIAL SECURITY REPLACEMENT RATES ARE HIGHER THAN COMMONLY UNDERSTOOD

SOCIAL SECURITY PUBLICLY reports its benefit replacement rates as a percentage of career "wage-indexed" earnings. This is reflective of the program's benefit formula, which relies on a computation of the individual's Average Indexed Monthly Earnings (AIME) over the course of his career. Simplifying, this method essentially consists of translating one's prior earnings years nearly into current equivalents by adjusting them for intervening growth in national average wages, then afterwards averaging the individual's highest-earnings years.[29] If, for example, national average wages have doubled since a prior year in which one earned $25,000, that earnings year appears in the individual's AIME as being worth $50,000. After wage-indexing all such prior earnings years, the individual's top thirty-five earnings years are identified and averaged for the purpose of calculating benefits.

This wage-indexed method of assessing one's pre-retirement income standard is atypical. Private financial planners use various methods of quantifying pre-retirement income, but it is rare for them to employ a method similar to Social Security's. More typically private financial planners calculate replacement rates in relation to one's

28. The sources are the same as for the previous table, excepting that the 1971 Trustees' Report page referenced is 27.
29. The text says "nearly" because the worker's prior earnings are indexed to the year that the worker turns 60 in the case of old-age benefits, or two years prior to eligibility in the case of disability benefits.

annual earnings, without indexing, just prior to retirement.[30] Some of these more typical calculations compare with annual income earned in the last single year before retirement, others with an average of the last few (e.g., five) earnings years.[31]

Social Security's reported replacement rates would be significantly higher than currently reported if they were calculated using other more common measures used in financial planning. Social Security's wage-indexing of an individual's prior earnings is one reason for this, because it increases the dollar value assigned to past earnings years, thus also increasing the denominator (pre-retirement earnings) in the replacement rate calculation and reducing the reported replacement rate.

The atypical manner in which Social Security calculates replacement rates means that when assessing an individual's level of retirement preparedness, it is not usually meaningful to add Social Security's reported replacement rates to those deriving from other sources. But because Social Security's atypical methods are not widely understood, this is frequently done, causing substantial confusion among affected individuals, financial planners, and even expert policy analysts. For example, consider the following quote from a publication of the National Academy of Social Insurance:

> Experts say that retirees need 70–80 percent of their prior earnings to keep up their standards of living in retirement. Social Security today replaces less than that – about 40 percent for an average earner at 65.[32]

This is by no means an unusual statement, but the percentages referenced within it do not refer to the same whole and thus cannot be meaningfully compared. Whereas many retirees aim to replace 70-80 percent of their *annual earnings prior to retirement*, the 40 percent figure given above for Social Security is instead in

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30. David F. Babbel and Craig B. Merrill, "Policy Brief: Personal Finance: (ELM Income Group, August 14, 2007), http://www.elmannuity.com/research.php: "Replacement rate is annual retirement income divided by annual income just before retirement" (view attributed to Jack VanDerhei, Employee Benefits Research Institute). See also Flora L. Williams and Helen Zhou, "Income and Expenditures in Two Phases of Retirement" (Association for Financial Counseling and Planning Education, 1997), http://www.afcpe.org/assets/pdf/vol829.pdf: "A common guideline is that one should have in retirement an income equal to 70% of current salary." Financial calculators such as those at money.cnn.com are also frequently based on comparisons with annual income earned just prior to retirement.

31. The point is not that final earnings are the only appropriate measure but that reported Social Security replacement rates are not directly additive to other commonly cited replacement rates based on final earnings. Later in the text and notes I include results with respect to lifetime CPI-indexed earnings, and also discuss how an exclusive focus on earnings just before retirement could distort results for those with atypically low earnings in those years.

32. Virginia Reno and Joni Lavery, "Social Security and Retirement Income Adequacy" (National Academy of Social Insurance Social Security Brief No. 25, May 2007), http://www.nasi.org /research/2007/social-security-retirement-income-adequacy.

comparison to its *wage-indexed career average earnings*. For typical earners, Social Security provides much higher replacement rates as a percentage of actual pre-retirement earnings than would be inferred from this comparison.

A traditional goal articulated for Social Security is that it provide a floor of income protection, supplementing—not supplanting—the efforts of individuals to put aside discretionary saving toward their own retirement. This is often expressed by referring to Social Security as one leg of a "three-legged stool" of retirement income security, the other two being employer pensions and individual saving. To produce an accurate picture of Social Security's role relative to these other retirement income sources, common metrics must be used.[33]

Perhaps the definitive work illuminating the significance of Social Security replacement rates was authored by Andrew Biggs and Glenn Springstead.[34] They found that Social Security typically reports replacement rates based on wage-indexing that are usually significantly lower than would be calculated via other common methods. For example, Biggs and Springstead found that for retired beneficiaries aged 64–66 in 2005, Social Security delivers a median replacement rate equal to 64 percent of the average of their five earnings years prior to retirement.[35] This is roughly 20 percentage points higher than the replacement rates calculated by Social Security's published method.

Social Security replacement rates as a percentage of final earnings are higher still for low-income participants because of the program's progressive benefit formula. Biggs and Springstead found that the median replacement rate for the second individual income quintile (between the 20th and 40th percentiles of the earnings distribution) was 82 percent. For the lowest income quintile, the median replacement rate was actually infinite, revealing that the median individual earner in that quintile did not have wages in the five years prior to claiming benefits.

Such lofty replacement rates could be viewed from two perspectives. On the one hand they show that pre-retirement earnings levels are very low for some participants. One could accordingly argue that to ensure adequate income protection in retirement, replacement rates must be much higher than could be "earned" solely by the wages of those with sporadic earnings histories and must also be kept far higher than the standard 70 percent target.

On the other hand, the high replacement rates also signify that Social Security tax and benefit levels have risen to the point where some of these low-income

33. Consider as one typical expression of this policy goal the unanimous statement of the 1994-96 Social Security Advisory Council, that "The fact that benefits are paid without regard to a beneficiary's current income and assets is the crucial principle that allows – in fact encourages – people to add savings to their Social Security benefits and makes it feasible for employees and employers to establish supplementary pension plans." There are countless descriptions of Social Security as but one component of a comprehensive national retirement income strategy. References abound to the concept of the "three-legged stool" consisting of Social Security, employer pensions and individual saving. A history of this well-worn phrase can be found at http://www.ssa.gov/history/stool.html.
34. "Alternative Measures."
35. "Alternative Measures," 8.

individuals can expect higher standards of living in retirement than they experienced during their working years. In other words, many of these individuals may have been forced to "over-save" in the sense that the benefits Social Security pays, and the tax burdens required to support these benefits, are such that these low-income individuals' pre-retirement standards of living may be inferior to their post-retirement standards of living.[36]

Biggs and Springstead further found that median replacement rates were typically even higher when taking into account the sharing of taxes and benefits by married couples. Many of the individuals in the lowest individual income quintile, for example, will draw Social Security benefits based on the earnings of another member of the household. Taking this into account increased median replacement rates to 69 percent of the average of the final five earnings years prior to retirement. Median replacement rates for the first and second quintiles were 137 percent and 77 percent, respectively; for the bottom (first) quintile the replacement rates come down from infinity (the figure calculated for individual earners) because a median shared-income household will have earnings by at least one person in the five years prior to claiming benefits.

A related consequence of these high Social Security replacement rates is that, for many low-income recipients, total retirement income replacement rates—that is, including income from other sources—routinely exceed 100 percent by almost any measure.[37] Current benefit indexing methods, if continued, would largely perpetuate these trends.[38]

This information should prompt reflection by policy makers as to how Social Security benefit levels should be established. Total retirement income replacement rates that routinely exceed 100 percent of late-career earnings are a deterrent both to continued labor participation and to further discretionary saving by younger seniors. Even today, Social Security is surpassing what some might regard as an extremely ambitious benefit goal—i.e., to provide sufficient retirement benefits for low-income individuals so that they need not suffer an income decline,

36.   Note that this finding is not solely an artifact of these individuals having low earnings years just prior to claiming benefits. Replacement rates relative to career CPI-indexed earnings were found by Biggs and Springstead to be 268 percent and 77 percent for the lowest and second-lowest individual quintiles, respectively.

37.   For example, Biggs and Springstead found that the lowest and second-lowest income quintiles experience total retirement income replacement rates that are 381 percent and 210 percent of final earnings, respectively. Though this is to some extent an artifact of these participants having very low earnings years just prior to claiming benefits, the corresponding figures still topped 100% when expressed as an average of career CPI-adjusted earnings: 204% and 141% for the bottom two quintiles, respectively.

38.   Biggs and Springstead found that the median retiree in 2040 stands to receive scheduled benefits (assuming Social Security is provided with enough additional revenues to remain solvent) equal to 55% of final earnings from Social Security alone, with the lowest and second-lowest income quintiles receiving replacement rates of 91% and 61%. They also found that total retirement income replacement rates in 2040 would exceed 100% of final average earnings for all income quintiles.

even without other retirement income sources, relative to pre-retirement standards of living. Under the Biggs-Springstead projections, Social Security could continue to meet this ambitious standard even if benefits for low-income participants were reduced somewhat from current schedules (a policy that I am not suggesting but noting for purposes of illustration).

The data presented here suggest that if Social Security is to supplement rather than to displace other forms of retirement saving—if it is intended to be but one leg of a "three-legged stool"—reductions in program replacement rates would likely be necessary. An exploration of possible alternatives that would more closely align Social Security with this theoretical conception is presented in the final section of this paper.

Beyond Social Security policy goals, the Biggs-Springstead findings carry other policy lessons as well. One is that many low-income, liquidity-constrained individuals may be acting perfectly rationally in not putting aside further discretionary retirement saving. If, for example, Social Security promises a particular individual an income replacement rate of 90 percent, and if the individual has pressing economic needs in the moment but limited ability to borrow, the individual may be fully reasonable in deciding against putting aside additional long-term savings. There is an ample literature supporting such an assessment of this individual's incentives in showing empirically that Social Security tends to depress personal saving.[39] The data presented by Biggs and Springstead thus suggest that reductions in the growth of future Social Security benefits could possibly stimulate additional national saving without necessarily reducing benefits for low-income Americans below pre-retirement living standards.

More generally, incomplete understanding of Social Security replacement rates—even among many retirement policy experts—suggests that federal policy makers should restrain themselves from being aggressively prescriptive with respect to inducements for people to engage in further retirement saving. In recent years there has been widespread interest in the "nudge" philosophy of Richard Thaler and Cass Sunstein, the central premise of which is that government should steer people into specific economic policy choices beneficial to them, while stopping short of outright compulsion. One of the most common suggestions along these lines is that individual workers should be automatically enrolled in 401(k) plans (while retaining the right to opt-out) as opposed to the situation today in which many workers are still only enrolled if they take an affirmative action to do so. As Thaler argued in a 2007 *Wall Street Journal* opinion piece:

> Consider two examples, both designed to increase savings. The first is to enroll people, automatically, into savings plans – while allowing them to opt out. The second is the Save More Tomorrow plan, which allows employees to commit themselves now to

39. See Congressional Budget Office, *Social Security and Private Saving: A Review of the Empirical Evidence* (Washington, DC: Congressional Budget Office, July 1998), http://www.cbo.gov/publication/11011.

increasing their savings rates later, when they get raises. Both approaches have been remarkably successful. Well-chosen default rules are examples of helpful 'choice architecture.' Since it is often for impossible for private and public institutions to avoid picking some option as the default, why not pick one that is helpful?[40]

The policy goal here is framed in terms of "increasing savings" instead of what it is necessarily in each individual's best interests, and the policy is described as being "remarkably successful" if it increases such savings.[41] No doubt many individuals would benefit from additional saving generally and from automatic enrollment specifically, and I do not intend to suggest otherwise.[42] But there is not an exact equivalence between a specific individual's best interests and the larger goal of increasing societal saving. Specifically, as we have seen, it may be against the interests of many low-income, liquidity-constrained individuals to be automatically enrolled in a supplementary retirement savings program. There is thus a substantial risk of such a policy valuing the beliefs of politically influential advocates over the needs of specific low-income individuals, with the consequence of coaxing many such individuals into arrangements against their best interests.

Thaler's statement implicitly (and correctly) notes that government will have an effect on an individual's choices in almost any event, and he argues that this effect should be designed to be "helpful" the individual.[43] But even when granting that choice-framing is both critical and inevitable, it is not always obvious what is helpful or even that policy makers are in a better position than the individual to assess this. For, as we have already seen, there is incomplete understanding of Social Security replacement rates even among experts, who frequently add Social Security's reported replacement rates to those reported by other sources without appreciating their lack of comparability. The evidence, instead of demonstrating that the policy maker knows what is best or that a general rule of thumb will apply equally well to individuals with different needs, appears to demonstrate

40. Richard H. Thaler, "Should Policies Nudge People to Make Certain Choices?," *Wall Street Journal*, May 25, 2007.

41. In Richard H. Thaler and Cass R. Sunstein's *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New York: Penguin, 2009), the authors note as one indication of the policy's success is that many individuals who are defaulted into automatic participation in a savings plan allow the participation to continue. This does not prove, however, that the policy is necessarily beneficial to the individual, only that the same behavioral inertia that the authors cited as a barrier to participation is now acting in favor of continuation.

42. The adequacy of retirement saving is also a partial function of when an individual claims Social Security benefits, as discussed in Charles Blahous and Jason Fichtner, "Limiting Social Security's Drag on Economic Growth" (Mercatus Center at George Mason University, forthcoming 2012).

43. Another good paper on the importance of choice-framing is Jeffrey R. Brown, Arie Kapteyn, and Olivia S. Mitchell, "Framing Effects and Expected Social Security Claiming Behavior" (National Bureau of Economic Research Working Paper 17018, May 2011), http://www.nber.org/papers/w17018.pdf.

that additional humility and restraint is in order with respect to government's steering the economic choices of individuals.

SOCIAL SECURITY BENEFITS ARE RISING FOR A GIVEN LEVEL OF REAL WAGES

As earlier noted in this paper, the current Social Security benefit formula aims to keep benefits constant as a percentage of pre-retirement income for average-wage workers across time. As also noted, this method does not prevent the net money's worth treatment of younger workers from worsening. This is because as society ages, there are fewer workers to support each beneficiary and later generations' tax burdens must therefore rise to support this rate of benefit growth.

Over time there tends to be real growth in average worker wages. As these wages rise relative to price inflation then so too does the typical Social Security benefit due to wage-indexing as shown in figure 4.[44]

As is apparent from the graph above, maintaining the current formula would continue to produce rising real benefits (at a cost of higher tax burdens) for younger generations. Whereas today a medium-wage worker retiring at the NRA expects an annual benefit of less than $19,000, by 2055 a typical medium-wage worker's full benefit would surpass $31,000 in today's dollars.

As previously noted, these benefit increases are a result of indexing initial benefit levels to keep pace with rising worker wages. What many do not realize is that this formula also results in steadily higher benefits being paid for a *constant* real wage. This is because the current benefit formula maintains constant replacement rates not for workers with a specific real wage level but for so-called *"average wage" workers*. These are workers whose wages are equal to the national averages in their respective eras. Average-wage workers in later years earn substantially higher wages than average-wage workers in earlier years.

Today's medium-wage worker turning 65 in 2012, for example, has an AIME equal to roughly $43,800 annually.[45] The medium-wage worker turning 65 in 2055 is by contrast expected to have annual career earnings of over *$240,000* which, even after adjusting for intervening price inflation, would be the equivalent of more than $76,000 in today's dollars.[46]

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44. *2012 Board of Trustees' Report*, http://www.ssa.gov/OACT/TR/2012/lr5c7.html. The graph depicts Social Security benefits received at the Normal Retirement Age by a medium-wage worker. The years on the graph refer to when the worker reaches 65. A medium-wage worker is defined as one with a career AIME roughly equal to the AWI. A medium-wage 65-year-old in 2012 has an AIME of roughly $43,800 as can be calculated from the data at the link.

45. A "medium-wage worker" is the term used by the Social Security Administration Office of the Actuary to refer to a worker with career average earnings equal to the AWI, as explained more fully in footnote 6. $43,755 is the figure used in the calculations throughout this section. The figure is calculated from data at http://www.ssa.gov/OACT/TR/2012/lr5c7.html. The rounder figure has been used in the text to recognize imprecision.

FIGURE 4. SCHEDULED MEDIUM-WAGE EARNER SOCIAL SECURITY BENEFITS AT NRA
(ANNUAL BENEFITS, ADJUSTED FOR PRICE INFLATION, IN $2012)
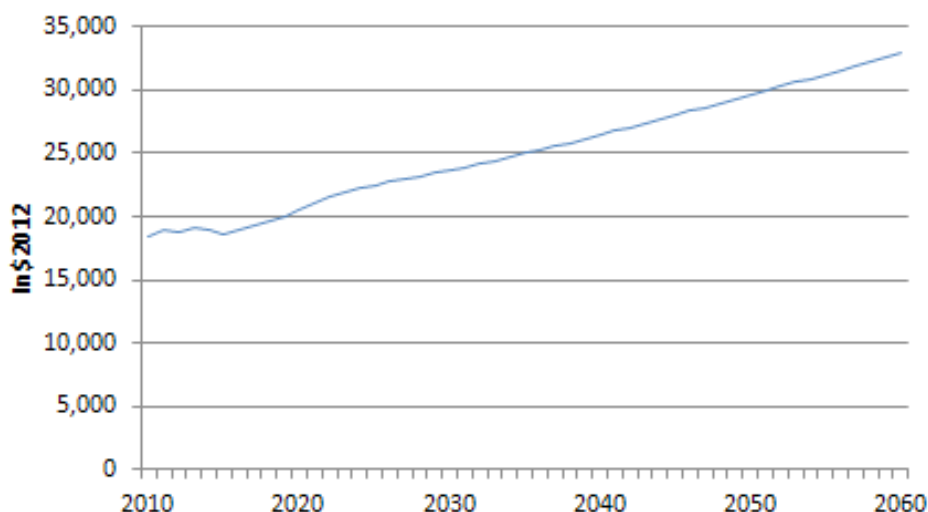
Source: Board of Trustees' Annual Report, 2012

The current benefit formula thus aims to provide the worker turning 65 in 2055, earning the inflation-adjusted equivalent of roughly $76,000 today, the same replace-ment rate now provided to a worker turning 65 with earnings of roughly $43,800.

Remember, however, that the Social Security benefit formula is progressive; it provides higher replacement rates to lower-income workers. So, because the formula provides 2055's $76,000 (inflation-adjusted) worker the same replace-ment rate as today's $43,800 worker, it will also provide 2055's $43,800 (inflation-adjusted) worker with a *higher* replacement rate.

In other words, the current benefit formula, because it aims to keep replacement rates constant for average-wage workers, generates *rising* replacement rates for a constant real wage. This steady increase in benefits for a given real wage level is a significant contributor to rising system costs.

This can be quickly seen by comparing the benefits expressed as replacement rates scheduled for a worker earning the real equivalent of $43,800 in 2055 to those of a $43,800 worker retiring today. Whereas today's medium-wage retiree with an AIME of $43,800 expects a benefit of roughly $18,800 and an income replacement rate of 42.9 percent, the $43,800 (inflation-adjusted) worker of 2055 would expect a benefit of roughly $21,300 (in today's dollars) and a replacement rate of 48.7 percent.[47]

46. Cross referencing the Social Security Administration's "Principal Demographic Assumptions" (http://www.ssa.gov/OACT/TR/2012/lr5c7.html) with "Selected Economic Variables" (http://www.ssa.gov/OACT/TR/2012/lr6f6.html).

These rising replacement rates for a given real wage level are illustrated in figure 5.

As can be seen on the graph, the formula aims to hold benefits for the medium-wage worker constant over the long term. But by doing so, it delivers rising benefits—and replacement rates—to workers with the same real wages across time.

Why has this policy been adopted? After all, the $43,800 worker of 2055 is not poorer than the worker of 2012 in terms of his purchasing power (our illustration adjusts for price inflation) and thus is not in substantive need of greater income security protections than today's $43,800 worker. The current formula nevertheless promises higher returns to this future worker based on the principle that he will be *relatively* poorer *in comparison to the society around* him—i.e., that he will occupy a lower position on the income spectrum of his time.

The current policy of increasing the benefit returns associated with a given real wage level is clearly not the only policy that could have been adopted. <u>It implicitly adopts the value judgment that as society grows generally richer, the federal safety net should expand so that Social Security benefits for a worker with a given level of real income automatically become more generous relative to his cost of living.</u>[48] In the final section of this paper I will present a hypothetical alternative that, less ambitiously, would hold constant the benefit replacement rates paid to workers with the same real wages over time.

POLICY REFORMS

ANY DISCUSSION OF Social Security policy choices necessarily introduces value judgments that are inherently subjective. This paper's focus on replacement rates is not intended to imply that they are the only prism through which Social Security benefit design should be viewed. To the contrary, this author's subjective policy perspective is that at least as much attention should be given to constraining the growth of program costs facing taxpayers. Indeed, in view of replacement rates' quirks and susceptibility to misinterpretation as reviewed in this paper, one could argue that the replacement rate metric is too flawed to serve as a reasonable basis for future Social Security policy evaluation.

That said, attention to replacement rates is an entrenched feature of the Social Security policy discussion. Many policy advocates focus closely on benefit replacement rates in their evaluations of benefit adequacy. A bipartisan policy negotiation

47. Benefits and replacement rates medium-wage workers are found at http://www.ssa.gov/OACT /TR/2012/lr5c7.html. The author calculates the 2055 benefits for a worker earning $43,800 (in constant 2012 dollars) based on the data at the same link.

48. Also implicit in the current policy is the value judgment that no matter how wealthy society becomes, Social Security's income protections should always expand with national income without increased reliance on private saving, despite the pressure such a program expansion places on strained federal finances.An alternative value judgment is also reasonable; that as society grows wealthier, individuals should do more saving for themselves and Social Security should become relatively more affordable.

FIGURE 5. SOCIAL SECURITY'S BENEFIT FORMULA CAUSES REPLACEMENT RATES TO INCREASE FOR A GIVEN REAL LEVEL OF WAGES (SCHEDULED REPLACEMENT RATES, WORKERS RETIRING AT NRA)
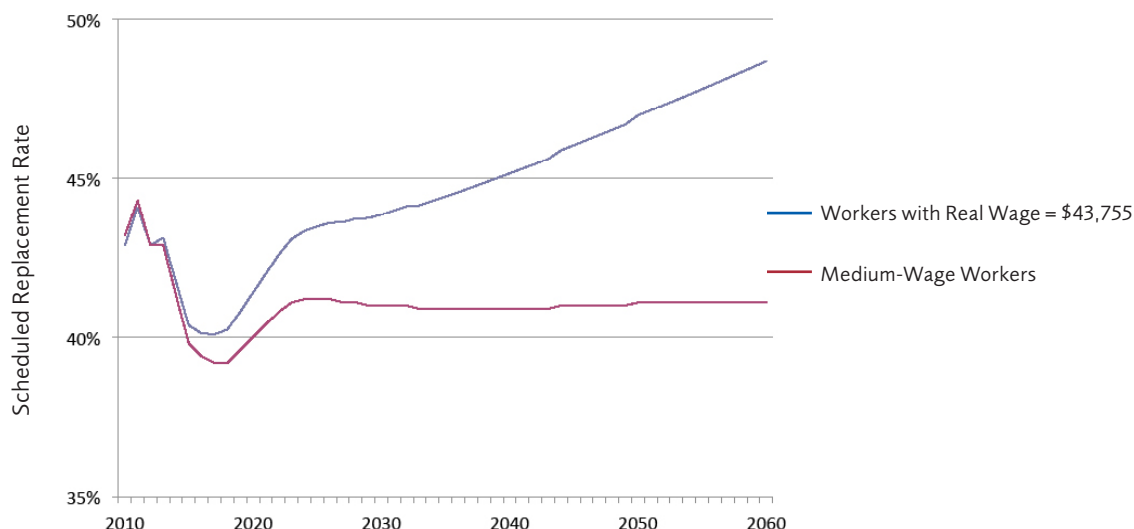
Source: Author's Calculations Based on Board of Trustees' Annual Report, 2012

is unlikely to be fruitful if it does not provide negotiators with avenues to upholding their respective core value judgments in the course of reaching a compromise agreement. Even those who do not base their policy views on replacement rates need to understand what they do and do not mean and, specifically, where there are differences between how replacement rates are often understood by others and what they actually measure.

Simplifying considerably, left-of-center policy advocates often express an abiding concern about benefit adequacy as measured by replacement rates. Right-of-center advocates often express an abiding concern about the continued growth of cost burdens facing taxpayers. A bipartisan agreement will likely need to address both of these concerns. This is inherently difficult because maintaining benefit replacement rates as they are currently measured would require that the program's financing shortfall be addressed entirely by raising taxes, an outcome unacceptable to right-of-center advocates. And similarly, a solution that focuses wholly or even partially on cost containment would require negotiators to abandon the goal of some on the left of maintaining constant replacement rates, at least as currently measured.

It is nevertheless possible to recognize and honor the focus on replacement rates of left-of-center advocates while addressing the cost-containment concerns of right-of-center advocates. The first necessary step is to understand the shortcomings and quirks of existing replacement rate measures as explained in this paper. The second step is to explore possible reforms to address these quirks. We have seen, for example, that even non-trivial downward adjustments in the growth of scheduled

benefits would permit replacement rates to remain high enough so that low-income individuals with no retirement saving outside of Social Security could generally avoid a decline in their living standards upon retirement; similarly, considerable downward adjustments in benefit growth would also allow current replacement rates to be maintained for succeeding generations of workers with the same real wages. This does not necessarily mean that these policies should be adopted, but policy makers should be aware that these goals are achievable.

Following is a brief list of conceptual approaches to policy reforms that would allow replacement rates to be maintained in practice, while still achieving both substantial cost savings and improving system finances relative to current benefit schedules.

Measuring Replacement Rates at the Normal Retirement Age (NRA): In an earlier section of this paper, I discussed the trend among some policy advocates to frame benefit adequacy goals in terms of replacement rates received at a constant retirement age (65). While in most of this section I emphasize the importance of honoring competing perspectives throughout the reform discussion, on this issue I believe there is little alternative but for policy makers to frame income adequacy goals in terms of the benefits received at the NRA, rather than at age 65 or at any other constant age.

Social Security is designed so that an individual is eligible for "full" benefits only when attaining the NRA. Indeed, one can think of the definition of the NRA as being that age at which the individual is entitled to receive Social Security's full basic benefit. To frame benefit targets in terms of those received by younger claimants introduces several, and potentially insoluble, analytical problems.

Simplifying, there are generally two self-consistent philosophical approaches to setting benefit levels and eligibility ages. One is that the general policy goal is to enable individuals to retire at the NRA—which might over time rise—with fully adequate retirement benefits. From this perspective the benefits at the NRA are the appropriate metric for measuring whether the policy goal has been met.

An alternative approach is to pursue a policy goal of enabling individuals to retire at a fixed age, such as 65, with fully adequate benefits. But if that is the goal, it is logical for the NRA to be set to be that age rather than rise as under current law.

Note that under *either* policy approach, the appropriate reference point is the benefit paid at the NRA—either because the NRA remains 65 or because policy makers have made a deliberate decision to enact a higher age of eligibility for full benefits. It would not be appropriate policy to raise the NRA if the adequacy standard were to maintain constant replacement rates at 65. Similarly, maintaining constant replacement rates at 65 is an inappropriate standard if the NRA is rising.

This is important because lawmakers implement eligibility age increases to achieve specific policy purposes. Though it is sometimes said that raising the age of full eligibility is indistinguishable from any other "benefit cut," this is not precisely true.[49] Formulaic benefit cuts and retirement age increases have different

implications for behavior and for retirement security in old age. If for example the early eligibility age (EEA) and NRA were gradually raised from 62/67 under current schedules to 64/69 respectively, the behavioral results would be different than if the same amount of savings were achieved solely by changing Social Security's benefit formulas. If the ages were raised, some of the savings would arise from individuals no longer collecting benefits at ages 62 and 63. If instead the change were made solely on the benefit side, many of these same individuals would still begin collecting benefits at age 62, the systemic savings accruing from their receiving lower annual benefits throughout their retirement.

Even if the total systemic savings were the same in the two cases, the approach of raising the retirement age would likely lead to less poverty among older seniors because individuals would have lengthened their working careers, delayed their retirements, and received higher annual benefits. Choosing a retirement-age increase over a formulaic benefit cut thus represents a deliberate choice by lawmakers to induce individuals to delay their ages of first benefit claims rather than simply to reduce retirees' annual benefit levels and their retirement income security.

It is certainly a worthwhile point of information for policy makers to know the projected benefits of individuals who claim early and thus receive lower annual benefits by choice. Lawmakers would do well to understand the benefits individuals receive both at the statutory EEA and the NRA, whatever they are chosen to be. This is quite different, however, from making the exclusive standard for benefit adequacy those paid at a fixed age such as 65, which may have no particular relevance to either the chosen EEA or the NRA.[50]

In sum, the method of analysis should not predetermine the outcome of the policy discussion. To measure benefits at a fixed age regardless of where lawmakers conclude the NRA should be set is to adopt a metric with the potential to confuse and to obscure key policy considerations. No matter whether the policy goal is to enable a target level of income security at a fixed or a rising age, it is appropriate for the NRA to be set pursuant to that policy goal and thus for replacement rates to be defined in reference to that NRA.

Once lawmakers turn their attention to evaluating benefit adequacy at the NRA,

49. See for example Ezra Klein, "Don't Cut Social Security, cot'd," *Washington Post blog*, September 7, 2010, http://voices.washingtonpost.com/ezra-klein/2010/09/dont_cut_social_security_contd.html.

50. Although a full exploration of them would exceed the purpose of this paper, there are other economic policy reasons why replacement rates should be calibrated with respect to a rising NRA rather than a fixed age. A life-cycle model of consumption must take into account changes in longevity when determining optimal patterns of saving and consumption. Aiming for a flat replacement rate at a fixed age of retirement will thus produce sub-optimal choices in an environment where life expectancy is rising. Longevity improvements should have an impact on both target annual replacement rates as well as retirement ages, policy considerations that are distorted by measuring outcomes only as replacement rates at a fixed age. Setting a goal of maintaining constant replacement rates at a fixed age would effectively require that Social Security absorb a permanently rising portion of individuals' lifetime resources.

the following reforms to address some quirks of current benefit schedules may be worth consideration. The choices that follow are not meant to be enacted in combination, as they would overlap one another to a great degree. Each would reduce the growth of system costs by a different amount, and each would represent a different philosophical approach to setting benefit adequacy goals in terms of replacement rates.

Reforms to prevent the ratio of pre-retirement income to post-retirement benefits from further declining: The aforementioned conceptual goal of current benefit formulas—i.e., maintaining constant replacement rates—is but one of many that could be adopted. The existing formula pursues a certain benefit growth goal without corresponding attention to limiting the growth of tax burdens. An equally valid alternative value judgment would be to aim to preserve tax equity for later generations, either by avoiding future tax increases or, more ambitiously, by limiting later cohorts' lifetime cost burdens to be comparable to those of previous generations.

To pursue either tax-equity policy, substantial restraints on the growth of benefits would be necessary. The inflation-adjusted value of individual benefits, which rises rapidly under current formulas (see figure 4), could continue to rise somewhat even without raising future taxes, provided that benefits are allowed to "decline" as measured by replacement rates. The more ambitious fiscal standard of holding total lifetime cost rates to historical norms could now only be met, however, by reducing the real value of benefits, including for many already receiving them.[51]

Whether policy makers should strive to maintain equity for participants primarily as taxpayers or as beneficiaries is an important value judgment. But even if adopting the perspective of focusing solely on beneficiaries, the existing wage-indexing formula may be considered to overshoot its appropriate target. A downward adjustment to scheduled benefit growth would be necessary, for example, to avoid further *increases* in replacement rates relative to pre-retirement standards of living.

Maintaining benefit replacement rates as a constant percentage of workers' pre-retirement living standards (as measured by after-Social-Security-tax income) would generate per-capita benefits that grow substantially more rapidly than price inflation, but somewhat more slowly than under current formulas and more slowly than *gross* pre-retirement earnings. Such a downward adjustment to benefit growth represents the minimum necessary to ensure that the relationship between post-retirement benefits to pre-retirement living standards remains stable in the future.

Assuming for illustrative purposes that these adjustments are applied gradually and proportionally to participants now 55 and under, a reduction in the growth of

51. As a point of reference, consider that the current annual Social Security cost rate of 13.83% in 2012 will rise in the future and is already substantially higher than the lifetime cost rates faced by those now entering the retirement rolls. See "Annual Income Rates, Cost Rates, And Balances" (http://www.ssa.gov/OACT/TR/2012/lr4b1.html).

scheduled benefits of roughly 0.25 percentage points per year would hold replacement rates roughly constant as a percentage of pre-retirement after-tax income, as shown in table 3.[52]

TABLE 3. 0.25 POINT ANNUAL REDUCTION IN SCHEDULED BENEFIT GROWTH, TOTAL SOCIAL SECURITY

Year Worker Turns 65	Benefit Replacement Rate at NRA as % of Pre-Retirement Earnings	Approximate Career Soc. Sec. Cost Burden	Benefit Replacement Rate as % of After-Social-Security-Tax Pre-Retirement Earnings
1985	41.5%	5.9%	44.1%
2020	40.0%	11.8%	45.4%
2055	37.0%	15.9%	44.8%

Source: Author's calculations based on "Detailed Single Year Tables," http://www.ssa.gov/OACT/solvency/provisions/tables/table_run388.html, reconciled with data on "Annual Income Rates, Cost Rates, and Balances, Calendar Years 1970–2090," http://www.ssa.gov/OACT/TR/2012/lr4b1.html, as well as the Board of Trustees' Annual Report, 1961, 1971, and 1983

If this were the sole adjustment to benefits, substantial tax increases would still be required to maintain system solvency. The illustrative formulation above would thus continue to value the interests of participants as beneficiaries over those as taxpayers and would be considered by many to be an inadequate adjustment to currently scheduled costs. The modified schedule referenced above would simply be the minimum adjustment required to correct one problematic consequence of the current formula: its depression of pre-retirement after-tax income relative to post-retirement benefits.

The current method of wage-indexing benefits not only causes benefits to rise as a percentage of workers' pre-retirement standards of living, but also causes aggregate costs to rise more rapidly than the program's tax base, necessitating substantial future tax increases if continued. It is questionable whether this outcome reflects a deliberate policy goal of lawmakers, and it may well warrant correction.

Reforms to prevent Social Security from forcing low-income Americans to "oversave" for retirement: In an earlier section of this paper, I discussed the Biggs-Springstead work detailing how Social Security replacement rates are higher than commonly understood, and higher when calculated by the methodology of most financial planners than by SSA's current methods. Social Security consequently delivers replacement rates that frequently exceed the often-recommended level of 70 percent of pre-retirement income, thereby rendering it inadvisable for many liquidity-constrained, low-income individuals to put aside additional saving for retirement.

Requiring large numbers of Americans to pay in to Social Security in amounts that

52. It bears emphasizing that this would be a reduction in the rate of real benefit growth, not a reduction from current levels or relative to price inflation.

produce replacement rates exceeding 70 percent likely has the effects of depressing other saving and of forcing affected individuals into sub-optimal patterns of saving and consumption.[53] Such high replacement rates may also conflict with Social Security's ostensible purpose of being just one component of a "three-legged stool" of retirement income security. Reductions in scheduled Social Security replacement rates may therefore be necessary to better align program realities with its widely perceived role.

Table 4 explores possible methods of constraining the growth of benefits by 2040, in amounts that would make appreciable headway in correcting program finances, allow for greater flexibility in individual retirement strategies, and strike different balances between the roles of Social Security and private saving in generating retirement income.[54]

Under Option #1, benefit growth would be reduced equally for all income levels. Under Option #2, benefits would be reduced more in the aggregate by more aggressively constraining benefit growth for higher-income workers. Both options are primarily illustrative, as it appears unlikely based on Congress's discussions to date that lawmakers will choose to reduce benefit growth for the lowest-income workers by as much as the 12 percent shown here. However, the Biggs-Springstead projections suggest that if lawmakers did so the median individual in the lowest income quintile would still receive an 80 percent replacement rate (as most typically measured) from Social Security and the vast majority in that quintile more than 70 percent.

53. "Limiting Social Security's Drag."
54. Author's calculations based on data in "Alternative Measures," 14. Replacement rates take into account shared taxes and benefits of married couples. The percentage changes from current schedules are specific to beneficiaries retiring near 2040, and in most instances would result in benefits substantially higher than those paid today, after adjusting for inflation. Typically, Social Security proposals phase in their changes, so percentage changes affecting older cohorts would be less than shown here.

TABLE 4. REPLACEMENT RATES FOR NEW RETIREES IN 2040, ALTERNATIVE SCENARIOS

Income quintile	Shared Soc Sec Repl. Rate (Current Schedules)	Option #1 Median Repl. Rate	Option #1 Reduction from Current Schedule	Option #1 Share of 70% Target Provided by Soc Sec	Option #1 Share of 70% Target from Other Sources	Option #2 Median Repl. Rate	Option #2 Reduction from Current Schedule	Option #2 Share of 70% Target Provided by Soc Sec	Option #2 Share of 70% Target from Other Sources
1st (Lowest)	91	80	12%	100%	0%	80	12%	100%	0%
2nd	61	54	12%	77%	23%	54	12%	77%	23%
3rd	55	48	12%	69%	31%	45	18%	64%	36%
4th	52	46	12%	66%	34%	40	24%	56%	44%
5th	38	33	12%	47%	53%	27	30%	38%	62%

Source: Author's calculations based on data in "Alternative Measures," Social Security Bulletin 68 no. 2

Under either option, Social Security alone would provide benefits sufficient so that most individuals in the lowest income quintile would not suffer a drop in their standard of living when they reach retirement age. Those in the second quintile would need to engage in some personal saving to hit the 70 percent target, but Social Security alone would also get these individuals the vast majority of the way there.

Moderate-to-high income workers would need to supplement their Social Security benefits substantially with income from personal saving under either option. Under Option #2, workers in the top income quintile would need to get about five-eighths of their target retirement income from sources outside of Social Security, while those in the second income quintile would still be able to rely on Social Security for more than half of their retirement income.[55]

Option #1 would leave the majority of the current program's financing problem in place unless other tax increases and benefit restraints were also enacted. Option #2 would eliminate the preponderance of the current financing shortfall.

The benefit targets in this table could be met in a number of ways, including possible adjustments to the benefit formula as well as to statutory eligibility ages. The figures are presented not to recommend a specific policy option but to give a sense of the magnitudes of changes that could be implemented while still preserving Social Security's role as a foundation of retirement income security.

Reforms to maintain replacement rates for those with the same real wages: The previous section of this paper explained how the current Social Security benefit formula causes replacement rates to rise over time for individuals with the same real wages. An alternative approach would be to adjust the benefit formula so that, over

55. All of the figures referenced in table 4 and in the accompanying paragraphs frame retirement income targets in relation to final pre-retirement income, as is most commonly done in financial planning. From a policy perspective it may be preferable to instead define retirement income adequacy in terms of career average CPI-indexed earnings, as this more directly measures an individual's ability to smooth his consumption over his lifetime. Doing so would result in replacement rates roughly 13 percent lower, on average, than those shown in table 4. See "Alternative Measures," table 7.

time, the same real wage level produces the same real benefit level and the same replacement rate. This would ensure that the workers of the future with the same real wages as today's workers receive the same real benefits, but no more.

This could be accomplished by changing the method of indexing the bend points in the benefit formula so that they rise with price inflation rather than wage inflation.[56] This would not be the equivalent of "price indexing" per se, because overall benefits would continue to rise more rapidly than price inflation as worker wage levels rise.

Under current law, real benefit growth is driven by two factors: growth in real worker wages as well as growth in the real benefits paid for a given real wage. Under this reform, the second of these sources of cost growth would be removed. Future growth in real benefit levels would be driven solely by the growth in worker wages; the real benefits paid for a given level of real wages would remain the same across time.[57] This is illustrated in figure 6.

This option should eliminate at least half of the projected Social Security shortfall, depending upon how quickly it is phased in.

This reform would be a philosophical departure from current law in some ways but would maintain policy continuity in others. Current law embodies a philosophy in which as society grows wealthier, the Social Security safety net grows more generous; a future retiree of a given wage level thus receives higher real benefits than today's to keep pace with the wealthier society around him. This alternative reform would instead embrace a different philosophy of maintaining the standard of living of individuals with equal real wages, such that any increase in real wages is its own reward; if tomorrow's medium-wage worker's earnings have the purchasing power of today's high-income worker, he should then get benefits comparable to today's high-income worker rather than be treated as though he is poorer.[58]

In other important ways, this option is philosophically continuous with current law. Many advocates are committed to maintaining constant replacement rates. As earlier noted, defining this as maintaining constant replacement rates for average-wage workers virtually forbids a legislative solution to Social Security's

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56. The benefit formula consists of a set of brackets analogous to income tax brackets; there is a 90 percent bracket, a 32 percent bracket, and a 15 percent bracket. The percentages are higher at the bottom of the wage scale to provide higher returns to lower-income beneficiaries. The "bend points" are the borders between the brackets. Under current law the border between the 90% region and the 32% region, for example, is indexed to grow with the AWI. Under the reform described here, the border would rise annually with the Consumer Price Index.

57. Though this version of re-indexing has not been recently introduced in Congress, it is similar to a proposal offered by former Senator Fred Thompson (R-TN) during his 2008 presidential campaign. It is also similar to the proposal of Congress's 1976 Consultant Panel chairman William Hsiao. "The Hsiao proposal seeks to maintain constant replacement rates for new retirees with the same absolute real level of earnings, regardless of their relative position in the distribution of income." See *Financing Social Security*, 48.

58. Over time, under bend point price-indexing, most workers would ultimately see the vast majority of their income drift into the top 15% benefit bracket, just as under current income tax law most Americans would ultimately drift into the highest income bracket.

**FIGURE 6. HOLDING REPLACEMENT RATES CONSTANT BY BEND POINT RE-INDEXING
(REPLACEMENT RATES, WORKERS RETIRING AT NRA WITH REAL WAGES = $43,755)**
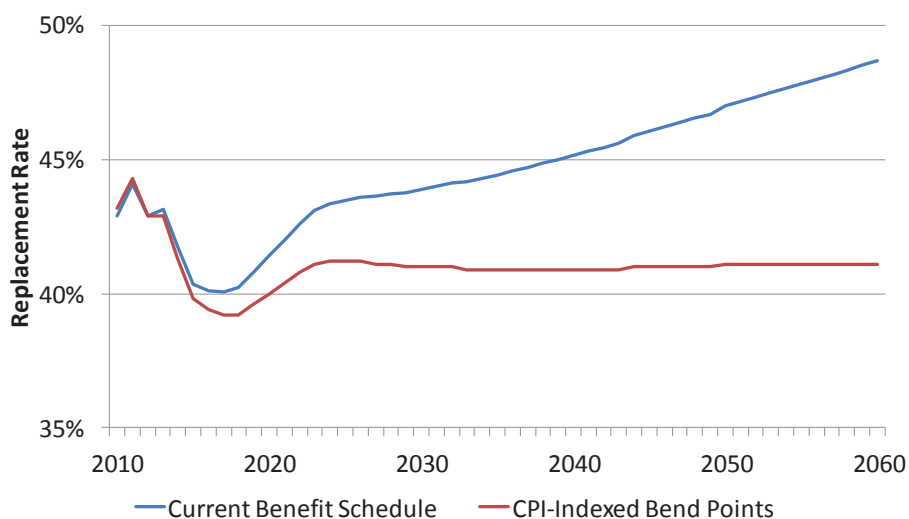
Source: Board of Trustees' Annual Report, 2012

shortfall, as it would require its entirety to be resolved by tax increases, a solution unacceptable to most advocates in the political center and the right. It also precludes the consideration of policy options to reduce the net income losses of later generations. Adopting a perspective, however, in which it is necessary only that we maintain constant replacement rates for constant wages would honor the left's rhetorical commitment to preserving replacement rates while allowing the right's concerns about rising program costs to be at least partially addressed. Lawmakers on both sides might also conclude, after studying the issue closely, that they do not believe it necessary or desirable for benefit formulas to produce replacement rates that rise over time for a given level of real wages.

All of the options presented here address quirks arising under Social Security's benefit formulas that many would find counterintuitive or inappropriate, even as all of these options maintain a policy focus on replacement rates. Again, this is not to suggest that replacement rates are the only appropriate prism through which to view Social Security policy options, but to note ways in which the effects of existing policies might be better understood and possibly modified.

CONCLUSION

FOR YEARS, MANY policy advocates have framed evaluations of Social Security benefit adequacy in terms of replacement rates. There remains, however, incomplete knowledge even among many experts and policy makers of the analytical significance of the replacement rates that Social Security reports as well as of counterintuitive results that arise under existing benefit formulas.

The current-law method of indexing Social Security benefits was adopted in

the 1970s as a result of a serious legislative misstep. It causes system costs to grow more rapidly than the program's tax base, and with them the tax burdens facing younger generations. Though often misunderstood as providing benefit equity over time, the higher cost burdens the existing formula imposes on younger generations effectively cause post-retirement benefits to rise as a percentage of pre-retirement after-tax income, depressing pre-retirement standards of living relative to post-retirement standards of living. Downward adjustments to the growth of benefits would be necessary to stabilize the program's effect on the relationship between pre-retirement and post-retirement income.

Social Security replacement rates are substantially higher than many understand because they are typically reported as a function of wage-indexed earnings, a metric essentially unique to the Social Security program, rather than in relation to pre-retirement annual income in the manner of most financial planners. Accordingly, they are not directly comparable to and cannot be meaningfully added to the income replacement rates typically associated with other income sources. An examination of the available data reveals that Social Security cost burdens and replacement rates are high enough so as to force many low-income individuals into sub-optimal consumption patterns, in effect forcing them to "over-save" for retirement.[59]

The Social Security benefit formula is also indexed in such a way that it provides replacement rates that rise over time for a given level of real wages. Re-indexing the benefit formula could allow replacement rates to be held constant across time for workers with the same real wages. This would permit replacement rates to remain a primary method of assessing benefit adequacy while reducing cost growth and improving system finances relative to current law.

Any discussion of Social Security policy choices necessarily introduces value judgments that are inherently subjective. This paper's focus on replacement rates is not intended to imply that they are the only prism through which Social Security benefit design should be viewed. Indeed, one could argue that the current replacement rate metric is too flawed to serve as a sound basis for future Social Security policy evaluation. A bipartisan negotiation is unlikely to be fruitful, however, if it does not provide policy makers with avenues to uphold their respective value judgments of benefit adequacy. It is possible to honor the focus on replacement rates of left-of-center advocates while addressing some cost-containment concerns of right-of-center advocates. The first necessary step in such a discussion, however, is to understand the peculiarities of Social Security's current replacement rate measures and benefit formulas.

59. A discussion of personal accounts as a vehicle for retirement saving, whether within or outside of Social Security, is beyond the scope of this paper. Here I will just briefly mention that the adverse consequences of "over-saving" are greater in traditional Social Security than they would be in an individual account system, because in traditional Social Security the individual lacks the option of immediately withdrawing excess saving to implement a more desirable path of personal consumption.