

Social Security at 70: Principles, Issues and Alternatives

INTRODUCTION

A fundamental element of the debate over Social Security reform is which set of principles should describe the role of the program over the next century. One possibility, which we refer to as “collectivist principles,” emphasizes the economic efficiency gains that flow from a social insurance program designed to pool various risks across all workers in the economy. A second possibility, which we label “individualist principles,” points to potential efficiency gains from reducing the degree of government intervention and increasing individual self-determination.

These different sets of principles have taken on new significance in the current fiscal environment, as the projected long-term actuarial deficit in the program leads to fundamental questions about the optimal level of social insurance, and how it is structured (e.g., the degree of progressivity and whether and how it should be pre-funded). The two sets of principles need not stand in opposition to each other; indeed, almost any reform proposal can be said to draw upon both sets of principles to some degree. Nonetheless, they provide a useful way to frame the current debate and evaluate the issues and alternatives facing policy makers.

We begin with a brief description of our two stylized sets of principles, and then apply them to some of the important issues currently under debate, including the size and shape of the program, price indexing of benefits and individual accounts. Our goal is not to provide policy prescriptions, but to supply an analytical framework for evaluating some of the key issues and alternatives facing policymakers today.

Collectivist Principles

Collectivist principles, in our parlance, refer to the role of Social Security as a social insurance program. Under this view, its principal goal is to pool risks such as disability, leaving behind dependents, permanent negative earning shocks and outliving one’s assets. The historical context for the collectivist viewpoint is the industrialization and urbanization that had transformed many economies over the nineteenth century. In this environment, extended families were often

Julia Lynn Coronado

*Watson Wyatt Worldwide,
Arlington, VA
22203*

Paul A. Smith

*Federal Reserve Board
of Governors,
Washington, DC 20551*

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more separated and individuals could find themselves destitute due to situations beyond their control, including a change in the fortunes of their employer, injury on the job, or the inability to continue physically taxing work owing to old age.

The new degree of income insecurity spawned a movement to create social insurance in many countries. President Roosevelt referenced “insurance principles” in justifying his vision of Social Security as a self-financing system to which both employers and employees should contribute, and his opposition to means-testing eligibility for benefits. Roosevelt believed the program should pool economic risks in an efficient way and should not have any negative stigma associated with it.

Seventy years later, the fundamental risk-pooling function of Social Security remains intact—the program continues to provide public insurance against the risks of disability, leaving behind surviving dependents, permanent negative earnings shocks and longevity. Supporters of the program point out that the government’s role is justified because private insurance of this type is generally not available due to moral hazard and adverse selection.

Individualist Principles

Adherents of individualist principles point out that as the economy has developed and individuals have grown more financially independent and sophisticated, the program should be modernized to reflect the new environment. Perhaps more importantly, the program has grown vastly since its implementation, with both tax rates and real taxable wages at much higher levels than under Roosevelt’s plan. While benefits have grown as well, this does not necessarily make the current size of the program efficient, due to potential deadweight losses from distorting intertemporal labor and consumption

decisions. In particular, the system is fairly paternalistic, in the sense that it provides very little in the way of individual choice or flexibility, worsening the efficiency losses from the intervention. Finally, critics argue that the Trust Fund has led to more government spending rather than incrementing national saving needed, and thus has failed to provide for future program benefits.

These differing sets of principles are not new, but are of particular significance now that the program is facing a projection of permanent actuarial deficit. Most analysts agree reforms are necessary to restore solvency, and that acting sooner would forestall more drastic changes later. However, analysts’ preferred set of reforms generally depend on the relative weights they apply to collectivist versus individualist principles.

We turn next to a brief discussion of the current state of the program’s solvency, and then explore some of the implications of the different principles for current issues and alternatives, including the size and structure of the program, price indexing of benefits, and the inclusion of individual accounts.

SOLVENCY

The context of the current debate over Social Security is one of short-term solvency, followed by projected permanent actuarial deficit. In 2004, income exceeded expenditures by \$145 billion, bringing the Trust Fund balance up to \$1.5 trillion at year-end. However, this relatively favorable cash-flow position is projected to deteriorate over time: according to the 2005 Social Security Trustees’ Report, under current law and using the intermediate set of assumptions, outlays will exceed revenues (hence the Trust Fund will begin shrinking) income in 2017, and the Trust Fund will be exhausted in 2041—at which point the program will no longer be able to pay full benefits without outside funding.

75-Year Actuarial Balance

In terms of cash flow, the fundamental problem is demographic: retiring baby-boomers will drain cash from the system beginning in 2008, while, in the longer run, increasing life expectancy and declining fertility will keep the number of retirees high relative to the number of workers, boosting expenditures while reducing receipts.

Each year, the Social Security Trustees' Report publishes a 75-year actuarial balance, which is the present value of projected receipts (and initial Trust Fund assets) less projected outlays, expressed as a share of taxable payroll. In the 2005 report, the balance is -1.92 percent of payroll. This figure changes from year to year for several reasons, including legislative changes, new data and assumptions affecting demographic, economic and disability parameters, new projection methods, and the changing valuation period (i.e., including an additional year in the 75-year window).

In 1983, reforms were enacted that were projected to result in solvency through 2058, and the resulting 75-year actuarial balance was +0.02 percent of payroll. In each year since 1983, however, the effect of the changing valuation period has been to worsen the actuarial balance, as more negative years are included in the 75-year window and the negative years already in the projection window move closer to the present.¹

In some years the valuation-period effect has been offset by other changes (e.g., new demographic and economic data

and assumptions), while in other years the other changes reinforced the negative effect of the changing valuation period. Overall, summing up the effects of changes from 1983 to 2005, the changing valuation period has worsened the actuarial balance by 1.31 percent of payroll, or two-thirds of the total deterioration in the actuarial balance. The combined effect of new data and assumptions on economic, demographic and disability parameters has been to worsen the actuarial balance by 0.21 percent of payroll, or about 11 percent of the total change. The effect of new projection methods has been to worsen the actuarial balance by 0.59 percent of payroll, or about 30 percent of the total change.²

Interestingly, demographic developments since 1983 have had a positive effect, improving the actuarial balance by 0.74 percent of payroll. Thus, although the fundamental cash-flow problem going forward is demographic in nature, it would be misleading to conclude that demographics have caused the deterioration in the 75-year actuarial balance since 1983 (except to the extent that demographics are responsible for the negative out-years that produce the negative effect of the changing valuation period).³

Unfunded Obligations over the Infinite Horizon

On a 75-year basis, an immediate increase of 1.92 percentage points in payroll tax rates, or an immediate 13 percent benefit reduction, would restore solvency under the intermediate assumptions. However, because the deficits are growing

¹ The 75-year actuarial balance incorporates the present value of trust fund assets at the start of the period, thus taking account of the accumulated value of receipts less outlays since the start of the program. Hence, the effect of changing the valuation period comes from adding negative years at the end (and moving them closer to the present), rather than dropping positive years at the beginning.

² The final component is legislative changes, which improved the balance by 0.16 percent of payroll, or about 8 percent of the total change.

³ Even if the entire effect of the valuation period were attributed to demographics, the net demographic effect on the actuarial balance since 1983 would only be -0.57 percent of payroll (-1.31 + 0.74), or about 29 percent of the total change since 1983. The 1983 Trustees' Report recognized that the system would be in deficit beginning in 2059.

in the out-years, such changes would not be projected to result in solvency beyond the 75-year window. Moreover, the required changes become larger each year that nothing is done. Thus, the current projections show that under intermediate assumptions, if no changes are made now, payroll tax rates would have to rise by 4.26 percentage points in 2041 and 5.70 percentage points by 2079 in order to restore 75-year solvency. Alternatively, benefit cuts would need to be 26 percent in 2041 and reach 32 percent by 2079.

But the 75-year measure is not comprehensive to the extent that it does not capture the effect of future years beyond the window. Another way to characterize the long-run financial status of the program is to calculate the unfunded obligation over an infinite horizon. This can be done on an "open-group" basis (i.e., including past, present and future participants) or a "closed-group" basis (including only past and present participants).

On an open-group basis, the unfunded obligation is \$4.0 trillion over the next 75 years and \$11.1 trillion over the infinite horizon; thus, there is a substantial effect of considering the future years after the 75-year window. On a closed-group basis, the unfunded liability is \$12 trillion over the infinite horizon. That is, future participants (who are excluded from the closed-group calculation) are projected to reduce the unfunded liability by \$900 billion in present value, by paying more in taxes than they will receive in benefits. However, this still leaves an \$11 trillion hole to be closed by revenue increases, benefit cuts, or some combination of the two.

SIZE AND SHAPE OF THE SOCIAL SECURITY PROGRAM

A comprehensive discussion of proposals to restore solvency is outside the scope of this paper. However, ultimately

a solution must involve revenue increases and/or reductions in traditional benefits (relative to current law). Revenue increases can take many forms, including increasing the tax base of the payroll tax, increasing the payroll tax rate, and/or making transfers from general revenues. Benefit reductions also come in multiple incarnations, including explicit changes to the benefit formula as well as implicit changes, such as using price indexing instead of wage indexing, increasing the retirement age, or increasing the number of years of earnings used in the benefit calculation.

For the most part, increasing the payroll tax rate has thus far not been a leading reform option.⁴ Critics have argued that even a 2 percentage point increase creates negative labor-supply effects, and, since the payroll tax is not progressive, it may be especially noticeable among low-income households, who typically pay more in payroll tax than in income tax. Increasing the payroll tax base (\$90,000 in 2005) has received more attention, but has not yet been widely embraced. One issue with increasing the base is whether the additional tax would entitle taxpayers to additional benefits. If so, the positive effect on solvency would be reduced; if not, some analysts have argued, the system could lose political support among higher-earning taxpayers.

Underlying each of these proposals is a debate over what the overall size and shape of the program should be going forward. The essential point of the solvency discussion is that, even looking only at current participants, the present value of projected benefits far exceeds the present value of revenue. Thus the heart of the debate is whether the program should continue at its current size, or should be scaled back.

Collectivist principles provide the rationale for a social insurance program,

⁴ It is a feature of the Diamond-Orszag plan (2004).

but do not provide much guidance on the optimal size of the intervention program. For example, how large and/or progressive must benefits be in order to achieve the goal of providing adequate insurance against the various economic risks? Individualist principles generally point to minimizing the intervention in the interest of reducing efficiency losses from distorting household saving and labor–supply decisions. We discuss these issues in more detail below. As a unifying concept, we will focus on the replacement rate, defined in the standard way as the share of pre–benefit earnings replaced by Social Security benefits.⁵

Benefit Structure

Social Security insures against economic risks by utilizing a progressive benefit structure that replaces a larger share of earnings for low–income workers than for higher–income workers. As a result, Social Security has been quite successful in reducing the incidence of elderly poverty. This has occurred in part through a significant ramping up in the general level of benefits over time. Between 1960 and 1995, real lifetime benefits have more than doubled (Steuerle and Bakija, 1994). Over the same period, the official poverty rate of those 65 and older dropped from 35 percent to 10 percent, or from more than

twice the poverty rate of the non–elderly to below the non–elderly poverty rate. Engelhardt and Gruber (2004) analyze changes in benefit levels across generations and conclude that the elasticity of elderly poverty to changes in real benefit levels is approximately unitary. They interpret this as evidence of a causal effect of Social Security benefits on elderly poverty, suggesting that benefit reductions could lead to a rise in elderly poverty.

The mechanics of social insurance in the Social Security program are illustrated in Table 1. The first column shows average labor income in 2003 by income quartile of individuals aged 55 to 62 who are still in the labor force. The second column shows the corresponding average annual Social Security benefit, assuming a steady attachment to the workforce and average wage growth.⁶ The third column shows that Social Security is structured to replace the vast majority of labor income for these lowest earners.

For today’s retirees, as shown in Table 2, Social Security benefits clearly serve as a fundamental source of support for low–earners—private (i.e., non–Social Security) saving provide only a small share of income among low–income households 65 or older. In the bottom quintile of the income distribution, only 3.5 percent of income comes from employer pensions and only 2.4 percent from asset income,

TABLE 1
INDIVIDUAL SOCIAL SECURITY REPLACEMENT RATES BY INCOME

Individual Income Quartile	Labor Income of Households Age 55–62	Individual Social Security Benefit	Replacement Rate
First	10,197	7,383	72.4%
Second	25,641	12,408	48.4%
Third	42,262	17,811	42.1%
Fourth	101,437	36,832	36.3%
<i>memo: poverty threshold for an individual 65 or older</i>			9,060

Source: Current Population Survey, March Supplement 2004, authors calculations.

⁵ This concept is not meant to provide a measure of fairness or rate of return from the system, but rather a simple and transparent measure of the relative size of the program and its relevance to participants.

⁶ This is a simplifying assumption for this illustrative example, but may not be well–founded for many low–income workers, who tend to have weaker labor–force attachment and thus more zeroes in the benefit calculation.

TABLE 2
INCOME SHARES FOR HOUSEHOLDS 65 AND OLDER BY HOUSEHOLD INCOME QUINTILE IN 2002

Source of Income	First	Second	Third	Fourth	Fifth
Social Security	82.6	84.0	67.0	47.0	19.8
Employer Pensions	3.5	6.8	15.0	25.5	20.5
Earnings	1.1	2.3	7.0	14.7	38.4
Asset Income	2.4	3.6	7.4	9.8	18.9
Public Assistance	8.9	1.6	1.0	0.2	0.1
Other	1.5	1.7	2.7	2.9	2.4
Quintile Limit (\$)	9,721	15,181	23,880	40,982	

Source: Social Security Administration, Income of the Population 55 and Older, 2002.

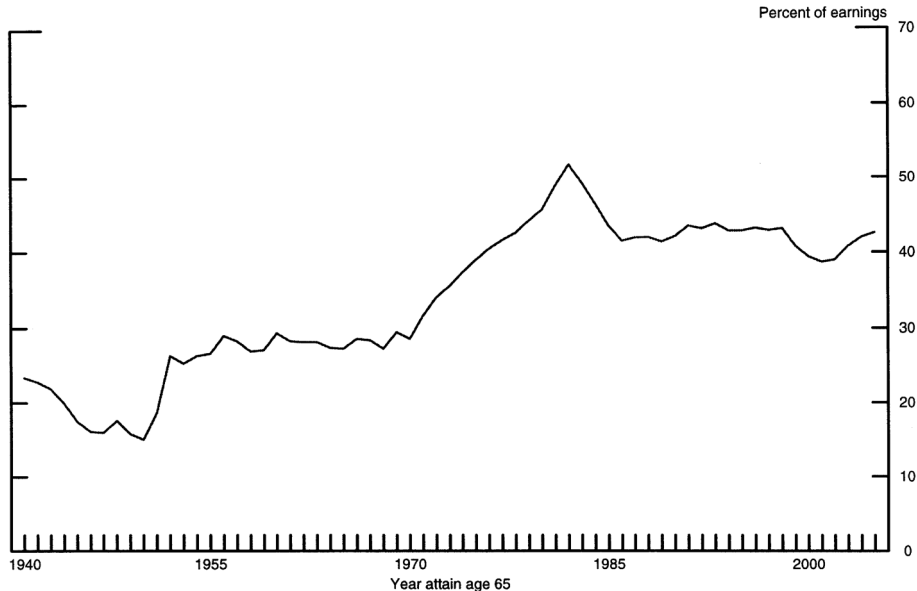
while Social Security provides 83 percent of income. In light of the findings of Engelhardt and Gruber, these statistics suggest that Social Security benefits are a primary barrier between low-income elderly and poverty, and that a reduction in benefits at the lower end may result in an increase in elderly poverty rates.

Earnings Insurance vs. Retirement Saving

While many analysts agree that benefit cuts should not target the lowest-income retirees, those who place a higher weight on individualist principles generally be-

lieve that some reductions from current law are preferable to the tax increases that would be needed to sustain current benefits. They argue that, while the Social Security system was designed as a system of social insurance, it has evolved into a program that serves as a primary vehicle for retirement saving—a function that it is not necessarily able to perform efficiently. Figure 1 shows the evolution of the Social Security replacement rate over time for a single person earning the average wage over their lifetime. Up until the 1970s, Social Security benefits replaced less than 30 percent of pre-retirement income for average earners. The replacement rate

Figure 1. Social Security Replacement Rates Medium Earner, 1940 to 2004



began to rise in the 1970s, peaking at over 50 percent in the early 1980s before declining to its current level of slightly more than 40 percent.

Critics point out that the expansion of the system was less the result of a determination that labor income had become more volatile (thereby necessitating an increase in the degree of social insurance) than a result of “mission creep” whereby the system of social insurance was transformed into a system of retirement saving. In particular, the expansion of the system in the 1970s featured a larger increase in benefit levels for middle- and high-income workers than for those at the lower end of the earnings spectrum (Schieber and Shoven, 1999).

The effects of this evolution are shown in Table 2, which indicates that 60 percent of elderly households receive at least two-thirds of their total income from Social Security—not just because Social Security is keeping low-income retirees out of poverty, but also because middle-income retirees enjoyed substantial benefit growth over the past 30 years.

Those placing a high value on individualist principles argue that the program is better suited to financing social insurance than retirement saving for two reasons. First, if the current Trust Fund is effectively being spent rather than saved, it contributes no resources to building up a capital stock to finance future consumption. Second, while social insurance may not be privately available, retirement saving is. Thus, to the extent the system distorts household saving and consumption decisions while providing a benefit available elsewhere, it imposes an unnecessary deadweight loss on the economy.

As a result, these analysts conclude, a useful principle going forward might be to carefully distinguish social insurance goals from retirement saving goals, and

think about which tools are best suited to each goal.

Social Insurance: Individuals vs. Households

An issue that has garnered attention in the academic literature but has been less actively debated in policy forums is how resource sharing within households interacts with the progressive benefit formula to weaken the social insurance function of the system. In the current system, the progressive benefit formula is applied to the lifetime earnings of individuals. However, many labor supply decisions are made jointly between spouses in response to the dual demands for income and household production, with the result that households often choose to boost the lifetime labor income of one member at the expense of the lifetime labor income of the other.

The program does not distinguish between the variation in earnings that results from adverse shocks and that which owes to choices between work and household production or leisure. Thus lower earning spouses in middle- or high-income households are effectively treated as though they had bad labor market outcomes and receive a high replacement rate. This feature is exacerbated by the presence of the spousal benefit, under which low-earning spouses receive a benefit equal to half of their higher-income spouse’s benefit.⁷

These features generate a larger benefit for higher-earning households relative to the taxes these earners paid into the system, offsetting the program’s redistribution across households. A number of papers have demonstrated that, indeed, when the effects of the Social Security system are considered on a household basis, the progressivity of the system is

⁷ The spousal benefit applies to married couples only—upon death of the spouse, the spousal benefit is converted into a survivor’s benefit.

nearly completely unwound.⁸ As a result, analysts have pointed out, these features reduce the effectiveness of the social-insurance mechanism in the system.

PRICE INDEXING

Several proposals to restore solvency include some change in the indexation used to calculate initial benefits. Such proposals are often referred to as “price indexing,” because they calculate initial benefits using price growth, rather than the wage growth used under current law. Productivity increases typically keep wage growth ahead of price growth (by about 1 percentage point per year over the long run), so switching from wage growth to price growth in the benefit formula can result in large reductions in the growth of future benefits, improving the solvency of the system.

Some analysts have suggested this method as a way of automatically reducing or eliminating the growth in real benefits; as such, it would represent a reduction in benefits relative to current law, without cutting real benefits. In this section, we will explore the implications of different price-indexing proposals for hypothetical workers of different earnings levels, and then discuss the implications in the context of our stylized sets of principles.

The details of price indexing, however, are quite complicated, leading to a fair degree of confusion over its effects. For example, there are as many as five different ways to “price index” benefits, each

having quite different effects on future retirees. We will discuss each of these briefly below.

To understand the price-indexing debate, one must first understand the calculation of initial benefits under current law.⁹ Currently, the initial monthly benefit is computed as follows: first, each year of earnings over a retiree’s career is converted from its nominal value to an indexed value by multiplying the nominal value by the ratio of average wages at retirement to average wages in the year of earnings. Second, the highest 35 years of earnings are averaged, and the result divided by 12. This results in the Average Indexed Monthly Earnings (AIME). Third, the AIME is fed through the following formula to calculate the monthly benefit: the first x dollars of AIME are multiplied by .90, the next y dollars (if any) are multiplied by 0.32, and any remaining dollars are multiplied by 0.15. The sum of these three pieces is the monthly benefit, or Primary Insurance Amount (PIA). The values x and y (which are the same for all retirees) are called “bend points” and they grow each year by the increase in average wages.¹⁰

In these calculations, the rate of growth in wages enters twice—once in the computation of AIME and once in the computation of the bend points. Thus there are three different ways to apply price indexing: to AIME, to the bend points, or to both. Of these three, price indexing the AIME alone has the smallest effect on benefit growth, price indexing the bend points alone has a larger effect, and price indexing both produces the largest effect. Henceforth, we

⁸ See Coronado, Fullerton and Glass (2000), Liebman (2002), and Gustman and Steinmeier (2000). One critique of these papers is that they have largely focused on cohorts that preceded the Baby Boom generation. Since Boomer women have participated in the labor force in greater numbers than their predecessors, it is possible that this inequity in the system will largely disappear as earnings between members of a couple have become more equal. However, Brown, Coronado, and Fullerton (2005) find that, even among the Baby Boom generation, much of the progressivity built into the Social Security benefits structure is unwound by intra-household resource sharing.

⁹ In this discussion we will abstract from early and late retirement and just focus on retirement at the normal retirement age.

¹⁰ In 2005, the first bend point is \$627 and the second is \$3,779.

will focus on the option of price indexing both the AIME and bend points, under the rubric “AIME–bend point indexing.”¹¹

But in addition to AIME–bend point indexing, there are two other indexing proposals that have been prominent. The first, which was proposed in the report of the President’s Commission to Strengthen Social Security in 2001, would leave the calculation of AIME and the bend points unchanged, but adjust the bend–point factors (i.e., .90, .32 and .15) by the ratio of cumulative price growth to cumulative wage growth (cumulated since the enactment of the change.) Following Biggs, et al. (2005), we refer to this option as “PIA Factor indexing.” As will be seen below, this method produces the largest reductions in benefit growth.

Finally, a proposal known as “progressive price indexing” would maintain the current–law benefit calculation for the bottom 30 percent of the wage distribution, apply PIA factor indexing to the workers at and above the Social Security wage base, and apply a blend of the two for the workers in between.

We model the effects of these three types of price indexing (AIME–bend point indexing, PIA factor indexing, and progressive indexing) on hypothetical workers at different points in the wage distribution. In these simulations, we assume the price indexing would begin in 2012 (consistent with the Commission’s proposal) and continue for 100 years. We model four hypothetical workers: a “steady low earner,” who is assumed to earn 45 percent of the average wage in each year, a “steady medium earner,” who is assumed to earn the average wage in each year, a “steady high earner,” who is assumed to earn 160 percent of the average wage in each year, and a “steady maximum earner,” who is assumed to earn the Social Security wage base amount in each year.¹²

Figure 2 illustrates the projected growth in real benefits for each worker under each type of indexing. The top left panel shows how benefits grow in real terms under current law, in which benefits are indexed to wage growth. For example, an average earner retiring in 2012 would receive a monthly benefit of about \$1,475 in 2005 dollars, while an average earner retiring in 2110 would receive about \$4,200 in real terms, due to the growth in wages.

The top right panel shows the effects on real benefit growth of implementing AIME–bend point indexing in 2012. As shown, this proposal slows the growth in real benefits, relative to current law, but does not stop it entirely. For example, an average earner retiring in 2110 would receive about \$2,500 in real terms under AIME–bend point indexing. Real growth continues for two reasons: first, we assume that the proposal would be phased in, so that a worker’s pre–2012 earnings would continue to be indexed by wages, and earnings from 2012 forward indexed by prices. Thus, it would take roughly 40 years after 2012 until the AIME indexing were fully phased in. Real benefit growth, however, occurs even after 40 years because real wages continue to rise. That is, even when *past* earnings are no longer indexed to wage growth, earnings at retirement will continue to be higher in real terms for each successive cohort, leading to a continued growth in real benefits.

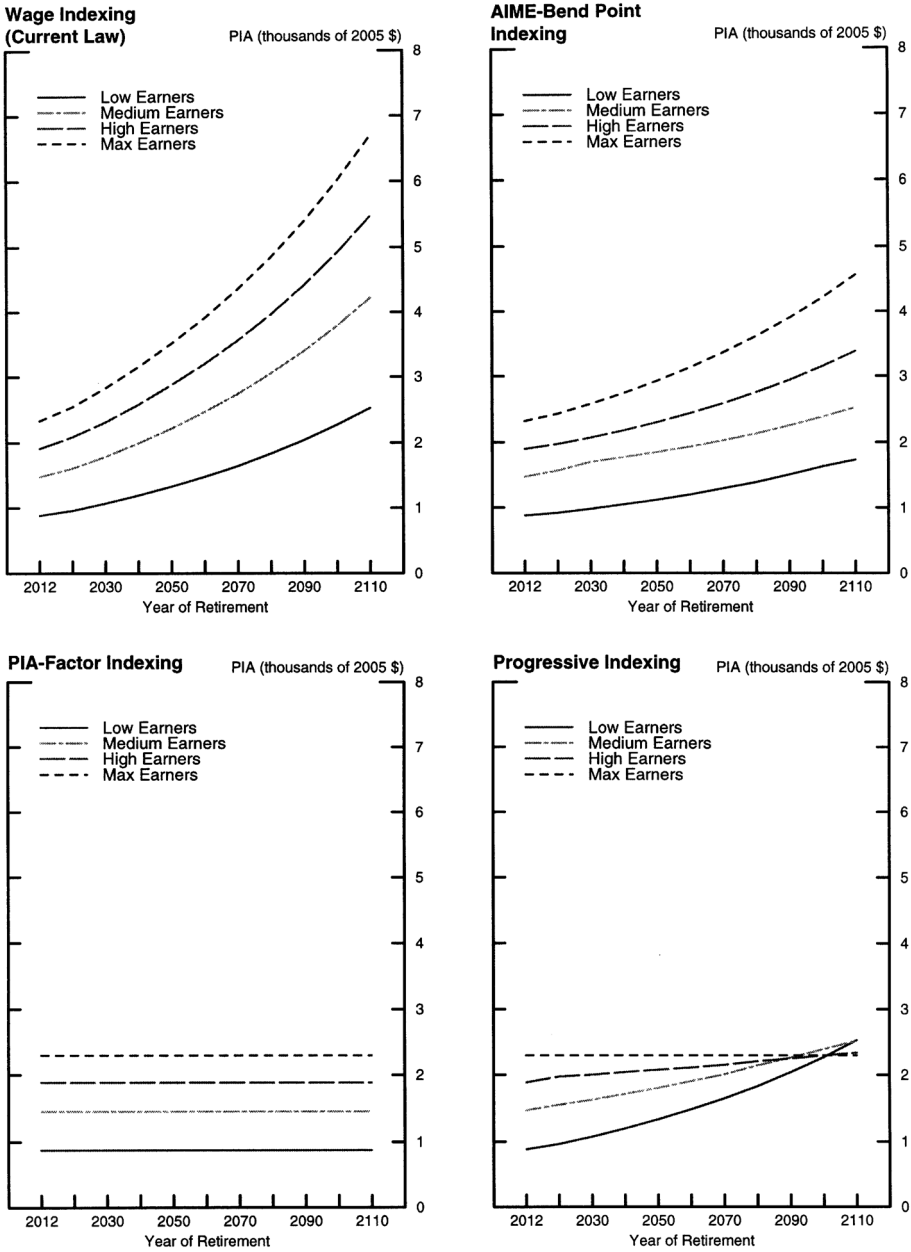
The lower left panel shows the effects of PIA factor indexing. Unlike AIME–bend point indexing, PIA factor indexing literally holds benefits constant in real terms. This is achieved by discounting initial benefits by the *cumulative* growth in real wages.

The lower right panel illustrates progressive price indexing. As shown, under this proposal the benefits of low earners continue to rise with wages, as under cur-

¹¹ See Biggs, et al (2005) for a detailed discussion of these different types of price indexing.

¹² In 2005, these earnings levels correspond to \$16,470, \$36,600, \$58,559, and \$90,000 respectively.

Figure 2. Growth in Real Monthly Benefits



rent law, while those of maximum earners are held constant in real terms, as under PIA factor indexing. The benefits of workers with intermediate earnings histories grow at rates in between these two. An interesting consequence of this approach is that real benefit levels converge for all types of workers, leading to a flat benefit structure by about 2100 (indeed, if kept in place, low earners would eventually receive larger benefits than higher earners).

Figure 3 illustrates, for each of the four types of workers, the growth of real benefits under the three types of price indexing, relative to current law. The upper left panel shows benefit growth for low earners. Progressive price indexing provides low earners with the same benefit growth as current law. AIME-bend point indexing gradually reduces benefits, relative to what they would grow to under current law, by about 30 percent over 100 years. Under PIA-factor indexing, benefits would be about 60 percent lower than current law after 100 years.

The remaining panels illustrate these relative growth paths for the other hypothetical workers. In each case, PIA-factor indexing provides the largest reduction from current-law benefit growth. Indeed, the percentage reduction under PIA-factor indexing is the same for all workers. Under progressive indexing, the reduction relative to current law growth is greater as one moves up the wage distribution, and it provides the same reduction as PIA-factor indexing for maximum earners. AIME-bend point indexing provides an intermediate amount of reduction, which varies non-monotonically with earnings.

Finally, Figure 4 illustrates the time path of replacement rates (i.e., benefits relative to earnings at retirement) that result from

each of the indexing strategies. Wage indexing, as we have under current law, results in constant replacement rates over time, as each new cohort's benefits grow at the same rate as their earnings.¹³ Replacement rates would decline over time for each of the three price indexing strategies. The top panel shows the decline in replacement rates under AIME-bend point indexing. A visible kink occurs about 40 years after implementation, at which time AIME indexing is fully phased in.

The middle panel shows the steeper decline under PIA factor indexing. Indeed, if this type of indexing were to continue indefinitely, replacement rates would slowly asymptote toward zero, due to the ever-increasing gap between real earnings and real benefits. The bottom panel shows that under progressive indexing, low earners' replacement rates hold constant at the current level, maximum earners' replacement rates decline at the same rate as under PIA-factor indexing, and average and high-earners' rates decline by intermediate amounts.

Thus, under any form of price indexing, benefits would grow less than under current law. Under the Commission plan (PIA factor indexing), benefits would not grow at all in real terms, while under other forms, real benefit growth would occur, but at a reduced rate from current law. Replacement rates would decline under price indexing, with the exception of low earners under progressive indexing. Thus, price indexing gets to the heart of the debate between collectivist and individualist principles—how high, and how progressive, the program's replacement rates should be. Should they be held constant, under the assumption that workers become accustomed to a given standard of living during their working years? Or, if the intent of social insurance is mainly

¹³ Under current law, the replacement rates are about 58 percent of earnings for low earners, 44 percent for medium earners, 36 percent for high earners and 28 percent for maximum earners.

Figure 3. Benefits Relative to Wage Indexing

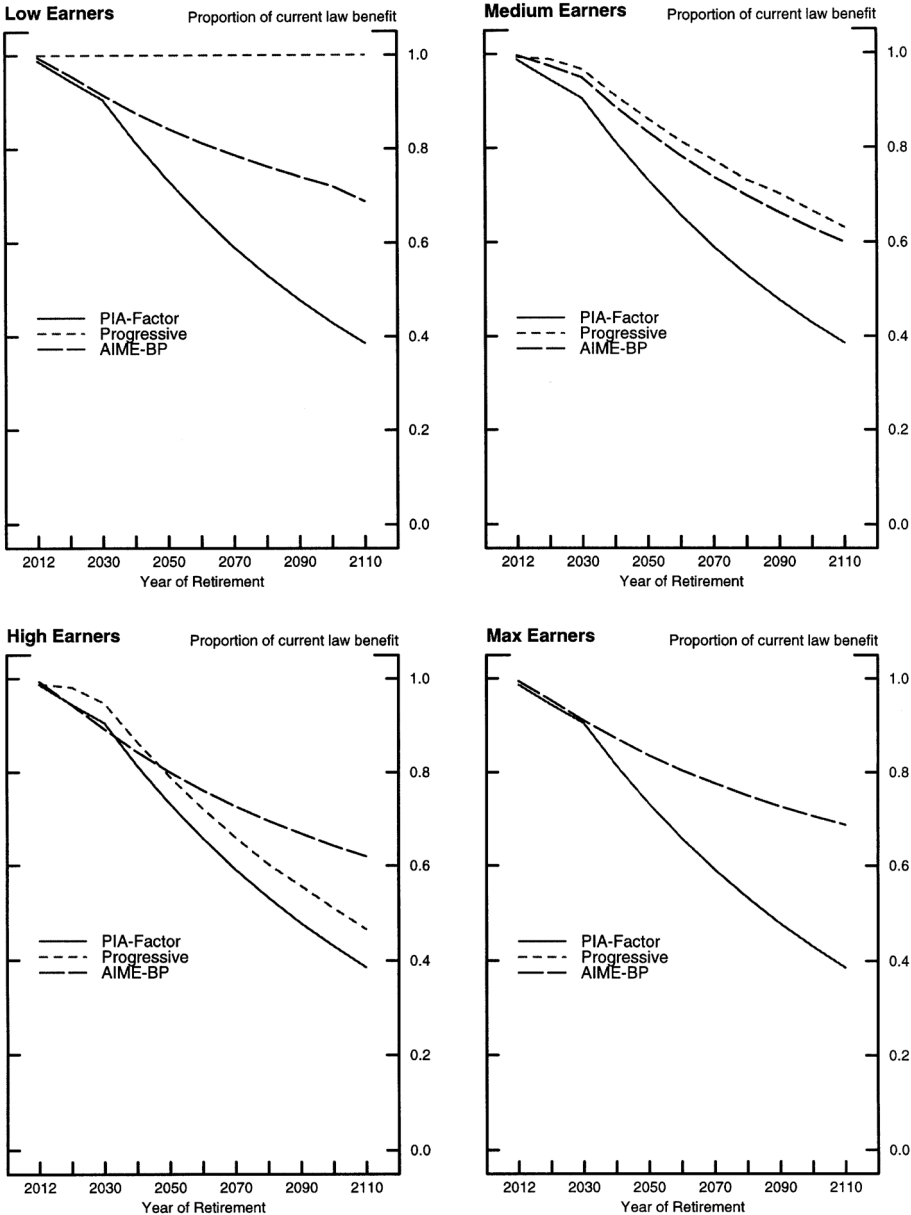
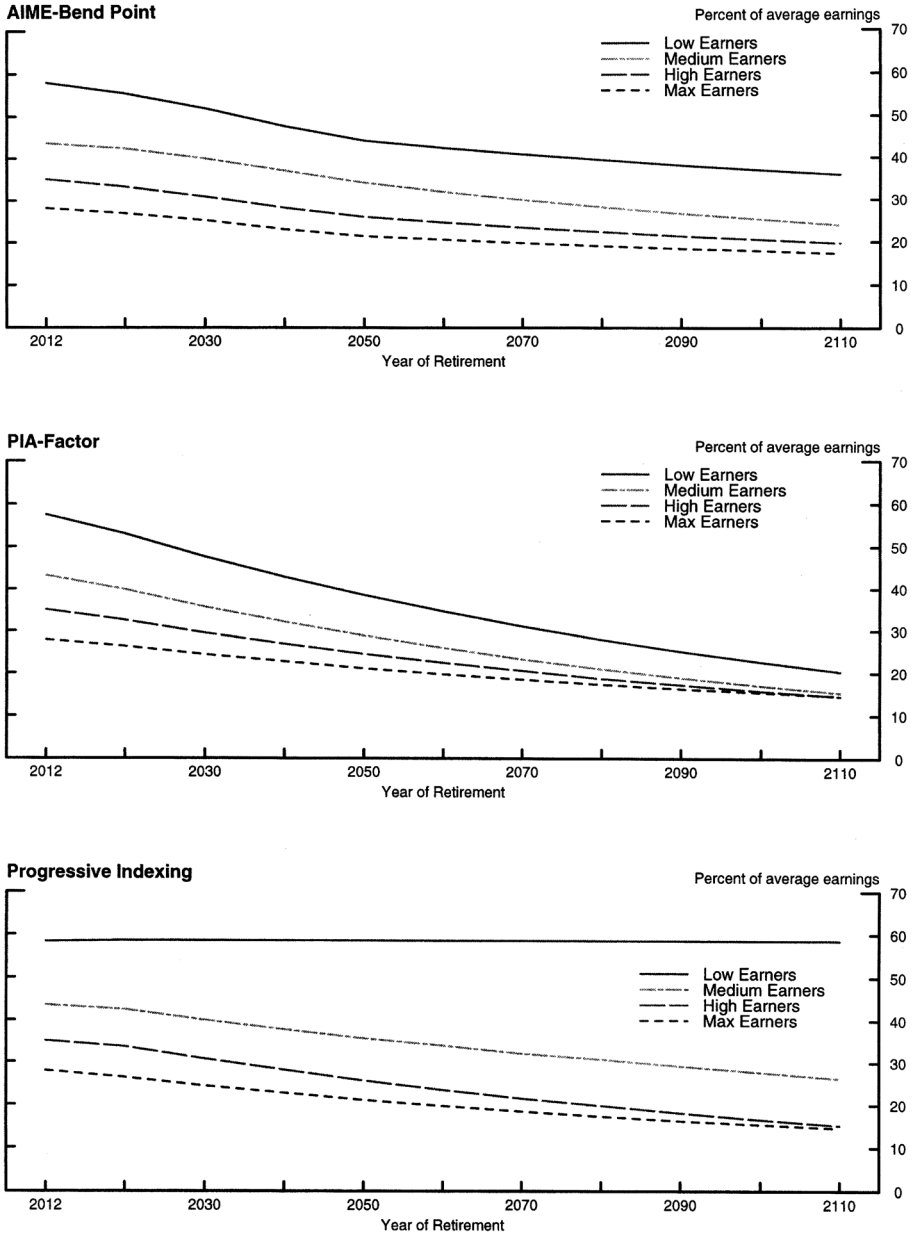


Figure 4. Replacement Rates



to guarantee some minimum level of consumption in all states of the world (including very old age), is it sufficient for replacement rates to decline gradually as average wealth grows? Another way of understanding this debate is to ask whether poverty should be defined relative to the prevailing income distribution or relative to an absolute standard of need (e.g., a fixed amount of real purchasing power).

The question about replacement rates can be viewed as a question about the optimal size of the program. While there are a number of ways to curtail growth in program, one question is whether it should be done via price indexing or some other method, such as by directly changing replacement rates via the bend point factors. Price indexing offers an “automatic” method for gradually reducing replacement rates as the society grows wealthier. However, some analysts have pointed out that direct changes to the bend point factors may be more transparent than indexing changes (making it easier for households to respond appropriately), and may allow more precise targeting of replacement rates (e.g., if the future spread between wage and price growth does not turn out as predicted).

INDIVIDUAL ACCOUNTS

The clash between collectivist and individualist principles is perhaps most readily apparent in the debate over adding individual accounts to the Social Security program. Some observers fear that the accounts could undermine the program’s social insurance function if they lead to an increase in the risk of poverty in old age. In addition, these analysts maintain, ac-

counts would not by themselves improve solvency, and under some formulations could significantly worsen the program’s finances, at least in the short run. Finally, critics of individual accounts point out that they would likely be accompanied by significant administrative cost and complexity issues, reducing or eliminating their net value to households.

Supporters of individual accounts, on the other hand, argue that accounts could generate significant long-term social benefits by pre-funding public Social Security obligations for the first time, thus increasing the capital stock to help finance future consumption. Moreover, they claim, such accounts could improve efficiency by giving households some control over investment and withdrawal decisions, perhaps reducing the deadweight loss associated with the more paternalistic approach taken by the current program. Finally, advocates of accounts argue that the accounts would reduce households’ exposure to political risk (i.e., the risk that benefit formulas could be changed by future Congresses with little advance warning), and could for the first time provide financial assets and financial education to low-income households, who are not being reached by the voluntary pension system.¹⁴

Pre-Funding of Benefits

President Roosevelt apparently envisioned a pre-funded Social Security system (in his words, “based on insurance principles”), rather than pay-as-you-go. He proposed a dedicated Trust Fund (invested in government bonds) to finance benefits, funded by payroll taxes and their earnings, but no general revenue transfers.¹⁵ What prevails today is largely

¹⁴ Some advocates of individual accounts maintain that the accounts would help restore solvency by taking advantage of the higher rate of return earned on equity investments. However, most economists argue that it is appropriate to factor in the higher risk associated with equity investments, leading to the conclusion that the equity premium is not by itself a sufficient solution to the solvency problem.

¹⁵ See Schieber and Shoven (1999), Schieber (2005).

a pay-as-you-go model; however, the program is accumulating a trust fund that is invested in non-marketable government bonds.

The implications of this practice are a matter of controversy. Investing the Trust Fund in Treasury securities effectively transfers payroll tax revenue to the general fund in return for an obligation of future repayment. Some analysts argue that this "off-budget" borrowing erodes fiscal discipline by disguising the size of the "on-budget" deficit. As a result, they claim, investing the Trust Fund in Treasuries leads to higher government spending, with the result that the Trust Fund is not really being saved at all, and thus no new capital investment is generated from the Trust Fund.

Ultimately, it is impossible to know the extent to which this critique is correct, because we cannot know the counterfactual level of government spending. However, it is important to note that at its heart, this argument is a critique of the political process. Advocates of individual accounts argue that accounts would help redress this situation and thus have real macroeconomic effects. According to this argument, investing payroll tax revenues in private accounts, rather than non-marketable Treasuries, would make transparent the size of the on-budget deficits, creating new public pressure for fiscal discipline.¹⁶ As a result of this pressure, the argument goes, public saving would increase, and the account assets would represent net additions to the capital stock.

It is interesting to note that, according to this argument, the primary way individual accounts would increase saving would be by forcing changes in the political process that resulted in tighter fiscal discipline. Thus, some analysts argue, to the extent that there was no political

response to the higher deficits, individual accounts would not increase saving or the capital stock. Conversely, these analysts maintain, it would not be necessary for such changes to occur through a system of private individual accounts. Indeed, some have argued that the same effects could be achieved by simply re-focusing public attention on the on-budget deficits and creating new public pressure for greater fiscal discipline. Such changes, they argue, would increase national saving and free up resources for building the capital stock without the complexity and expense of individual accounts. Others have argued that it could be more efficient, from a cost perspective, to invest Trust Fund revenues collectively, as is done by the National Railroad Retirement Investment Trust (NRRIT), a private organization that invests tax revenues in private assets on behalf of the Railroad Retirement Board.

However, advocates of individual accounts argue that political changes are unlikely without a major change such as individual accounts. With regard to collective investing, account advocates maintain that with such a large Trust Fund in Social Security (about \$1.5 trillion at the end of 2004, compared to \$27 billion in the NRRIT), it would be extremely difficult to ensure collective investment decisions were made solely in the interest of future beneficiaries, free from political, corporate, or special-interest influence. As a result, these analysts argue, despite being more costly than collective investment, Social Security accounts provide the best hope for pre-funding benefits in a meaningful way.

As mentioned above, whether accounts increase public saving depends on the response of the political system to the diversion of payroll tax revenues. Likewise, the effect on *private* saving depends on

¹⁶ For example, according to the FY2006 Budget of the United States, the estimated unified budget deficit for 2005 is about \$427 billion, while the on-budget deficit is \$589 billion. By 2010, the unified deficit is projected to be \$207 billion while the on-budget deficit is projected to be \$460 billion.

the extent to which households change their other saving behavior in response to Social Security accounts. In particular, if saving in 401(k)s, IRAs, and other private vehicles were to fall by the amount of new contributions to the Social Security accounts, there could be little or no net pre-funding of future benefits.

Despite the importance of this question, very little research has addressed it so far, in part due to a lack of appropriate data. There is a vast literature on the question of whether 401(k) and IRA balances represent net new saving or merely a reshuffling of previously existing assets.¹⁷ But that literature, which has not reached consensus, is largely focused on the question of whether the tax incentive inherent in such retirement plans merely induces higher-wealth taxpayers to shift existing assets into the accounts in order to lower their tax liability. The question about Social Security accounts is less about tax arbitrage than optimal savings behavior in the broader retirement security context.¹⁸ Would households perceive payroll taxes going into accounts as more tangible or irrevocable than the accrual of traditional Social Security benefits? If so, they might consider the new account a significant new asset and respond by reducing other saving. On the other hand, if they expect a significant reduction in the traditional benefit as a result of the new account, households might respond by increasing other saving.

To summarize, exploring how both the political process and households might respond to the new accounts would be a fruitful area for future research. For the former, one approach might be to try to understand how government spending decisions have historically been affected by the size of on-budget deficits. For the

latter, one approach might be to look at how household saving patterns have changed in other countries that have introduced individual-account programs. Another possibility would be to look at the household saving response to the trend from defined-benefit to defined-contribution pension plans. This trend, which has been quite pronounced over the past two or three decades, offers some similarities to the introduction of Social Security individual accounts.

Effect on Replacement Rates

In addition to the effect of individual accounts on national saving, an important consideration is how individual accounts would ultimately affect replacement rates, where in this context, "replacement rate" is defined to include the annuitized value of account assets. The effect on replacement rates would depend on the specifics of the proposal (e.g., the size of account contributions and the parameters affecting any offset between account assets and traditional benefits), as well as the combined effects of investment choices made by the individuals and market returns.

Thus, replacement rates would be stochastic—for example, while currently each "steady medium earner" receives the same replacement rate, with the introduction of individual accounts there would be a distribution of replacement rates for each earnings level. This suggests another potentially fruitful area of future research—trying to understand, for a given individual account proposal, the parameters characterizing the replacement-rate distributions, including how they vary by earnings level and how they are affected by other program parameters.

¹⁷ Papers in this literature include Engen and Gale (1997, 2000), Engen, Gale and Scholz (1994, 1996), Poterba, Venti and Wise (1995, 1996), Pence (2002) and Engelhardt (2000).

¹⁸ Presumably the Social Security accounts would be taxed similarly to 401(k)s and IRAs. If the tax treatment were sufficiently different, we could see tax-related offsets between 401(k)/IRA contributions and Social Security accounts.

CONCLUSION

Much of the current debate over Social Security reform can be viewed as a differential weighting of two distinct sets of principles, which we refer to as “collectivism” and “individualism.” Those who emphasize collectivist principles generally believe that the social-insurance principles that were fundamental to the creation of Social Security are still operating today—Social Security acts as a public program for widespread pooling of risks that generally cannot be insured against privately. Individualists tend to believe that there are efficiency gains to be realized by changing the size and structure of such a program and by increasing individual flexibility in how benefits are accumulated and distributed. In addition, critics have pointed out that by ignoring intra-household resource sharing, the current system undermines its own progressivity and social-insurance goals.

One way to boil down some of the difficult choices underlying the current debate is to ask what the target replacement rate should be for each lifetime earnings level. Those who place a higher value on individualist principles often argue that current replacement rates are unsustainably high and should be reduced across the board. Others propose doing whatever is necessary to provide enough new revenue to keep replacement rates at their current level. Still others argue that making the system as a whole more progressive, i.e., keeping replacement rates high for low-lifetime-income households but reducing them for higher-earning households, could maintain social insurance goals while accommodating reductions in the overall size of the program. Whatever the desired set of replacement rate targets, there are choices to be made about how to achieve them, with some arguing that price indexing is an automatic way to gradually reduce replacement rates, and

others arguing for direct changes to the benefit formula on grounds of transparency and ability to target replacement rates.

With regard to individual accounts, critics often contend that accounts would undermine the social-insurance principle of poverty reduction by exposing low-income households to more risk. Others point out that accounts could strengthen the social-insurance goals—by pre-funding benefits and providing new assets to low-income households—as long as the program is structured so that the accounts do not weaken the guarantee against poverty in old age. Future research that could illuminate the effects of individual accounts might include how both the political process and individuals might respond to the introduction of the accounts, and what the distribution of replacement rates by earnings level might look like under an individual-accounts proposal.

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