

For release on delivery
9:45 a.m. EDT
Thursday, September 17, 1998

*Remarks by

Edward M. Gramlich

Member

Board of Governors of the Federal Reserve System

at the Brooklyn Law School

Brooklyn, New York

September 17, 1998

*This text was originally published in the Kiel Week conference volume at the Kiel Institute of World Economics entitled "Redesigning Social Security".

Edward M. Gramlich

The United States: How to Deal with Uncovered Future Social Security Liabilities

The U.S. Social Security system, first formed back in the 1930s, is a government defined benefit pension program financed by worker payroll taxes. As workers pay in their payroll taxes, they accumulate benefit credits. At any point in time, one can make some economic and demographic assumptions, project forward tax inflows and benefit outflows, and determine the long-run actuarial soundness of the system, or really the long-term consistency of the present set of tax and benefit schedules.

Every year, such forecasts are made by the Social Security and Medicare trustees—three cabinet officers, the commissioner of Social Security, and two outside members. Although earlier Social Security legislation mandated that quadrennial outside advisory councils be appointed to review these forecasts and to comment on relevant policy issues, the last such council to examine the retirement system was the Greenspan Commission in 1983. But a new advisory council was formed in 1994 and I was asked to chair it. It included three members from business, three from unions, and various others from the private pension industry, the self-employment sector, independent representatives, and so forth, making thirteen members in all. We met monthly from mid-1994 to mid-1996, commissioned a number of special studies, appointed two technical panels that made reports, and in January 1997 issued our own report (Advisory Council 1997). In this paper I discuss this report, particularly trying to promote the proposal I put forward for dealing with the uncovered future liabilities of Social Security.

1. Uncovered Liabilities

The council's main point of departure was the annual reports of the Trustees of Social Security (see, for example, Trustees' Report 1997). As has been widely reported in the U.S. press, the intermediate assumptions of this report had the combined assets of the Old-Age, Survivors, and Disability Insurance (OASDI)

trust funds going below the safety level, a year's worth of benefits, in 2029. The assets of the Medicare Hospitalization Insurance (HI) Trust Fund, a separate entity that we did not examine, were projected to go below the safety level in 2001, a far more urgent situation. But since the past convention was that these trust funds should be actuarially sound for 75 years, the fact that the OASDI trust fund assets were projected to go below the safety level as soon as 2029 was alarming enough. The sum total of future Social Security liabilities stands now at \$2.5 trillion, 34 percent of current GDP, and it would take an immediate 18 percent increase in the OASDI payroll tax to eliminate this long-term actuarial imbalance.

With both the OASDI and HI trust funds, the underlying demographics of the country are such that projected benefits are rising rapidly compared to payroll tax inflows, so that once the fund assets first go below the safety level at some future date, say 2029, the funds will be increasingly far out of actuarial balance after that date. In that sense, \$2.5 trillion is an underestimate of future uncovered liabilities, as is the 18 percent payroll tax deficiency.

These numbers reflect two deeper pension-saving issues for the United States. One involves actuarial balance. In a stable defined benefit social security system with pay-as-you-go (PAYG) financing, the underlying accounting identity can be written as:

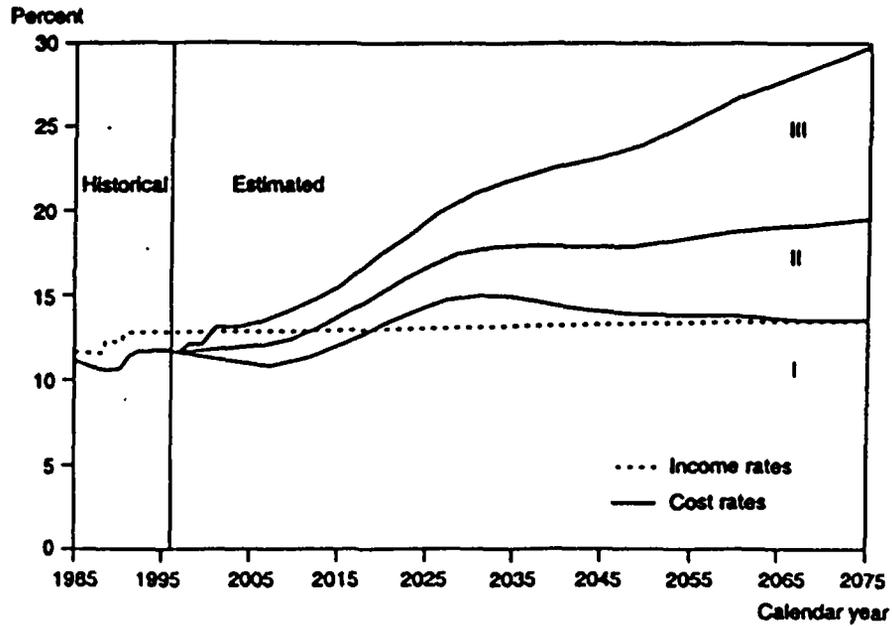
$$[1] \quad t = (B/W) \cdot (S/N) = r \cdot d,$$

where t is the OASDI tax rate on taxable wages, B is average social security benefits, W is average taxable wages, S is the number of social security recipients, and N is the number of workers. The overall numerator, $(B \cdot S)$, is aggregate social security benefits. The overall denominator, $(W \cdot N)$, is aggregate taxable wages, with the overall right-hand side equaling the payroll tax rate because of the PAYG identity. This identity can also be written as the product of the aggregate replacement rate, $(r = B/W)$, and the dependency ratio, $(d = S/N)$.

The United States now has an aging population, with people living longer and not having enough babies to stabilize the population share of young people. This means that the dependency ratio, d , is steadily rising, from about 0.29 today to about 0.56 by the end of the 75-year forecast period. According to the PAYG identity, if nothing is done to aggregate replacement rates, the payroll tax rate must rise steadily to pay for the existing defined benefit Social Security plan.

Figure 1, which compares OASDI payroll tax inflows with projected future benefit outflows, all as a percent of taxable payrolls, gives the income flow statement for the OASDI trust funds. These same numbers converted to asset stock form, and shown as the ratio of the asset stocks as a percent of annual outflows—the so-called trust fund ratio—are shown in Figure 2.

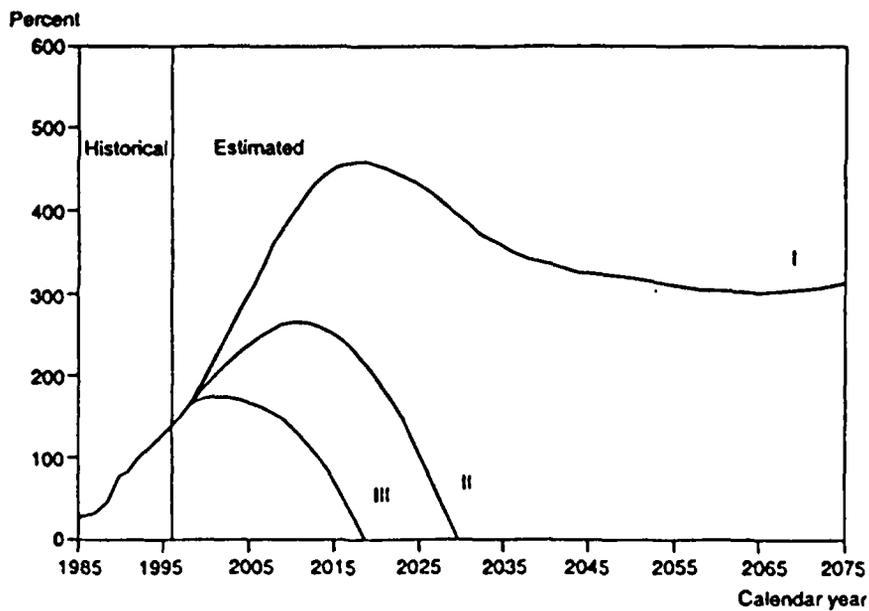
Figure 1 — OASI Income Rates and Cost Rates (as a percentage of taxable payroll)^a



^a I: Low-cost scenario. — II: Best-guess scenario. — III: High-cost scenario.

Source: Trustees of Social Security (1997).

Figure 2 — Trust Fund Ratios for OASI and DI Trust Funds, Combined (assets as a percentage of annual expenditures)^a

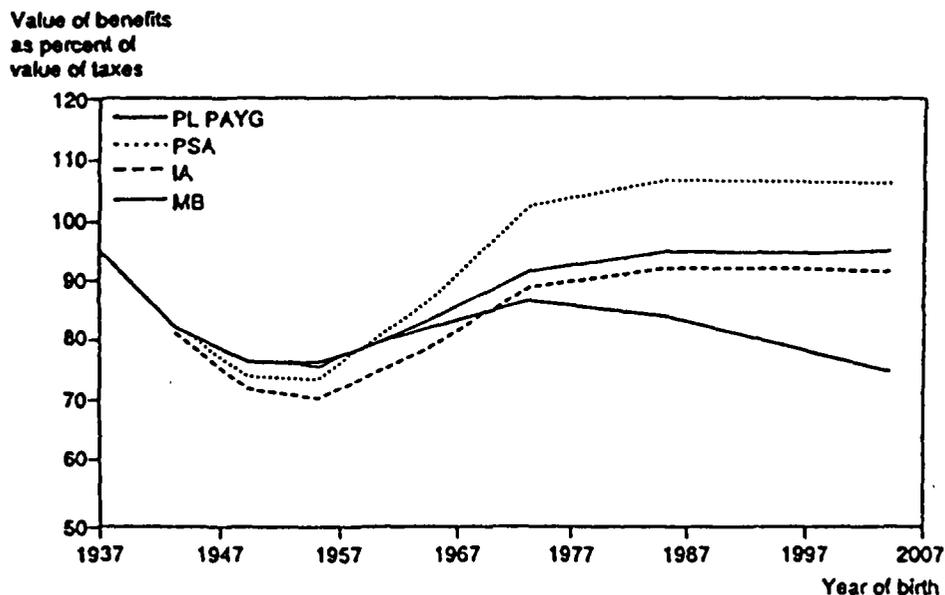


^a For legend and source see Figure 1.

The second issue involves the rate of return. Another property of a PAYG system, first pointed out by Paul Samuelson, is that the equilibrium real rate of return on worker contributions equals the rate of growth of the economy's real wage base (real wages times number of workers). This real wage base is slated to grow about 1 percent in the long-term forecasts of the Trustees, which means that younger cohorts will be increasingly getting fewer discounted benefits relative to their discounted tax payments (using the overall real interest rate of 2.3 percent as the discount factor). Money's worth ratios, the ratio of discounted benefits to discounted taxes paid by employees and employers on behalf of employees, can be computed for past and future cohorts.

Taking into account the redistribution within Social Security, spousal benefits and the likely share of families receiving them, disability insurance levels and the likely share of families receiving them, and survivor's benefit levels and the likely share of families receiving them, the weighted average money's worth ratios for people born in different past and future years are shown in Figure 3. For people born before 1930, overall money's worth ratios are well above 1.0,

Figure 3 — Present Value of Expected OASDI Benefits as a Percentage of the Present Value of Expected Contributions of Alternative Social Security Systems, by Year of Birth for Grand Composite Workers^a



^a The figure refers to the Pay-As-You-Go system under Present Law (PL PAYG), the Personal Security Accounts (PSA) plan, the Individual Accounts (IA) plan, and the Maintain Benefit (MB) plan. See text for further details.

Source: Advisory Council (1997).

meaning that on average Social Security was a much better investment than government bonds. For people born in the early 1930s and retiring now, overall money's worth ratios are about 1.0—meaning that Social Security has been approximately as good a financial investment as government bonds. For all of these age cohorts, Social Security should be a very attractive proposition—it gives social protection for low-wage and disabled workers and survivor's insurance, and still a decent financial return. Typically, Social Security is indeed very popular with these age groups.

But the story is very different for younger workers. While the overall money's worth ratio cycles a bit because of past movements in real interest rates, over the long run the aggregate money's worth ratio is slated to fall for younger workers, even before any policy changes in OASDI replacement or tax rates are made. With the necessary policy changes to bring the system into actuarial balance, these money's worth ratios would become lower yet. One reflection of this fact is shown in Figure 3. The line labeled "PL (present law) PAYG" assumes that Social Security is operated in the future as it has been for the most part in the 20th century—by raising payroll taxes as need be to finance present law benefits. Not surprisingly, these money's worth ratios drop to about 0.7 and falling. Not surprisingly, poll results find Social Security to be a much less attractive proposition for younger workers.

The interaction between these two issues sets up a difficult problem in political economics. Taxes could be raised or replacement ratios cut to keep the system in long-term PAYG balance. But the mere act of doing that worsens the money's worth ratios for younger cohorts and threatens the future popularity of the Social Security system. The question of how to bring the system into financial balance while preserving its political popularity was the central issue faced by the Advisory Council.

2. New Approaches

The council had three different approaches for dealing with these twin problems. Each approach takes advantage of the macroeconomic proposition that future returns on both stocks and bonds are likely to exceed the implicit PAYG return of the present OASDI system. Two of the approaches take advantage of the additional macroeconomic proposition that the best way to insure a healthy retirement system in the 21st century is to raise retirement, and national, saving now.

One approach, known as the Maintain Benefits (MB) plan, involves minimal changes in benefit schedules, tax rates, and hence underlying rates of national saving. The trust fund finances would be preserved, and the money's worth ra-

tios for younger workers raised (see the MB line in Figure 3), by a huge investment of Social Security funds in equities (combined with the forecasting projection that the returns on common stock would continue to exceed those on bonds). There are a number of institutional and political difficulties with such an approach, and in fact in the end those favoring the MB approach only wanted to “study” central fund equity investment, not actually do it. From a macroeconomic point of view, the most telling criticism of the MB approach is that it requires virtually no new national saving, and hence basically entails an asset swap with the private sector. In the end the OASDI trust funds would hold more stocks and fewer bonds, and private savers would hold fewer stocks and more bonds. But the country would be no richer in the long run because there would have been no new wealth creation.

A second approach, called the Personal Security Accounts (PSA) plan, involves a replacement of the present defined benefit system with large-scale defined contributions held outside the OASDI trust fund, similar to the Chilean system. These accounts would be privately owned and managed, hence increasing their riskiness. The OASDI benefit schedule would revert to a poverty-line flat benefit, again increasing the risk that individuals who did not invest well would not receive many retirement benefits. Since the present day payroll tax would be largely diverted to the personal accounts of individuals, there would also need to be a huge amount of transition financing—new borrowing and new taxes—for such a plan.

From a macroeconomic point of view the problem here is arbitrage. Basically, the government would be doing a huge amount of transition borrowing so that individuals could invest in their higher-yielding PSA accounts. The money's worth ratios turn out to be highest for this plan (see the PSA line in Figure 3), but these can be misleading because of the arbitrage, and because the money's worth ratios are expectations, with a large potential variance because of the investment risk.

3. The Individual Accounts Plan

I personally do not favor either approach and have come up with an intermediate approach that preserves the important social protections of the present Social Security system, does this in a financially prudent way without relying on OASDI equity investment or arbitrage, and still adds what I consider to be badly needed new saving for retirement. My Individual Accounts (IA) plan does all three.

The first component of the IA plan is what might be called kind and gentle benefit cuts. These cuts would really be cuts in the real growth of benefits over

time for high-wage workers, with disabled and low-wage workers being largely protected from any cuts. The IA plan would include some technical changes such as including all state and local new hires in Social Security and applying consistent income tax treatment to Social Security benefits. These changes are also part of the council's other plans, and go some way to eliminating Social Security's actuarial deficit.

Then, beginning in the 21st century, the changes would be supplemented with two other measures. There would be a slight increase in the normal retirement age for all workers. Under present law this normal retirement age is already slated to rise from age 65 to age 67 during the next century: the change would speed up this schedule, and also index it to the overall rise in life expectancy later on in the 21st century. There would also be a slight change in the benefit formula to reduce the growth of real Social Security benefits for high-wage workers. Both of these changes would be phased in very gradually to avoid actual benefit cuts for present retirees and "notches" in the benefit schedule (instances when younger workers with the same earnings records get lower real benefits than older workers). The result of all changes would be a modest reduction in the overall OASDI replacement rate of equation [1] to leave OASDI payroll tax rates stable into the future. When combined with the rising number of retirees, the share of the nation's output devoted to Social Security spending would be approximately the same as at present, eliminating this part of the impending explosion in future U.S. entitlement spending. Of the three plans suggested by our council, this IA plan is clearly the best for achieving short- and long-term balance in the U.S. federal budget.

These benefit cuts alone would mean that high-wage workers would not be experiencing rising real benefits as their real wages grow, so the IA plan would supplement these changes with another measure to raise overall retirement (and national) saving. Workers would be required to contribute an extra 1.6 percent of their pay to their defined contribution individual accounts. These accounts would be owned by workers but centrally managed. Workers would be able to allocate their funds among five to ten broad mutual funds covering stocks and bonds. Central management of the funds would cut down the risk that funds would be invested unwisely, would cut administrative costs, and would mean that Wall Street firms would not find these individual accounts a financial bonanza. The funds would be converted to real annuities on retirement, to protect against inflation and the chance that retirees would overspend in their early retirement years.

All changes together would mean that approximately the presently scheduled level of benefits would be paid to all wage classes of workers, of all ages. The difference between this outcome and present law is that under this IA plan these benefits would be affordable, as they are not under present law. The changes would eliminate Social Security's long-term actuarial deficit while still hol-

ding together the important retirement safety net provided by Social Security. They would significantly raise the return on invested contributions for younger workers. They would slow the growth of overall entitlement spending and improve the federal budget outlook, even in the near term. And, since the changes would involve neither asset swaps nor arbitrage, the changes would move beyond the present PAYG financing scheme, by building up the nation's capital stock in advance of the baby boom retirement crunch.

Bibliography

Advisory Council (1997). *Report of the 1994-1996 Advisory Council on Social Security.* Social Security Administration. Washington, D.C.

Trustees of Social Security (1997). *Status of the Social Security and Medicare Programs.* Social Security Administration. Washington, D.C.