



[Home](#) > [Economic Research](#) > [Publications](#) > [Economic Letter](#) > On the Transition to a Fully Funded Social Security System



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# On the Transition to a Fully Funded Social Security System

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- [Paying twice for retirement?](#)
- [References](#)

While the President and Congress are celebrating (and rightly so) their progress in reducing the budget deficit, everyone involved is well aware that the long-term prognosis for the federal budget remains disturbing. One of the main threats to long-term budget balance comes from Social Security, which promises future retirees much more in benefits than it expects to collect in taxes. Martin Feldstein (1996) estimates that the present value of the net unfunded liability is \$11 trillion, an amount roughly three times the size of the official federal debt and approximately one-half to two-thirds the value of all tangible capital in the United States. Clearly, these promises cannot be kept. Reforms of one kind or another are needed to restore long-term budget balance, and while it is too soon to say how this will be resolved, reforms are sure to involve some mixture of tax increases and benefit cuts.

How did we get here? Although the problem is complex, many economists agree that one important element concerns the way Social Security is financed. Social Security was initially established and continues to operate on a pay-as-you-go basis, which means that taxes collected from current workers are transferred to current retirees. In contrast, a fully funded pension would collect taxes from workers when they are young, invest the proceeds on their behalf, and years later pay their benefits out of the accumulated principal and interest.

One disadvantage of a pay-as-you-go system concerns the implicit rate of return on contributions. If tax rates were constant, a mature pay-as-you-go system would pay a real return equal to the growth rate of the tax base, which in the long run is equal to the rate at which the work force grows plus the rate of productivity growth. Over the last 50 years, this has amounted to about 3.2% per year, but this probably overstates the growth we can expect over the next 50 years. During the 1950s and 1960s, Social Security benefitted from unusually rapid productivity growth. In the 1970s, the tax base began to grow more slowly because of the worldwide slowdown in productivity growth. At first, this was partially offset by higher growth in the labor force, as baby boomers first began working. But the labor force began to grow more slowly after baby boomers were fully absorbed, and productivity growth never returned to the rate experienced earlier. Thus, over the last 25 years, the Social Security tax base has

grown at an average annual rate of about 2.5%, and this is probably a better benchmark for the coming decades.

Now, in fact, the average return on Social Security contributions has been higher than the rate of productivity plus population growth. Those who received retirement benefits during the early years of the program earned handsome returns, because they were eligible for full benefits even though they may have paid into the system for only a few years. Later, returns on Social Security were kept unsustainably high by steadily increasing the tax rate on younger workers. Between 1940 and the present, the combined rate paid by employers and employees rose from 2 to 12%, and projections into the next century suggest that tax rates will have to continue to rise to support current benefit schedules. But tax rates cannot rise indefinitely, and the system will eventually (perhaps very soon) confront the constraint on returns described above.

In contrast, a mature fully funded system would pay a return equal to those on private investments, which are much higher. For example, stocks have earned an average real return of 8.5% over the last 40 years. This return differential is no small matter, as seemingly small differences in annual rates of return add up to huge differences in retirement wealth as the years go by. For example, a 40-year-old worker who contributed \$1,000 into a pay-as-you-go fund earning 2.5% per year would be entitled to a payment of \$1,854 at age 65. If the same amount were invested in equities, the contribution would have grown to \$7,867 by age 65. The low return on a mature pay-as-you-go system represents a very significant deadweight loss to society.

Not surprisingly, in the face of these rate-of-return differentials, some economists have proposed phasing out the pay-as-you-go system and replacing it with fully funded pensions. But, despite the promise of higher returns, the transition from one system to the other involves a number of difficulties which have thus far damped enthusiasm for reform. One important issue concerns the perception that workers caught in the transition would have to pay twice for retirement. But this perception is misleading and exaggerates the burden that will fall on transitional cohorts. In this *Economic Letter*, I discuss the transition to a fully funded pension system and explain why the burden is not likely to be as great as one might think.

### **Paying twice for retirement?**

As far as I am aware, every proposal for moving to a pre-funded system grandfathers current recipients; any proposal that called for a significant cut in benefits to current recipients would probably be regarded as dead on arrival in Washington. Instead, a funded system would be phased in gradually, and during the transition remnants of the old pay-as-you-go plan would exist side-by-side with elements of the new pre-funded system. As the years went by, the fraction of benefits paid out under the old plan would fall, and the fraction paid out under the new one would rise. Eventually, the old system would vanish, and Social Security would become fully funded.

The chief obstacle concerns generations caught in the transition, for it appears that these workers would have to pay twice for retirement. Not only would they continue to contribute to a pay-as-you-go system to support current retirees, but they also would contribute to mandatory IRAs to pay for their own retirement.

The perception that workers caught in the transition have to pay twice is misleading, for several reasons. One is that current workers would not be completely cut off from benefits under the old pay-as-you-go plan. Instead, they still would be entitled to benefits they had accrued up to the date of the reform, but at that date they would stop accruing further benefits under the old regime. Thus, a worker who was 64 at the date of the reform would be entitled to nearly full pay-as-you-go benefits and would participate for one year under the pre-funded system. A 63-year-old worker would be entitled to somewhat less under the old plan and would participate for two years in the new one, and so on. Our hypothetical 40-

year-old would still be entitled to partial payments under the old plan and would not have to pre-fund his entire retirement.

A second reason why those caught in the transition would not pay double is that, because of the rate-of-return differentials cited above, contributions to the pre-funded portion of the plan would be much lower than those to the pay-as-you-go portion. For example, while our hypothetical 40-year-old worker had to contribute \$1,000 to the pay-as-you-go portion to earn an entitlement of \$1,854 at age 65, he would have to contribute only \$241 to a pre-funded equity account to earn the same payment. Thus, even at the beginning of the transition, the combined pay-as-you-go and pre-funded tax would be considerably less than twice the current pay-as-you-go tax.

Third, as the transition proceeded and the pay-as-you-go portion of the system shrank, the fraction of benefits financed by the higher pay-as-you-go tax would fall, and the fraction financed by the lower pre-funded tax would rise. Over time, the combined tax rate would fall, even if benefits were held constant. For example, in simulations conducted by Feldstein and Samwick (1997), the transition would begin with the current 12.4% tax for the pay-as-you-go portion, plus a 2% contribution to a mandatory IRA. After 15 years the pay-as-you-go portion of the system would shrink by enough to reduce the payroll tax by 1.2 percentage points, and after 25 years the combined tax would fall by 3.7 percentage points. At that point, the combined tax rate would be lower than the current pay-as-you-go tax. And 10 years after that (35 years into the transition), the combined tax rate would be little more than half the current rate. Thus, tax rates are only 16.1% higher at the beginning of the transition, and fall as the transition proceeds. In some respects, this simulation may represent a rosy scenario, but the qualitative point remains valid even if some of the numbers are off. Because a funded system pays a higher return than a pay-as-you-go system, combined contributions will shrink as the former replaces the latter.

Fourth, payroll taxes could be reduced further if the pay-as-you-go element of the program were partially financed by consumption taxes, for this would shift some of the burden from workers to consumers in general. In particular, current retirees themselves would bear some of the burden of the transition, because they, of course, still spend money on consumption goods after they retire from work.

Finally, and most importantly, much of the discussion about paying twice implicitly assumes that current taxes will be held constant if the pay-as-you-go system continues, but the current system cannot be sustained indefinitely. If benefits are held constant, taxes must go up in any case. For example, one way to restore solvency to the current system would be to increase taxes immediately and permanently by 2 percentage points. In this case, taxes would initially rise by the same amount as in a transition to a funded system, but would not fall later on. From this perspective, reform should be regarded not as a current tax increase but as a promise of a future tax cut.

The current system promises something for nothing, and any proposal that spells out how it actually would pay for benefits must suffer in comparison. But a something-for-nothing benchmark is inappropriate; it can't deliver. An appropriate benchmark would spell out the taxes needed to sustain the current system, and relative to this the transition to a funded system seems less burdensome. Indeed, because of the return differential described above, taxes would (eventually) have to rise more to perpetuate the current system than to transform it into a fully funded program.

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## References

Feldstein, Martin. 1996. "The Missing Piece in Policy Analysis: Social Security Reform." *American Economic Review* 86, pp. 1-14.

\_\_\_\_\_, and Andrew Samwick. 1997. "The Economics of Prefunding Social Security and Medicare

Benefits." *NBER Macroeconomics Annual 1997*, pp. 115-148.

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