Director’s Corner

Reform of social insurance programs is a topic of worldwide interest, as countries attempt to cope with budgetary shortfalls and demographic change. One program for reform of Social Security under consideration is transition from an unfunded, pay-as-you-go system to one with funded personal accounts. In thinking about transitions, there is a substantial body of economic analysis to draw on. Heading into the fifth year of funding, MRRC is expanding its scope to include work on international comparisons: as noted within this newsletter, we have commissioned scholars from Italy and Germany to produce survey papers on European experiences with reform. A number of other MRRC projects address particular aspects of reform.

This newsletter highlights two studies that analyze possible transitions to a funded Social Security system. Laitner proposes a two-step approach: we could immediately set up a funded system of personal accounts, providing the financing from national debt; we could then decide on a time table for paying down the debt. The existing unfunded system represents an implicit social debt; the new system would make the debt explicit. The two-step approach allows one to consider the desirability of modifying the structure of Social Security to a system of funded personal accounts separately from the desirability of sacrificing now to reduce government implicit and explicit debt. Smetters and Walliser consider a mechanism through which reform might be implemented: instead of requiring people to switch from the present Social Security system to one with personal accounts, we could offer each household a menu of choices. As we move into the future, analyses such as these will profit from national and international scholarship.

Director MRRC

Issue in Brief

Dropping Out of Social Security
by Kent Smetters and Jan Walliser

Executive Summary

One reform plan under consideration for the U.S. Social Security system is privatization. When Chile converted its pay-as-you-go social insurance system to individual private accounts, it did so by issuing “recognition bonds” for previous contributions made by workers that were placed in each worker’s new account. People who were retired at the time of the reform continued to collect benefits under the old system. In this traditional conversion approach, bonds are paid off using general revenue when the worker retires. Many analyses of converting the U.S. Social Security system to individual funded accounts also phase out benefits based on past contributions. However, this approach actually overpays some individuals. For many younger, richer individuals, Social Security is actually a bad deal. In some cases, the present value of their payroll taxes is greater than the present value of the future Social Security benefits. Paying such individuals money to recognize past contributions gives them more than what Social Security is actually worth to them.
One alternative approach, which avoids this overpayment problem, is to allow people to drop out of the system. People who drop out will no longer have to pay payroll taxes but they will lose claims to future benefits. In this situation, the government will not need to pay benefits to people who are willing to leave the program. Therefore, it can avoid the overpayment problem. For those people staying in the system, the present value of their future benefits is greater than the present value of their payroll taxes (otherwise they would drop out). This means that if the government uses payroll taxes as the only revenue source, it needs to increase the payroll tax rates to balance its budget. This increase in the payroll tax rate causes more people to drop out, which, in turn requires the government to increase the payroll tax more. This tax spiral continues until everyone drops out of the system.

To deal with this tax spiral problem, we propose an alternative dropping-out approach where the government, after allowing dropping-outs, uses general revenues to finance Social Security benefits. In this situation, since the government does not need to increase payroll taxes to balance its budget, it can avoid the tax spiral described above. Motivated by this observation, we run simulation models to better understand the welfare effects of two reform plans: the traditional conversion approach, where the Social Security system phases out with past contributions, and our dropping-out approach. In this Issue in Brief, we summarize our simulation procedures and also discuss the simulation results. Using our simulation results, we illustrate that our approach produces more favorable macroeconomic and distributional outcomes than the standard conversion approach.

Simulation Models

Our simulations generate two sets of trajectories: one is a set of trajectories on macroeconomic variables (e.g., per-capita output, capital stock, and wages), which illustrates how each reform plan affects the economy in general; the other is a set of trajectories on welfare changes, which illustrates different welfare effects of each reform across income classes. Focusing on these two effects, we run simulations for each approach as follows:

Traditional Conversion

Considering the traditional conversion approach, we first set the payroll tax rate to zero. To finance Social Security benefits during the transition period, we then increase income tax rates (recall that each worker would be receiving benefits based on their past contributions); as the benefits decrease, however, we gradually lower income tax rates. By following the same steps, we also run another simulation model where consumption taxes are used during the transition period. These two are the benchmarks; their results were compared below with those in the dropping-out conversion approach.

Dropping-Out Conversion

Considering the dropping-out conversion approach, we first allowed people to drop out of the Social Security system (people who dropped out would become exempt from payroll taxes but lose claims to future Social Security benefits). The payroll taxes were, however, collected from and the Social Security benefits were paid to people who chose to remain in the system. Income taxes were then increased to finance any gap between the benefits payable and the payroll taxes collected in each period. As before, by following the same steps, we also considered a consumption-tax alternative, where consumption taxes were used to finance gaps between the payroll taxes collected and benefits paid out.

In addition, we run simulations where the payroll tax rates were reduced in half after reform (this would encourage people to stay in the system); as above, gaps between Social Security revenue and expenditure were either financed by income taxes or consumption taxes.

Summary of Major Findings

Our simulations yielded four major findings:

1. The larger the amount of wage-income taxes collected, the slower the adjustments in the economy: There are two important points to be made. First, as mentioned above, the traditional approach costs the government more than the dropping-out approach. This means that the government needs to collect more taxes under the first approach. As more money is extracted from the market, fewer funds are available for investments. Therefore, the economy grows slowly. The economic growth under the traditional approach is slower, in
general, than that of the dropping-out approach. Second, increases in wage-income tax rates encourage people to work less. Increases in consumption taxes encourage people to consume less. This means that there are more funds available for investments and also more workers available for production under consumption-tax financing than income tax financing, and, in general, economic growth is faster.

2. Larger increases in wage-income taxes mean smaller welfare decreases among the elderly at the time of reform, while larger increases in interest-income taxes or consumption taxes mean larger welfare decreases among them. The elderly do not work, because their working years are over, but they earn, because their savings earn interests. Therefore, wage-income taxes do not hurt the elderly, but interest-income taxes do. In addition, given the same income levels, the elderly consume relatively more than younger people (because they do not need to save much); therefore, consumption taxes hit the elderly relatively hard. Therefore, income-tax financing is in general preferable to consumption-tax financing, and the dropping-out approach is in general preferable to the traditional approach for the elderly.

3. Income tax-financing decreases the welfare of low-income people less than consumption tax-financing does. Low-income people are more or less exempt from income taxes, but they are not exempt from consumption taxes, which would hit them harder.

4. Under the dropping-out conversion approach, how quickly young people drop out of the system influences how equally the effects are spread out across age cohorts. Under the dropping-out system, age groups choosing to stay in the system will be hurt the most, because they pay the payroll taxes as well as increased income or consumption taxes that finance the transition (recall that those who dropped are exempt from the payroll taxes). As more people choose to stay in the system, therefore, the initial negative welfare effects of the reform will be spread out across more cohorts. Therefore, welfare decreases for each age cohort will be smaller.

Conclusion

Under the standard conversion approach of the Social Security system to personal accounts, the government, after eliminating the payroll taxes, keeps paying people the benefits based on their payroll-tax payments in the past. Under this approach, the government compensates people more than what Social Security is worth to them. To avoid this overpayment problem in the standard approach, we have considered an alternative reform approach, where the government allows people to drop out of the system and also uses general revenues to finance any future gaps between the payroll taxes and the benefits payable. Summarizing our simulation models, we have compared macroeconomic and welfare effects of the two alternatives. In general, economic growth is faster under our dropping-out approach than the standard one. However, depending on the payroll tax rates applied and also the tax base used to finance the Social Security benefits, initial negative welfare effects of the dropping-out conversion fall on different income and age groups.

Kent Smetters is an Assistant Professor of Insurance and Risk Management at the Wharton School.
Jan Walliser is at the International Monetary Fund.

MRRC booth at the Gerontological Society of America Meetings in Boston

The MRRC conference booth appeared recently at the GSA Meetings in Boston, November 22-25, 2002. MRRC staff were available to respond to inquiries from conference attendees. In addition, the booth made available materials including MRRC working papers, Issues in Brief, a list of research topics, current and previous Center newsletters, and MRRC brochures. The Boston Center for Retirement Research shared this booth with one staff representative and similar materials for distribution. Although the booth will not be appearing at further conferences in year five (2002-2003), all materials that have been distributed at the booth will be available on the website. An order form is included with this newsletter and on the MRRC website that allows you to order hard copies of our materials.
Issue in Brief
Transition Paths and Social Security Reform
By John Laitner

Executive Summary

Over time, the Social Security program has evolved as a pay-as-you-go, or an unfunded system. With the well-known problems plaguing the current system, some have argued for a changeover to a funded system. Funding the system might help participants understand the relation between their taxes and benefits, and it might facilitate further reform that expands the latitude for individual choice.

In this Issue in Brief, I describe a procedure in which the U.S. Social Security system could be transformed into a funded system virtually instantaneously through the use of government debt. Surprisingly enough, such a reform would have almost no direct economic consequences. It might, nonetheless, be significant: it might change society’s psychology when coping with future demographic trends, it might clarify for voters the full extent of the economy’s indebtedness, and it might facilitate additional reforms.

While proposed reforms usually include provisions for new tax revenues, I suggest splitting the task into two parts: funding the system through national debt, and then paying down the national debt. Regardless of the theoretical framework used for understanding these changes, paying down the debt reduces the tax burden on future generations. In some cases, it leads as well to a substantial long-run increase in the economy’s stock of physical capital and, hence, potential output. Other models predict more modest changes, perhaps with reductions in the inequality of private wealth holdings.

Transition to a Funded Social Security System

In a funded Social Security system, each generation pays for its own benefits; this is in contrast to the current, unfunded system, in which each generation pays for the previous generation’s benefits. This section outlines a procedure for shifting to a funded Social Security system in a way that leaves physical investment, interest rates and wages unchanged. Government’s total liabilities, explicit and implicit, would remain the same, but the balance would shift to the “explicit” side. In principle, the economy could engineer such a shift rapidly.

In this funded system, current retirees would continue to receive Social Security benefits. However, current workers would stop paying Social Security tax and, when retired, would not receive Social Security benefits from the government. Instead, at the time of the program’s implementation, each worker would receive from the government a one-time payment of government bonds. This payment would be equal in value to the worker’s vested Social Security benefits to date. These bonds would be put into a private account in the worker’s name from which the worker could not withdraw funds until his retirement. Over the remainder of his working lifetime, the worker would be required to save a government-mandated amount of money each year. These yearly, required savings would be invested in government bonds and put into the same account as the one-time bond payment. The amount of these yearly savings would be set so that, at the end of the worker’s working lifetime, the total value of the bonds in this account would be equal to the value of the entirety of the Social Security benefits that the worker would have received in retirement under the old program. Once retired, the worker would be able to draw from the account each year an amount equal to the Social Security benefits that he would have received that year under the old program.

The Social Security taxes saved by workers under the funded program are likely to be greater than the mandated private-account saving required of workers. Likewise, the Social Security taxes lost to the government under the funded program are likely to be greater in value than the Social Security benefit payments relieved of the government by the Social Security tax’s abolition. To erase these discrepancies, each worker would pay a yearly tax, called a “debt service tax,” to the government. With this tax, both people’s lifetime incomes and the long-term cost to the government of Social Security are the same under the funded and unfunded programs.

The one-time bond payment would increase the national debt. However, it would also relieve the government of its obligation to pay in the future to the bond payment’s recipients the proportion of Social Security benefits accounted for by the bond payment. These Social Security benefits are an equally expensive implicit debt of the government; although they do not show up in the government’s accounts, they are, exactly like govern-
ment debt, an obligation of the government to pay others in the future. Therefore, the government’s “true” debt, explicit and implicit, is the same under the funded and unfunded programs; explicit debt merely replaces implicit debt.

Because of the yearly interest payments on the extra debt undertaken by the government to finance the one-time bond payment, government budget deficits will be higher or, equivalently, government saving will be lower under the funded program. However, because of the yearly mandated saving, personal saving will be higher under the funded program. It can be demonstrated that the amount by which personal saving is higher is equal to the amount by which government saving is lower. As a result, overall saving is the same under the funded program as under the old, unfunded program. Since overall physical investment equals overall physical saving, it, too, is the same. In turn, the stock of physical capital, interest rates, and wage rates will also be the same under the funded program as under the unfunded program. Since overall physical investment equals overall physical saving, it, too, is the same. In turn, the stock of physical capital, interest rates, and wage rates will also be the same under the funded program as under the unfunded program.

The analysis so far suggests that one can transform many Social Security problems into analyses of national debt. It also suggests that we can measure the “burden” to an economy of an unfunded Social Security system with the size of the national debt, which one creates in the process of instantaneously funding the system. Quantitatively, the size of the implicit debt from the U.S. Social Security system is very substantial. Geanakoplos et al (1999), for example, use a 1997 figure of $8.9 trillion.

**Funded vs. Unfunded Social Security**

What might be the advantages of a funded Social Security system? First, the private accounts in the funded system might ease workers’ worries about the safety of their future benefits. Second, the private accounts in a funded system might make other reforms to Social Security, such as allowing people to invest their Social Security funds into corporate bonds or common stocks, more easily implemented.

Third, a funded system might change participants’ psychology enough to help arrest future growth of the government’s explicit and implicit debt. For example, suppose people are expected to live longer and enjoy longer retirements in the future. Under the unfunded system, a standard course of action would be to wait until the future and raise Social Security taxes to pay for the extra costs to the government of paying Social Security benefits over longer retirements. Since this means the government is obligated to pay more Social Security benefits in the future, the government’s implicit debt increases. In contrast, under the funded system, the young are likely to support an increase in the amount of money they are required to contribute to their private accounts to ensure that funds are available to draw from that account over a longer period of retirement. This does not increase government debt, explicit or implicit. Fourth, funding the Social Security system would simplify information problems for voters. Instead of having to keep track of two types of government debt—explicit and implicit—there would be a single one.

**Why Reduce the National Debt?**

I now turn to the question of paying down the national debt. Converting the Social Security program to a funded system of personal accounts would, as just explained, enormously increase the explicit national debt. We might then want to raise new tax revenues to reduce that debt. Why pay down the national debt? I consider three possible answers. First, the “morality” answer contends that, when an economy finances current government services, or transfers, with debt, it is, in effect, passing the cost on to future generations. The second answer, “generosity,” is more subtle. It contends that paying down the national debt now will spare future generations the costs of a higher national debt. These costs include “dead weight loss,” the economic term for the cost of the inefficiencies caused by the distorted work and savings disincentives associated with the higher income and Social Security taxes needed to pay interest and debt principal in the future. The third answer, “necessity,” contends that this dead weight loss may become unbearably great in the future if the national debt continues to grow, to the extent that there is no choice but to contain the national debt. In conclusion, there are several possible reasons an economy might want to reduce, or control the size of its national debt.
Potential Benefits of Reducing National Debt

Economists employ two basic frameworks when analyzing people’s economic behavior: the life-cycle model and the dynastic model. The life-cycle model assumes that people care exclusively about their own lives, not those of their predecessors or descendants. In the dynastic model, people care about their descendants as well.

In the life-cycle model, an increase in the national debt will reduce the stock of capital in the economy. An increase in government debt intensifies the competition among government bonds, corporate bonds, common stocks, and other financial instruments for people’s savings, forcing firms to increase the interest rates they pay on corporate bonds and the rates of return they pay on common stock. Consequently, it becomes more expensive for firms to raise money to finance physical investment. In the long run, this will result in a smaller stock of capital in the economy. A smaller stock of capital will result in lower labor productivity and, consequently, lower wages and GDP in the long run. Consequently, in the life-cycle model, an increase in the national debt should cause higher interest rates, a smaller capital stock, lower wages, and a lower GDP. Similarly, paying down the national debt should result in lower interest rates, a larger capital stock, higher wages, and a higher GDP in the long run.

In the dynastic model, an increase in the national debt does not reduce the stock of capital. People in the dynastic model realize that a larger national debt will result in future generations being taxed more to pay off that debt. As a result, people will save more in order to make larger bequests to future generations to compensate for the greater tax burden. In the simplest dynastic models, the increase in personal savings will equal the increase in government debt, and so the increased abundance of personal savings will neutralize the extra competition for personal savings posed to corporate bonds, common stocks, etc. by the newly issued government bonds. Firms will not have to increase the interest rates they pay on corporate bonds or the rates of return they pay on common stock, so it will be no more expensive to raise money to purchase capital than before. Therefore, firms will not demand any less capital than before, and the stock of capital in the economy stays the same in the long run. Therefore, in the dynastic model, an increase (or, for that sake, a decrease) in the national debt has no long-run effect on interest rates, the capital stock, wages, or GDP.

In a theoretical analysis that uses a hybrid of the two models—one in which saving is driven by a combination of life-cycle and dynastic motives—Laitner (2001) finds that, for policy purposes, the economy is better described by the dynastic model. Consequently, a change in the national debt should not have a sizable effect on interest rates, the capital stock, wages or GDP in the long run. On a side note, Laitner (2001) does expect an increase in the national debt to worsen wealth inequality in the future.

Conclusion

This Issue in Brief summarizes work that suggests that the U.S. Social Security system could be reformed from an unfunded to a funded system virtually instantaneously through the use of government debt. This might have several benefits, which are discussed. I then describe several reasons why we would want to pay down the national debt and end by cataloguing different macroeconomic implications of debt reduction. In all cases, paying down the debt reduces the tax burden on future generations.

John Laitner is a Professor of Economics at the University of Michigan and the Director of the Michigan Retirement Research Center.

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MRRC research awards for 2002-2003

We are pleased to announce the recipients of research awards for the coming year.

Papers on International Social Insurance Program Reform by Agar Brugiavinni and Axel Borsch-Supan

Lifetime Uncertainty and Social Security Reform by John Laitner

How to Evaluate the Effects of Social Security Policy on Retirement and Saving When Firm Policies Affect the Opportunities Affecting Older Individuals by Alan L. Gustman and Thomas L. Steinmeier

Characteristics of and Determinants of the Density of Contributions in a Private Social Security System by Jere Behrman, David Bravo, and Osvaldo Larranaga

How Attractive are Guarantees in Social Security Personal Retirement Accounts? by Olivia S. Mitchell and Alexander Mueermann

The Impact of Financial Education on Savings and Asset Allocation by Annamaria Lusardi

How Will the Annuities Market Develop if Social Security Includes Individual Accounts? by Guillermo Martinez Barros Estelle James, and Augusto Igelsias Palua

Changes in Income, Wealth, or Medical Expenses? A New Look at the Causes of Poverty Among Widows by Kathleen McGarry and Robert F. Schoeni

Labor Supply Flexibility and Portfolio Decisions of Older Americans by Hugo Benitez-Silva

Consumption and Time-Use Before and After Retirement by Susann Rohwedder and Michael Hurd

Household Retirement Expectations, Social Security Reform, and Savings Adequacy by Hugo Benitez-Silva and Debra Sabatini Dwyer

Welfare Measures in a Stochastic Production Economy with Overlapping Generations: An Application to Social Security Reform by Kent Smetters

Understanding Measures of Social Security Benefit Receipt, Pension Incomes, Retirement and Savings by Race, Gender, and Marital Status: A Structural Approach by Alan L. Gustman and Thomas L. Steinmeier

Take-up of the Supplemental Security Income Program by the Low-Income Elderly: Interactions with Social Security by Todd Elder and Elizabeth Powers

Back to Work: Trends in Post-Retirement Employment by Nicole Maestas

Full descriptions of the newly awarded projects as well those for previously funded research are available at www.mrrc.isr.umich.edu/research/research.cfm.

Mark your Calendars for the 5th Annual Conference of the Retirement Research Consortium

May 15-16, 2003
National Press Club
Washington, DC

Information about this conference, including registration information, will be provided and updated as needed on the MRRC website: www.mrrc.isr.umich.edu or can be obtained by calling Patty Hall at (734) 615-0422.

The 5th Annual Conference is being organized

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