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———. 2001b. Individual risk in an investment-based Social Security system. *American Economic Review* 91 (4): 1116–25.
Feldstein, Martin, Elena Ranguelova, and Andrew Samwick. 2001. The transition to investment-based Social Security when portfolio returns and capital profitability are uncertain. In *Risk aspects of investment-based Social Security reform,* ed. J. Y. Campbell and M. Feldstein, 41–90. Chicago: University of Chicago Press.
Feldstein, Martin, and Andrew Samwick. 1998. The transition path in privatizing Social Security. In *Privatizing Social Security,* ed. M. Feldstein, 215–64. Chicago: University of Chicago Press.

Comment David W. Wilcox

Martin Feldstein has probably done more than any other person to highlight the urgent need to reform our Social Security system and the potential benefits of putting the system on an investment-based foundation. In addition, he has personally conducted a goodly fraction of the seminal research in this area and inspired others to undertake much of the rest. To state the obvious, this conference volume—like many of its predecessors in this subject area—would not have come to fruition without his efforts, and the research careers of many of the participants at this conference would not have been nearly so rich without his beneficial influence. When the nation finally confronts the imperative of reforming the system, much of the thinking surrounding the ensuing debate will have been shaped directly or indirectly by Feldstein. For all of this, we owe him an enormous debt of gratitude.

This chapter continues in the tradition of his pushing the research frontier forward. In earlier work with Ranguelova and Samwick, Feldstein proposed the idea of limiting the financial risk associated with participation in personal retirement accounts (PRAs) by having the government provide an explicit guarantee.[1] Although the probability of a draw on taxpayer resources struck the authors as relatively low and the associated costs in those cases seemed manageable, the idea was criticized, partly on the apprehension that once a government guarantee had been agreed to in principle, no matter how limited in its original form, the guarantee might be enhanced over time, ultimately becoming a considerable new burden on taxpayers.

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The views expressed in this comment are those of the author and are not necessarily shared by the Board of Governors of the Federal Reserve or by the other members of its staff. I am grateful to many colleagues for helpful comments on an earlier version of these remarks.

1. See, among others, Feldstein, Ranguelova, and Samwick (2000).

This chapter proposes an elegant remedy for that critique. Feldstein notes that the objective of risk reduction can be achieved entirely through market-mediated means. For example, a PRA investor who wants to be guaranteed a minimum real return of zero percent can have each year's contribution invested in a mixed portfolio of Treasury Inflation-Protected Securities (TIPS) and equities. The TIPS ensure that the guaranteed minimum return will be paid, while the equities provide the potential for upside risk. When participants are young, the fraction to be invested in TIPS is relatively small; as participants age, the fraction to be invested in safe securities rises. Similarly, as Feldstein notes, participants could limit their downside risk by contracting for "zero-cost collars." Under this approach, participants would, in effect, purchase put options to eliminate their downside risk and sell call options to finance the insurance. Both approaches have the great virtue of never involving the government as guarantor; they also recognize and operationalize the important idea that there is no need to impose a one-size-fits-all type of approach in an investment-based Social Security system; individuals clearly differ in their attitudes toward risk and their ability to bear it, and policymakers ought to contemplate the possibility of allowing them to choose a PRA structure that is tailored to suit their own attitudes and situations.

The fundamental idea behind these market-based approaches is appealing, creative, and convincing: Feldstein has demonstrated that market-based mechanisms can be devised to sharply limit the risks associated with participation in a PRA—mechanisms that keep the government at two steps' remove, and so substantially alleviate concerns about an implicit contingent liability. Accordingly, my remaining comments are organized in two sections. In the first, I note two important methodological questions that are raised by Feldstein's paper. In the last section, I note some of the other issues, aside from portfolio diversification and the associated financial risk, that will likely figure in the debate as to whether individual accounts should be part of the inevitable future reform of Social Security.

Two Questions

The conclusion that PRAs would be welfare-enhancing depends on the treatment of transition costs and the specification of a welfare function, among many other factors. This section examines issues related to both factors. The issues are framed as questions because I do not know the answers and hope to encourage others to work on them.

Question #1: How Should Transition Costs Be Addressed in Analyses of Fully Funded Systems?

In the long run, a sustainable pay-as-you-go Social Security system can pay a rate of return equal to the rate of growth of the population, n, plus

the rate of growth of productivity, p. By contrast, in a world free of random variation, a fully funded system—whether administered on a centralized basis with a trust fund or a decentralized basis with a system of personal retirement accounts—can pay a riskless rate of return equal to r^*. Standard models predict that utility-maximizing individuals living in a stochastic environment will not choose a portfolio that delivers the riskless rate but will instead accept some risk as the price of a higher expected return, which I will denote as r. In this chapter, Feldstein compares plans delivering $n + p$ to plans delivering various versions of r and concludes that most people would be happier with the latter than the former.

As is well known by now, thanks especially to papers by Geanakoplos, Mitchell, and Zeldes (1998, 1999), there is no inherent rate-of-return inefficiency in a pay-as-you-go Social Security system. Policymakers chose to confer above-market rates of return on the first generations to participate in Social Security; the inexorable consequence of those decisions is that all subsequent generations, taken as a whole, must experience a below-market return on their participation. The issue of how best to distribute the burden of paying for the net benefit conferred on early participants is an open question, but there is no debating the fact that someone will pay.

This chapter compares the status quo pay-as-you-go system to a fully phased-in investment-based system. In so doing, it leaves aside the transition costs that would necessarily be associated with paying off the unfunded liability built up under the current system. In light of the uncertainty about how those transition costs will ultimately be borne, it is fair to ask how they should best be reflected in an analysis like this one. Two approaches present themselves immediately; I have no doubt that these do not exhaust the range of possibilities, but they illustrate that the underlying issue can be addressed.

One way to take the transition costs into account would be to build on the central insight of the papers by Geanakoplos, Mitchell, and Zeldes (1998, 1999), that a pay-as-you-go-system does not suffer from any rate-of-return inefficiency. Accordingly, households in the aggregate should be indifferent between the current pay-as-you-go system and the investment-based alternative provided the PRA is invested entirely in TIPS. In the Social Security Trustees' Report for 2006, population is assumed to grow about 0.3 percent per year in the long term (that is, between 2040 and 2080), productivity is assumed to grow 1.7 percent per year, and government bonds are assumed to pay a 2.9 percent real rate of return. Thus, in the world of the trustees' projections, the necessary indifference condition could be achieved by adjusting the assumed rates of return on TIPS and stocks downward by 90 basis points.

Another way to take the transition costs into account would be to regard the analysis in the chapter as providing part of the overall answer and augment it with an analysis of the welfare consequences of the investment-

based approach for the generations that bear the transition cost. A complete apples-to-apples analysis could be produced by calculating the welfare gain or loss of *all* future generations, recognizing both that the transition costs are front-loaded relative to the benefits thereof and that all subsequent generations would presumably benefit from the shift to full funding.[2]

Under either approach, if the model is calibrated appropriately, PRAs will exhibit no welfare advantage over the pay-as-you-go system if households are required to invest the PRAs entirely in TIPS. Once that constraint is relaxed, however, many households will prefer PRAs because, as usual, a certain amount of additional equity risk will be seen as desirable given the higher expected rate of return.[3]

Question #2: What Welfare Function Should Be Used to Evaluate the Results of the Simulations?

The CRRA utility function used to conduct the welfare analysis in this chapter yields counterfactual predictions on at least two issues of immediate relevance to the desirability of an investment-based approach to Social Security reform:

- If CRRA were the right utility function and the coefficient of relative risk aversion were between one and five, the equity premium would not have been declared a puzzle (Mehra and Prescott 1985). Put differently, if everyone had the utility function posited in this chapter, post-WWII returns on stocks and bonds would have had markedly different empirical properties.
- If CRRA utility were the right utility function, then—as my colleague Sean Campbell has recently pointed out—the reduction in the volatility of real activity that seems to have occurred around the early- to mid-1980s would have been accompanied by a proportionate reduction in the volatility of asset prices, but it was not (Campbell 2005).

The analysis in the chapter would be considerably more compelling if it used a utility function capable of generating the posited distribution of asset returns. Thanks to some relatively recent research, that objective appears to be achievable.[4]

2. Feldstein and Liebman (2002b) undertake an analysis of this sort and show that a transition to an investment-based Social Security system increases the present discounted value of consumption of all current and future generations provided the marginal product of capital exceeds the discount rate applied to the future consumption.

3. Some households will be indifferent to the constraint on portfolio holdings because they will adjust the composition of their non-Social Security portfolio to offset any change in the composition of their Social Security portfolio.

4. For example, the habit-based utility function proposed by Campbell and Cochrane (1999) can account for the behavior of the equity premium over the postwar period and, as demonstrated by Sean Campbell (2005), it can also account for the failure of the Great Moderation in real activity to be reflected in the volatility of equity returns.

Other Considerations Relevant to the Evaluation of PRAs

If the current pay-as-you-go system and an investment-based system are put on the same footing, and ignoring any lifetime wage insurance that might be provided through the current system but not by simple versions of individual accounts like the one studied here, the representative worker will be indifferent between the two systems if constrained to invest only in the risk-free asset, but will strictly prefer the investment-based approach if allowed to invest part of his or her portfolio in risky assets. What other considerations should policymakers take into account as they consider this extremely important decision? The issue is not easy because serious arguments can be made on both sides. The following strike me as some of the most important of those arguments. First, as to the arguments *in favor* of individual accounts:

- *Personal accounts are naturally self-sustaining.* Under a system of personal accounts, promised benefits can never exceed available resources because the only promise in a defined contribution (DC) structure is that each beneficiary will receive the proceeds of his or her own account. No solvency crisis can occur under such a structure; the parameters of such a system never need to be adjusted to put the system back on a sustainable trajectory. By contrast, in a defined benefit (DB) structure, the parameters can—and, as demonstrated by present experience, do—get out of alignment with what is sustainable. Moreover, the structure is not inherently self-correcting; unless self-correcting mechanisms have been built into the structure (such as, for example, indexing the retirement age to longevity), overt decisions must be taken to bring the system back into sustainability. In practice, these decisions can be delayed long past the time when they should be made.
- *A system of personal accounts is more credible as a vehicle for ensuring that "saving" for retirement actually adds to the capital stock.* A plausible argument can be made that the current system—while generating $1.9 trillion in apparent saving since 1983 in the form of trust-fund accumulation—has generated little or no real government saving.[5] This argument runs as follows: if, since 1983, Congress and the president have set their fiscal objectives in terms of the unified budget (for example, they might have been aiming to produce a balanced unified budget), then the Social Security surpluses that have been run during that time have served only to facilitate larger non-Social Security deficits than would have occurred otherwise. In other words, the saving that should have been used to prepare for future retirements has

5. To be sure, counterarguments can be made as well; see, for example, Diamond and Orszag (2003).

been dissipated. A system of individual accounts might be more likely to preserve such saving for its intended use. If contributions into the accounts are scored against the concept of the budget around which the political conversation revolves—a plausible but not certain hypothesis—then those resources might be seen as having been "taken off the table," and policymakers might be driven to choose a tighter fiscal policy than under the current system. In other words, *apparent* saving through the Social Security system would translate one for one into government saving. Whether that government saving would be transmitted into national saving would depend on whether the added saliency of the personal accounts would cause personal saving to decline. Unfortunately, the issue of whether Social Security surpluses actually contribute to government saving is of diminishing importance with each passing year because the time when Social Security surpluses will turn into deficits is drawing nearer.[6] Beginning roughly a decade from now, a fiscal policy anchored on the unified surplus or deficit will be more restrictive than one anchored on the balance excluding the current operations of the Social Security system.

- *A system of personal accounts might impress upon individuals that they have a responsibility for their own financial security in retirement.* A system of individual accounts might foster a greater sense of individual responsibility. In turn, that sense of individual responsibility could contribute to an enhanced popular appreciation of how important it is for individuals to behave in ways that are favorable to growth over time.
- *A system of personal accounts would open to everyone the opportunity to bear some equity risk.* For some individuals, failure to participate in equity ownership, no doubt, represents a rational decision grounded in considerations such as greater-than-average riskiness of own labor income, greater-than-average aversion to risk, and so forth. For others, however, it probably reflects considerations (such as high transactions costs or basic ignorance about investing in the stock market) that a system of personal accounts could help overcome. The magnitude of any welfare gain that would result from breaking down these market imperfections is difficult to estimate.
- *A system of personal accounts could reduce the price of risk and in so doing could induce entrepreneurs to undertake a riskier set of investment projects. Assuming risk is associated with return, the result could be an economy with somewhat greater aggregate risk but also somewhat faster average growth.* If a system of personal accounts induces additional

6. According to the 2006 Social Security Trustees' Report, Old-Age, Survivors, and Disability Insurance (OASDI) costs (benefits plus administrative expenses) will first exceed tax revenues in 2017; costs are projected to exceed overall OASDI income (including interest on assets held in the trust fund) starting in 2027.

demand for risky securities, it should also cause a reduction in the price of risk. Confronted with a lower price of risk in financial markets, entrepreneurs could, over time, choose to undertake a riskier portfolio of investment projects. To my knowledge, no empirical basis exists for judging whether any such shift would be important quantitatively or negligible.

Now as to some of the considerations militating *against* introduction of individual accounts:

- *Personal accounts could come to represent a major new liability for the federal government.* Over time, a system of individual accounts would inevitably create wave after wave of "notch babies"—cohorts retiring with noticeably lower accumulated assets despite having similar earnings histories. Policymakers would face enormous political pressure to insulate beneficiaries from the consequences of their investment decisions and the vagaries of the market. The contingent liability associated with any such move could represent a significant new fiscal burden. Given that no Congress can credibly restrict the actions of future Congresses, it is hard to see how the issue of the implicit put can be avoided entirely.[7]
- *In their simplest forms, personal accounts leave at best limited scope for sharing risks, either within or across generations.* The current system is intended to provide a measure of social insurance: It provides insurance against lifetime earnings risk by providing a higher replacement rate for low-income workers than for high-income workers; it provides insurance against disability; and it provides insurance against early death, in the form of survivors benefits for children of deceased workers, widows and widowers with minor children, as well as widows and widowers of retired workers. The current system also has the scope to smooth risks across generations; in principle, this could include not only demographic risks but also financial risks. While some of these features could be built into a system of individual accounts, they are not inherent in the simplest versions of PRAs.
- *Social Security may not be an appropriate vehicle for financial risk-taking.* Social Security is intended to provide a foundation for financial security in retirement, but was never intended as more than that. Under current law, Social Security promises a replacement rate of about 42 percent for a typical worker near the middle of the earnings distribution, but the current system is not sustainable. Assuming that resources into the system are capped at the current 12.4 percent of payroll, revenues will be sufficient to pay only about 70 percent of

7. Kent Smetters (2001) has emphasized the enormous cost of explicit government guarantees.

current-law benefits by the middle of this century. Assuming revenue of 12.4 percent of payroll, a sustainable replacement rate is probably in the neighborhood of 28 percent. Personal-finance professionals conventionally advise aiming to accumulate enough resources to provide an overall replacement rate of about 75 to 80 percent in retirement. Thus, by the middle of this century, workers should be aiming to replace about 50 percent of preretirement income out of some combination of employer pension benefits and personal saving. Even a very-risk-tolerant individual could probably satisfy his or her appetite for equity-risk exposure even if prevented from holding *any* equity risk through the Social Security system.

- *Relative to the current Social Security system, personal accounts could prove a costly means of transferring resources.* In 2003, the cost of administering the current Social Security system amounted to about 1 percent of benefits paid. If the costs of an investment-based system can be limited to 30 basis points per year, benefits over a forty-year career would be reduced by about 6 percent, or roughly six times as much as under the current system. Estimates on the order of 30 basis points are based on the idea of modeling an investment-based system on the federal Thrift Saving Plan. However, such analysis has been heavily criticized as too optimistic.[8] Based on the costs of administering private plans in the United States and the experience of foreign countries with privatized systems, some analysts have suggested that annual costs in the neighborhood of 1 percent per year are more realistic. Costs in this range would reduce annual benefits by about 20 percent—a very sizable reduction in efficiency compared to the current system.[9]
- *A system of personal accounts might turn out to be significantly more regressive than suggested by simple simulations.* The labor force attachment of lower-income individuals is much more tenuous than that of higher-income individuals. This can have important implications for the distributional characteristics of a system of personal accounts. If low-income workers have relatively more spells of unemployment, they will experience relatively smaller account accumulations than would be indicated by simulations based on hypothetical "steady

8. For example, Francis Cavanaugh, the first executive director of the federal Thrift Saving Plan, is quoted in the *Washington Post,* March 3, 2005, as follows: "There's no way they can do this without an enormous federal subsidy. . . . This has to do with workability, no matter how one feels about it philosophically, and it's not workable." He also characterized the 30 basis point estimate referred to in the text as "ridiculously optimistic." See http://www.washingtonpost.com/wp-dyn/articles/A2367-2005Mar2.html.

9. Related concerns are that a system of PRAs might give rise to much greater "leakage" of retirement saving during the preretirement years and that the introduction of PRAs might cause individuals to choose to annuitize too little of their Social Security resources, leaving themselves overexposed to the risk of outliving their resources.

earners" whose earnings follow smooth trajectories over their working careers. Feldstein and Liebman (2002a) conduct simulations of this type using real-life earnings histories and demonstrate that this concern can be addressed by a small change in the contribution or benefit rule.[10]

One consideration difficult to categorize as either a pro or con is the scope for participants in a system of PRAs to tailor their asset holdings to their risk tolerances and individual circumstances. If all individuals are fully rational, this scope for choice will obviously be utility-increasing. If at least some individuals are not fully rational, choice will be a mixed bag. The behavioral economics literature is replete with examples of individuals engaging in nonrational financial decision making.

Concluding Remarks

In demonstrating that the financial risk associated with participation in PRAs can be substantially mitigated through market-based mechanisms—leaving government more convincingly out of the picture—this chapter takes a significant step forward. The analysis suggests that workers would strongly prefer a fully funded investment-based system over the current pay-as-you-go system. The margin of preference would obviously be narrower if the costs of achieving full funding had been taken into consideration; an important question is how much narrower. Future research should address that question. It should also attempt to extend Feldstein's analysis to models that provide realistic accounts of why some individuals do not currently invest in equities and realistic accounts of why the decision making of other individuals seems to be so heavily influenced by factors (such as default settings) that should be irrelevant according to conventional theory. Aside from the welfare consequences of broadening the menu of available investment vehicles, myriad other issues, both pro and con, should also figure into the debate over whether to adopt a system of individual accounts.

References

Campbell, John Y., and John J. Cochrane. 1999. By force of habit: A consumption-based explanation of aggregate stock market behavior. *Journal of Political Economy* 107 (2): 205–51.

Campbell, Sean D. 2005. Stock market volatility and the great moderation. Federal Reserve Board, Finance and Economics Discussion Series no. 2005:47. Washington, DC: Federal Reserve Board.

Diamond, Peter, and Peter Orszag. 2003. *Saving Social Security: A balanced approach.* Washington, DC: Brookings Institution.

10. See Feldstein and Liebman (2002a).

Feldstein, Martin, and Jeffrey Liebman. 2002a. The distributional effects of an investment-based Social Security system. In *The distributional aspects of Social Security and Social Security reform,* ed. M. Feldstein and J. Liebman, 263–326. Chicago: University of Chicago Press.

———. 2002b. Social Security. In *Handbook of public economics.* Vol. 4, ed. A. Auerbach and M. Feldstein, 2245–2324. Amsterdam: Elsevier.

Feldstein, Martin, Elena Ranguelova, and Andrew Samwick. 2000. The transition to investment-based Social Security when portfolio returns and capital profitability are uncertain. In *Risk aspects of investment-based Social Security reform,* ed. J. Y. Campbell and M. Feldstein, 41–90. Chicago: University of Chicago Press.

Geanakoplos, Jean, Olivia Mitchell, and Stephen P. Zeldes. 1998. Would a privatized Social Security system really pay a higher rate of return? In *Framing the Social Security debate: Values, politics, and economics,* ed. R. D. Arnold, M. J. Graetz, and A. H. Munnell, 137–56. Washington, DC: Brookings Institution.

———. 1999. Social Security's money's worth. In *Prospects for Social Security reform,* ed. O. Mitchell, R. J. Myers, and H. Young, 79–151. Philadelphia: University of Pennsylvania Press.

Mehra, Rajnish, and Edward C. Prescott. 1985. The equity premium: A puzzle. *Journal of Monetary Economics* 15 (2): 145–61.

Smetters, Kent. 2001. The effect of pay-when-needed benefit guarantees on the impact of Social Security privatization. In *Risk aspects of investment-based Social Security reform,* ed. J. Y. Campbell and M. Feldstein, 91–112. Chicago: University of Chicago Press.