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A STRUCTURE FOR ANALYSIS**

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ABSTRACT

This paper identifies the key economic issues that must be addressed in the debate over a privatized social security system. We examine a two-pillar plan. The first pillar would consist of a demogrant: a small indexed pension of the same dollar amount for all retirees who had contributed to the system over a full lifetime of work. The second pillar would consist of a fully-funded individual defined-contribution account, financed by payroll taxes, held in financial institutions, and directed by participants. We explore how such a system would affect the risks households face, how it would alter the distribution of income, and how it might influence household behavior, including incentives to work and save, and portfolio choices. We also examine macroeconomic issues: how the transition to a private plan would occur, and what the likely effects would be on national saving.

We conclude that a two-pillar system offers several positive features, namely a reduction in political risk, an increase in household portfolio choice, and improved work incentives. Disadvantages include less redistributiveness and national risk sharing, and increased administrative costs.

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The US social security system is in need of reform. Its Trustees forecast that absent changes, contributions will fall below benefits in 2012 and the system's trust fund will be exhausted in 2030 (Technical Panel, 1995). Many have discussed achieving system solvency by raising taxes and cutting benefits, but recently a more fundamental reform has been proposed, namely "privatization" of some or all aspects of social security. This paper identifies key economic issues that must be addressed in the debate over a privatized system in the United States.

I. The Mechanics of Social Security Privatization

It is useful to recall the economic rationales for our current social security system (Peter Diamond, 1977) before analyzing whether the public or private sector can better achieve the underlying economic goals. Six features of the current system are salient. 1) It provides forced saving, or income that cannot be spent prior to retirement. 2) It provides insurance against earnings loss, disability, and longevity. 3) It redistributes income from high to low lifetime earners. 4) It is mainly an unfunded or pay-as-you-go system. 5) It is controlled and administered by the government. 6) It is a defined benefit plan.

Privatization could take many forms. An extreme version would end all government involvement in the provision of retirement income. We take as given that some forced saving is appropriate and focus on reforms that involve a shift to a mandatory defined-contribution individual plan with contribution

levels set by the government.

In our judgment, there are two key steps to a privatization plan. 1) Allocate all future contributions to a two-pillar arrangement. The first pillar would entail a small demogrant or minimum pension for retirees who contributed to the system over a full lifetime of work.¹ The second pillar would be a fully-funded individual defined contribution account, financed by payroll taxes, held in financial institutions, and directed by participants.² 2) Compensate current system participants for promised benefits by giving them specially issued government "recognition" bonds³ worth no more than the value of their accrued benefits minus the present value of the demogrant.⁴ Retirement consumption would be supported by the demogrant in the form of an indexed annuity, funds from the individual social security retirement accounts, and other funds privately accumulated.

This plan is similar (but not identical) to the most widely

¹ Some advocate a means-tested first-pillar instead of a demogrant.

² Financial regulation such as that governing 401(k) pension plans would be required.

³ Here, the switch is immediate and mandatory; alternatives would be to make it gradual and / or optional.

⁴ As with any defined benefit plan, computing accrued benefits can be complicated. The proposed system might improve long-term solvency if the government bonds were worth less than net promised future payments; households might still prefer this to the current uncertain prospect of future benefits.

cited functioning privatized social security plan: that of Chile (Diamond and Salvador Valdes-Prieto, 1994). There, workers contribute 10% of pay into a regulated privately managed fund of their choice (plus 3% for administrative costs and disability insurance); retirees receive benefits as an indexed annuity or may receive a lump sum if their annuity exceeds the government-guaranteed minimum pension. Recognition bonds were issued; this old-system debt equals roughly 80% of Chile's GDP (World Bank 1994).

II. A Framework for Evaluation

This section examines how privatization would be expected to affect economic behavior. The appropriate comparison is between solvent public and privatized plans, so we assume that the necessary benefit cuts and tax increases have been implemented to achieve system solvency (Technical Panel, 1995).

A. How would privatization affect the risks households face?

The current system provides households with insurance against shocks to earnings, length of life, and inflation. There is a close link between insurance (transfers on the basis of unpredictable outcomes) and redistribution (transfers based on predictable outcomes), and the current system contains elements of both. The earnings insurance comes from four sources. 1) The schedule relating retirement benefits to contributions is

concave, due to its "bend points." 2) Retirement benefits are based on an average of the 35 highest-earning years. 3) The program includes disability insurance. 4) The system is primarily pay-as-you-go, meaning that benefit levels of the current old are positively related to earnings of the current young; this provides some intergenerational risk-sharing.

Social security benefits are paid in the form of an annuity, providing insurance against living too long, and the annuity payments are indexed to inflation, providing insurance against inflationary shocks.

The current system also introduces political risk, because in the past Congress has frequently changed benefits and taxes. Uncertainty about the political climate adds risk to retirees' payment streams; indeed surveys find that many young Americans are worried that Social Security will not provide currently-promised benefits.

Could private markets replace the reduced public insurance, and if so, would they be more or less efficient? Some intragenerational earnings insurance would be maintained under a two-pillar system by the flat demogrant; it could be increased by means-testing the first pillar based on lifetime earnings.⁵ To the extent that the new system provided less of this insurance, it is unlikely that the private sector would replace it: adverse selection

⁵ Increasing the progressivity of the personal income tax is an imperfect substitute because the current social security system insures based on lifetime (rather than one year's) earnings (Diamond, 1977).

is severe in the market for earnings insurance, and no private markets currently exist. Intergenerational risk sharing would also be absent in a privatized system, and the private sector would not provide it due to the impossibility of writing contracts with unborn future generations. A form of earnings insurance that private firms do offer is disability insurance, and this market could expand if social security were privatized. Moral hazard is a problem, but equally so for private and public provision.

Consider next insurance against length of life. Private firms do issue individual annuities, but households have private information about mortality and those expecting to live longer are more likely to purchase annuities (Mark Warshawsky, 1988). The current social security system avoids this form of adverse selection because annuitization is mandatory and all households are grouped into a single risk pool. Adverse selection under privatization could be mitigated by mandating some annuitization, as in Chile.⁶

Even if private markets could provide annuities, it is not clear that their payments could be indexed to inflation, as benefits are currently. If the Treasury were to issue indexed bonds, this would likely facilitate private sector issuance of indexed annuities (Technical Panel, 1995).

⁶ Risk pooling diminishes if information about expected lifespan arrives over one's life and private insurers charge individuals risk premiums based on their risk at retirement age. Mandating a national risk pool or requiring annuity purchase at younger ages might resolve this objection.

Balanced against the privatized system's shortcomings is the new opportunity for households to hedge other types of risk in private capital markets. In addition, and importantly, younger and middle-aged workers would confront less political risk because a privatized system would eliminate the need for governments to alter social security rules in response to economic or political pressures.

B. What would be the distributive consequences of privatization?

The current system ostensibly redistributes from workers with higher to those with lower lifetime earnings. While all workers contribute the same fraction of covered social security earnings, low earners' benefits replace a higher fraction of covered earnings. Despite its intent, the system is less progressive than it might seem because there is a positive empirical correlation between lifetime earnings and length of life (Constantijn Panis and Lee Lillard, 1995).

To maintain redistribution under a two-pillar system, either the demogrant could be set high or the dollar amount put in low earners' accounts could exceed the amount deducted from their pay (with the reverse for high earners). In addition the entire individual account could be made taxable (and thus subject to the progressive income tax) when withdrawn (only a part of social security benefits is now taxable). In practice, however, a two-pillar social security system would likely be less redistributive.

C. How would privatization alter household behavior?

1. Household portfolio choices: Individual accounts would give households added control over how their retirement funds are invested. Whether this is beneficial or detrimental depends on one's outlook and assumptions. For example, if current social security benefits can be mimicked with existing financial assets and households are unconstrained in their portfolio choices, then privatization would have no effect (the neutrality benchmark).

However, many households have little or no non-social security wealth and are therefore probably constrained in their holdings of certain assets; the plan would improve their choice set, enabling them to select a more efficient portfolio and attain a better point on the risk-return frontier. Because of differences in tastes across households, this change would be superior to the implicit uniform portfolio rule of the current system. The added control might also improve "financial literacy." On the negative side, if households are not well informed about risk and return, or for other reasons are unable to make "wise" investment choices, the added control could be detrimental to household well-being.

2. Household incentives to save: Households might alter their saving in response to changes in both the level and riskiness of future income resulting from privatization. Holding the mean of future income constant (which is appropriate for examining privatization), a decrease in uncertainty will decrease precautionary saving. As described above, overall uncertainty would fall due to the reduced political risk, but would rise due to

the reduction of insurance. The net effect is theoretically ambiguous.

3. Household work incentives: There is a tradeoff between efficiency losses due to a distortion of incentives and gains due to insurance: the tighter is the link between contributions and benefits, the smaller are both the labor supply distortion and the earnings insurance (Diamond, 1977, Laurence Kotlikoff, 1995). (Distortions not related to insurance may also be present). Privatization would increase this linkage by, for example, dropping the 35-year averaging period, eliminating the actuarially unfair adjustment for postponing retirement, and crediting single and dual earner couples only for contributions made (rather than providing a higher implicit rate of return for single earner couples).⁷

D. Macroeconomic Issues

1. The transition: When social security was established, the initial old generation received benefits even though it had not contributed very long to the system, and subsequent generations' benefits have been primarily paid by taxing the next generation. The system is therefore un- (or under) funded. Some argue that this makes the transition more difficult, because the privatized system would be a funded one. This misses the point that barring default, benefits to the current old need to be paid, whether the

⁷ The added taxes necessary to pay interest on the recognition bonds would increase distortions.

liability is implicit or explicit. The presence of past obligations is irrelevant to the pros and cons of privatization.

2. Effects on national saving: National saving and the aggregate capital stock are probably lower in the US than if the system had originally been set up as a funded system and no payments had been made to the initial old. Yet this does not mean that a switch to a funded privatized system, along with the issuance of recognition bonds, will raise national saving. To the contrary, a natural benchmark is that the switch has no effect on national saving ($Y - C - G$). To see this, assume that government spending (G) remained unchanged, and that private households had no precautionary motive for saving, received the same expected value of future benefits, and faced the same expected future taxes. With no change in national output (Y), current private consumption and thus national saving would be unchanged. This occurs because the interest payments on the increased explicit national debt cause a transfer from young to old that exactly replaces the transfer under the old unfunded social security system. Only if fiscal policy were changed to make the debt shrink over time relative to the old implicit liability would national saving increase (as in Martin Feldstein, 1995).

Relaxing some of these assumptions could change saving. For example, privatization may alter incentives for the government to spend or tax. Because flows into the private accounts will no longer be counted as government revenue, privatization will dramatically increase the measured fiscal deficit, and issuing

recognition bonds will increase measured government debt. These factors could induce politicians to cut G or raise taxes, each of which would raise national saving. Also, as described above, changes in risks facing households might alter private and hence national saving. Overall, it seems precarious to build the case for privatization based on the argument that it will increase national saving.⁸

3. Rate of return comparisons: Some contend that privatizing social security would increase participants' rates of return, but this argument is misleading. By holding stocks in their individual accounts, most people would earn an expected return that exceeded the implicit future rate of return on social security (g). But these rates of return are not strictly comparable for two reasons: 1) A portion of the higher private return is compensation for bearing higher risk. 2) A portion of current contributions supports unfunded promises to retirees, a burden that must be borne whether the system is privatized or not. Therefore, even though private accounts could earn a riskless return (r) exceeding g , the difference ($r-g$) would still need to be raised in taxes to pay interest on the now-explicit recognition bonds. (This tax might not be explicitly tied to individual pension accounts, but would show up elsewhere in the household tax bill.) In general, it is unlikely

⁸ However, by providing households with more flexibility in their portfolio choices, privatization might lead to a more efficient allocation of the same national saving -- with saving channeled into investment projects that better matched desired risk-return tradeoffs.

that a privatized system's rate of return, net of other new taxes, would exceed that promised under the current social security system.

E. Would Administrative Costs Rise?

Administrative costs of a private individual account system would likely be higher: US social security administration costs are only a quarter as high as for private pension systems (on an active contributor basis; Gary Reid and Mitchell, 1995). However, private plans perform numerous useful functions such as money management and other investor services that the government does not. Even with privatized individual accounts, it would be cost effective to have the government continue to collect contributions to exploit the natural monopoly in the tax collection function.

III. Conclusion

This paper offers a framework for a balanced analysis of the advantages and disadvantages of a move to a privatized system. The main advantages of a two-pillar system are a reduction in political risk, an increase in household portfolio choice, and improved work incentives. The main disadvantages are a decrease in redistributiveness and national risk sharing, and increased administrative costs. We regard the likely effects on national saving and on rates of return as modest, at least without major changes in the political arena that privatization might induce.

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