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TOWARDS AN OPTIMAL SOCIAL SECURITY DESIGN[•]

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With an introduction by Elsa Fornero and a discussion by Axel Börsch-Supan

[•] This is an edited transcript of a talk prepared for the *Ce*ntre for *R*esearch on *P*ensions and Welfare *P*olicies workshop: *Opting Out of Social Security: Scope, Limits and Welfare Implications*, Turin, 5 June 2000. The talk was prepared and presented while holding a Fulbright Professorship at the University of Siena. I am grateful to both the Fulbright Commission and the University of Siena for this opportunity.

Welcome and Introduction

Elsa Fornero[•]
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• First, I would like to thank you all for being here, at the inaugural workshop of the newly established Centre for Research on Pensions and Welfare Policies (CeRP) Moncalieri (Turin). CeRP is an independent centre whose mission is to contribute original research, both theoretical and empirical, on topics relating to social security and pension funds, population ageing and welfare policies. CeRP will also address policy issues raised by governments, unions and financial institutions. Research is published in a working paper series and presented at an annual conference.

• Second, about the workshop. Under the pressure of unsustainable financial prospects, many pension systems around the world have been (or are in the process of being) reformed. Not infrequently, these reforms have been undertaken in haste, under the threat of a financial crisis and to achieve substantial reductions in pension expenditure and deficits. Less attention has been devoted, until recent years, to the question of *optimal social security design*, from both a macroeconomic perspective (essentially meaning financial equilibrium) and a micro one (i.e. incentive structure).

This question or, perhaps more modestly, the identification of the characteristics that define a «good pension program» have recently been the object of many intellectual efforts. In the analysis, the focus has gradually shifted from *redistribution to insurance* (both between and within generations, with a possible extension to the international level) and from *political to efficiency theories of social security*. Perhaps this is only natural given the poor design, short-sightedness and time inconsistency of many of the past systems.

From this viewpoint, it is now widely argued that sole or prevalent reliance on the traditional PAYG system is not efficient, since it implies insufficient insurance/diversification of risks and death-weight losses. A consensus view seems to emerge that a <u>mixed pension system is better than one based on just one of the two component</u> (PAYG or funded). Taken

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as a sort of normative statement, this means, in particular, that *a PAYG component should be maintained* even if it were relatively easy to switch completely to a funded system (a condition that does not hold in most countries). It should be maintained, however, to perform tasks which are complementary to those performed by the market, not just to allow politicians discretionary redistribution.

Starting from the present unbalanced composition in favour of PAYG - typical of most advanced countries – the way to correct it is still an open question, also depending on the magnitude of the «pension debt» already embodied in the current promises, which heavily influence the transition costs.

This establishes the factual and intellectual background to the workshop, the aim of which is twofold: i) to enquire about the real advantages of a mixed pension system, in search of explanations that go beyond what appears to be almost "conventional wisdom" and ii) to discuss solutions that might allow for a real diversification of pension wealth and that are coherent with good incentive structures, while maintaining (within the public component) some scope for redistribution. These are usually expected to centre upon a combination of: a) fiscal incentives meant to divert towards pension funds savings accruing to other financial instruments (such as severance pay funds in Italy) and b) partial *opting out* clauses. Today we want to concentrate on the latter.

We believe that the *opting out* debate is an interesting issue for economics, not necessarily restricted to a comparison between a public/unfunded and a private/funded pension system. In fact, opting out is an intrinsically dynamic issue, involving an analysis of both the transition processes and the properties of the resulting risk sharing/diversification arrangements.

This is why we have planned to devote the morning session to theoretical issues and the afternoon session to empirical implementation of partial funding, in the EU and elsewhere, in search of good practices that allow the latecomers to avoid the mistakes of the forerunners.

Finally, let me just say a few words about Italy. In spite of two far reaching reforms implemented in the Nineties, the Italian pension system still faces serious sustainability problems.

These include:

i. the large financial unbalance of the (long) transition period;

ii. some consequences of the general features of the new long run equilibrium;

iii. the considerable dead-weight losses that might arise because of the compulsory high level of participation in the PAYG system, at all ages;

While the (large) projected financial unbalances are due to the fact that the reform's pace is too slow to offset both the generosity of past rules and the adverse demographic changes, two aspects of the long run new provisions are problematic: a) the PAYG component will be "too large", in terms of contributions (although perhaps not in terms of share in the benefit level), with respect to the funded one; and b) it will be based on the same principle of actuarial fairness characteristic of the private component; both aspects are likely to prevent a true diversification of risks.

This is why, in our view, a gradual and partial opting out strategy should be seriously considered within the policy options. However this would mean jumping prematurely to conclusions, so I will stop here.

• Turning to the workshop program, you can see it is very tight, but I hope also very challenging. Finally, I want to thank Compagnia di San Paolo and the European Science Foundation for financial support.

Peter Diamond is the first speaker. He needs no presentation, of course. I should just mention an exchange we had a few days ago, when he confirmed his participation the workshop, and said: "I look forward to seeing you and explaining why opting out of social security is not a good idea". To which, I answered: "This is precisely the reason why I asked you to open fire". So let Prof. Peter Diamond open fire.

Towards an optimal social security design

Peter Diamond[•]
(MIT)

1. Introduction

In responding to the introduction to this conference, I want to suggest that the consensus view that has been referred to, of two pillars, one funded and one not, has very little underpinning as of yet. There is something to it but it is premature to reach the claimed consensus conclusion.

In this talk, I will start with funding; what I will say will be old hat to the people who are familiar with the pension discussion, so I will not dwell long on that. Then I will talk about the link between funding and risk, an issue which has been raised in the introduction; then about opting out; and lastly, very briefly, about the proposed use here in Italy of severance pay – the TFR - to fund pensions - another place where I will disagree with the previous speaker.

2. Spelling Out a Vulgar Error

In all of economics, but particularly in pensions, there is a need to separate the economics of outcomes from the politics of government action. The political role comes in two different ways, and I think it is important to keep them both in mind.

First, there is an enormous short-run political problem of getting something done, of how to package proposals in order to get legislation. This is an issue even when not only the experts but also the politicians are in agreement. This is because the right thing to do for most countries involves either raising taxes or cutting benefits. Such actions threaten politicians with the wrath of voters. (Only Britain is phasing out social security, so the problem is elderly poverty reappearing eventually rather than too expensive a system.)

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Perhaps more important is the second problem - long run politics. Once you set up a system it will have its own political dynamics and the dynamics coming out of the social security system are extremely important. Legislation is an analogue to an incomplete contract: it never covers all the circumstances, it will be revisited, and the legislative process is asymmetric. Political asymmetry should be kept in mind. That is why it is very important to do distasteful things with a long lead time, recognizing that one can easily raise benefits or lower taxes, but it is very hard on short notice to do the reverse.

As economists we are used to doing comparative statics between two equilibria –that is the standard legitimate analysis. The problem in the social security area is that we start with legislation that is unsustainable; that is, given our current projections, the current law does not describe what we expect to happen.

As Herbert Stein put it, *what can't happen will not happen* and therefore if we want to do comparative statics we have to start with the baseline: *what kind of corrections might happen if there is not early legislation, but rather late legislation?* And we have to contrast that with the implications of present action needed to head off what will have to be done in the future.

Applying this approach to pension funding and its changes, one splits the problem in two parts that have strong similarities but also some important differences: you can change the implicit funding of social security and you can make a change that involves explicit funding in the sense of assets owned either by individuals (in individual accounts) or by a central trust fund.

If a country legislates today a cut in benefits for fifty years from now, that can be a big decrease in the implicit debt of the social security system. A drop in the implicit debt is an increase in funding – because there is nothing magical about the origin; social security systems are used to living with negative net present values at least for a time.

So we have to look at both issues. One is how to deal with the present discounted value budget constraint. In many countries this constraint is now in an unsatisfactory state, in the sense that the kind of dire changes that would be called for in the future are unattractive - it would be more attractive to do things sooner rather than later. Secondly, if there were some explicit assets associated with social security – either individual accounts or a central trust fund - what kind of portfolio should be held and how does the equilibrium change if you change the portfolio.

I will discuss these issues, but let me start by reminding you of a vulgar error that in the U.S. comes regularly from the politicians. Steve Forbes made it repeatedly in the last presidential campaign, and was roundly attacked by academics precisely because it is a vulgar error. I was interested to see that in his speech laying out a few hints (nothing resembling a plan) on what he would do about Social Security privatization, George Bush made the vulgar error twice. The second time was much more striking: he said "even if you took the safest asset there is, U.S. Government bonds" – he didn't say inflation-indexed Government bonds, so he even got the relevant asset wrong – "it pays a higher rate of return than social security does." This quote suggests that the rates of return on assets and on Social Security taxes are the available alternatives. But they are not available alternatives because of the cost of transition if individuals get to buy assets with their tax payments. The disregard of the costs of the transition is widespread, also in economic analysis. One of the working papers prepared for the workshop, which I just picked up on the way in[1], makes a comparison between a mixed funded PAYG pillar and a PAYG pillar without funding with different means and different variances as if one could move costlessly between these two.

Steady state analyses are always incomplete, and they are particularly incomplete when there is a large cost needed to change the nature of the steady state. So the only way George Bush could deliver asset-market returns to young workers is by cutting pension benefits to the elderly. And the only concrete thing he has really said about social security, other than wanting individual accounts, is that he is not going to cut the benefits for the elderly. So he is making the error of comparing two things that are not comparable: comparing apples and oranges, as we often put it.

And I think the consensus that has been previously mentioned in favor of the risk characteristics of two separate pillars, one in funded individual accounts, the other in an unfunded defined benefit system, is based on comparisons of steady states: these are not complete analyses and so there is not yet a basis for a consensus. I think that it is extremely important not to confuse steady state analysis with policy relevant analysis. Not to say that we do not need to do steady state analysis – this is a step in doing research - but we should not leap to conclusions based on that.

[1] Guido Menzio, *Opting out of Social Security over the Life Cycle*, CeRP Working Paper no.1, June 2000.

3. Funding and Political Risk Diversification

Now I also believe that there may be virtue in having two different pillars, but I think the risk diversification that is involved is political risk diversification much more than economic risk diversification. And that there are several different kinds of risk involved that need to be considered.[2]

Also, let me say that while funding can be desirable, it can be done within a defined benefit system or by having two separate systems – one with funded individual defined contribution accounts and one with defined benefits. From an economics perspective, funding does not require two pillars. What is needed politically may be another story.

From an economic point of view, it is very clear that anything you can do with two pillars you can do with one pillar: it is a dominance theorem. The interesting questions are the political questions: What happens if you set up one system when you get a shock, as inevitably you do – either a demographic shock or an economic shock? What happens if you set up two pillars and you get the same shocks – because demography is not going to be influenced by whether we have one or two pillars, and interest rates, given the level of funding, are not going to be influenced?

And it is important to keep in mind that differently structured systems are likely to react differently. Let me run through a quick example. Assume you get a slowdown in labor force growth, and assume you have a single system. Then you now have a financial problem and you are going to cut benefits – let me just stick with only talking about benefit cuts and not about tax increases for comparison purposes. How would you cut the benefits? If you had no other basis for thinking about it, you would say proportionally – a logical thing you can do for a baseline. Now go over to having two separate systems. You get a slowdown in labor force growth: that by itself does nothing to funded individual accounts. But if you piled all your redistribution into – say - a flat benefit, as Britain and Argentina have, or a progressive system, as the U.S. has, and you go to change that in response to the change in demography, what would you do? You cut the flat benefit. And the distributional effects are very different between these two cuts. By having two pillars you have made a much larger percentage cut

[2] For a discussion of political risks in the US, and individual accounts more generally, see National Academy of Social Insurance, 1998, *Evaluating Issues in Privatizing Social Security, Report of the Panel on Privatization of Social Security*, also available at www.nasi.org and as Diamond, Peter (ed.), 1999, *Issues in Privatizing Social Security, Report of an Expert Panel of the National Academy of Social Insurance*, Cambridge: MIT Press.

for low income people compared to high income people, because cutting a flat benefit is a bigger percentage cut for low income people than a proportional cut in both pillars.

In contrast, if the shock is to interest rates, then that is a hit on the individual accounts and the individual accounts are cut proportionally and so high income people bear more of the cost of an interest rate shock when you have two systems rather than one system that is cut proportionally. So different risks get distributed differently within a cohort by the natural political response of these two systems. There are also likely to be differences in speed of response and so differences across cohorts. One needs to look at all dimensions and a variety of risks when contrasting one- and two-pillar systems.

In some countries even if funding is desired, this is an academic comparison. If there is to be explicit funding, there is a consensus that the government does not have the ability to maintain a fund in a defined benefit system and invest it sensibly. If a country is like that, if you can't do it, you should not do it – this is one of the first rules. If a country can do it, then we have a choice. I think we have to recognize that individual accounts are much harder to set up and run for a country with an inadequate capital market than a lot of people suggest. In some former communist countries, with no capital markets and no regulatory ability, setting up individual accounts seems to me to be pointless: they will hold government debt.[3] Talk about political risk: some of these countries have enormous troubles collecting taxes, and what is the one thing you can surely collect taxes on? Pension accounts that the government is holding. So they may be more vulnerable to heavy taxation than any other asset. And there may be less political protection from inflation than with defined benefits.

4. How to Redress the Balance

So we have a system that is out of balance in the sense that we prefer to have legislation today even about things that may change in the future. Let me note that for the first fifty-five years of U.S. history there was always on the books a tax increase that had been legislated to take effect later; from 1935 until 1990 there was always a future tax increase previously voted. Occasionally, when the economic scenario was rosier than expected, Congress would delay the tax increase, but never repeal it. They would just delay it because it is so handy to have it on the books. And always politicians would stand up and say "we

[3] Even worse, they use some of the limited administrative ability to organize reforms.

have a tax increase coming, I am introducing legislation to repeal it." But, if Social Security needed the money, that was just posturing that never turned into legislation. So legislation now for future tax increases and future benefit cuts: that is the successful way to get a system to function.

If a system is out of balance, what are the ways to get the present discounted value budget constraint improved now rather than later? We can divide up the alternatives into four classes. You can cut benefits - Italy and Sweden have done this brilliantly by using the vocabulary of actuarial adjustments and by imitating defined contribution pensions as a device for cutting future benefits. This was a stroke of genius - brilliant packaging. And there may even be good policies beyond allowing early action if you get to the question of what kind of intergenerational distribution you want. The second class of actions is raising taxes - you can raise them now or you can raise them later. The third class is to increase the government subsidy to social security. And the fourth class, if you have some assets, is trying to get a higher rate of return on them.[4] That's it, that is your list. Where does more funding come in? If you cut benefits that will generate more funding eventually. If you raise taxes that will generate more funding. If the government commits to larger contributions - as the Clinton administration has proposed - that will increase funding. And if you actually have some assets and you invest them better that will help - how much that helps depends on the value of assets.

Notice the critical element in all of this: these are changes in the intergenerational allocation of benefits and taxes. The number one issue is: *do we want to have a bigger burden on future generations or a bigger burden on current generations?* There is no general theoretical answer to that. In any particular country you would say: how quickly are wages growing? how poor are the current elderly? how poor are the current near elderly? whom do we want to tax in a net sense in order to finance this program? And the answer may well be different in a country having high wage growth versus low wage growth, a country with a history of no private savings to speak of, as in the former communist countries, or a country with sizeable private savings. These will all be relevant for deciding how to distribute the burden of restoring balance to the present discounted value budget constraint.

Normative generational accounting is a partial way to see the essence of this picture, but does not normally incorporate the wage levels we expect for the different generations.

[4] With an ability to borrow, investment can be done without positive net assets.

But the generational accounting piece is an important part of the story. In the U.S. context, I see no particular reason to think that the U.S. is widely out of balance in income distribution across generations. So raising taxes sooner, rather than later, and a bit of benefit cut on the current elderly as well as in the future, all of these seem to me to be about equally valuable; the important thing is to do something. In some other countries, there may be much more of an imbalance and particularly Italy seems to be far too generous for the retirees coming soon relative to the later generations - but that is just a presumption.

5. Funding and Economic Risk Diversification

Let us turn to risk. The first point about risk and funding is the one I have already made, which is, you can fund in two ways – individual accounts or a centralized trust fund. The second point is that this should be considered in a general equilibrium allocation of risks. Interesting starting points are the paper by Douglas Gale[5] looking at public debt as a risk sharing device between generations, and the paper (better-known within the social security community) by Robert Merton[6]. There are two issues here. One is how to shift the risk inherent in aggregate wages partially away from the workers. You can shift it to future generations, you can shift it to retirees, and you can shift it to capital (history is history so it is very hard to shift things back in time). And secondly there is risk associated with capital: how do we increase the pool of people who are sharing capital risk? You can do that by shifting some of it to workers who are not investing in capital because they are not doing any saving, and you can shift it forward in time through a government device that will include future generations.

Risk spreading sounds hard in a world that doesn't yet have all of the markets that Robert Shiller[7] wishes we had. It is not as hard as it seems if you have a government with wide scope for action. For example, decreasing the payroll tax and dedicating part of the corporate income tax to social security involves a different risk pattern, with less sensitivity to wage growth and more to the return to capital. So there are ways to do this kind of risk sharing that do not require explicit funding: in that sense, funding is a bit orthogonal to the

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[5] Douglas Gale, 1990, *The Efficient Design of Public Debt*, in R. Dornbusch and M. Draghi (eds.), *Public Debt Management: Theory and History*, Cambridge: Cambridge University Press.

[6] Robert C Merton, *On the role of social security as a means for efficient risk sharing in an economy where human capital is not tradeable*, in Bodie, Sand, Shoven, eds., *Financial aspects of the US Pension system*, University of Chicago Press.

risk questions that the literature addresses. Indeed social security could engage explicitly in swaps. A key question is the nature of the response of the social security system to demographic and economic shocks. Assar Lindbeck[8] has a new paper giving a basis for the risk characteristics for social security system with different response structures: for example, a fixed tax rate PAYG system, or a fixed tax rate fully funded system, or a system with a fixed benefit level and a tax rate that fluctuates. And depending on the kind of risk you are thinking about and the kind of system you are thinking about, these have different intergenerational consequences.

If you think of people living longer and getting richer, the natural response is to have a larger fraction of their time in retirement. What is the sensible response to that of an optimal saver? You have three margins: consume less and save more when young, consume less and have lower monthly benefits when old, and work longer.

If you set up a reasonable model and change life expectancy, and change the disutility of work not fully proportionally (I think this is reasonable) and you change wage levels and you remember that retirement is a normal good, we would expect more retirement for the better off (in a time series sense, not in a cross section: the most well paid people like their work more than most badly paid people like their work, which is a very important element about retirement). Thus the natural response is you work all three margins: you save a little bit more, you have lower monthly benefits and you work a little bit longer.

A fully individual accounts system does not have any political mechanism to raise taxes: there is no financial problem, nobody is clamoring "when I am old I am going to have too little, because I lack self-control to save, so please force me to save more." The tax rate does not go up. This is one of the things that I dislike about a fully defined contribution system. A system with some defined benefits will have a financial problem that will create pressure for a tax increase to be considered along with benefit cuts.

Without a tax response, you need to work the other two margins more. As long as the system is defined contribution or defined benefit with sensible actuarial adjustments – it does not have to be actuarially fair, just having significant increases in benefits by working longer – people can work longer and get larger benefits. Benefit cuts happen automatically with both

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[7] Robert J. Shiller, *Macro Markets*, Clarendon Press Oxford, 1993.
[8] Assar Lindbeck, *Pensions and Contemporary Socioeconomic Change*, unpublished, 2000.

DC and NDC systems. With a DB system, it takes legislation, making a choice between tax increases and benefit cuts more visible.

I think risk issues are very interesting. You can not do risk analysis without having a political model as well as an economic model. A political model specifies what changes when a shock comes and relates that legislative choice to the structure of the system.

6. Opting Out

Opting out involves two steps. One is that workers get to divert some of their payroll tax payments into individual accounts. The second is that in consequence of opting out they lose some of their defined benefits.

The first question to ask is whether from the point of view of the social security system allowing somebody to opt out is a money maker, a money loser or break even?

6.1 Money-Losing Opting Out

Allowing opting out by the self-employed in Germany is a money loser, because if you walk away totally from a system that has a large implicit debt you have left the remaining debt on fewer workers. Not only is that a money loser, but because there are fewer workers taking the debt it increases the distortions in the system: you have lowered the distortions on the people opting out, you have raised the distortions on the rest. And so you have moved away from a fairly uniform pattern of distortions, which, in the absence of strong evidence on elasticities of labor supply, is what we would think of as the distortion minimizing system.

So if opting out is a money loser, it will be particularly attractive to people to opt out. More generally, if you could walk away from the public debt, would you not love to do that assuming you still have access to the public assets? So allowing money-losing opting out is a bad idea.

6.2 Break-Even Opting Out

Partial opting out can be organized on a break-even basis. You can do that by charging the opted-out people what they cost the government. So you divert some of your resources into an individual account and the government runs up a debt calculation for you (equal to the decrease in the value of government bonds in a central trust fund as a consequence of the diverted revenue) and then when you reach retirement age the government converts that into a negative annuity, and subtracts that from your residual defined benefit.

This can not be done with a complete opt out, only with a small opt out. Even with a small opt out, it may not work with a highly progressive system – like the U.S. High-income people, who are getting particularly low returns, would run into a nonnegative benefit constraint.

You also need to adjust for the people who die before retirement, because you never get the revenue back from them. Actuarial calculations should not be based on life expectancy at retirement but on life expectancy when workers take money out of the system. But that is a technical correction.

So you could run the system on a break-even basis from the point of view of social security. What happens if you do that? What you have done is giving people a choice between investing implicitly in the safe treasury asset or investing in whatever else they invest in with the risks both of accumulation and annuitization and administrative costs.

Normally, as economists, we think that giving people more choice is good; however we are talking about social security here and why do we have social security? We have a mandate to save for retirement because we think more choice is bad, we think lots of people would save too little: that is why this institution is here.[9] And the same people who would save too little are probably not terribly good at understanding what kind of annuity they will have when they retire if they opt out in contrast to staying in.[10] In the U.S., according to a speech by Arthur Levitt, the head of the SEC, half of the public does not know the difference between a stock and a bond. So are these the people we want to make sophisticated choices of alternative points on the risk-return frontier? This seems to me a bad idea.[11]

A second issue is the political implications of going down the road of a break even opt out. That is a big part of the story. Why does George Bush like individual accounts? Why

[9] On this issue, see George Loewenstein, *Is More Choice Always Better*? Social Security Brief 7, National Academy of Social Insurance, 1999.
[10] Many people would get the calculation wrong even without misselling.
[11] We could have individual accounts without portfolio choice – a provident fund. But this is probably not a politically stable outcome.

does the US union movement hate individual accounts? Not because of the economic consequences of two percent of payroll moved across assets markets.

The people who are saving, and these are the people clamoring most to opt out, already have an asset portfolio. Unless their portfolio has no Government bonds in it, the fact that they can move from some bonds to stocks inside social security is meaningless since it is their total portfolio that matters and the optimum does not change much. If they have bonds and stocks outside social security it is a wash, apart from administrative costs. So the people who clamor the most for the opt out are the people for whom it would be totally irrelevant if it did not have other implications.

Ignoring differences in administrative costs, for these people with internal portfolios more choice is not negative if they know what they are doing, but it is not a positive: it is a zero. If you get out of the burden of the implicit debt that is a different story, but that is not the reason we want people to be opting out – that is not break-even opting out.

The issue here is that individual accounts will emphasize the vulgar error. “Look at this great return I am getting on these individual accounts, look at the terrible return I get on social security.” This is viewed as something that opens up the political process which will in time wipe out the DB system. In the U.S. context this would mean wiping out one of the most redistributive programs we have. Indeed, some (but not all) proposals do eliminate the progressivity in US Social Security.

It is not surprising that the Republican Party likes this scenario – they have been opposed to Social Security at every point in its process. The speeches in 1935 forecasting doom not just of the American economy but of American freedom because of the creation of Social Security are a kick to read. Alan Greenspan’s speech about letting the Social Security Trust Fund invest in stocks[12] sounds just like a speech of a Republican congressman in the thirties.[13] The Republicans opposed the creation of Social Security, opposed disability

[12] Alan Greenspan testified that such investment "has very far-reaching potential dangers for the free American economy and a free American society."

[13] The Minority in the House Committee Report asserted that Social Security would "impose a crushing burden upon industry and upon labor." In more purple prose, Congressman James W. Wadsworth (NY) said, "This bill opens the door and invites the entrance into the political field of a power so vast, so powerful as to threaten the integrity of our institutions and to pull the pillars of the temple down upon the heads of our descendants." And Congressman John Taber (NY) said, "Never in the history of the world has any measure been brought here so insidiously designed as to prevent business recovery, to enslave workers and to prevent any possibility of the employers providing work for the people."

insurance, opposed Medicare; when Reagan came to power they talked about eliminating Social Security but realized politically they could not do that.

That is what is involved here. I do not know what is involved in other countries, but in the U.S. it is the issue of the within cohort income distribution that is the main issue. In many other countries it is not, because in many other countries the DB system is linear and not redistributive, the safety net is financed from the general government budget, not the social security budget.

So opting out, it seems to me, only makes sense when there is a financial gain to social security, not when it is break even, not when it is a loss.

6.3 Money-Making Opting Out

Can you have a financial gain? Sure you can. If you have a circumstance where people have very little faith in social security, you can offer them a rotten deal, and if their expectation is bad enough they may take it. You can talk about this as a Pareto improvement: ex ante they are happier because they do not have faith, and those staying with the government program are happier because social security is in a better financial position than what would have happened.

Now again in the U.S., if there is no legislation, when the trust fund hits zero – currently forecasted for the late 2030's - there is still enough payroll tax revenue to pay 75 percent of benefits. That is a worst case scenario. Stop a twenty-something assistant professor of economics and ask what he expects to get after 2030 and he tells you zero. Zero I think is outside the realm of political possibility. So the government – if you think this is an appropriate thing for a government to do - can take advantage of the ignorance of the people who want to opt out into a worse deal.

This again gets back to the issue of what social security is about. So opting out seems to me to be not a sensible way to go. If there is a reason to set up an individual account –for example because it is a device to raise taxes, as has been proposed in the U.S., or it is a device to have across the board benefit cuts - then it seems to me it ought to be mandatory. It should not be voluntary; the voluntary dimension, unless it introduces some exceptional political leverage in what can be done, seems to me to introduce more harm than good.

7. Diverting the Severance Pay to Fund Pensions

Let's talk about Italy and the TFR. Italy has two problems. One problem is that benefits are much too generous for the sum of taxes and the current level of transfers from the general revenue - which is about two percent of GDP going into pensions right now. So the first problem is how to get benefits down to match taxes. (I am not talking about micro efficiency issues: there are some problems there as well, but I'm leaving these aside.)

What is the second problem? If Italy manages to do that it is still the case that taxes and benefits are too high. So, what would be desirable? I think there is a consensus about this in Italy: it would be to find a way to lower benefits and lower taxes, so Italy would have lower taxes on employment.

So what is the proposal here? The proposal is to increase the taxes for retirement as a device to somehow get lower taxes for retirement. This sounds like judo economics: we move in the wrong direction to somehow get a political outcome in the right direction.

Now, maybe there is a political scenario that goes "we raise taxes so high that then we get to lower them". But I think the proponents of this proposal have an obligation to spell out a political scenario so that this works.

The second problem I have is that there is not a general unemployment insurance program; so severance pay is funding available for unemployment. If this were available only for retirement you need to ask whether is there a greater need for more revenue elsewhere? Is revenue more useful for retirement benefits, which are already too generous, or for young workers without jobs? The answer seems clear: you give it to young unemployed workers.

Now, an in-between way is to set up unemployment accounts - we have heard about this from Orszag and Snower[14] and a number of other people - so that people could tap the accounts if unemployed and a residual would stay around for retirement. Perhaps this would be a device for increasing the insurance component by having the government add funds if a worker runs through the account totally.

It seems to me that moving away from the severance pay concept is a good idea, but moving it to pensions seems to me to be inferior to moving it to other places which are less generously financed than pensions.

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[14] J. Michael Orszag and Dennis Snower, *From Unemployment benefits to Unemployment Support Accounts*, unpublished, 1997.

8. Concluding remarks

Summing up, the risk characteristics of partial funding need more study. Voluntary opt-out seems likely to be a poor idea. And moving the funds from TFR to pensions seems like a move in the wrong direction.

Discussion by Axel Börsch-Supan•

1. Introduction

Many things in life depend on the point of view. If you come from Africa, and propose to increase the temperature there, you may be a little out of place. If you come from Iceland, it is quite different. Similar with Peter Diamond and me.

Most of the European pension systems are far apart from what is already in place in the United States. Just to give the example of Germany which I know best, the percentage of retirement income that is provided by some kind of funded system is just very small. The part of retirement income, and this does not mean funded part, but whatever else there is, not provided by the Government's pay-as-you-go financed social security is 15% of this. I would argue, about half is labour income and family transfers. The situation is pretty similar in Italy and in France. Thus, in the three large European countries, we are actually far out on the limb with respect to financing pensions. Going from this extreme position a bit more towards a mixed system is a very different cup of tea than changing the UK or US system, where Peter may argue that one already did over it. In that sense I think that we have a consensus that we pour some wine back into that glass of a mixed pension system. The question is only what the balance should be; specifically whether the funded pillar should be very large or not, and how it should be organised.

2. Solutions are required soon

Let me get a bit more into the details of what Peter said. If you talk to the politicians, it is still amazing how they underestimate the aging burden in the European countries, just because it seems so hard to believe that the aging burden in Europe, which is already high relative to the United States, will double in the future and become even heavier. It's even

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more difficult to understand that there is very little time available to solve the problem associated with it.

This political boundary condition is very tough, because I don't think we have the time to ponder another ten years about academic and complicated models. Decisions on pension reform will pretty much be made during the next couple of years, actually very soon. I think that it is very important - and you phrased it very nicely, Peter – to understand what will happen if nothing happens right now. What will happen if an economy will take a path that is clearly unsustainable? What will give, what will yield? Where will the friction be? I think the main question here is how benefits will be cut, because it is quite clear that if we stay with the current pay-as-you-go system, the current level of benefits is unsustainable, so that they must be cut somehow in a more or less chaotic way.

The main task of pension reform is to design an orderly way how to cut benefits and increase contributions. Note that I am careful with the word "taxes" here and like to say "contributions", which will finance retirement consumption. This is an important distinction: taxes distort labour supply, contributions do not. You said there are four options. I don't think there are actually four options, since it does not look likely that you can raise taxes much more, because taxes are high. Hence, some part of financing pensions has to be shifted from taxes to contributions, exactly the point of installing a mixed system. There is, by the way, another big difference between the three countries I mentioned in Europe and the United States: financing a higher share of pensions indirectly by state subsidies is not a solution whatsoever because that is equivalent to raising taxes. Some in Europe even hope that there may be some loops to get more debt into the system. Financing pensions by debt would be crazy economics. In addition it would be not only against the spirit but also against the law put down in the Treaty of Maastricht.

You can work more and longer, and Peter Diamond talked about that route of financing old age consumption. I share his points. Unfortunately, this happens to be the least popular way out, according to most polls.

3. The big picture: possible solutions

Let's get to the big picture first. It is quite clear that this society has to pay more for old age consumption, there is no way to get around doing this. Most people have been used to quite a generous consumption level through their lives, they would like to have that in old age as well. So we just have to live with the fact that both the current generation has to work for their old-age consumption, and future generations will have to do more for their parents. Now, the question is how you do this.

In my opinion, the crucial matter is to minimize the tax aspect of financing old-age consumption. My single most important criticism of what Peter Diamond was saying is that he downplayed the micro incentive effects. I actually think that micro incentives are part of, and an indication for, the serious problems which we have. Paying for social security is more and more considered a tax, a pure tax, without a one to one relation to benefits. Any kind of pension policy has to take this into account: get out of the tax character, make it more a payment for something you need anyway from your consumption for the current generation, and probably teach to the younger that they have to honour the generation contract in a way that also pays for them. I come back to the micro incentive effects later, but I think that in the big picture they assume a very high but underestimated prominence. They are an important reason for a large funded pillar with accounts that “belong” to the employees.

The second big picture pieces are the macroeconomic issues behind pension reform. Population ageing means that consumption relative to the available labour in Europe will get out of proportion. This will have a strong macroeconomic impact. If you have essentially the same population size in thirty years, but the ratio of pensioners to workers will double, these workers will have to feed many more people, or just provide more food per worker. In order to achieve this higher productivity, one has to raise the capital stock, and one actually needs a lot of capital deepening in order to offset population ageing. One can also import a lot, but it has some risks attached to get a major proportion of consumption from abroad. Hence, not only micro incentives, but also macroeconomic necessities speak for a high degree of funding.

Those changes need time, and this is another re-occurring theme in pension policy. In order to achieve the required degree of capital deepening in countries like Italy, France and Germany, one needs a decade or maybe two. Farsighted policy will create at least the incentives to get these changes going. This brings me back to my earlier point: I don’t think these countries have the luxury of pondering a lot what they want to do: they have to do it soon.

4. Which financing system is best?

You were talking about dominance among financing systems, pay-as-you-go versus funded, based on individual accounts. I hope it was a misunderstanding, I am a glad it is [P. Diamond explains he was talking about the dominance of a single system with a given level of funding compared to the two systems which determine an extra constraint to the maximization problem]. If we are honest, we know very little about the dominance of pay-as-you-go versus fully funded, and that is because we understand the risks involved very little, and we particularly badly understand the political risks which are involved in both systems. As it is part of the game, you stressed the risks and costs of a system of individual accounts. I stress the political risks involved in the pay-as-you-go system, and I particularly stress the risks which are involved in a Government-run funded system. We actually have ample evidence here particularly in Southern Asia, also in Northern Africa, and Middle East: these countries have huge funds that did not do overly well, to put it mildly. Cynics say that they were doing well if they had an interest rate above minus 5%. We unfortunately also made not very satisfying evidence on how pay-as-you-go systems were run in the European countries. For example, all the 3 countries which I concentrated on earlier, Germany, Italy and France did not act together to install independent actuaries. It is quite amazing to realise that countries as enlightened (you think) as Germany, France and Italy still continue to fiddle around with demographic forecasts that do a political favour to the ruling Government rather than just deliver facts for an open discussion.

5. The role of the Government

This last discussion brings me to a deeper point which I want to address- but only briefly. I am very sceptical about the role of the Government in pensions and that is not just a sigh, I think that is a major disagreement between one side of the discussion-Peter Diamond’s view of the world- and the other side. It again has a sort of an American versus European point of view touch to it. America had a very different history. Luckily so, as opposed to Europe - I hate to say this – had a history of well controlled Governments, with many more checks and balances. We Europeans are more sceptical and do not like a Government which should take care about everything including the asset management. By the way, the 401(k) and IRA accounts in the US worked actually pretty well, and these individual accounts worked better than the pay-as-you-go systems both in Germany and in this country.

6. Incentive effects

In effect we have in Germany a tax to finance the pension system that amounts to about 30% of gross earnings. In Italy the tax rate is even higher but it is paid by a relatively small tax base. That tells you an important story: there is a lot of evasion in the system, and the evasion increases. As long as pension contributions are viewed as taxes, we do have a problem. I have done some research on the perception of pension contributions – taxes versus insurance premia – and its impact on evasion. It is actually hard to do research on this, because we have to look for a natural experiment where the people can vote with their feet. In Germany we have a small part of the social security system which is voluntary. People have evaded that system completely, and they did opt out for obvious reasons - it was in their self interest to transit to a funded system. This tendency to evade shows how deep the problems are of the European type public pension systems. The people have lost their sympathy for the pay-as-you-go system, they have lost the understanding in these pension systems. It is not that they are so rotten that we have to get rid of them altogether, they still do a lot of service, but people do not have that perception any more.

Hence, it is very important for a pension reform to get also the pay-as-you-go part into shape, not only to introduce more funding. The only way to renovate, not revolutionize, the pay-as-you-go system, is to make sure that the system will deliver the services it promises. The best way to achieve this is to introduce some kind of notional accounts which carry the following message: there will still be benefits delivered even if the benefits will go down. We have to take the tendencies to evade from the European pension systems very seriously by taking out part of the burden, by smoothing it over generations during this very quick demographic transition, which will take place between 2015 and 2025, and by showing that the reformed multi-pillar system will carry less of a tax burden on the workers than the current system.

7. Conclusions

Let me then finish, since we are short of time. We agree that an academic analysis of pension reform cannot be done with steady states models, I hope this is clear for every academic; however, it still is hard to get the demographic burden modelled in a reasonable dynamic model, just because transition comes very quickly. It’s expected for 2015 for Germany, and I think it is very similar in Italy, it is smoother in the United States. From 2015 to 2025, we essentially have most of the bulk of the demographic changes. Then things suddenly change. Most of the pension reform has to be done long before. How to anticipate this, how to dissolve the pension burden, how to smooth it – those are important tasks .Smoothing obviously needs the capital market, and that is yet another reason to have more funding. We can further discuss the details, but we will not be able to do this in a pure pay-as-you-go system.

Diamond's rejoinder

First of all, it's a pleasure. This is not the first time I had exchanges with Axel, because as far as I can tell we come with the same basic values, we come with the same economics, and somehow at the end we are in a different place, so let me say a few words as to why I think that's going on. First of all, we both agree that getting the micro rules right to improve on the tax dimension of the system is just extremely important. Reforming this topical list is very important, and I agree with it totally.

The second thing that we both agree on is that beyond the correct economic implicity taxes is a perception issue, and there are two dimensions here. One is when you have a set of workers who don't want to save for retirement. It's not clear how much they are going to value the money going into an individual account, so to a large extent is still going to be viewed as a tax. The second thing where I think you are right is that something has to be done to make people aware of the system. I don't know if NDC systems are necessary for that. I think what's important is what the US very belatedly is getting to: annual statements. Workers are told year by year what's going on with this. I think that would be important. In terms of the distortion with the tax aspect, it's important to recognize an increase in funding as an increase in some taxes in order to reduce other taxes. Actually, you should never say what you said at the end "A mixed system would be less of a tax burden on workers". That's just misleading. A mixed system would be more of a tax burden on workers for a while followed by less of a tax burden on workers later.

I agree on the fact that the bottom half of the income distribution has nothing to do with 41K and IRA, so it doesn't address any of the issues, let's recognise that.

And then to come to the heart of the issue, what is the big question? Is the big question: "how to get benefits cut through the political process" or is the big question "how to get national savings up so there are more resources for the future"?. These are separate questions; my presumption is what really matters is to cut the benefits, that the division of that future available consumption is a much more important issue than getting the national savings right up a bit by funding. If that's the case, then I think one needs to make an argument of how the political process works, that gets you from funding with or without opting out into benefits cuts. I think without presenting that scenario, the argument is incomplete. You may have a scenario in Germany that works and is possible, and I just haven't heard. As soon as I hear it I believe it, but I think one can say that without making that argument there is a gap. Now, Reinhold Schnabel was telling me yesterday that the labour ministry has just proposed basically to freeze the payroll tax, which is a way of cutting benefits, which strikes me as a very reasonable way of cutting benefits, and if they can make that stick as legislation, the benefit process has been solved.

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