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**REFORMING SOCIAL SECURITY:
EFFICIENCY AND GOVERNANCE ***

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1. INTRODUCTION

The reform of the "welfare state" as we have known it in the last decades has been more and more on the agenda of policy makers and academics. Besides the aggregate financial constraints felt by a great number of states worldwide, microeconomic efficiency also bears on this problem. In Section 2, we address efficiency issues, related specifically to old age pensions and unemployment benefits. Both provide social security via insurance, the latter against states of nature.

Sustaining social security is thus a worldwide challenge for policy, in an environment where reform at the national level is a response to pressure on domestic firms and ultimately on individuals to escape excessive taxation or regulation. Even if policies broadly converge to some efficiency norm, the response may not be immediate for a variety of reasons including political cycles. Lack of national cohesion on development strategy may benefit incumbent policymakers or existing generations at the expense of voters or future generations. The pattern may be countered by appropriate policies, supported by institutions, accounting methods and monitoring devices. This is the problem of governance, touched upon in Section 3. Combining efficiency and governance, we try to infer in the concluding Section 4 some lessons on how to reform the current systems.

Governance is decisive because most social security systems are very dependent on the state. It is then pure rethoric to separate the discussion of its financial equilibrium from the discussion of the public finances in general. The point is whether or not current policies are feasible in the long-run, without threatening macroeconomic stability. Governance also impinges on the desirability of redistribution policies and their financing. While part of the benefits has to do with managing underlying political options, the costs of current - or alternative - social security systems do affect the functioning of the economies. To assess how these interactions operate, it must be recognized that the state cannot raise revenue, for whatever end, by lump sum taxation. The unavoidable excess burden of taxation creates a trade-off between redistribution and efficiency, which must be reckoned with in political terms.

Yet this type of effect is far from being the whole story: some of the roles fulfilled by modern social security system do contribute to economic efficiency. And when they do not, there is still the problem of minimizing the losses, for given redistribution objectives. Different designs of the way a system operates and is financed can mean widely different costs for the economy. By affecting the incentives to save and work, or by solving problems of asymmetric information in insurance markets, a social security system affects both negatively and positively the functioning of the economy.

Solutions must be equitable but they must also be efficient. This means that they are incentive compatible and promote growth. Otherwise they will

magnify the social problem they were supposed to cure and increase social deprivation. If not replaced by more efficient policies, nationally agreed equity objectives will become more difficult to attain as time goes by.

Macroeconomic stability is a prerequisite for sustained growth, social consensus on a stability-oriented policy is necessary to avoid financial instability, in the form of "stop and go" policies. As the current situation in most countries is one of serious problems of efficiency and equity within and among generations, the threat to sustained growth may also extend to national cohesion.

Only firms - not states - can go bankrupt. The notion of the competitiveness of nations must therefore be handled with care. Nevertheless, attempting to foster international interdependence by cooperation among all levels of government, instead of defensive measures involving some form of protection against foreign competition is a vital challenge for the nation-state because it helps sustaining reform.

In discussing the reform issues we will take as a reference what is the most frequent arrangement in the OECD countries: a universal, compulsory public system, financed through a pay-roll tax and general tax revenue, on a pay-as-you-go basis. Reforming universal social security systems can be seen as solving a problem of macroeconomic and microeconomic efficiency, given values about equity which prevail in a given society and which are in one way or another responsible for the particular institutional mix available.

In the European Union (EU), the mechanisms of multilateral surveillance are based on peer pressure to comply with the annual Broad Economic Policy Guidelines and with the medium term strategy contained in the White Paper on Growth, Competitiveness and Employment approved in late 1993. Even though the White Paper fails to distinguish between the arguments for and against tax reform, including social security reform, and ways to lower the excess cost of labor in Europe, the greatest difficulties for the competitiveness of European firms in world markets comes from slow implementation of the agreed upon strategy.

2. EFFICIENCY

2.1. OLD AGE PENSIONS

2.1.1. Income Smoothing and Redistribution

A major component of all social security systems is the old age pension scheme. We can distinguish two roles for this arrangement. The first is related to savings and income smoothing. The second is related to redistribution. We will not discuss in detail the second aspect. It suffices to note that it is not clear at all, on a priori grounds, that the old as such are in special need of redistribution measures. They are not always the poorest and may well be richer than families

with young children. Old age poor should certainly be the target of redistribution measures, because they are poor, but not because they are old as argued in detail by World Bank (1994).

Moreover, most of the equity debate has been centered on measures of income distribution that may not be the most adequate. The policy implications can be quite different, and sometimes in conflict when we look at intra-generation vs inter-generation redistribution or at instant vs life-cycle inequality as discussed in Section 3 (see also von Weizsäcker (1994)).

Anyway this redistribution role of a social security system can be conceptually distinguished from its role of income smoothing, which includes an insurance argument. And our point is that it should be advantageous to do so. In particular the redistribution element should be financed by different means. Those are political objectives of society as a whole, as represented by its Government, and it should be financed by general revenue. Here the trade-off between equity and efficiency should be made clear by having the general redistribution programs competing for tax funds with other objectives.

In a world of perfect knowledge and perfect foresight, with well functioning capital and insurance markets, there would be no reason for the state to intervene in relation to the income smoothing objective. Voluntary decisions, insurance contracts, and the saving instruments created by the markets would be enough. So the problem must lie in the fact that market failures exist, which raises the question of whether governments can intervene to improve the situation. But governments are also prone to failures, and the problem becomes a very complex one, of deciding which types of failures are preferable. We live not in a world of potential first-best solutions, but in one where hard choices among imperfect solutions are the norm.

2.1.2. Income Smoothing and Efficiency

Income smoothing has quite a substantial economic value. More precisely, people value the consumption smoothing that happens as a consequence of income smoothing. Governments all over the world put a lot of effort into stabilizing aggregate consumption. Bob Lucas (1987, p.26) estimates the potential gains for the American consumer, associated with the elimination of variability in aggregate consumption at about 0,5%. The cost of aggregate consumption instability is therefore a small proportion of aggregate consumption. The cost of individual variability of consumption is estimated by the author at close to 5%, a much more sizeable effect. But this cannot be interpreted as the possible gains from improvements in stabilization policy, rather as the potential, or actual, gains from social insurance. Any system of income-risk pooling improving the imperfections of capital markets would contribute to reduce this individual variability and therefore have a significant economic value to individual households. The benefit will be greater the greater

the initially uninsurable risk, so that the estimate is probably higher for many countries besides the US.

There is an efficiency case for social security type arrangements. But different arrangements will have different consequences, and the difficult and interesting questions are the ones relating to the design and operation of alternative solutions. In particular, when and how should the state take over rather than allow the markets to solve the situation.

The smoothing of income has to be made for two reasons. The first relates to life-cycle arguments. The ability to earn changes substantially with age, and old people do not command high salaries. Ideally one would save enough while young to finance his consumption later. This need will arise even without any uncertainty about his real income and life duration. The second one relates to smoothing across different states of nature. Unexpected events, totally or partially outside individual control, will affect income. Most people would like to insure against such risks. We will take each one in turn.

2.1.3. Life Cycle Smoothing

Voluntary schemes are the best way to solve this problem. They will cause the least distortions. As long as there are adequate savings instruments, including adequate tax treatment of long-term savings, there should be no reason for the state to impose its choice on the amount of individual saving and its applications. But problems do appear that can qualify substantially this conclusion.

The first problem has to do with life-cycle poverty: total income over the entire life-cycle may be insufficient. If that is so, no amount of individual saving will solve the problem. We need to have redistribution, and it can be argued on efficiency terms that it should be concentrated in the old-age period, when the disincentive to work is not affected.

The second problem has to do with undeveloped capital markets and the inability of evaluating the long-term prospects of the particular investment instruments available. This may lead to a lower than optimal savings rate, which may well warrant some forced savings. But it is not a logical consequence that such forced savings should be made through a publicly run system. If funded, it faces similar informational problems. If pay-as-you-go, other problems must be brought forward, and we address some of them in the next sections. Macroeconomic instability and inflation in particular, so pervasive in many countries, also make for inadequate saving instruments. Again, although this may logically lead to some mandatory forced savings, it does not imply the need of a publicly run system.

Finally there is a moral hazard type of argument. By short-sightedness or by deliberate strategic behaviour people may not save enough and become a

burden for society, even when they are, in life cycle terms, above a minimum poverty level. Modern societies, at least in many countries, will find unacceptable not to help. This means that every citizen benefits from some insurance. And, if that is so, he should be made to pay for it. Everybody - and not just workers - should be made to contribute. If we accept as desirable this universal guarantee, then one has a case for a universal compulsory minimum pension scheme. The state is the entity "offering" the insurance policy and so this should be a publicly run system. But only for a minimum pension.

2.1.4. Retirement and Insurance

It is well known that insurance markets, due to asymmetry of information, are prone to some specific forms of market failure: adverse selection and moral hazard. Private markets may thus fail to pool risks adequately in the population. When dealing with retirement pensions two risks that give raise to great uncertainty deserve attention. The first one is inflation. The second is uncertainty about the time of death. In both cases the question can be asked whether the state can do a better job of pooling risks than is done by the market.

When there is no inflation, or when the rate of inflation can be anticipated, privately-run funded pensions are perfectly possible and efficient arrangements. The problem is with unanticipated inflation, for two reasons. First, because, being unanticipated, it becomes very difficult to make actuarial calculations, unless the real rates of return are independent of the level of inflation. Second because inflation is a common shock and so hits everyone in the same way, at the same time. No risk pooling among pensions will solve this problem. Actually the best way to insure against this risk is to have macroeconomic stability, in particular price stability. This is the topic of Section 3 below.

Even in countries with the most sophisticated capital markets, there is only a very partial hedging for this inflation risk (Bodie (1990), Gordon (1988)). If pensioners are to be protected from it, government may need to intervene. But this can be done without resorting to a totally public scheme. Private pensions can be protected by indexed government bonds or simply budgetary transfers as argued by Nicholas Barr(1992). Even when the system is government run such indexation may not exist. Portugal is an example and, for several years, in the late seventies and early eighties, pensions fell in real terms.

Uncertainty about the time of death is a further source of risk. If a system provides for a lump-sum amount at the time of retirement, a late death may mean hardship. Those are private, uncorrelated risks, that should be possible to eliminate by pooling. The alternative, which insures against this risk, is for the system to promise an annuity, at the time of retirement. The main difficulty with private markets is again how to hedge for inflation.

2.1.5. Social Security and Savings

When discussing the efficiency consequences of a social security system, the issue that received most attention is probably the impact of the system on savings. Theoretical arguments lead many authors to argue that the impact should be negative. The implied assumption is then that a negative effect on national savings rate will decrease investment and so the growth rate. In the long-run this means that output is smaller than otherwise, and so there is an inefficiency cost. A second aspect of this issue is whether the method of financing makes a difference or not. Does a fully funded system have a smaller impact on the savings rate, as compared to a pay-as-you-go system?

Take the pay-as-you-go case first. People tend to save when they are relatively young and working, to dissave when they old and retired. Transferring income from working people to the older should then have a negative impact on total savings. A more careful analysis shows that this argument may not be so compelling as it seems at first sight. Actually one should look carefully at the determinants of the savings behavior along the whole life of each generation after the system is introduced and try to see the consequences. But the first generation of pensioners receives an unexpected gain, financed by reduction of the income of a cohort that has a higher propensity to save; and the second generation of pensioners also have pensions rights attributed to them that are higher than future contributions. In life-cycle terms one should expect them to reduce savings. We return to this point in section 3.2.

One argument leads to the opposite direction. If people, when young, either because they are shortsighted, or because they do not have access to adequate savings instruments, have a savings rate that is less than optimal, the imposition of a mandatory pay-roll tax may lead to a reduction in consumption. By affecting the retirement behavior and the inter-generational transfers among numbers of the family (young supporting the old, or bequest behavior) the introduction of a pension scheme will further impact on the savings behaviour. Given this complexity the only way to cut the question is to have empirical evidence deciding the issue.

Unfortunately the evidence is not strong enough to be totally unambiguous. Nevertheless, for the case of the U.S., we would like to quote Larry Kotlikoff (1994a): "in using social insurance programs to transfer ever larger sums from the young, who are in their saving-years, to the old, who are in their dissaving-years, the U.S. government has reduced U.S. national saving to historically unprecedented levels" and "U.S. consumer expenditure surveys and related data show that it is the U.S. elderly, the recipients of enormous social insurance transfers, whose increased consumption accounts for most of the decline in national savings".

Take now a fully-funded scheme, where government makes mandatory a certain level of savings. If people were saving that amount (or more) voluntarily the decision will have no impact. Otherwise it should increase the total amount saved. When comparing with a pay-as-you-go system a funded one should have a positive effect on the savings rate.

But the implied part of the argument, i.e. that higher savings lead to higher investment and thus higher growth rates depends then crucially on how the application of the fund is done. In particular, there is ample evidence that governments are quite bad at managing these funds, getting much lower yields than privately managed funds, as shown in World Bank (1994). Also it is important to understand how the existence of such funds affects the capital markets and the savings behavior of government. If government adjusts its behaviour by using the funds to cheaply finance a bigger deficit, the total national savings rate may not increase, despite the positive effect it has on private savings. Even in comparatively disciplined countries like Sweden and Japan the State could not resist the temptation to grossly misuse the funds it managed (Barr (1992)).

One further issue, which cuts across this discussion on the funding method is the possible impact of the annuitization of the retirement benefits on the consumption of the elderly and on their bequest behaviour, and so on the total savings rate. It is taken up at the end of Section 3.2.

2.1.6. Effects on the Labor Market

If the benefits were actuarially linked with contributions they would be seen as a price for insurance and should have a small distortionary effect on the labor market. When the system is financed on a pay-as-you-go basis, through a pay-roll tax this link is vague and the pay-roll tax is like any other tax, and brings important distortions on the functioning of the labor market.

The first important question is the usual one of tax incidence. If we take for granted that the system is funded on a pay-as-you-go basis, then there is no special reason to finance it through a pay-roll tax. In many countries the pay-roll tax is earmarked for the social security. But in economic term this is exactly equivalent to have these counted as part of the general revenue and have the budget finance all transfers. It makes no sense to separate this part of overall fiscal policy and analyze it independently.

The problem of financing the pensions is then simply one of optimal design of tax system. The overall tax system, including an eventual pay-roll tax, should be conceived in a way to minimize the excess tax burden, for a given amount of revenue. This is a general equilibrium analysis, and it is sometimes dangerous to try to reach conclusions from a partial equilibrium one. In particular the White Paper, already mentioned, includes a proposal about

substituting partially the pay-roll tax with a bigger VAT which should be framed in this light. In a world with two factors, capital and labor, and with perfect capital mobility, we know that the incidence of a tax is always on the immobile factor, i.e., labor. There would be no point in substituting a pay-roll tax by a VAT.

The rise in European unemployment may nevertheless be due, at least in part, to the widespread use of pay-roll taxes throughout the EU. The more rigid is the labor supply and the less opportunities there are to escape to the informal sector the more interesting a pay-roll tax becomes as part of a fiscal system designed for efficiency. But the real issue is that the size of the transfers has been increasing due to the demographic evolution and the rising entitlements, and so the tax revenue had to increase.

One important decision affecting the labor market has more to do with the benefits of old age pensions than with the financing of the system: the retirement decision. In fact the effective retirement age and the labor force participation of the older have been decreasing almost everywhere (World Bank (1994)). The theoretical arguments point in the direction of negative impact of a pension scheme on the labor supply but empirical studies are inconclusive (Diamond and Hausman (1984) do find some empirical support for this).

A quite different issue, but also bearing on the efficiency of the labor market has to do with the mobility of the labor force. The issue is specially important in the occupational schemes, when there are sometimes quite long vesting periods and no portability of rights. This has a positive effect by allowing a firm to recover its investment in firm specific human capital by being able to induce a longer relationship with its working force. But it also has negative effects, by creating barriers that may stop efficient redeployments of the labor force. A second point is that the insurance benefits are thereby reduced, and this may be an efficiency loss also. This last point can be of reduced importance, if the insurance effect is already guaranteed by a basic scheme, and the occupational plan is simply a complementary one (as is often the case). We do not conclude that this type of conditions, limiting to some extent the mobility, should be totally barred. If a basic scheme exists, that is portable, it may be efficient to allow firms to attract an adequate and stable labor force by using such an instrument.

This discussion brings us to a last general point of which this one may be seen as a special instance. The detailed rules regulating the eligibility and the timing for an old age pension have important embedded incentives that need to be understood. In Portugal, for example, the pension at retirement age is calculated as given percentage of a reference salary. The percentage used be 2,2% for each year of contribution, up to a maximum of 80%. The reference salary used to be the average of the best five years among the last ten, in nominal terms. When inflation is high the replacement rate (first pension/last

salary) could be quite low. On the other hand, by using only information about the last few years, the system was open to strategic behaviour: one could contribute on the basis of a very low salary and make arrangements to have a (fictional) high salary on the last few years. Small family firms could use such a strategy quite easily. With a quite low total life cycle contribution, one could qualify to a very high old age pension. The problem lies with the fact that these rules ignore a very large amount of information about the past history of each person. Recent reforms shifted the system in the right direction. Now what counts are the best ten out of the last fifteen years, but these are corrected for inflation.

A second problem with incentives lies with the fact that no allowance is made for a gradual decreasing of the working effort. With such rules the best strategy is to work as hard as possible in the last years, because that has a strong effect in the pension. Working part-time for a while is a self-defeating option. This can have the effect of reducing the actual retirement age and thus the total labor supply. Rules that would not penalize a gradual phasing out from the labor force are not difficult to conceive and might have better embedded incentives.

2.2. UNEMPLOYMENT BENEFITS

One useful way to look at unemployment compensation is to think of it as smoothing income across states of nature. With risk averse individuals this has a economic value that can be substantial. There is here an efficiency argument for the existence of an insurance scheme. Notice that this argument is quite independent from a redistribution type of argument. The system might be actuarially fair for every one, as far as the efficiency argument is concerned. Actually, if provided by private markets it would be so. Again, here the interesting problems lies in the analysis of the reasons why markets fail and also whether the state has reasonable means of bettering the situation.

One reason why insurance markets may be unable to cope is because risks are correlated. At certain periods, the probability of being unemployed is higher for everybody. This is an aggregate risk that cannot be solved by pooling the individual risks. But no state scheme will solve this problem either, for the same reason. The advantage may be only in a higher capacity of the state to use its budget and the public debt to shift resources in time.

A second reason has to do with adverse selection: some people are simply worse risks than others and it may be difficult or impossible for private firms to monitor the relevant information. The availability of a past record on employment can partially solve this problem. But then firms will try to seek the best risks and the market will be characterized by separating equilibrium, with full insurance for the good risks, but with only partial insurance to the worse risks. Eventually some groups may not be able to make insurance at any price. A pooling equilibrium might be made possible by making insurance compulsory, as it happens in other markets, (e.g. car accidents insurance). But the government would need to make it impossible for a company to reject any

individual or else to set up a last resort public scheme to insure those that no company would accept.

A much more difficult problem to solve is the question of moral hazard. If insured against unemployment, specially with a high replacement rate, a worker may well decide to be unemployed. This is the reason that makes it almost impossible for a general unemployment insurance scheme to be run by private markets. Simple empirical observation shows the almost total absence of such privately own arrangements. And we do not believe that this is simply a "crowding-out" by the now generally available public systems.

While this points to an almost impossibility of private markets to supply unemployment insurance, it does not make it a logical conclusion that the state should set a system instead. But, even only for efficiency reasons - besides eventual redistribution ones - there is a strong case for the existence of such a scheme, as long as we believe there is involuntary unemployment. But no system of unemployment insurance can avoid the negative aspects related to the strategic behaviour of the insured. A publicly run is very probably desirable, but it should be designed in such a way as to minimize the disincentive effects it has on the labor supply. The problem becomes specially serious when the replacement rates are high. This is often the case for low-paid people who are practically as well-off employed as unemployed, and even sometimes better-off as unemployed ("poverty trap").

This disincentive effects can be substantial and should be carefully weighted in designing the rules that determine the benefits. Very often this means offering only partial insurance against unemployment. In fact most systems already do so. First, the replacement rate, although sometimes (too) high, is in general less than one. Second there are eligibility conditions, in general in the form of a certain minimum period of employment. How the benefits should be defined as a function of the individual past history is an important theoretical and empirical issue requiring more work. In fact some features like maximum duration of benefits; whether those should be decreasing over time; how demanding are the rules on "looking for jobs"; the elements of past employment/unemployment story may all be important elements that should probably be taken into account in the designing of this insurance contract.

Hugo Hopenhayn and Juan Pablo Nicolini (1994) develop an interesting model where they characterize the optimal unemployment insurance contract and evaluate the welfare differential between this optimal contract and the typical current programs. They find in particular that the compensation should decrease with the length of the unemployment period; and that the level of these benefits should depend on past history, e.g. being smaller the shorter the last unemployment spell.

When looking at pension systems based on individual accounts, one may be able to avoid some incentive problems by substituting unemployment insurance schemes with access to liquidity schemes. The idea is to allow the

worker to have partial access to the funds accumulated in the individual account out of which he will finance his retirement pension. This implies that, to a certain extent, he will have to sacrifice the level of that pension or else chose to retire somewhat later, so as to accumulate again rights to a higher pension. In this way, the costs of giving only partial insurance can be mitigated. The optimal schemes probably becomes a combination of partial insurance and access to liquidity. This is an area where further theoretical and empirical work could have a high pay-off in terms of designing better performing schemes.

3. GOVERNANCE

3.1. INSTITUTIONS

We have been taking as a reference what is the most frequent institutional mix in the OECD countries: a universal, compulsory public system, financed through a pay-roll tax and general tax revenue, on a pay-as-you-go basis. In particular, the peer pressure mechanisms practiced in the EU have been emphasized as an effective way to deal with growing international interdependence. It was also stressed that the medium term strategy contained in the White Paper does not contain clear arguments for and against tax reform, including social security reform. One reason may be that taxing and spending powers, as well as the design of budgetary procedures, remain with member states. This is why the principle of no bail-out by the Community or by each other (Article 104b) is the basis for the protocol on excessive deficits which is part of the Union Treaty. The protocol stresses budgetary procedure because the public sector annual budget helps markets, social partners and taxpayers see the size of the public sector relative to private initiative and therefore deal with high and rising public debt from below.

European construction will be sustained if policy rules exist to protect the interests of present and future taxpayers. But institutions oriented to the avoidance of excessive future taxation will not take hold unless current voters appreciate the unsustainability of current policies. The convergence criteria for stage III of EMU can be seen in this light. Without them, the economic regime remains fragile and subject to policy reversals.

Social partners and taxpayers must understand that spending and borrowing by the government tend to be higher than what would be socially desirable. There are two reasons for this bias. Spending may be excessive because marginal cost of financing is not fully accounted for. Debt finance may be excessive because the interests of future tax-payers are under-represented. A high share of open-ended expenditures (transfers to households, interest payments on public debt and government wage bill) increases the bias. Because they create entitlements, open-ended expenditures make it difficult to sort out the effect of economic cycles and the effect of discretionary policy decisions.

Appropriate procedures must include contingent reductions in expenditure and increases in revenue due to uncertainty in forecasting both sides of the budget. On the whole, appropriate budget procedures ensure that the authority representing the collective interest in the efficiency of public finance dominates over spending agencies, including those responsible for open-ended expenditures. The institutional requirements involve the parliament and the court of auditors, both at the national and at the union level - aside from the independence of the central bank in matters of monetary policy. Basically, an effective multi-annual fiscal adjustment strategy (MAFAS) on the part of each member state is necessary.

Strengthening market institutions also requires devising ways of monitoring the implementation of internal market measures, including financial services, as well as the coordination of the implementation of structural measures contained in the White Paper. In fact, structural, including tax, measures aimed at removing the obstacles to growth, competitiveness and employment, will certainly be part of the transition. They are required in most if not all of the current and prospective member states, so as to reinforce the competitiveness of firms located in Europe relative to the US or Japan, let alone the fast developing countries.

As Jurgen von Hagen and Ian Harden (1994) have stressed, the annual public sector budget must be the locus of conflict resolution. Institutions determine fiscal policies to the extent that they determine strategic roles and advantages. Therefore they create or destroy opportunities for collusion among groups. Budgetary procedures will be appropriate if they facilitate effective and accountable conflict resolution. On the contrary, if the process leads to non-decisions or if conflict resolution is removed from budget, budgetary procedures are not appropriate and fiscal convergence will be impaired. The budget becomes a mere record of prior commitments and off-budget items spread, compounding the inefficiency of the budget process.

A MAFAS can thus be seen as a commitment technology which helps remedy budget illusion. The commitment will not be credible, however, if appropriate budget procedures are not followed. Appropriate procedures must include contingent reductions in expenditure and increases in revenue due to uncertainty in forecasting both sides of the budget. In countries that need to introduce a stable and broadly-based tax system, which does not encourage widespread evasion, as an important component of structural adjustment, there will be additional uncertainty on the revenue side.

On the whole, appropriate budget procedures have been successful in bringing some union economies closer to a sustainable fiscal stance because they ensure that the authority representing the collective interest in the efficiency of public finance dominates.

This implies the strategic dominance by the Prime Minister or the Minister of Finance over spending ministries. It is to be understood that spending ministries include the one responsible for transfer payments. The revenues from social security contributions do not suffice in general to make the Minister responsible as true a representative of future taxpayers as the Minister of Finance. The tradition of the pay-roll tax, already mentioned in section 2.1.6, may be related to the belief that its revenues should be earmarked for social insurance transfers. In addition to complicating the design of the optimal tax, this tradition also makes it more difficult for budgetary procedures to sustain social security policy.

3.2. ACCOUNTING

The introduction of a system of generational accounting should be foreseen as part of the reform of budgetary institutions, including systems of social insurance. Indeed, Kotlikoff (1994b) - who has been responsible for the preparation of these accounts for the US Federal Budget over the last few years and has applied to a number of other countries - states: "if one were to include only Social security benefits and taxes in the construction of generational accounts, one would essentially end up with the Trustee's Report of the Social Security Administration". He adds: "generational accounting is not some complicated, black box economic model. Instead it's a straightforward means of drawing out the collective implications of the government's separate fiscal, demographic, and growth projections."

In the actual implementation of generational accounting, the fiscal burden of future generations and that of the youngest current generation, namely newborns, are compared in terms of lifetime net tax rates. These are taxes paid (TAX) net of transfer payments received (TRAN) expressed in terms of share of lifetime labor income:

$$\text{NETX}=\text{TAX}-\text{TRAN}.$$

Lifetime labor income grows over time, together with the growth of the economy as a whole. This comparison is justified because newborns, like future generations, have all net taxes ahead of them. Once in place, generational accounting is apt to answer questions on the sustainability of fiscal policy, such as the ones asked by Kotlikoff (1994a):

- "1. Is the trajectory of government spending affordable? Or does it imply that current or future generations will be forced to make unacceptably large net tax payments?
2. Given the trajectory of government spending, are current generations projected to pay enough in net taxes to ensure that the net tax payments of future generations do not become unacceptably large? "

The intertemporal constraint can then be written as:

$$PVNETX^c + PVNETX^f = PVSPEND + DEBT$$

where PV is the present value operator;

c, f are the superscripts for current and future generations respectively;

SPEND is government spending;

-DEBT is government net financial wealth.

The zero sum nature of fiscal policy is clear from the equation. Given the right hand side, reducing net taxes on current generations implies increasing them on future generations.

The wealth variable measured as liabilities minus assets excludes government capital because it is value at the present value of its imputed rent and would therefore appear in PVSPEND and in DEBT with opposite signs. There is no presumption about debt retirement in the future, only that public debt will continue to be serviced.

Note that generational accounts place explicit liabilities like DEBT on an equal footing with implicit liabilities to make promised transfer payments, defined as PVTRAN, to both current and future generations.

The introduction of a pay as you go social security system clearly lowers $PVNETX^c$ relative to $PVNETX^f$ as current generations include current and near term retirees who will receive larger social security transfers without having to pay additional payroll taxes. If transfers are financed by privatization, DEBT remains unchanged but $PVNETX^c$ falls so that $PVNETX^f$ must rise to keep the intertemporal budget in balance.

As an illustration of the bias against future generations, Figure 1 shows US generational accounts from Kotlikoff (1994b): lifetime tax rates rose from 24% of lifetime labor earnings for the generation born at the turn of the century to 36% for 1992 newborns. But this more than 50% increase pales by comparison with what future generations will have to pay, a "colossal 82 percent!"

This is used to explain the decline in the US rate of savings and investment and the rise in the consumption of the elderly. The increase in the relative consumption of the old, largely due to health care, is shown in Figure 2. At the end of Section 2.1.4, the relevance of the choice between lump-sum vs. annuity was noted. Again this choice will affect the savings rate (Kotlikoff, Shoven, Spivak (1986)), by increasing consumption in old age and reducing bequests. Figure 3 illustrates the dramatic effect of the form in which the government has been transferring social security benefits to the elderly, indexed annuities rather than lump sum payments, and the fact that Medicaid and Medicare benefits are provided in the form of in-kind annuities.

Figure 1

Lifetime Net Tax Rates of Current and Future Generations

Source: Kotlikoff (1994b)

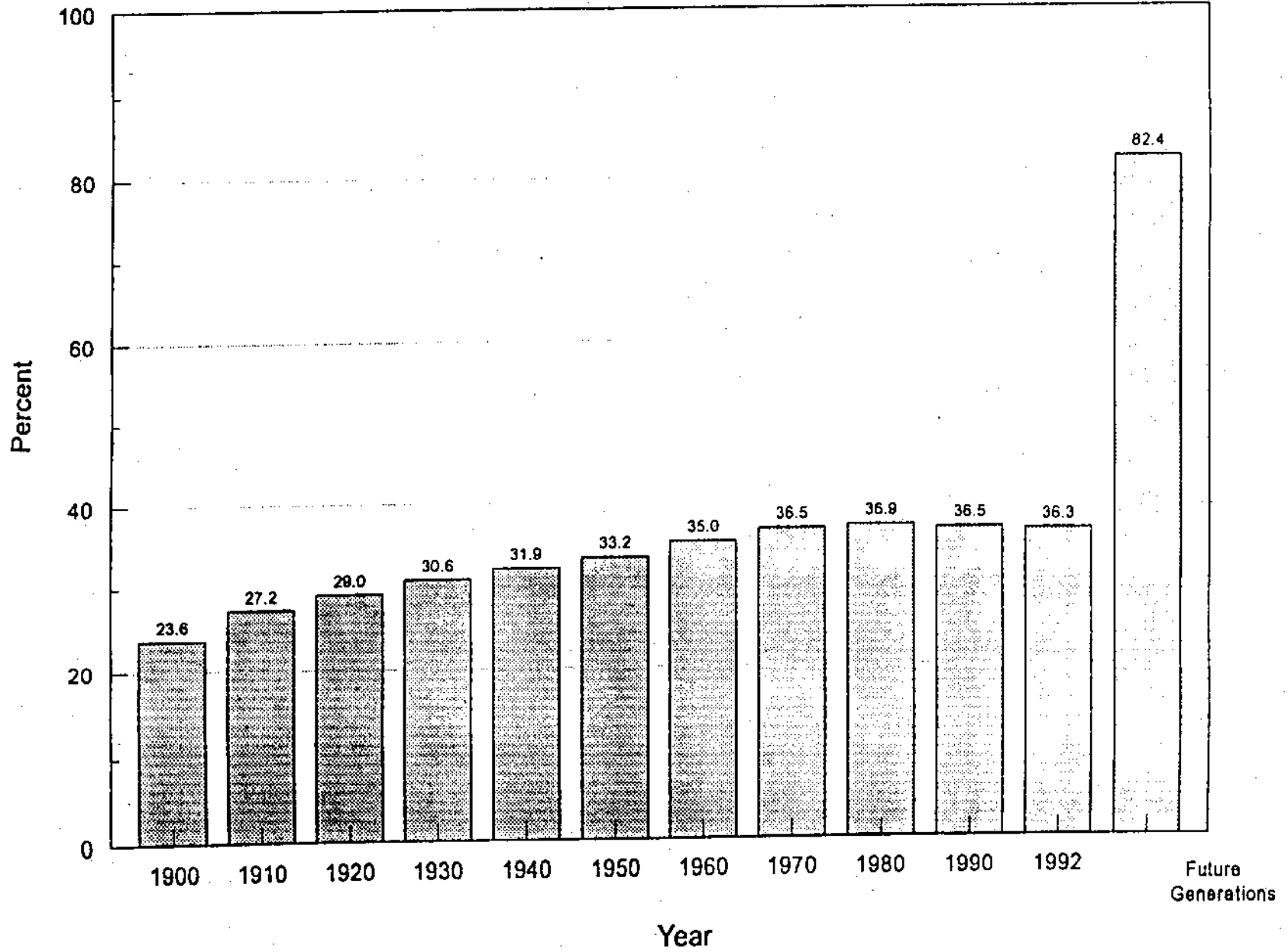
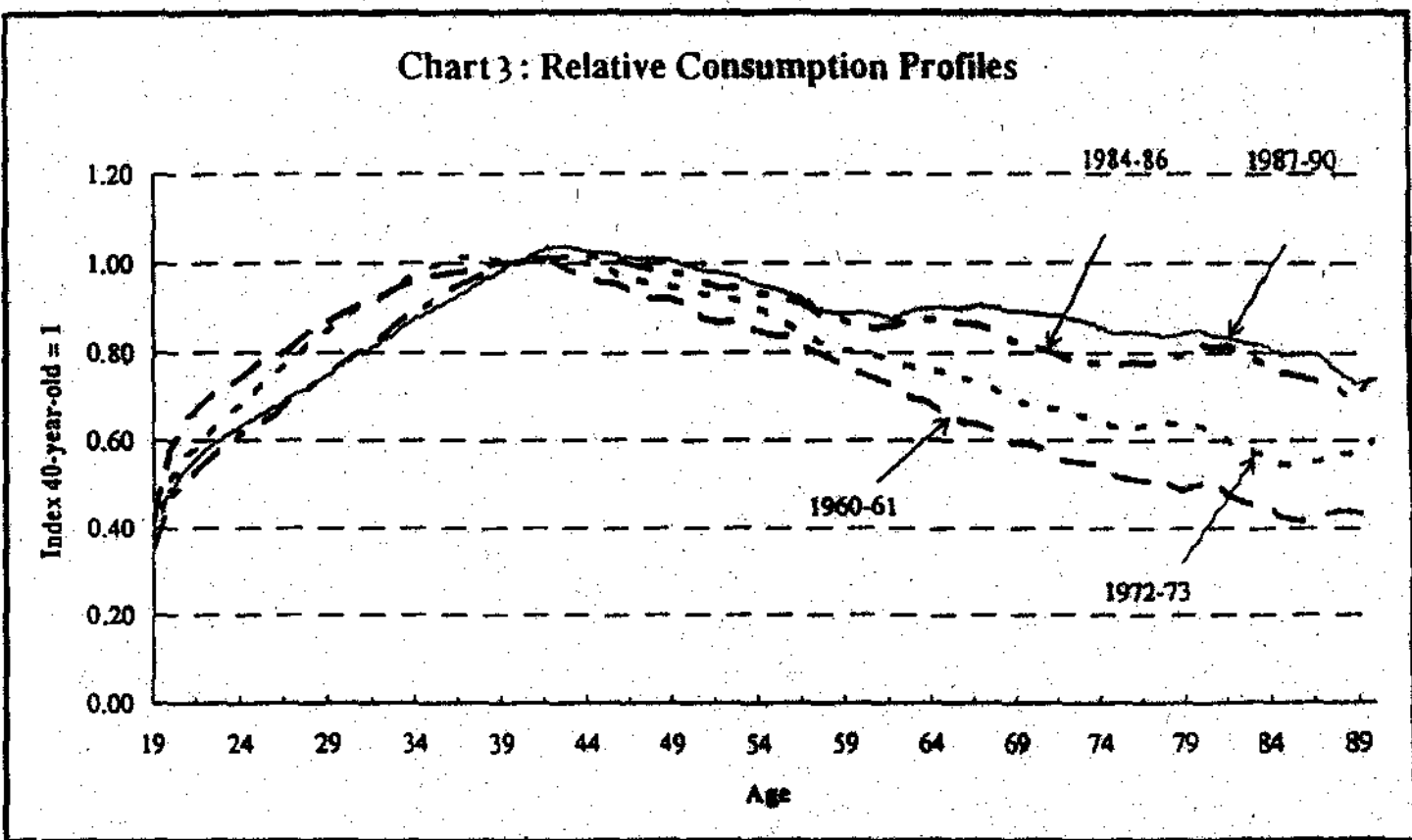
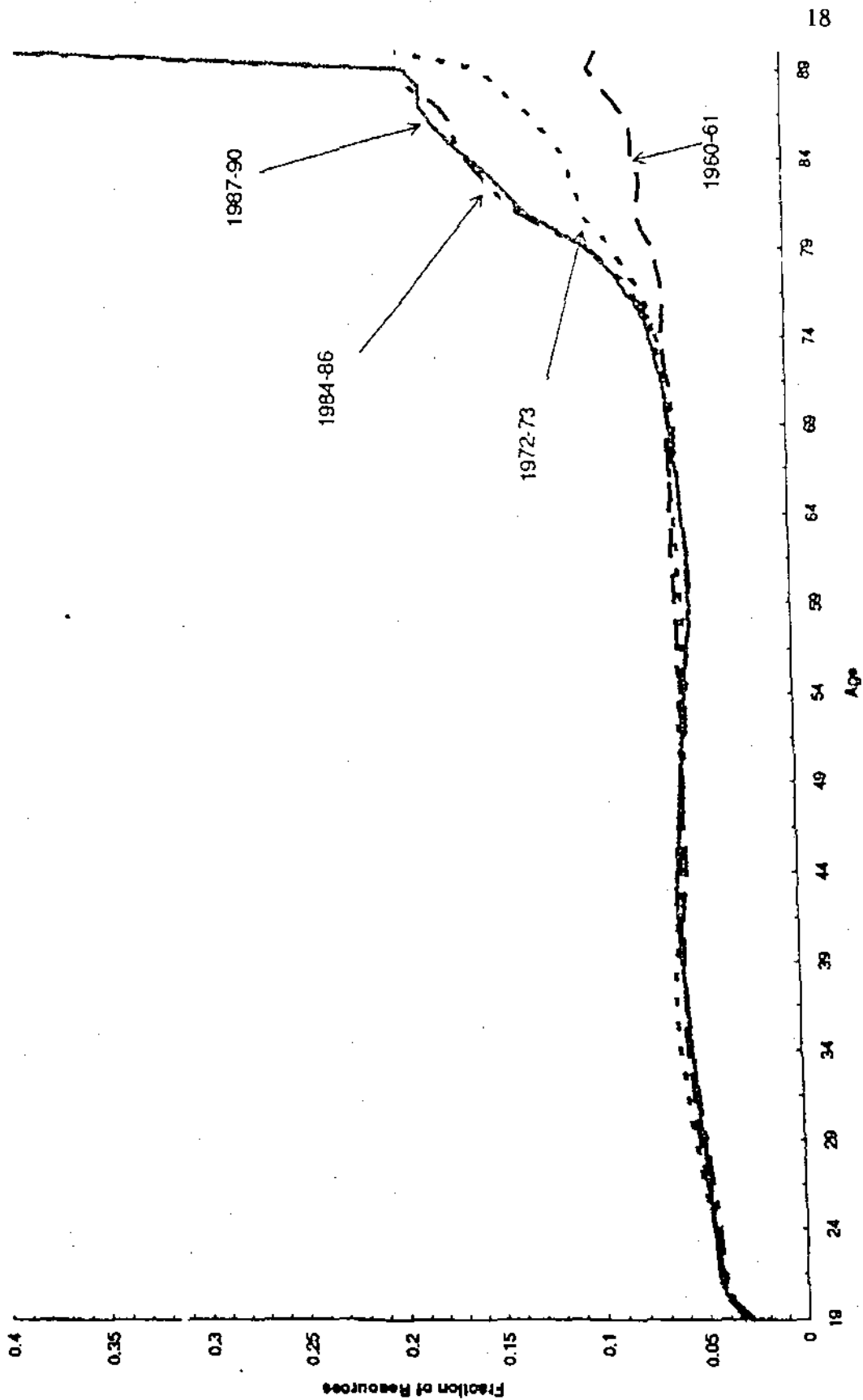


FIGURE 2



Source: Kotlikoff (1994a)

Figure 3: Average Propensities to Consume Out of Total Resources



Source: Kotlikoff (1994a)

3.3. MONITORING

Any evaluation of fiscal policy requires a study of public debt sustainability. However, the lack of clear distinction between private and public sectors and the lack of data make this difficult if not impossible for most countries. The existence of substantial arrears among public enterprises, the financial system, and the government, with gross debt probably much greater than the net debt, make assignment of debt to sectors conceptually difficult, even if we had the data. The existence of unmeasured future claims on the government add to the conceptual difficulties with measuring the fiscal deficit, as shown by Towe (1993).

An influential publication by Crédit Suisse First Boston (1993) has helped make the financial community more aware of this problem. Using the estimates of ABP, the Dutch civil service pension fund, of unfunded pension liabilities in the 12 EU member states at end 1990, they show that the hidden debt is of the same order of magnitude as the explicit debt. In the notation above, using a discount rate of 4% :

$$PVTRAN=DEBT.$$

Since some of the pensions are taxed, an adjustment also has to be made to PVTAX, and an estimate of the "true" debt is arrived at. It is reproduced in Table 1. The Dutch report goes on to encourage sector pensions, along the lines of World Bank (1994). Figure 4 shows the relative magnitudes of pensions funds and life assurance company assets. Both reports also claim that asset allocations should be liberalized, in spite of possible negative short term effects on currency fluctuations. Figure 5 shows the limited diversification existing so far.

Even if generational accounts are not fully implemented, any MAFAS will involve major structural changes in the budget. Aside from further improvements in the tax system, measures are needed on the expenditure side whenever the level of publicly-provided pensions is very high, and provisions for retirement are liberal. Since structural measures are needed for pensions, as well as for many other fiscal issues, MAFAS may require some form of social contract to be effective, and it will change the future fiscal position. Indeed, conceptual and practical problems in measuring the public deficit, and even worse, the public debt make monitoring especially difficult in countries where the public private distinction is blurred, or changing by explicit policy - such as the formerly planned economies.

Yet adequate monitoring of the implementation of a given strategy is essential for its credibility. It is the only way a country can durably join the policy convergence club. Therefore, it is an additional reason why the appropriate institutions should be developed. The EU experience in matters of multilateral surveillance is again relevant for a broader set of countries. On the other side,

TABLE 1

"True" Debt, 1990 (% of GDP)					
	Conventional Debt	Unfunded Liabilities	Tax Claim on Public Pensions	Tax Claim on Private Pensions	"True" Debt
Belgium	128	112	22	0	218
Denmark	67	97	19	0	145
France	47	106	21	2	130
Germany (west)	44	179	36	5	182
Greece	96	196	39	0	253
Ireland	102	103	21	12	172
Italy	98	184	37	0	245
Luxembourg	7	238	48	0	197
Netherlands	79	210	42	21	226
Portugal	68	167	33	0	202
Spain	45	183	37	0	191
United Kingdom	40	70	14	22	74
Source: see text above					

Source: CSFB (1993)

FIGURE 4

Pension Funds and Life Assurance Company Assets
Percent of GDP, end-92*

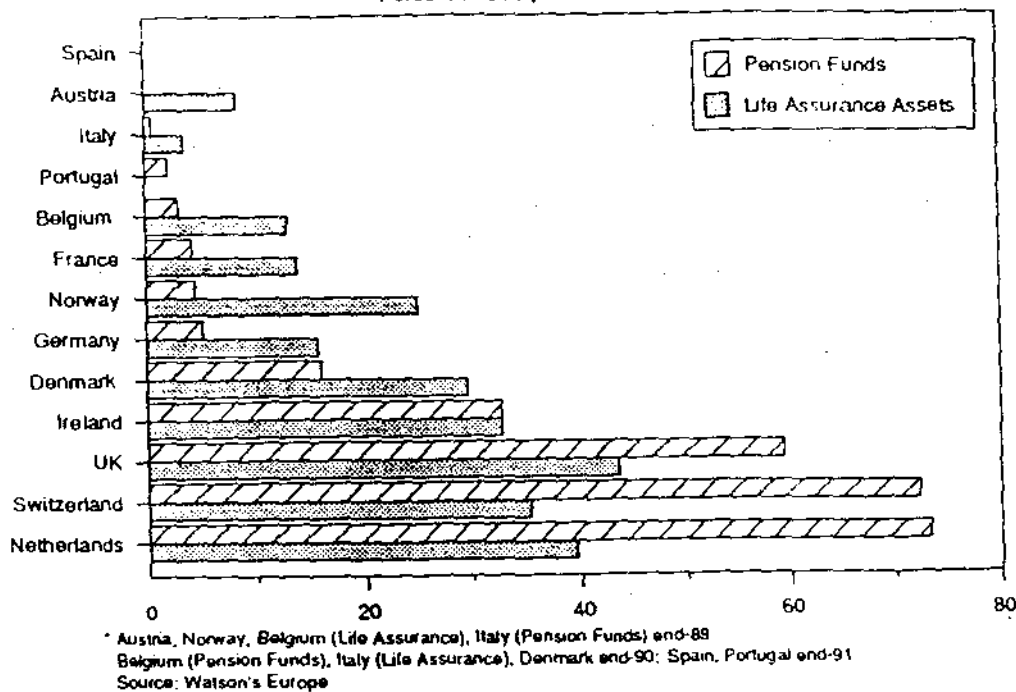
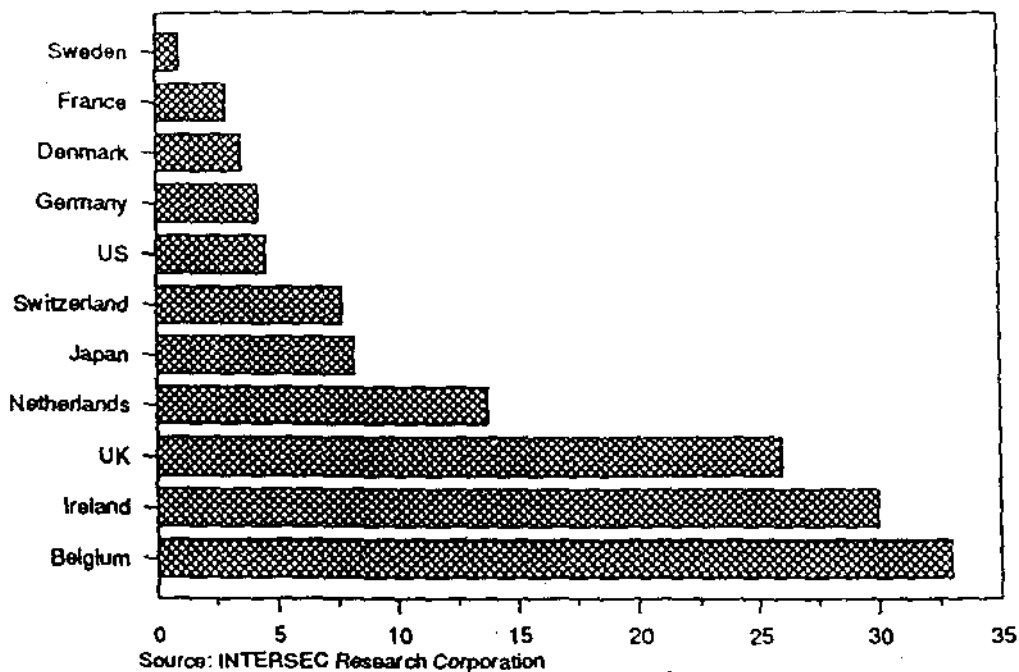


FIGURE 5

Pension Funds
Percent of Non-Domestic Assets



Source : CSFB (1993)

the difficulties with banking supervision which have become apparent in a number of OECD countries, including in the EU, suggest the difficulties associated with any reform process where the costs may be borne immediately but the benefits appear in the medium term.

This is yet another argument for a MAFAS capable of remedying deficit illusion, that is to say for the adoption of budgetary procedures which avoid the excessive taxation of future generations. A further implication is that such a MAFAS will probably be front-loaded, that is to say that deficit reduction may overshoot its long run target either via tax increases or expenditure reduction. In any event, nominal ceilings on non-interest expenditure (including social transfers) continue to be an important component of any credible MAFAS.

4. CONCLUSIONS FOR REFORM

We showed that efficiency considerations alone suffice to make old age and unemployment insurance mechanisms desirable. A similar reasoning applies to health insurance and to other transfer payments within and between generations.

The strategy proposed above is based on the claim that, quite aside from the constraints existing in an international body like the European Union, arrangements like NAFTA, Mercosul or even APEC will have to confront some of these issues together with their member-states. There is also the presumption that international institutions such as the International Monetary Fund, the World Bank, the World Trade or the United Nations Organizations have a role in monitoring progress on these matters.

While the values of proximity to the citizen, of national legitimacy and of democratic accountability appear to be widely shared, they are not valid worldwide at present. The emphasis on expectations and on future generations allows us, nevertheless, to invoke these values in connection with the set of policies which has brought more and more countries to policy convergence, respecting property rights and an open trading system. In spite of the greater difficulties in monitoring, social security reform must be seen in this light.

The current situation, where redistribution and efficiency objectives are mixed in a unique state-run system is quite costly in terms of efficiency. Given that most benefits are also universal they cannot be targeted to precise redistribution objectives. The insurance component should be made as close to actuarial as possible. The redistribution component should be funded from general tax revenue and more targeted. That the current systems are not very good at redistribution is clear from the analysis of World Bank. The existence of more than one pillar, with different objectives, and run differently as a consequence is probably the best way to fulfill different objectives.

This paper has addressed the reform of universal social security systems by showing in Section 2 that equity arguments are not necessary for a social security system to exist. In that connection, the importance of designing incentive compatible rules is stressed and two examples are presented of how rules constrain the decision to retire and to be unemployed. In the latter case, the effect of unemployment compensation on long term unemployment is also addressed. Section 3 stressed the fiscal fundamentals which are present in social security and the effect of alternative institutional arrangements on efficiency, that is to say on incentives and growth. The problem of financing social security is seen as one of optimal design of tax system, conceived in a way to minimize the excess tax burden, for a given amount of revenue. While there is no general case for substituting a pay-roll tax by a value-added tax, the move suggested in the White Paper, may help lower European unemployment.

In fact, the general argument about optimal tax reform, that it should be sweeping and infrequent, cannot be applied to social security. Since there are efficiency arguments for social insurance, changes in that direction follow the general arguments that by requiring insurance, the state can lessen the moral hazard problem. There is no reason for gradualism there. The same can be said about improvements in the functioning of unemployment insurance, by adding individual information, or allowing a combination of partial insurance and access to liquidity. In connection with redistribution, however, the optimal tax argument for a swift regime change disappears.

A front-loaded MAFAS - making room immediately for future reductions in social transfers - suggests itself in this connection. To make such a strategy credible, something like the so called excessive deficit procedure agreed in the Union Treaty may be required to ensure that national cohesion is not threatened by fiscal overshooting. Forms of multilateral surveillance adapted from the ones found in the EU will also help in making any process of social security reform more acceptable in international financial markets.

The acceptability of the front-loaded MAFAS will turn out to be decisive in keeping social security reform on the political agendas, and, more importantly, on doing something to sustaining social security policy worldwide. We do not attempt to draw country specific conclusions but rather to present some consequences of global competitiveness among firms towards problems which are often still seen as pertaining solely to national decision making. Nevertheless, both authors were involved in different capacities in the reform of the Portuguese social security system initiated in 1993 and their stand on what was achieved and on what remains to be done is the same.

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