Toward a Reformed and Coordinated Pension System in Europe: Rationale and Potential Structure*

Robert Holzmann
Director, Social Protection Sector
The World Bank, Washington, D.C.

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Abstract

The need for a rapid and comprehensive reform of the pension systems in the current and future member countries of the European Union is increasingly understood by most individuals and politicians. But much of the reform debate is still characterized by fiscal issues at national level. There is little discussion about a reform need beyond fiscal consideration -- the need for a reform move toward a more coordinated pension system within the European Union, and how it may look like and come about. This paper (i) reviews the reform needs of the pension systems for fiscal, economic and social reasons; (ii) makes the case for a move toward a more coordinated pension system in Europe; and (iii) sketches how such a system may look like and come about. The central claim of the paper is that the Notional Defined Contribution (NDC) system is an ideal approach to deal with diverse fiscal and social reform needs, and to introduce a harmonized structure while allowing for country-specific preferences with regard to coverage and contribution rate. It also leads to a political reform movement as a number of countries did or plan to introduce NDCs, and others can easily convert their point system into an NDC structure.

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1. Introduction

The need for a rapid and comprehensive reform of the pension systems in most current and future member countries of the European Union is increasingly understood by most individuals and politicians. While a few countries have recently undertaken major reforms to make their pension systems financially sustainable, in the majority of European countries the reform efforts to day are still insufficient. More importantly for this paper (and for Europe) much of the reform debate is still characterized by fiscal issues at national level. There is little discussion about a reform need beyond fiscal consideration, the need for a reform move toward a more coordinated pension system within the European Union, and how such a system may look like and come about. This is the topic of this paper and to this end it progresses in three Sections. Section 2 reviews the reform needs of the pension systems for fiscal, social and economic reasons. Section 3 makes the case why a move toward a more coordinated pension system in Europe is needed. And Section 4 sketches how such a system may look like and come about. The central claim of the paper is that the Notional Defined Contribution (NDC) system is an ideal approach to deal with diverse fiscal and social reform needs, and to introduce a harmonized structure while allowing for country-specific preferences with regard to coverage and contribution rate . It also leads to a political reform movement as a number of countries did or plan to introduce NDCs, and others can easily convert their point system into an NDC structure.

2. The need for pension reform in EU and EUA countries[1]

There are three main reasons why countries of the European Union (EU) and her future accession countries in Central, Eastern, and southern Europe (EUA) need rapid and comprehensive reforms of their national pension systems: First, the current high expenditure level and related budgetary pressure will only worsen given the projected further aging of populations, and the national systems need to be reformed to handle aging in a manner consistent with individual preferences. Second, ongoing socio-economic changes are rendering current retirement income provisions inadequate at the

social and economic level. Third, globalization creates chances and challenges, and to deal with them effectively requires, inter alia, flexibility and better functioning factor markets.

The ***expenditure level for public pensions*** in most Western European countries is well above that of other highly industrial countries at a similar income level. The average pension expenditure as a percentage of gross domestic product (GDP) for the 15 EU countries in 2000 amounted to 10.4 percent (That is a low estimate because it includes only the expenditure under the projection exercise of the Economic Policy Committee, 2001). The Organisation for Economic Co-operation and Development (OECD) estimate is about 1.3 percentage points higher (OECD 2002).[2] The average for the non-European and affluent OECD countries--the United States, Japan, Canada, the Republic of Korea, Australia and New Zealand--in 2000 was about 5.3 percent, that is, roughly half. In the EU, only Ireland (4.6 percent) and the UK (5.5 check ?) has similar levels. This difference is also shared by the accession countries in Central and Eastern Europe. Except Romania (5.1 percent), all others have expenditure shares close to (and in Croatia, Slovenia, and Poland, well above) the EU average and hence much higher than non-European OECD countries despite an income level of one-quarter and less. Poland's pension expenditure, at close to 15 percent of GDP, rivals that of Austria and Italy for the world championship (See figure 1 in the Annex). The gap between these expenditure levels and those in non-European OECD countries is only little explained by differences in population age structure. Rather, it reflects differences in the public/private mix of provisions and in the benefit levels and the effective retirement age in the public systems. The replacement rate is generally much higher as public (largely unfunded) pensions are little supplemented by private and funded arrangements (except in Denmark, the Netherlands, Sweden, Ireland, and the United Kingdom). The effective retirement age is typically low as a result of disincentives to working longer in current schemes, special options for early retirement and past labor market policy that deliberately attempted to keep the unemployment rate low by allowing older workers to exit prematurely. Yet the

[1] This and the next section draw on Holzmann, Mackellar and Rutkowski et al. (2003).

demographic component in pension expenditure is going to increase under unreformed systems as aging in Europe accelerates.

In Europe, the total fertility rate has been below replacement level (approximately 2.1) since the 1970s in the west and since the 1980s in the east, and there are few signs of a rebound from the current low levels. On the other hand, life expectancy is likely to increase during the next 50 years by 4.2 years for women and 5 years for men. As a result, for the EU15, the old-age dependency ratio is projected to increase from 27.7 percent (2000) to 53.4 percent (by 2050) (see table 1 in the annex), based on rather optimistic assumptions with regard to total fertility rate (assumed to rise again to 1.8 in most countries) and life-expectancy (assumed to rise less than in the past). The projections for the EU Accession countries are very similar (United Nations 2002). Based on this projected change in the old-age dependency ratio, and in a no-reform scenario, expenditure would roughly double.

Of course, such a radical expenditure increase would not necessarily materialize because some reform measures have already been enacted, and system dependency ratios (beneficiaries to contributors) may not deteriorate to the same extent as do old-age dependency ratios. Greater labor force participation by women is likely and that of the elderly may increase. This, at least, is the scenario put forth by the Economic Policy Committee of the EU, and the country projections for the period 2000 to 2050 (EPC 2001; see annex table 2).[2] As a result, the average EU pension expenditure (captured under this exercise) is projected to increase "only" from 10.4 percent of GDP in 2000 to a peak of 13.6 percent around 2040 (with a projected fall from 5.5 to 4.4 percent for the United Kingdom, but almost a doubling for Spain from 12.6 to 24.8 percent). This moderate projected 30 percent increase of the average expenditure level (compared with a pure demographically induced increase of some 70 percent) is estimated as a result of lower benefit ratios (average benefits compared to GDP per capita) and higher employment ratios (employment to population aged 15 to 64). However, I strongly conjecture that this modest increase in EU average pension expenditure levels will

[2] Other projections by academics and national research institutes are typically less optimistic and predict a much larger increase in expenditure under current service scenarios. See, for example, Rother et al. (2003).

require major changes in the pension schemes and their incentives for enhanced labor market participation and delayed retirement decisions. Put differently, a further major increase in pension expenditure can only be prevented if major reforms take place.

No similar and coordinated projection exercise has been undertaken for the EU Accession countries but existing projections paint clearly a two-class picture (EPC 2003): In countries which have undertaken major reforms – such as Hungary and Poland – the expenditure share remains largely unchanged (and a similar path can be conjectured for reformed systems in Estonia and Latvia). In countries where a major reform is still outstanding, the expenditure share in percent of GDP is projected to increase dramatically: An almost doubling in Cypress and Czech Republic, and a further increase in Slovenia. Bank internal projections are largely consistent with this picture.

Even if the budgetary and demographically induced pressures did not exist, there still would be a major need for most European countries to reform their pension systems to be better aligned with the **socioeconomic changes.** Three changes stand out: increasing female labor force participation; changing family structures and high divorce rates; and the rise in atypical employment.

In the EU countries, the *labor force participation* of women has increased substantially over recent decades. In the formerly centrally planned countries it was very high, but it decreased during the transition to a market economy (annex table 3), and the decrease for women mimics that of men and was in some countries even less pronounced (World Bank, 2003). Although there are differences among EU countries— (for example, in Italy, female labor force participation in the age group 15-54 in 2000 stood at a low 53 percent, in contrast to Denmark where an 83 percent female participation rate is almost equal to that of men) a further increase is projected for all countries. The EU average for the age group 15-54 is projected to increase from 67 to 77 percent, whereas that for men will remain largely constant at around 85 percent. So far this change in female labor force participation is little reflected in the pension benefit structure (see annex table 5). The benefit rules largely still reflect the traditional image of a working husband and a child-caring housewife who needs a widow's pension for her protection in old age. Only a few

countries, such as Denmark, have fully moved towards independent pension rights and eliminated the traditional widows pension (Denmark in 1984). As a result there is often under-provisioning for young widows with children, and there is often over-provisioning for widows with own pensions, and the latter now includes widowers. To ensure gender neutrality, in many countries survivor's pensions have been extended to male spouses and the budgetary consequences are increasingly curtailed by ceilings and tapers.

But eligibility for survivor's pensions gets complicated by the *rising divorce rate*. In many countries the divorce rates are more than 50 percent of the rates of marriage (per 1000 inhabitants; see annex table 4). This an approximation that in many countries more than 50 percent of marriages will not survive, including the second or third marriages. And those countries with, a more conservative divorce behavior so far, such as Italy and Ireland are expected to catch-up quickly. But only very few countries have moved in the direction of establishing independent rights for spouses (and even less for partners), that is, the individualization of pension rights. In many countries benefit traps for women still exist, that is, incentives against rejoining the labor market or remarrying when eligibility for a survivor's pension has been achieved.

Another and more recent development concerns the rise in *atypical employment*, that is, the reduction in full-time salaried employment and the increase in part-time employment, pseudo self-employment, and temporary employment (see table 6 in the annex). This development may be ascribed to globalization and competitive pressure that makes full-time employment less dominant than it used to be; it may be linked to more self-selected flexibility in the labor market (including the choice of retirement provisions). And data for OECD countries suggest that coverage under public pension schemes is decreasing (Holzmann 2003a). Whatever the reason, these atypically employed people do not fare well under many current pension schemes, which are based on the full-time employment fiction. Again, reforms (and a stricter contribution-benefit relationships) are called for.

Last but not least, ***globalization*** understood as high and increasing integration of markets for goods and services, factors of production, and knowledge calls for changes in the way public programs operate, including in the area of pension provision. Such reforms are

needed not only to reap the benefits of globalization but also to deal with the challenges which include profound shocks resulting from technical innovations, and shifts in the demand and supply of goods and factors. This calls, inter alia, for more flexibility across labor markets, improved financial markets, and life long learning.

A main conjecture about the fate of nations and their economic performance in a globalized world is their capacity to deal with shocks, in particular those which require the existing economic structure to adjust. It is claimed that the more flexible and adjustable an economy is to react to such shocks, the better it will fare. Such a flexibility comprises mobility of individuals across professions, including between the public and the private sector. In most European countries such a mobility is hampered by separate pension schemes between both sectors which limit if not eliminate any move between them. If this argument is not convincing, separate schemes render the application of some reform measure difficult or counterproductive. For example, increasing the retirement age for all primary school teachers to, say 67 may not be in the best interest of all participants, but it is feasible for a teacher to move to a related or different profession.

The integration of countries into the world economy is importantly linked with their own *financial sector development*. A developed domestic financial market is a main ingredient for full capital account convertibility, including the capacity to diversify pension assets internationally (Karacadag et al., 2003). International diversification is, perhaps, the only free lunch in the world, and promises major welfare effects as national and international rates of return of retirement assets (beyond shares) are little correlated but this requires that some minimum domestic financial market exists. Forcing individuals to hold most or all of their pension assets in illiquid Pay-As-You-Go (PAYG) assets is not an optimal strategy of dealing with diverse risks individuals are exposed to and clearly not welfare enhancing. Pension reforms which include the introduction or strengthening of a funded pillar allow such a risk diversification and at the same time can importantly contribute to development of the domestic financial market. Well developed domestic financial markets are a critical pillar of a market-based economy as they mobilize intermediate savings, allocate and price risk, absorb external financial shocks, and foster good governance through market-based incentives . The level of financial

market development is positively linked to output level and quite likely also to economic growth paths (Levine et al., 1999). Such effects are crucial for the EU Accession countries but are likely to be important for various current EU member states as well.

Last but not least, in order to handle aging through prolonged labor market participation, to provide labor market flexibility in a socially acceptable manner, and to contribute to knowledge and skill formation as a major ingredient for economic growth requires a pension system which supports *life long learning*. Today too many pension schemes are still based on the strict separation of education, work, and retirement leisure. But a modern economy and the need for lifelong learning require a pension scheme in which the mixing of the three activities is encouraged and not impeded--for example, going back to school after years of work, bringing forward (retirement) leisure, or taking up work again after retirement (say, from ages 70 to 72). Such flexibility is discouraged in most current pension schemes.

To deal with aging, socio-economic changes and globalization suggests a reform approach which moves toward a more actuarial system structure that better links contributions and benefits, more individualization to handle professional and family mobility, and also some funding to allow more individual decision and choices . The approach must go beyond a parametric adjustment of existing schemes. For most member EU countries this contrasts with adopted reform approach so far, while most of the EUA countries have shown more inclination to adopt a paradigmatic shift in pension provision (Holzmann, MacKellar and Rutkowski, 2003).

Reforms in the 1990s and early 2000s in the EU countries were essentially of parametric nature - with Sweden and partly Italy as main exceptions. The reform package typically included a combination of the following elements: (i) reduction or elimination of early retirement provisions; (ii) an increase in the retirement age or related indirect measures to this effect; (iii) reduction in the annual accrual factor; (iv) further changes in indexation; (v) and introduction or enhance support of a funded voluntary pillar. Only a few countries started towards more harmonized national systems (for example Austria and France), and most countries ignored the non-fiscal reform needs except, perhaps, for

reasons of political economy (Natali and Rodes, 2003). While essentially all these reforms move in the right directions, even from a fiscal point of view more is needed and this rapidly. [3]

3. The need for a better coordinated pension system in an integrated Europe

While there is increasing support for national pension reforms in EU and EUA countries, and, perhaps, agreement with some or, perhaps, all of the arguments advanced above, there is little understanding and support for a pan-European approach which should lead to a coordinated pension structure. Pension systems are considered - like other parts of social policy programs - as a national agenda item with little indications that member countries see a necessity for more coordination. And astonishingly, neither does the Commission of the European Union which in many other areas often sees such a coordination, or even harmonization need and pushes accordingly. "Open coordination" of member country's reform efforts as benchmarking not harmonization device is the name of the game (Holzmann, MacKellar and Rutkowksi, 2003).

This section argues that a major impetus for a pan-European pension reform approach resides in ***European economic integration,*** and the objective of common markets for goods, services and factors of production under a common currency - the euro. This objective has implications for the provision of retirement income: budgetary implications, the need for more labor market flexibility, and the need for enhanced labor supply in an aging population.

The concept of a stable common currency in Europe is linked with the *Maastricht fiscal criteria* to keep the fiscal deficit below 3 percent and public debt below 60 percent of

[3] In order to deal with the fiscal issues resulting from aging various recent reforms propose to handle this via adjustments in annual pension indexation. For example the recent Rürup Commission Report for Germany suggests to adjust pensions in line with the shifts in the ratio of contributors to retirees, and the recent Austrian reform envisages to cap indexation by the amount the median voter receives. Balancing the fiscal accounts with reduced indexation instead of a lower initial pensions and price indexation thereafter is questionable for 3 main reasons: First, it introduces a high level of uncertainty for individuals as the future real pension level cannot be determined, but once it is known the capacity to react may be nil. Second, in view of the unsettled issue of financing long-term care for elderly the financial needs of elderly may increase but not be reduced. Last but not least, the reform is not credible because time inconsistent as politicians may not be able to withstand future pressures for changes in indexation.

GDP. Although the selection of the criteria may be questioned (Holzmann, Hervé, and Demmel 1996), the objective is sound: to avoid excessive and opportunistic fiscal expansion by some member countries at the detriment of the internal and external value of the euro. To comply with the related growth and stability pact, the 12 "euroland" members engage to achieve a structural budget deficit of zero percent (to allow for fiscal expansion when cyclically needed). But many countries will not be able to achieve a zero budget deficit in a sustainable manner unless the pension system is reformed and the explicit or implicit transfers from the budget are curtailed. In Austria, as an extreme example, the pension-related deficit amounts to almost 5 percent of GDP. And all current and future member countries are exposed to enhanced fiscal pressure of population aging in the main public programs -- pensions and health -- in addition to yet fully grasped expenditure pressure in long-term care programs or infrastructure.

Room for budgetary expansion (and contraction) is needed in a common currency area because exchange rate and interest rate policy are lost and few other instruments are available to deal with asymmetric shocks hitting some member states but not others. Given the limited effectiveness of fiscal policy in an integrated economic area resulting from high leakages to other regions or compensating private sector savings, however, the other main policy instrument has to come into play: *labor market flexibility* through wage flexibility and migration.

Empirical evidence for the United States suggests that although wage adjustment during regional crises is important, the main adjustment mechanism is migration from (temporarily) contracting to expanding regions (Blanchard and Katz, 1992). This contrasted in the past with the European experience in which both wage flexibility and migration had little importance (Decressin and Fatàs, 1993); actually the international and inter-regional mobility in Europe during recent decades has been very low (Braunerhjelm et al. 2000). For Europe both adjustment mechanisms are likely to remain less important than in the United States because of more rigid labor markets and cultural and linguistic barriers; the last two restrictions translate also into a larger loss of social capital when moving (Esping-Andersen, 2001). But both mechanisms need to be

strengthened if delayed adjustments after demand or supply shocks, and its economic and social consequences are to be avoided.

A particular recent drastic example for the consequences of delayed structural adjustment and lacking mobility in resource re-allocation under a common currency-type arrangement is Argentina. The introduction of the currency board with the national currency pegged to the US dollar was motivated by the many episodes of hyperinflation and the expectation that the tight monetary corset will help to push through reforms on the good and factor market. But these reforms, including on the labor market did not come through as expected and left the country very vulnerable when shocks hit the world economy and neighboring countries.

One important mechanism to support a common currency and adjustments after shocks is a pension system that allows for full labor mobility across professions and states--a requirement not yet met. In many European countries different pension rules for public and private sector workers impede mobility between the sectors. Mobility between states exists notionally for public schemes (but less in reality), but full portability for corporate and voluntary funded systems is still under discussion. As a result, the EU does not have a coordinated, even less a harmonized pension system, which characterizes other economically integrated areas under a common currency (such as the Australia, Brazil, Canada, Switzerland and the United States). These federations or confederations exhibit many differences at state or province levels (including income taxes or short-term social benefits), but they have one thing in common--a public retirement income scheme across states.

A third main argument for a more coordinated pan-European pension system resides in the need for more *labor market integration* which goes beyond the requested labor market flexibility. A strand of international economics suggests that free trade in goods and services or alternatively free capital flows may be sufficient to lead to equalized factor prices and maximize welfare . However, in the real world of externalities and incomplete competition, quite likely the performance of all markets (including the labor market) need to be improved and integrated more strongly to maximize welfare

(Nicoletti et al., 2001). Full integration of the European labor market requires full portability of pension rights between countries.[4]

Finally, the *external value of the euro* is likely to be determined or co-determined by the growth expectation of Europe (compared with the United States or other currency areas). Current-period balances or imbalances in flows of goods and services or even the net-asset positions of countries are increasingly conjectured to lose their importance in determining the relative price of a currency under globalization. Productivity growth can only compensate partially for the effects on GDP growth of projected population decline in the EU15 (13 percent between 2000 and 2050), and higher productivity requires mechanisms to reallocate workers from shrinking to expanding sectors and regions. If falling population and aging are not better compensated through increased labor supply resulting from higher labor market participation, delayed retirement, and increased external migration, the impact on GDP growth will be substantial. Hence, the relative weakness of the euro (compared with the U.S. dollar) may be explained by expectations of the financial markets about the relative growth of these two currency areas. Enhanced labor force participation and delayed retirement, however, require major changes in age management practices in work places and labor markets as well as appropriately reformed retirement income schemes.

4. Potential Structure of pan-European pension system and transition issues

What structure could or should a more coordinated Pan-European pension system have, and if an appropriate steady-state system were to emerge from the discussion, what are the transition issues the approach would encounter, and how could they be solved? This Section suggests answers to these questions while issues of the political economy and how to get there will be addressed in the concluding remarks in the last Section. This Section starts out with outlining the general and specific main objectives a pan-European pension system should have before reviewing which of the main three options fits best. The proposed pan-European system consists of a (mandated) first pillar NDC plan, a (voluntary) funded pillar with occupational and individual retirement plans, and a zero

[4] On the recent debate about the need to harmonize or not harmonizing labor market policies in Euro

pillar of social or non-contributory pensions providing minimum income support for the very vulnerable elderly. All elements are discussed in turn with main emphasis on the NDC pillar.

a. Demands on a reformed and coordinated Pan-European pension system

What are the objectives that such a reformed system should fulfill? A presentation of these desiderata should allow a transparent and objective discussion and an easy comparison with alternative reform proposals. Two sets of objectives are suggested: Generic objectives which all modern pension systems worldwide should fulfill, and specific objectives which result from the EU background.

The ***generic objectives*** are the ones developed and proposed by the World Bank in a position paper under publication, and two level of goals – primary and secondary – are distinguished (Holzmann et al. 2003).

The primary goals of a pension system should be to provide adequate, affordable, sustainable, and robust old-age income, while seeking to implement welfare maximizing schemes in a manner appropriate to the individual country:

- An adequate system is one which provides benefits to the full breadth of the population that are sufficient to prevent old age poverty on an a country specific absolute level in addition to providing a reliable means to smooth lifetime consumption for the vast majority of the population.
- An affordable system is one that is within the financing capacity of individuals and the society, one that will not displace other social or economic imperatives or lead to untenable fiscal consequences
- Sustainable refers to the financial soundness of a pension system and its capacity to be maintained over a foreseeable horizon under a broad set of reasonable assumptions
- Robust refers to the capacity to withstand major shocks, including those coming from economic, demographic and political volatility.

The secondary goal of mandated pension provisions (and their reform) is to create economic growth effects by minimizing negative impacts such as on labor markets and macroeconomic (in-)stability created imbalanced systems, while leveraging positive impacts such as on financial market development. This secondary goal is important since all retirement incomes—whether funded or un-funded—are essentially financed out of

countries, see Calmfors (1998).

the country's output. The centrality of output for pension systems (Barr 2000) for delivering on the primary goals makes it imperative that the design and implementation of pension system are checked for their economic output and growth effects.

The suggested specific objectives of a pan-European pension system, to be used as criteria for selection and choice, are four: Mobility, national preferences, solidarity, and feasible transition:

- First, the system should allow for easy or best unrestricted mobility between professions, sectors, and regions but also between stages of the life cycle (school, work, and leisure) and family structures.
- Second, the system should allow for national preferences of target levels of (mandated) benefits or contributions, re-distributive allocation of resources toward the poor or specific groups or activities.
- Third, the system should be consistent with the (European) concept of solidarity, understood as mechanism of risk sharing among and between generations, redistribution of income from the life-time rich to life-time poor, and open risk coverage.
- Finally, the proposed future system should involve a feasible system transition from the current national systems for the largest possible number of member countries.

b. Potential structures of a Pan-European pension system

There are three main options for a future Pan--European pension system which aims to fulfill the objectives set-out above: (i) A basic pension plus a mandated fully-funded pillar; (b) Bismarck for all; and (iii) zero pillar plus NDC pillar plus voluntary funded pillar. The main arguments are the following:

(i) A basic pension in the form of demogrant or social pension plus a mandated fully-funded pillar providing DC benefits would be consistent with all objectives, except most importantly the one on easy transition. According to the World Bank experience, such a system may be structured in such a way to fulfill all primary and secondary goals, and if well done it can achieve them very well. Such a system ensures the requested mobility, allows for national preferences (for example by country-specific levels of basic pensions and contribution rates for the funded pillar), and can be structured to ensure solidarity: for example through a central public pension fund which pays one rate of return (hence pooling of risks across individuals) and through explicit budget transfers to individual accounts to deal with low income or periods of unemployment (as in Mexico). The main obstacle is (easy) transition. Abstracting from political problems to find consensus for

such an Anglo-Saxon approach in Continental Europe, the main obstacle is fiscal. It is well known that such an approach makes the implicit debt which pension promises constitute explicit, and the level of this implicit debt is in the range of 200-300 percent for most European countries.[5] Repayment of such an amount is beyond political and economic reach, and for a broad range of assumptions not Pareto improving. While a repayment of the debt may not be necessary to achieve the social policy objectives, it can be doubted that international markets are willing to live with such an explicit debt level of the EU without consequences for interest rate and exchange rate of the Euro.

(ii) Under the second option, a future pension system would expand the dominant Bismarckian approach of an unfunded and publicly managed DB system to the whole EU. Supported by social pensions and voluntary funded pensions such an approach can also achieve many but not all objectives. Well structured it can achieve all primary goals, and very well structured it may even support the secondary goals of a pension scheme. But as experience with such systems throughout the world indicates it will be difficult to make such structural reforms happen (and agreed at European level). With regard to the specific EU objectives, an inconsistency between the mobility goal and national preferences emerges. For example with different accrual rates or additions for, say, child caring under another identical DB structure, it would be difficult but not totally impossible to move from one profession or member country to the next, but the administrative efforts to emulate such a mobility would be gigantic while not fully successful. Last but not least, the transition would require first a consensus on a DB structure (and there are many), and second complicated rules of transitions.

(iii) The proposed structure of a (mandated) first pillar NDC plan, a (voluntary) funded pillar with occupational and individual retirement plans, and a zero pillar of social/ non-contributory pensions which provides minimum income support for the very vulnerable elderly is claimed to fulfill all objectives – generic and special, primary and secondary.[6]

[5] There are various estimates for the implicit debt of European pension systems (see Holzmann et al. 2001), but a simple rule of thumb may be sufficient according to which the level of implicit debt is roughly 20 to 30 times steady state expenditure. The average level of EU spending is over 10 percent of GDP .

[6] There are few other papers so far which outline the basic structure of a more coordinated European social policy, even less pension system. One recent exception is Bertola et al. (2001) which proposes for contingent insurance provisions three core elements: a minimum contribution rate, a close contribution-benefit link and, no penalization when moving.

Of course, there is room for design and implementation specificities to make a future structure very well or less well fit. The following sub-sections outline the basic structures and design elements to make it fit well.

c. The crucial (first) pillar – Notional Defined Contribution plan[7]

To motivate the choice of NDC as crucial pillar of a future pan-European pension system, this subsection progress in three parts: (i) outlining the basic structure of an NDC system; (ii) highlighting its capacity to deal with system objectives and reform needs; and (iii) presenting the ease of transition for most (but not all) EU member countries.

(i) Basic structure of ideal NDC: One main attraction of an NDC system is the simplicity of its basic structure if one follows the rule book, that is, if it is seen as a system which makes the algebraic and economic logic and constraints of an (unfunded) pension system explicit. Simply put, an NDC system consists of an individual account system to which contributions by individuals (and their employers) are earmarked, notional interests paid, and at retirement the accumulated (notional) amount used to determine the level of annuity based on the residual life expectancy (and the notional interest rate). Crucial elements for design and implementation are: (1) The choice of a notional interest rate consistent with internal rate of return of a PAYGO scheme, that is growth rate of aggregate (covered) wage sum. Per-capita rates of wage or GDP growth or contribution revenue will not do the trick if the contribution rate is constant, but the discussion about the best notional interest rate choice is far from over. (2) The choice of remaining life-expectancy. Politically determined underestimation (for example by taking the cross-section life expectancies instead of estimated cohort expectancies) to deliver higher annuities will also jeopardize the financial sustainability. (3) The indexation of benefits. While indexation beyond price adjustments is, in principle, feasible, it is suggested to keep benefits constant in real term. Such an under-indexation compared to a steady state helps to build-up a reserve fund.[8] (4) A reserve fund is needed

[7] This paper is not the first one which proposes an NDC-type structure for a pan-European pension system. The idea has popped-up in various papers and presentations (including by the author) and references include Feldstein (2001) and Gora (2003). Yet, this paper provides, perhaps, the most comprehensive treatment so far.

[8] The quasi-actuarially fair annuity is determined by remaining life expectancy and notional interest rate. If productivity growth is above (negative) population/labor force growth, the growth rate of aggregate

as an NDC system cannot guarantee balancing the pension budget in every period, i.e. to be fully immune against economic and demographic risk. (5) Other important basic design elements, discussed below, concern the minimum eligibility age to own pension and to minimum pension, if any; the introduction of redistributive elements; and transition rules to new NDC benefits.

(ii) Dealing with system objectives and reform needs: An NDC pillar (together with a well designed zero plus voluntary pillar) is able achieve all reform needs outlined in Section 2 and 3, and to fulfill all system objectives. Here we concentrate on a subset for reason of space and importance: Financial sustainability; changing family structure and establishing own pension rights; mobility across professions, and across states; and national preferences and solidarity.

Achieving financial sustainability, in particular under conditions of an aging population is one of the trade-marks of an NDC system, albeit it is not fully automatic. As life expectancy increases, individuals receive a lower pension benefit for a given retirement age which they can compensate by extending their labor force participation. Hence, the system encourages a behavior that deals with aging in a consistent and balanced manner, namely splitting the increase in life expectancy between more work and more retirement leisure. Earlier or later retirement for a given age is sanctioned (rewarded) by quasi-actuarial decrements (increments) consistent with a PAYGO scheme.[9] But financial stability cannot be achieved automatically in all periods (Valdes-Prieto 2000) which leads to the need for reserve fund, and mechanisms to adjust revaluation and indexation, if needed (see footnote 9).

Dealing with increasing female labor force participation, changing family structures, and rising divorces, is easy under an NDC system as it allows individualization of pension rights together with considerations of fairness and efficiency. For example, marriage and separations over the life cycle can be easily handled by splitting the accumulated

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wages is still positive. Hence keeping pension benefits constant instead of indexing with positive notional interest rate provides a little surplus for reserve building, and additional indexation once a steady state reserve fund is reached.

(notional) amounts (contributions and interests) of the time together. But even if the marriage lasts till retirement one can imagine a splitting of benefits at retirement (as anyhow uni-sex survival probabilities may be applied). Also survivorship can be handled in an easy manner: For example, widows/ers with small children receive a generous transitory pension till, say, the children enter school, and the split accumulations from prior marriage help build her (or his) own pension account and eliminates any pension trap. Since in most European countries accumulated financial and physical assets during marriage are split at divorce it would be inconsistent not to split the accumulated pension rights.

Mobility across professions can easily and quickly be established as an NDC plan allows immediate harmonization of pension schemes with little technical problems. Take civil servants pensions to be integrated into an national NDC pillar. For those already retired, nothing changes. For those with accumulated pension rights, these rights can be estimated with high precision, transformed into a present value and credited to an individual (notional) account. The next month (or year) this individual gets credited the unified contributions and notional interests as everybody else. As a result for those very close to retirement little change in the pension amount takes place while those with a few years of work record the new system dominates by far. Quite likely such a reform will need to be accompanied by a review of the overall compensation package of the public sector, leading to changes in earnings profile or supplementary but funded pensions of NDC type.

The mobility across EU member countries can also be made very easy under an NDC plan. Albeit the accumulated amounts are only notional, they are very precise and allow an easy aggregation across countries with two main approaches. Under a transfer approach a worker moving from, say, Germany to France would take his accumulated amount along (i.e. the German social security scheme would need to make a cash transfer to the French social security scheme), and the pension would be calculated and disbursed in the country he stops his activity and applies for a pension. From a national point of

[9] The discount rate is the rate of wage growth which is below the (risk-adjusted) interest rate in a dynamically efficient economy. The latter applies to fully funded DC system which is actuarially fair. Unfunded DC systems – i.e. NDC – come close but are only quasi-actuarial.

view only the balance for all labor market migrants (to and from the country) need to be transferred which is likely to be modest. Under the alternative preservation approach each worker would keep his account and continue to receive national notional interests till retirement. Then the individual would receive partial pensions from as many countries he has worked in. Clearly, the second approach seems more transaction-cost intensive and will create a problem in the case minimum pensions are granted (by which country – the final resident's one?). Of course, social arbitrage is not excluded under the first approach as individuals may be tempted to move before retirement to a country with high minimum pension, low remaining life expectancy and low income tax rates.

But incentives for social arbitrage will always exist in case of national preferences and different depth of national solidarity across member countries, and NDCs cum social pensions allow for national preferences. For example, one country may prefer a frugal mandated pension for its residents and prescribes a low NDC contribution rate only (say 10 percent) and expects more voluntary contributions to well regulated funded schemes (say also 10 percent), while the other prefers a high target replacement rate and mandates a higher contribution rate accordingly (say 20 percent), but expects few people to contribute to a funded pillar. Individuals moving between these two countries would not fare too differently. The NDC approach exhibits national solidarity through its pooled rate of return approach – one notional interest rate – and the sharing of economic and demographic risks. The second element of solidarity – redistribution – can also be easily introduced in NDC systems but requires direct payments from the budget at the time of granting. For example, low income workers can be provided a co-payment to their contribution or for periods of recognized unemployment the contributions to the NDC system are paid in cash by the unemployment benefits system.

(iii) Dealing with transition issues across member countries: The prior sub-section has already highlighted that a transition across earnings-related and unfunded pension regimes within a country is technically but not necessarily politically easy. The same applies to countries which start a prima vista from different systems. In the following such transition issues are discussed by country groupings.

Coordinating among the existing NDC countries. Four current or future EU countries have already introduced NDC systems: *Italy (1995), Latvia (1996), Poland (1999), and Sweden (1999).* While these countries share the system design of NDC, there are major differences in some design and implementation elements (Palmer 2003). For example, the countries use different notional interest rates, ways to determine the residual life expectancy, or transition rules from the prior to the new system. This raises two general issues: To what extend must or should a pan-European NDC system have the same system design and implementation (and hence be fully harmonized, except, say the contribution rate levied), and to what extent must or should the transition rules be harmonized.

For example, using different notional interest rates is primarily an issue of financial sustainability for the national scheme. Assuming that the choice of the rate of aggregated wage growth provides sustainability but the per-capita average wage growth does not because if too high, a country which chooses the latter would need to find additional budgetary resources or cut annual benefit indexation. A priori there seems no reason why such national preferences should not be granted. Of course, the political shortsightedness may lead to the choice of the most favorable notional interest rate which is the least financially sustainable. But no system is politically foolproof.

There are more arguments for some harmonization of transition from the old to the new system. For example, Italy and Sweden will only gradually phase in the NDC system over the next decades while Latvia has moved all workers in one stroke to the new system. If mobility across professions and countries is a main goal of a pan--European reform, it is the latter approach which is needed. An approach which, however, allows the expression of national preferences, in particular the generosity of the transition rules at the detriment of financial sustainability.

Transitioning quasi-NDC countries: Two countries have unfunded DB systems which almost mimic NDC systems and hence should be easy to transit – *Germany and France*. It is almost common knowledge that a DB system which uses life time income revalued with national wage growth and actuarially determined annuities is algebraically equivalent to an NDC system (Disney, 1999). In reality differences do exist (Legros

2003) which does not prevent a transition toward a common NDC design but does not make the transition different from other earnings-related schemes.

Transitioning other Bismarckian systems: The transitioning of the many other current and future EU countries with a typical unfunded and earnings-related social insurance scheme for old age is, in principle, very simple, and equivalent of transitioning civil servants benefits to NDC (discussed above): Calculate the acquired pension rights and transform them into the present value, i.e. a lump some amount to be credited to the individual account. The alternative approach would be to use past contribution records and past notional interest rates to determine the initial amount. In an actuarially fair scheme the result would be the same. Under current conditions the conjecture is that in most countries the top-down approach is cheaper for governments as it will capitalize on the recent reforms which have reduced the present value of pensions (via increase in retirement age, change in indexation, etc.).[10] Hence for fiscal reason a substantive parametric reform prior to a move toward NDC makes sense. This will be the case for Austria which just did such a parametric reform and prepares a move toward NDC/individual accounts. An NDC reform is also in political discussion in Hungary and Czech republic, and proposed by researchers in countries such as Spain, Portugal, Greece and Belgium (see, for example, Vidal-Melia and Dominguez-Fabian, 2003).

Transitioning the European outliers?: While Bismarckian-type systems by far dominate the European scene by the number of population covered, there are 4 main countries which have a more Beverage-type system, and for which a transition toward NDC would constitute a main policy change: Ireland with a flat rate contributory and non-contributory system; the UK with a flat-rate contributory plus an earnings-related systems (SERPS) with opting-out options to private sector arrangements for the latter; Denmark and the Netherlands with a universal pensions which is flat in the former, and pro-rata with regard to residency in the latter country (see ECP 2001). The EU Accession countries in Central and Eastern Europe have inherited a pension system which is typically earnings related and this was not changed during the economic transition (except the reforms moving toward a multi-pillar structure; see annex to Holzmann,

MacKellar and Rutkowski, 2003). If a transition/non-transition were to be envisaged what would be the approach? For a typical universal and basic system plus quasi-mandated funded scheme, such as in Denmark, one solution to achieve some coordination with regard to mobility would consist in providing a buy-in option to the universal pension as well as funded scheme by transfers of an accumulated NDC amount.

c. The funded - second or third - pillar in a Pan--European pension system

With a well designed pan--European NDC scheme which allows for national preferences, what is the role of a funded pillar, what structure should it have, and what needs to be done to make it work well? All current and future EU member countries already have funded pillars at different levels of importance and sophistication which, again, will need some adjustment and coordination to achieve the objectives of a pan--European pension system (annex table 7).[11]

The role of a funded pillar is essentially fourfold: The first main purpose is consumption smoothing beyond NDC benefits. While an NDC system can provide generous replacement rates if the contribution is sufficiently high, as a mandated, general scheme it should not do so. A very high mandated contribution rate under an NDC scheme would make it again closer to labor tax rate with all the known negative social and economic effects, in particular for credit constraint individuals (Lindbeck and Persson, 2003), and the incidence effects on wage levels seem to be lower if the reciprocity between contributions and benefits is stronger (Ooghe, Schokkaert and Flechet, 2003). An actuarially fair funded pillar allows consumption smoothing according to individual preferences and has no or little distortionary effects on individual labor supply and savings decisions. The second main purpose is to support retirement flexibility in an aging society. NDC as quasi-actuarial scheme encourages later retirement with high decrements for early leavers. To compensate for future lower pensions at early age , individuals need to plan to stay longer on the labor market or to save more under a funded pillar. The alternative of voluntary NDC contribution to finance an earlier

[10] The bottom-up approach may be cheaper for countries which increased contribution rates from low levels and have not undertaken a benefit-cutting reform.

[11] For details on supplementary and complementary funded pension arrangements in Europe, and beyond, see ISSA (2003).

retirement is possible but has to be weighted against the third main purpose – risk diversification. As funded and unfunded pension pillars have a different exposure to economic, demographic and political risks, and as their rates of return are little correlated, diversifying pension benefits from two different pillars is welfare enhancing. Last but not least, funded pillars are important to support pan-European mobility, and beyond. In the proposed more coordinated but not harmonized Pan-European pension system differences would still exist. Their mobility reducing effects, however, can be limited with a strong funded pillar. Furthermore, labor mobility with the rest of the world is also bound to increase, with Europeans working some part of their life abroad, and migrants from LDCs working part of their life in Europe. Again, a strong funded pillar which can easily be taken back home would make life for both migrant workers and host and sending countries so much easier (Holzmann 2003b).

For the potential best pan-European structure of a funded pillar, a number of choices would need to be made, but most are suggested to be rather easy. First, the issue of mandated or voluntary pillar, corporate (second) or individual (third) pillar.[12] Mandating the second pillar at the explicit detriment of the first NDC pillar raises the issue of transition costs, and an assessment by most pension economists is likely to be that it is not worth the effort. In addition, it can be argued that the economic rationale for mandating a high replacement rate is decreasing because of reduced myopia of individuals and better financial retirement instruments. What can and should be considered is to transform existing and mandated severance payments which exist in all EU member states into funded unemployment benefit cum retirement benefit accounts as some countries have started to do so.[13] Hence, I would argue that (new) funded pillars should be voluntary and the rules should allow for both corporate and individual pensions

[12] Please watch: In the European terminology second pillar refers to corporate pensions (whether mandated or voluntary) and third pillar to individual pensions (whether mandated or voluntary). In the Anglo-Saxon terminology (and beyond) used by the World Bank the second pillar refers to mandated and funded pensions (whether corporate or individual), and the third pillar to voluntary and funded provisions (whether corporate or individual). In this paper the European terminology is used.

[13] On this topic of severance payments and their reform, a conference will be held in Laxenburg, near Vienna, on November 7 and 8, 2003. The conference is jointly organized by the World Bank, Washington, DC, and the Ludwig Boltzmann Institute for Economic Analysis, Vienna, and is hosted by the International Institute for Applied System Analyses, Luxenburg. For more information, visit www.worldbank.org/SP or http://members.vienna.at/libecon/boltzanalyse.

in a well designed but simple manner. Second, the issue of defined benefit (DB) or defined contribution (DC) plan emerges. While as individuals we are likely to prefer a DB plan, best in the form of the final salary-scheme type, economic rationale and recent trends speak in favor of DC schemes. It is the least distortionary scheme with regard to individual labor supply decisions, including retirement, and it provides the required mobility across professions and states. Third, simplicity and transparency of the approach, i.e. structure of the retirement products should be simple and there should be at least one set of instruments which are standardized across the EU. The suggested instruments are some kind of individual or personal retirement account as well as some corporate pension account offered by the employer as they exist with a relatively simple structure in, say, the US and Canada. Complicated structures a la Germany which try to achieve too many objectives at the same time should be avoided. Last but not least, the mandated annuitization of the accumulated retirement saving is not suggested, at least as long as the NDC account allows the financing of minimum pension.

Finally, funded pillars as part of a pan-European pension scheme have also coordination requirements at the level of regulation and supervision and taxation which are likely to be difficult to fulfill. At the level of regulation and supervision the question of mutual recognition versus more centralized approaches emerge. At the level of taxation, the issue of consistency of taxation (income versus consumption-type taxation, and in the latter case whether it is back-loader or front-loaded) and recognition of tax deduction for contribution to funded pillars across Europe. While progress has been made toward harmonization of tax treatment by EU directives, the launch of new infringements procedures against Belgium, Spain, France, Italy and Portugal and pushing forward existing cases against Denmark signals that more needs to be done. And the Pan-European Pension Directive which emerged in 2003 after 10 years of preparation and discussion seemingly needs time for digestion by financial market institutions and multi-national enterprises before a judgment can be made (IPE 2003).

d. The zero pillar: A strengthened social or non-contributory pension in EU member countries

All current and future EU member states have some income provisions for the elderly poor, at least in the form of general social assistance but increasingly also in the form of a means-tested social pensions, and a few in the form of a universal demogrant (Table 8). It is strongly suggested that a pan-European pension system will need to strengthen the zero pillar/non-contributory pillar which deals with the vulnerable elderly in Europe for reasons of social objectives and system consistency.

The main arguments for a strengthened zero pillar are twofold: First, having under the new structure a quasi-actuarial NDC system as first pillar and actuarial funded second and third pillars tends to increase the efficiency in the labor market but reduces the redistribution of income toward the poor. Shifting from a non-actuarial to a actuarial system can result in Pareto improvement but will require to keep or introduce a minimum benefit (Lindbeck and Persson, 2003). Second, income support for the very vulnerable elderly to prevent old-age poverty is part of the adequacy objectives of any pension system. A strengthened zero pillar can be motivated by the increase in vulnerability of the elderly as aging progresses, and by the solidarity objectives of the European Union. With incomplete and perhaps falling coverage under earnings-related schemes one can conjecture that poverty incidence will increase as the increase in life expectancy continues.[14]

With regard to the how such a strengthened zero pillar should be structured three main issues emerge: Should there be a minimum pension in the NDC system in addition to a zero pillar?, How is this related to the zero pension?, and What eligibility criteria and level should be applied? First, there are a few good arguments for a minimum pension under the NDC system, most importantly it strengthens incentives for formal labor force participation. However, in order not to contradict the neutrality objective of the NDC structure with regard to the individual retirement decision, eligibility needs to be restricted. For example while allowing individuals to retire from the age of, say 60 onward, it may be required to have a minimum accumulated notional amount equivalent to 100+ percent of the minimum pension or the reaching of the standard retirement age of

[14] Data for European OECD countries suggests that while poverty incidence tends to be the highest among the age group 65+, it is in this group that it has been falling most markedly between mid-80s and 90s (for Czech Republic and Hungary, early to late 90s). See Foerster (2003).

67 (which is increased with life expectancy). Second, coordinating a minimum NDC pension with a zero pillar pension with regard to labor market incentives requires either different amounts, different eligibility ages and/or different eligibility criteria (such as some kind of means testing of zero pillar). Last but not least, eligibility to a zero pillar pension may have to be conditioned on higher ages (say 70 onward), but a means-testing may be kept light, for example in the form of affluence testing which excludes people having access to pension provisions and financial assets. How much national preferences such a zero pillar would be able to exhibit without inhibiting too much the incentive structure of a proposed pan-European pension system is open for discussion and requires more research.

5. Concluding Remark

This paper attempts to motivate why a more coordinated pan-European pension system is needed and which potential structure could achieve this best. The needs for a more radical as well as cross-member state pension reform are both social and economic, and the later closely linked with the common economic area and currency. The suggested structure for the current and future EU members states is a multi-pillar system, with a NDC system at is core, and coordinated supplementary funded pensions and social pensions at its wings. Such an approach is claimed to fulfill all generic and EU specific demands on a Pan-European pension system, including the room for national preferences.

Beside the **why** of a pan-European approach and **which** structure it may have, what remains to be sketched is **how** such a system reform could come about. One could imagine three main avenues:

First, an approach initiated and led by the EU Commission: possible but not likely. First there is no intention by the member states to empower the Commission with such a reform request. Social policy is seen as a national agenda item subject to the subsidiarity principle and hence not open for centralization through the Commission. Second, there are no visible efforts by the commission to take such a lead as such a necessity for a more rapid and a more comprehensive reform does not seem to be seen. Last but not least, the recently introduced method of open coordination as a peer review process to accelerate

reforms in the member countries has its merits but is unlikely to lead to rapid reforms even less to create a pan-European reform vision (Holzmann, MacKellar and Rutkowski 2003).

Second, a competitive approach across EU countries in which one of the existing or reformed pension systems will gradually be adopted by other countries as they see advantages with regard to social and economic policy goals: Again possible, a bit more likely, but not sufficiently rapid, and if so, perhaps not optimal. First, the advantages of reformed systems emerge and get documented only with a laps of time which may be measured in decades, and this may prove too late. Second, imitation of system reforms are and will be taking place (for example the inspiration of the Polish by the Latvian NDC reform, or the likely introduction of individual accounts in Austria and Hungary inspired by the Swedish reform). But the imitation by other countries is likely to be restricted. Third, even if all countries where to follow a lead example and competitive pressure, this may not ensure sufficient consistency of approaches across countries to provide the needed mobility of the workforce in Europe. Last but not least, and "to the extent that social policy is meant to redress market failures or to implement solidarity transfers, competition among systems will not lead to efficient outcomes when the elements of the relevant equation span the borders of policymaking constituency (Bertola et al., 2001). By definition, collective action is needed to eliminate inefficient or unfair economic interactions; hence, one can argue that bringing back competition at the inter-constituency level defeats both purposes (Sinn, 1998).

Third, a cross-country led government approach: Issues of pension reform have started to be addressed by government officials, for example in Economic Policy Committee of the EU which represents high-level officials from ministries of finance and economy of EU member countries (e.g. EPC 2001). EPC has, so far, been largely concerned with the fiscal consequences of aging but this may be enhanced by the broader stability issues, including the need for cross-European labor mobility. To foster the points for a better coordinated, pan-European pension system is quite likely the tasks of academics and research institutions, examined and supported by the EPC or similar core group, and at some moment in the future espoused by a charismatic European politician. Perhaps this will happen after the first main asymmetric shock hits Euroland.

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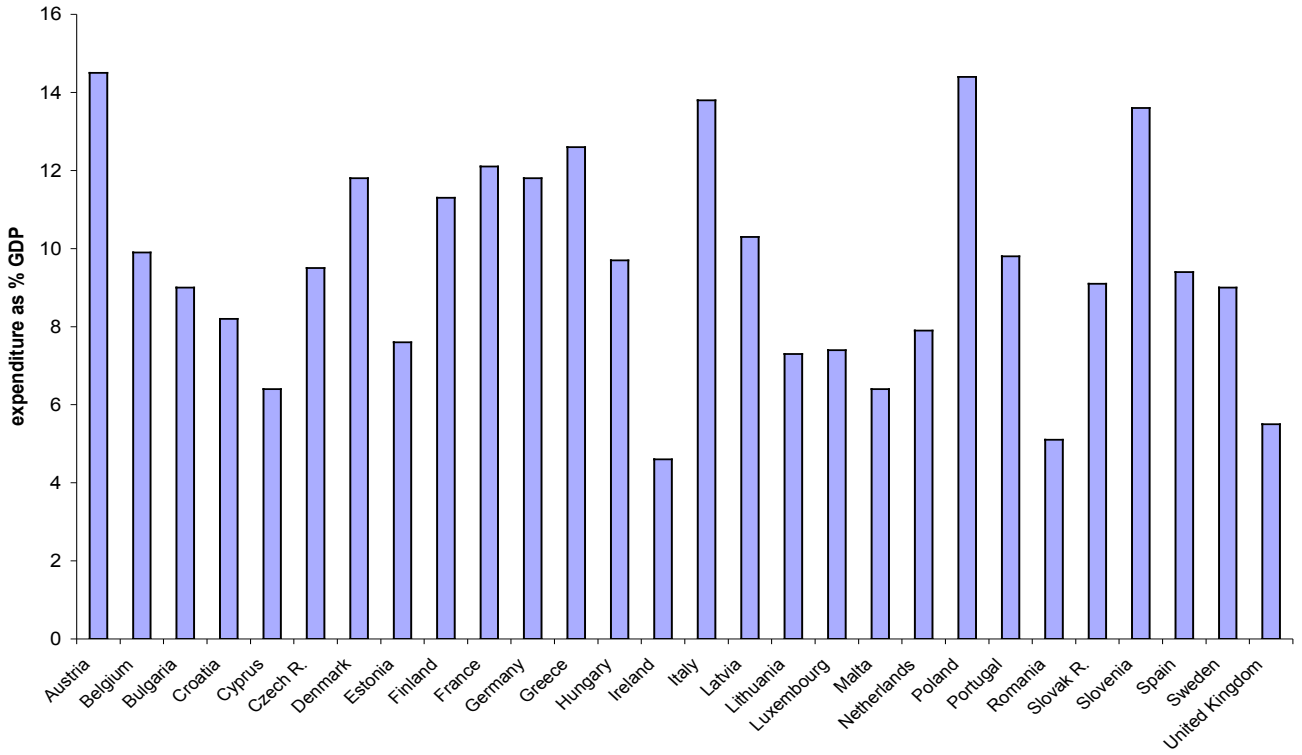
Annex – Figures and Tables

Annex – Figures and Tables

Figure 1. Pension Expenditure in EU and EUA Countries (plus Croatia), 2000 or latest (percent of GDP)



Sources: EU 2001, World Bank pension dataset 2003.
Notes: Croatia data from World Bank Labor Markets dataset 2003

Table 1. Projections of Old-Age Dependency in EU and EUA Countries 2000-2050 (ratio of people aged over 64 to working age population, percent)

Country	2000	2010	2020	2030	2040	2050
Austria	25	29	32	44	55	55
Belgium	28	29	36	46	51	50
Denmark	24	27	34	39	45	42
Finland	25	28	39	47	47	48
France	27	28	36	44	50	51
Germany	26	33	36	47	55	53
Greece	28	32	36	42	51	59
Ireland	19	19	25	30	36	44
Italy	29	34	40	49	64	67
Luxembourg	23	26	31	40	45	42
Netherlands	22	25	33	42	48	45
Portugal	25	27	30	35	43	49
Spain	27	29	33	42	56	66
Sweden	30	31	38	43	47	46
United Kingdom	26	27	32	40	47	46
EU average	**27**	**30**	**35**	**44**	**52**	**53**
Bulgaria	24	24	29	34	41	53
Cyprus	18	20	26	32	34	39
Czech R.	20	22	32	38	47	59
Estonia	23	25	30	36	42	57
Hungary	21	23	29	33	40	50
Latvia	23	26	29	37	44	56
Lithuania	21	24	26	35	40	43
Malta	18	22	32	39	40	46
Poland	18	18	26	33	37	50
Romania	20	20	24	26	36	45
Slovak R.	16	17	23	30	36	47
Slovenia	20	24	32	44	53	64
EUA average	**20**	**22**	**28**	**35**	**41**	**51**

Sources: EU countries - EPC 2001, EUA countries - UN Population Division, 2002

Table 2. Public Pension Expenditure in EU and Accession Countries in 2000-2050 (percent of GDP)

Country	2000	2010	2020	2030	2040	2050
Austria	14.5	14.9	16	18.1	18.3	17
Belgium	10	9.9	11.4	13.3	13.7	13.3
Denmark[1]	10.5	12.5	13.8	14.5	14	13.3
Finland	11.3	11.6	12.9	14.9	16	15.9
France	12.1	13.1	15	16	15.8	..
Germany	11.8	11.2	12.6	15.5	16.6	16.9
Greece	12.6	12.6	15.4	19.6	23.8	24.8
Ireland[2]	4.6	5	6.7	7.6	8.3	9
Italy	13.8	13.9	14.8	15.7	15.7	14.1
Luxembourg	7.4	7.5	8.2	9.2	9.5	9.3
Netherlands	7.9	9.1	11.1	13.1	14.1	13.6
Portugal	9.8	11.8	13.1	13.6	13.8	13.2
Spain	9.4	8.9	9.9	12.6	16	17.3
Sweden	9	9.6	10.7	11.4	11.4	10.7
United Kingdom	5.5	5.1	4.9	5.2	5	4.4
EU	**10.4**	**10.4**	**11.5**	**13**	**13.6**	**13.3**
Cyprus	8	..	..	11.9	..	14.8
Czech Republic[4]	7.8	..	..	..	..	14.6
Estonia	6.9	..	..	..	..	..
Hungary[4]	6	..	..	..	..	7.2
Latvia[3]	9.8	..	..	..	..	..
Lithuania	5.3	..	..	6	..	7
Malta	5.4	..	..	..	..	..
Poland	10.8	..	..	9.6	..	9.7
Slovakia[3]	7.9	..	..	..	..	..
Slovenia	13.2	..	..	19.7	..	18.1
Bulgaria	9.1	..	..	..	..	..
Romania	6.4	..	..	7.8	..	8.2
EUA	**8.05**	**..**	**..**	**11.0**	**..**	**11.4**

Sources: EPC 2001, Pre-accession Economic Programmes 2002.
Notes: For most EU member states, these projections include most public replacement income for persons aged 55 and over.
1- For Denmark, the results include the semi-funded labor market pension (ATP)
2 - Results for Ireland are as % GNP not GDP
3 - source: Gesellschaft fur Versicherungswissenschaft und - gestaltung e. V. (which in turn draws on national statistics)
4- source: OECD
.. indicates data not available

Table 3. Labor force participation – male and female in EU and EUA countries, 1960, 1980, 2000, and 2050

	Male								female							
	15-64				65+				15-64				65+			
Country	**1960**	**1980**	**2000**	**2050**	**1960**	**1980**	**2000**	**2050**	**1960**	**1980**	**2000**	**2050**	**1960**	**1980**	**2000**	**2050**
Austria	90.1	84.9	74.4	79.3	15.0	4.5	2	6	53	54.4	57.7	67.8	7.0	2.6	1	5
Belgium	85.9	79.7	71.7	71.9	9.5	4.6	1.4	1.3	30.5	41.2	58.6	67.8	3.3	1.3	0.5	0.6
Denmark	92.3	88.3	85.1	81.8	32.6	15.4	9.4	8.1	42.8	71.3	77.3	80.5	8.0	5.2	2.7	2.4
Finland	87.3	79.3	74.8	73.9	31.7	6.8	4	2.5	55.5	69.4	73.0	74.7	12.0	3.0	1.4	1
France	88.9	81.5	75.6	75.1	26.0	5.8	2.1	1.7	43.6	55.1	62.2	70.0	10.2	2.9	1.2	1
Germany	91	83.2	80.7	80.1	24.0	8.9	4.5	2.4	50.4	51.9	64.7	71.3	8.0	4.2	1.7	1.1
Greece	90.1	83.5	76.7	76.6	45.0	27.0	9.6	7.9	26.3	31.8	46.7	67.0	8.7	6.1	3.7	3.2
Ireland[3]	90.9	85	87.8	87.3	54.0	26.8	13.6	11.7	31.1	34.7	56.4	75.8	15.0	6.0	2.4	2
Italy	89.2	79	73.0	76.1	27.5	12.4	5.5	3.7	30.4	38.4	46.4	66.9	5.6	3.5	1.5	1.4
Luxembourg[1]	88.7	82.3	113.8	148.4	..	..	..	..	30.8	39	74.3	115.0	..	..	..	..
Netherlands	90.9	77.6	77.4	76.2	19.9	4.8	1	1	24.9	36.1	55.2	70.9	2.5	1.0	1	1
Portugal	93.5	87.1	87.5	87.2	62.9	29.7	16.7	14.3	18.4	52.4	66.4	81.5	11.0	8.4	7.1	6.5
Spain[3]	92.8	86.4	83.6	85.5	56.6	12.3	2.8	2.8	20.3	32.9	54.7	75.2	9.4	4.1	1.1	1.1
Sweden	88.8	87.9	81.3	83.3	27.6	10.4	6.8	7.2	38	75.3	76.5	82.6	4.5	2.6	3.5	3.9
United Kingdom[3]	94.6	89.2	87.6	85.9	26.6	11.0	6.8	5.8	43.6	57	69.9	75.5	5.4	4.1	2.7	2.4
EU	**90.3**	**83.7**	**82.1**	**84.6**	**32.8**	**12.9**	**6.2**	**5.5**	**36.0**	**49.4**	**62.7**	**76.2**	**7.9**	**3.9**	**2.3**	**2.3**
Bulgaria	88.4	82.7	77.2	77.2	38.3	18.8	10.1	8.6	68.9	70.4	71.4	68.8	8.5	3.9	3	2.5
Cyprus	91.7	88.6	88	86.1	53	35.7	20.5	0.2	42	46.7	56.9	59.1	17.6	11.8	7.8	6.3
Czech R.	86.5	84.8	83	80.6	24.4	18.8	11.7	10.3	61.6	75	75	71.7	9.2	7.1	4.9	4.5
Estonia	87.2	85.4	81.7	81.5	20.5	17.5	23	22.4	67.3	79.2	74	74	6.8	9.5	13.3	13.4
Hungary	91.7	84.8	78.7	76.2	57	3.8	0.9	0.9	46.9	62	61.1	60.5	20	3	0.2	0.2
Latvia	84.8	84.8	82.2	83	24.3	22.4	20.2	19.2	64.3	77.9	74.2	75.4	12.8	12.3	11.3	10.8
Lithuania	83.3	83	81.2	81.7	32	19.4	12.3	11	61.3	74.8	70.8	71.7	9.5	7.8	6.5	5.9
Malta	88	85.7	78.8	76.3	27.3	14.3	5	4	17.2	22.5	30.2	34.6	0	0	0	0
Poland	89.8	84.2	77.9	77.4	57.5	30	24.1	21.3	62.1	67.7	66.2	66.4	30	17.5	15.3	13.8
Romania	93	83.6	76.8	76.7	62.6	11.4	4.9	3.9	72.4	69	61.2	61.4	30	8.9	4.2	3.5
Slovak R.	86.5	83.5	82.1	81.8	30.9	19.8	11	9.6	47.4	69.3	74.6	72.7	7.7	4.7	4.2	3.6
Slovenia	89.9	81.9	76	74.1	57.1	19	11.8	10.2	44.3	67	66.5	64.9	13.5	10	8.6	8
EUA[2]	**88.4**	**84.4**	**80.3**	**79.4**	**40.4**	**19.2**	**13.0**	**10.1**	**54.6**	**65.1**	**65.2**	**65.1**	**13.8**	**8.0**	**6.6**	**6.0**

Sources: EPC 2001, OECD 2003, ILO Laborsta 2003, UN Population Division 2002.
Notes : 1 - estimates for Luxembourg assumes increase in cross-border workers which explains the high rate
2 - Projections for EUA countries are for the year 2010, 3 - population aged 20-64.

Table 4. Changing family structures: Divorces in EU and EUA countries, around 2000

Country	**Divorces** (per 1000 people)	**Marriages** (per 1000 people)
Ireland	0.7	5.1
Italy	0.7	4.9
Greece	0.9	5.4
Spain	1.0	5.2
Portugal	1.8	5.7
France	2.0	5.1
Luxembourg	2.3	4.5
Netherlands	2.3	5.1
Germany	2.4	4.7
Sweden	2.4	4.0
Austria	2.5	4.2
Finland	2.6	4.8
United Kingdom	2.6	5.1
Denmark	2.7	6.6
Belgium	2.9	4.2
EU average	**1.9**	**5.1**
Bulgaria	1.3	..
Cyprus	1.7	..
Czech Republic	2.9	..
Estonia	3.1	..
Hungary	2.4	..
Latvia	2.6	..
Lithuania	2.9	..
Poland	1.1	..
Romania	1.4	..
Slovakia	1.7	..
Slovenia	1.1	..
Malta	..	..
EUA	**2.0**	**..**

Sources: EU countries - Eurostat 2000-2001, EUA countries – American Divorce Reform 2002, UN Demographic Yearbook, 1999, Recent demographic developments in Europe 2001
Notes: .. indicates data not available

Table 5. Pension arrangements for widows/widowers and divorced in EU and EUA countries around 2000

	Widow/Widowers benefit		Divorcee's benefit	
Country	**Eligibility**	**Benefits**	**Eligibility**	**Benefits**
Austria		Up to 60 % of deceased spouse's pension, income tested - rates below 60% may be increased depending on beneficiary's income		
Belgium	Those aged 45+, or disabled, or caring for a child. Should have been married for at least 1 year at the time of spouse's death. Conditions are waived if child born out of marriage or in case of accidental death	80% of deceased spouse's pension. Minimum 9102.11 euros/year if worker was fully insured, if not then reduced. If widow(er) receiving other pension: receives survivor pension only for 12 months and total pension benefits may not exceed 110% of own pension	Special pension at age 60	37.5% of former spouse's earnings during period of marriage less pension earned in own right during the same years
Bulgaria	Deceased had 5 years of service, 3 years if aged 20-25, or was pensioner	Minimum pension for each survivor is 90% of social pension, 1 survivor - 50% of deceased's pension, if 2, 75% and if 3 or more then 100%		
Cyprus	Conditions same as for old age pension, lump sum paid if conditions not met. Payable to widow or dependent disabled widower	Same as old age pension + 60% supplementary pension. Widow may substitute husband's coverage record for her own for period prior to his death		
Czech R.	Deceased met pension conditions or was pensioner at time of death	Basic amount of 1310 CZK + 50% of percentage amount of deceased's pension, payable to all widow(er)s for 1 year, thereafter only to widow(er)s aged 55(58), any age if disabled or caring for disabled/dependent child or disabled parent		
Denmark	Survivor pension eliminated as of 1984	Lump sum paid to widow(er) and children under 18 of deceased, amount depends on pension of the deceased		
Estonia	Widow(er) not capable of gainful activity, deceased had 1-14 years of coverage depending on age	One survivor - 40% of deceased's pension entitlement, 2 survivors - 70%, 3 or more 100%		
Finland	Under age 65 if caring for a child, if childless then at least 50 at time of spouse's death, must have been married for at least 5 years, residing in Finland	universal pension awarded for first 6 months after spouse's death, thereafter becomes income-tested		

France	At least 55 years and married for 2 years. Conditions are waived if child from marriage or if widow(er) and deceased disabled. Personal income must be less than 13874 euros/year, must not have remarried	54% deceased spouse's pension, income tested, payable for 2 years. If beneficiary is 50, payment extended until 55	Eligible for survivor's pension if not remarried, pension proportionately divided if more than one surviving spouse	54% deceased spouse's pension
Germany	Deceased had 5 years of coverage, or pensioner at death	100% of deceased's pension first 3 months, 55% if aged 45+, disabled or caring for a child, otherwise 25%	Former spouse eligible for survivor's pension. Amount split between widow(er) and former spouse according to length of marriage	
Greece	Eligible for survivor's pension for 3 years, those above 40 continue to receive it provided they do not work or receive any other pension.	Full pension paid if disabled. Those who work or receive other pension get 50% of normal survivor pension. When survivors cross 65 they are paid full pension, if receiving other pension at 65+ then they get 70% of normal pension		
Hungary	Deceased was pensioner or met requirements for pension at death	50% of insured's pension paid to widow(er) who at the time of death was 55(60), disabled or caring for 2 children, paid to other widow(er)s for 1 year only		
Ireland	Annual average of at least 39 weeks paid or credited in last 3 or 5 fiscal years prior to date spouse died or attained 66, atleast 24 weeks for minimum pension	Contributory pension: up to 123.30 euros/week (144.80 euros if aged 66+), non-contributory pension: up to 118.80 euros/ week (134.00 euros if age 66+)		
Italy	Deceased was a pensioner or had 5 years of contribution of which 3 years were in the last 5 years	60% of insured's pension, 80% if 1 child, 100% if 2 or more children, lumpsum paid if conditions for survivors pension not met, must have paid at least 1 year's contribution in last 5 years	separated spouse eligible for survivor's benefit	
Latvia	Deceased was insured or pensioner at time of death	50% of insured's pension, 75% if 2 survivors, 90% for 3 or more		
Lithuania	Deceased must have been pensioner or had adequate coverage for disability pension at the time of death, widow(er) who has reached old age or is disabled eligible	20% of deceased's benefit, 25% for each child, total may not exceed 80% of deceased's pension		
Luxembourg	Insured had 12 months coverage in 3 years prior to death or was a pensioner	100% of insured's basic old age pension + 75% of increment earned by insured, payable without regard to personal income	Divorced spouse eligible	Amount depends on years of marriage, not on personal income

Malta	Deceased paid 156 weeks of contribution with annual average of 50 weeks, paid or credited, reduced pension awarded for less coverage, earned income of widow(er) must not exceed minimum wage, Widows under age 60 with children under 16 qualify regardless of income	Benefit varies depending on whether contributions were made before or after Jan 22, 1979. Earnings related benefit which can be as much as Lm70.72/week are 5/9th yearly average of best 3 consecutive years of last 10 years before husband's death or retirement. Upon remarriage widow forfeits benefit from previous marriage and receives lumpsum equal to 52 weeks pension		
Netherlands	Residents eligible. Payable to widow(er)/unmarried permanent partner	Income tested for those born before 1950, those 45% disabled, 932.38 euros/month for those caring for child under 18, benefit reduced by survivor's income from employment. No benefits if income > 2002.54 euros/ month		
Poland	Deceased was a pensioner or met employment requirements for old age pension or disability benefits prior to death	One survivor - 85% of deceased's pension, 2 survivors - 90%, 3 or more 95%		
Portugal	Deceased met pension requirements or was a pensioner at death	60% of insured's pension. Payable for 5 years only unless beneficiary over 35, disabled or caring for a child.		
Romania	Insured met pension requirements or was pensioner at the time of death. Widows must fulfill certain age conditions and also duration of marriage requirements. No prior requirements if death was by work accident, occupational disease or tuberculosis	Limited benefit paid for 6 months to low income spouse caring for child under 7 who does not meet eligibility conditions, 50% of deceased's old age pension, 2 survivors 75%, 3 or more 100%		
Slovak R.	Deceased met pension requirements or was a pensioner at time of death	60% of insured's pension payable to widows for 12 months, thereafter only to widow's aged 50, aged 45 if she has reared 2 or more children, aged 40 if husband died in occupational accident, any age if disabled, caring for a child or caring for 3 or more children, widowers pension 1977SK / month		
Slovenia	Deceased met pension (old age or disability) requirements or was a pensioner at time of death, had 5 years of coverage and contribution, widow(er) must be be atleast 52(53) in 2003	70% of insured's pension, 2 survivors - 80%, 3 survivors - 90%, 4 or more - 100%		

Spain	Deceased had 500 days of contribution in the last 5 years, pensioner at time of death or had 15 years of contribution, beneficiary not eligible once remarries unless 61+ at time of marriage, 65% disabled or survivor pension is 75% of pensioner's total income	46% of either the deceased's or survivor's benefit base, whichever is higher, for income below a particular level - 50%, 70% if there are dependents	Ex-spouse not eligible for old age pension once remarried unless 61+ at time of marriage, 65% disabled or survivor pension is 75% of pensioner's total income	
Sweden	Residents eligible. Deceased must be credited with pension points for at least 3 years or have 3 years coverage	Benefit payable for 6 months if married or cohabiting for at least 5 years - under certain conditions. Payable for as long as living with child under 12. Special pension paid if unemployment or illness prevents self-support		
United Kingdom	Deceased met coverage requirements or was pensioner at time of death	Weekly allowance to those above 45 without dependent children payable for 52 weeks after death of spouse. Amount depends on age at widowhood. Widow aged 18-59 with dependent childeren gets weekly allowance of 53.05 GBP + 31.45 to 32.25 GBP for each child minus amount of other benefits/income		

Sources: Social Security Programs throughout the world - Europe 2002.

Table 6. Selected work arrangements in Europe, 1988 and 1998 (percent of total employment)

Country	Total employment (000s)		Self-employment (including family workers)		Part-time employment		Temporary employment[1]	
	1988	1998	1988	1998	1988	1998	1988	1998
Austria	..	3,626	..	13.8	..	15.8	..	6.8
Belgium	3,483	3,857	18	17.4	9.8	15.7	4.5	6.4
Denmark	2,683	2,679	11	9.7	23.7	22.3	10.2	9.1
Finland	..	2,179	..	14.6	..	11.7	..	15.1
France	21,503	22,469	16.2	12.5	12	17.3	6.6	12.2
Germany	26,999	35,537	11.5	11	13.2	18.3	10.1	10.9
Greece	3,651	3,967	49.5	43.4	5.5	6	8.8	7.4
Ireland	1,090	1,496	25.3	20.2	8	16.7	6.8	6.1
Italy	21,085	20,357	29.5	28.7	5.6	7.4	4.1	6.1
Luxembourg	152	171	11.2	9.4	6.6	9.4	3.3	2.4
Netherlands	5,903	7,402	12.1	11.6	30.3	38.8	7.7	11.2
Portugal	4,427	4,764	30.9	28.2	6.5	11.1	12.6	12.4
Spain	11,709	13,161	29.1	23	5.4	8.1	15.8	25.3
Sweden	..	3,946	..	11.4	..	23.9	..	11.4
United Kingdom	25,660	26,883	12.7	12.5	21.9	24.9	5.2	6.1
EU	**1,28,345**	**1,52,494**	**19.1**	**16.6**	**13.2**	**17.4**	**7.8**	**10.6**

Source: Eurostat, Labor Force Survey.
Notes : 1 - Dependent employees including apprentices, trainees, research assistants etc.
.. indicates data not available

Table 7. Scope of funded pensions in EU and EUA countries around 2002

Country	Mandated second pillar	Description	Contribution rate	Share of covered LF as%	Pension as % of retirement income[3]	Pension assets in % of GDP
Austria	no	-	-	-		2.6
Belgium	no	-	-	-	0.5	4.8
Bulgaria[2]	yes	Supplementary mandatory pension funds, not less than 50-100BGN for farmers and 200BGN for self-employed, max monthly income - 1000BGN, current contribution 2% but planned increase to 5%. No reserves	2% payroll	48.4		
Cyprus	no	-	-	-		
Czech R.	no	-	-	-		3.4
Denmark	yes	Privately administered defined contribution scheme, Civil service pension scheme for public sector employees - defined benefit		82.0	16.0	21.5
Estonia	yes	Employer contributes 4%, employee 2% to funded system, no ceilings. Pension fund management companies maintain individual accounts and must make quarterly contributions to a guarantee fund.	6% payroll	60.0		0.13
Finland	no	-	-	-	38.6	
France	no	-	-	-		5.6
Germany	no	-	-	-	13.0	3.3
Greece	no	-	-	-		11.9
Hungary	yes	Contribution to grow to 8% by 2004, employees' contribution ceiling 250% average wage in 2003, no ceilings on employer contribution, maintained as individual accounts, 0.4% of contributions go toward guarantee fund	6% payroll	45.0		5
Ireland	no	-	-	-		
Italy	no	-	-	-	4.2	3.2
Latvia	yes	Current contribution 2% but rate expected to increase to 9%, max income from which contributions are paid - 18400 LVL	2% payroll	72.0		0.4
Lithuania	no	-	-	-		

Luxembourg	no	-	-	-		
Malta	no	-	-	-		
Netherlands[1]	yes	not mandatory but schemes set by industrial agreements, 95% of schemes are defined benefit. Occupational pensions integrated with public pension schemes.	-	91.0	19.0	85.6
Poland	yes	DC individual account schemes where employees chose the fund, Employees contribute half and not less than min wage, max for employers and employees 250% average wage (annually), guarantee fund - 0.1% pension assets - backed up with state budget guarantee.	7.3% of total social security contribution	70.0		3.0
Portugal	no	-	-	-		12.0
Romania	no	Partially legislated then questioned. Second pillar decided on principle. Adoption depends on future fiscal condition	8% payroll	75.0		
Slovak R.	no	-	-	-		1.0
Slovenia	no	-	-	-		0.0
Spain	no	-	-	-		2.1
Sweden	yes	Premium Pension authority maintains the individual accounts of the system. Workers chose from several hundred privately managed funds for investment of their capital.	2.5% payroll	100.0	76.4	32.6
United Kingdom	yes	Mandatory pension component covers defined benefit and defined contribution schemes. Some components run by state, some by employers and some by financial services companies.	17.5%-40% earnings - varies with age			83.7

Sources: OECD 1998, World Bank Pensions dataset 2003, Luxembourg Income Study 2003, Complementary and Private Pensions 2003, Deutsches Institut fur Altersvorssorge GmbH 1999, Blommestein H., (2000), Whitehouse E., (2001), Palmer E., (2000), Whitehouse E., (2000), Ministry of Social Affairs, Denmark 2002, Holzmann et al 2003, Chlon-Dominczak A. 2003

Notes: 1 - Second pillar in Netherlands is quasi-mandatory, based on collective labor contracts. Data on pension as % retirement income not available so capital income as % of retirement income has been used.

2 - For Bulgaria the share of LF column gives data on proportion of participants in funded systems as % of total contributors

3- Includes total population as specific data for age group 65+ is not available

- indicates not applicable

Table 8. Scope and form of Social Pensions in EU and EUA countries around 2002

Country	General	Eligibility	Nationality/residency requirements	Benefits	% Share of elderly (65+)[1]	Social assistance expenditure as % of GDP	Comments
Austria	General Assistance, Supplementary pensions, Minimum pension of 630.92 euros for an individual	General assistance covers those unable to maintain minimum standard of living and age> 19. Older people (above retirement age) whose insurance pension are below minimum qualify for supplements.	must be resident, EU nationals or recognized refugees, some provinces require Austrian nationality	income-tested allowance maintains minimum level of pension	6.7	0.2	Supplements for minimum pension level in all schemes. Social assistance for those without coverage under earnings-related pension.
Belgium	General Assistance, guaranteed income for old, Minimum pension	All citizens in need, age>18 qualify for general assistance. Older people (women 60, men 65) who can't maintain minimum standard of living eligible for guaranteed income scheme	general assistance: those registered, some restrictions on foreigners. Guaranteed income: Belgium or EU citizens plus resident for 5 years before claim or 10 years during lifetime	minimum pension of 9253.11euros/year for a single person fully insured. Means-tested allowance of 7022.70 euros/year for a single person.		0.7	
Bulgaria	Social pension			flat rate of 44 leva/ month			
Cyprus	Social pension	Those 65+ and not entitled to pension or similar payment from other sources. Lump sum payment to those aged 68 who did not meet contribution conditions for pension	20 years of residency after age 40 or 35 years after 18	lump sum payment of 15% of total earnings. Social pension is 133.63 pounds a month			
Czech R.	Minimum pension			2080 CZK/month	0.2		
Denmark	Non-contributory supplementary pensions scheme	People with low pensions rights. Payable at age 67	Residents of Denmark. EU citizens and recognized refugees given temporary help for 3 years until resident	income tested supplement of 4406 kroner/month		1.4	
Estonia					2.6		
Finland	Living allowance	Those who have no other source of income. Minimum age 18	Residents, registered by municipality			1.1	

France	General assistance, benefits for elderly plus supplements to guarantee minimum income, Minimum pension	People ineligible for other benefits, age> 25, benefits for elderly for people aged 65+ with low pension income or no pension	French and EU nationals	Minimum pension calculated at 50%, not less than 6307.62 euros/ year. Coverage for 150 quarters. Minimum reduced depending on length of coverage		2.0	
Germany	General assistance, Basic security benefit	Those with insufficient income to meet needs eligible for assistance. Security benefits for those 65+ (even if not eligible for old-age pension) and those 18+ with permanent reduction in earnings capacity, not eligible if held responsible for own situation.	Residents. Restrictions for non-Germans including refugees	Minimum pension of 9253.11euros/year for a single person fully insured. Means-tested allowance of 7022.70 euros/year for a single person.		2.3	
Greece	Assistance to old and needy, Minimum pension, Dependent's supplements	Older people aged 65+ without adequate social cover and those in need with no social security cover.	Ctizens who are permanent residents. Refugees and asylum seekers with permit to stay	minimum pension of 360 euros/month plus 26.99 for non-working wife or dependent disabled husband, 17.98 for each child		0.1	Benefits to older people without medical care and minimum pension. Lump sum paid to economically weak.
Hungary							
Ireland	Supplementary allowance, Old age non-contributory pension	Older people 66+ with limited means, people with exceptional needs	Residents. Restrictions on refugees and asylum seekers	Up to 134 euros/week depending on means test plus 88.5 for adult dependents, 16.8 for each child	8.7	5.1	
Italy	Social assistance, Social pension, Social allowance	All living independently eligible for assistance. Social pension for those 65+. Older people not eligible for social pension - social allowance, minimum pension	residence in municipality, legal residents in Italy, EU citizens	Social assistance up to minimum pension level (392.69 euros/ month). Social allowance may be up to 516.46 euros/ month for those aged 70 with income<6714 euros		1.3	Social allowance scheme replaced Social pension in 1996. No new claimants for Social pension since 1996
Latvia	Minimum pension			30 lats/ month			
Lithuania	Basic pension			110% of poverty level			
Luxembourg	Income support benefit, Minimum pension	All above 30 years, at least 20 years coverage for minimum pension	resident for 10 years out of last 20. Registered with local authority.			0.5	
Malta							

Netherlands	General assistance, Income tested supplementary allowance for old	All above 18 years	Residents. Non-citizens covered only if special agreements exist	Supplementary allowance reduced by 2% for each unexcused year of non-contribution.		2.2	
Poland	Minimum pension			minimum pension 530.26 zlotys/month			
Portugal	Guaranteed minimum income, Social pension, Social supplement to pension	Guaranteed income for those in economic need. Social pension for older people(65+) not covered by any other social security scheme. Social supplement to pensioners whose contributions insufficient to generate minimum pension	nationals and EU citizens. 6 months residency requirements for stateless and refugees.	Social pension is 138.27 euros/ month		0.5	
Romania							
Slovak R.	Minimum pension			550 koruna/month			
Slovenia							
Spain	Minimum income scheme, Social pension	Minimum income scheme for low income working age households. Social pension for those 65+ without insurance pension	1 year residency requirement for minimum income. 10 years residency including 2 preceeding claim for Social pension	minimum pension is 385.50 euros/month (for those aged 65), reduced minimum pension for those<65	1.6	1.1	
Sweden	Social welfare allowance, Guarantee pension	People who have no other means of support. Also serves as a supplement to people claiming social security benefits	residents			1.2	
United Kingdom	Income support benefit	All excluding unemployed. Income must be below certain level. Not payable if savings are over 8000 GBP or if working more than 16 hours a week	residents only unless under EU regulations or refugee. Restrictions apply depending on immigration status	depends on age,income, circumstances. 92.15 GBP a week minus other income for a single person.		4.2	non- contributory means tested social assistance

Sources: Social Security Pensions edited by Gillion C. , Turner J., Bailey C., Latulippe D., 2000, Social Security Programs Throughout the World 2002, Trends in Social Security 2003

Notes: 1 - Social assistance recepients as a proportion of total aged population