



## Pension Policy in EU25 and its Possible Impact on Elderly Poverty<sup>1</sup>

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<sup>1</sup> Neither the European Commission nor the organisations with which researchers are affiliated with carry any responsibility towards data used and interpretations made here in this document.

This policy brief reviews the most recent changes in pension policies in EU25 and provides a description of how these policy reforms might affect the risk of poverty for elderly populations. The analyses shed light on the expected evolution of poverty among the elderly for coming decades. These insights are also useful to identify key policy responses that might be necessary in order to meet the objectives of not only sustainability but also adequacy of pensions in the European Union.

At the outset, it is useful to note that the current period of pension reforms is driven mainly by increased concerns over the impact of population ageing and a need for fiscal consolidation.

A common trend is that the generosity of pension benefits drawn from the public pension systems is on the decline, and thus the average public pension benefit ratio could drop. Moreover systematic reforms have changed the nature of pension provision from defined benefit type provision to defined contribution type provision. In general, this type of change shifts more risks towards individuals concerned (of the same generation), and results in a more restrictive redistribution to the lower income individuals.

### Pension policy in EU countries: An overview<sup>2</sup>

<sup>2</sup> For detailed discussion, see the full report Zaidi, Marin, Fuchs (2006)

“Pension Policy in EU25 and its Possible Impact on Elderly Poverty”.

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The pensions landscape in Europe is changing fast. For the purpose of the analyses presented here, the pension reforms that have taken place can be broadly classified into two broad sets:

- The **parametric reforms**, which have maintained unchanged the pay-as-you-go (PAYG) nature of existing pension systems but made substantial changes to their underlying rules – such as the rules on the accrual of pension entitlements, the age at which benefits can be drawn, and the contribution periods required.
- Other countries have gone even further and opted for **systematic reforms**, i.e. moving from the PAYG defined-benefit (DB) structure and adopting new defined-contribution (DC) type schemes. For systematic reforms, one can distinguish two main types of reforms: World-Bank inspired multi-pillar reforms that set up systems of funded personal accounts (e.g. Slovak Republic, Estonia and Hungary) and the adoption of Non-Financial Defined Contribution (NDC) systems (e.g. Sweden, Italy, Poland and Latvia).

Note here that the two biggest countries in Europe, Germany and France, have not shifted to NDC (and thus they are categorised as countries which had parametric reforms), but have introduced features that mimic in some respect NDC systems. France has introduced a link between the number of contribution years and life expectancy while Germany has adopted a sustainability factor that links the level of pension benefits to the dependency ratio. In the same vein, Austria has also significantly modified its public pension plans and could be said to now have a personal notional defined benefit account system.

## Parametric reforms: Scope and possible impact

Most countries in the EU25 have opted to enact parametric reforms rather than systematic reforms. However, this does not necessarily mean that the former have a smaller impact on pensioner incomes than the latter. In fact, their impact on fiscal sustainability and pensioner welfare can be equally impressive, or even more in some instances (e.g. while the replacement ratio is expected to decline by 11% in Hungary, which has gone for systematic reform, that in France is set to fall by 26%). The main difference between parametric and systematic reform lies not in the financial impact on pensioners (or contributors) but in the shouldering of risk between the current generation and the State (who becomes a custodian of future generations in this respect). The fact that the parametric reforms do not change public pension systems from a DB to a DC set-up

has several important implications. The longevity risk is still borne by the pension provider rather than the pensioner, and redistribution is still possible under a DB system, something that is relatively more difficult to achieve under a **pure** DC framework.

Parametric reforms may affect either the contribution side or the benefit side. Almost all countries in the EU25 have undertaken parametric reforms during the last decade, and in some cases this preceded systematic reforms.

- On the **contribution side**, countries may change the percentage of income that needs to be paid or the income thresholds that apply. They may change the length of contributions required to qualify for a pension. The state pension age, or the minimum age at which a pension starts to be paid out, can also be modified.
- On the **benefit side**, an important parametric change is a change in the indexation or uprating of pension benefits. Also, Governments may change the benefit formula by modifying the accrual rates or altering the pensionable earnings. Many countries have also tried to rollback the early retirement schemes and also sought to extend working lives by offering benefits to older people who continued to work or deferred their pensions.

Table I below summarises the main parametric reforms that have taken place, or are gradually being introduced, in the PAYG DB public pension schemes of the current 25 Member States. The parametric reforms are sub-divided into 5 categories. In some cases, some countries that have made systematic reforms are also listed in the table, e.g. Italy. This is because in these countries the old schemes still apply to older cohorts of workers, and Governments have also sought to reform them. In general, the parametric reforms have been driven by the objective of increasing revenues or decreasing generosity in terms of annual pension benefits paid out, and thus they are likely to have a negative impact on incomes of pensioners.



**Table 1:**  
Countries that made  
parametric reforms  
between 1995/96 and 2005

Source:  
Based on analysis of 'Social Programmes  
throughout the World', various editions,  
and 'MISSOC Tables', various years.

	Retirement Age	Contribution Rate	Contribution Requirement	Benefit Indexation	Pension Formula
Austria					
Belgium					
Cyprus					
Czech Republic					
Denmark					
Estonia					
Finland					
France					
Germany					
Greece					
Hungary					
Ireland					
Italy					
Latvia					
Lithuania					
Luxembourg					
Malta					
Netherlands					
Portugal					
Slovak Republic					
Slovenia					
Spain					
U.K.					

### Retirement age:

The most frequent reform was changing the retirement age. In most EU25, the reform has involved the equalisation of the legal retirement age for men and women (as per ruling by the European Court of Justice). Only Eastern European New Member State countries (Czech Republic, Estonia, Hungary, Latvia, Slovak Republic, Lithuania) and Italy have ef-

fectively increased the retirement age for both genders, while Denmark actually lowered it from 67 to 65. The coalition Government in Germany intends to raise the state pension age from 65 to 67. Similarly, independent Government-appointed pension commissions have recently recommended the extension of the retirement age in both the UK and Malta.

### **Contribution rate:**

The second most common reform during this decade was modifying the contribution rate. Given the PAYG-nature of public schemes, this reform, on its own, does not yield full benefits. In contrast, some countries, e.g., the Netherlands and Sweden have even set a cap on contributions.

### **Contribution requirement:**

One of the most common changes has been the scaling back of the early retirement schemes that had been put in place in the 1970s and 1980s. Contribution requirements for early retirement, or deductions for taking up pensions before the legal retirement age, have gone up in Belgium, Denmark, Germany, France, Italy, Austria, Finland, the Czech and the Slovak Republics, Spain and Slovenia. More crucially, the period of minimum contributions needed to qualify for the maximum pension has been increased or is being raised in several countries, like Austria, Belgium, France and Italy. France has also introduced a significant reform under which after 2009, the number of contribution years will increase in line with the increases in life expectancy.

### **Benefit indexation:**

On the benefit side, more countries moved away from earnings uprating of pensions in payment; most EU countries now uprate benefits with prices – implying that over time pensioner benefits will fall in relation to general incomes and thus they will lose out their relative position in society. As can be seen in Table I, there have only been a handful of countries that have recently changed the way they index benefits after retirement – this may be somewhat deceptive, as most countries had already effected these changes at an earlier date. There were only a few countries in the Union who had still earnings uprating in 1995, but since have moved away. Austria and Germany had at first moved towards net

earnings, so that the burden of any increases in social security contributions would be shared between workers and pensioners. Now they have both moved to an even less generous indexation: Austria to price uprating and Germany has introduced the 'sustainability factor' to adjust pension benefit indexation. Other countries, like Hungary and the Slovak Republic, went for the Swiss formula (50% price uprating and 50% earnings uprating) and in this way reduced what were previously wage-indexed pensions.

### **Pension formula – accrual side:**

Changes in the pension benefit formula are rather more complex reforms, especially in terms of their implications being fully understood by the average citizen. There are a wide variety of pension benefit formulae and thus it is hard to synthesise the main changes. However, broadly speaking, the formulae can be divided into two parts – accrual of entitlements and pensionable salary. The accrual side determines how much of the pensionable salary the pension benefit will be replacing. Thus, for instance, the scheme could be based on having an accrual of 2% of the final salary for every year of contribution. The other component, pensionable salary, amounts to the representative salary to which the earnings-related scheme is linked. Typically DB schemes (particularly in the private sector) have accrual schedules that are related linearly to the number of years in the system (i.e. same accrual rates for each year of contribution, irrespective of age and years already contributed for). In order to extend working lives, or alternatively to discourage early retirement, in recent years some Governments, such as Finland and Greece, have modified their accrual rates and tried to give higher entitlement to those who work after certain ages, or else have sought to make people work more by reducing accrual rates. In other cases, the accrual rate may differ on the basis of earnings (Czech Republic and Portugal have higher accrual rates on lower earnings, and lower accrual rates on higher earnings; France and Sweden have higher accrual rates on higher earnings). There are also differences in accrual rates across sectors (e.g. fire-fighters' pension schemes in the UK, and the pension schemes for the police in Greece, have much higher accrual rates compared to other sectors in the economy; the French pension system has separate accrual regimes for executives and nonexecutives).

**Pension formula – pensionable salary side:**

A more readily understandable parametric reform involves changing the pensionable salary. Most countries used to have schemes that limited the determination of this salary to the final few years of a career, a period when someone would be near the top of his earnings history. However, in recent years, there has been a considerable lengthening of this period, so that the wage that is replaced is in many cases no longer very representative of the final salary of the person before he retires. Austria, for example, has moved away from using 15 best years to the income earned during 40 to 45 years of working lives. Most notably, this kind of reform is likely to harm more those who had steep earnings careers, but may not be any more beneficial to those on low-income trajectory. Other countries, like Portugal and Hungary, have also gone towards calculating the pensionable income as the average lifetime salary, while others, such as France, have just increased this period to be more in line with the required contribution periods. Germany introduced a ‘sustainability factor’ which links annual pension indexing to changes in the ratio of pensioners to workers supporting the system. German pensions are tied to a basic pension-point value component, which, in turn, is indexed to annual net wage growth. This pension-point value component is adjusted in line with the sustainability factor, so to lower pension payouts for all German retirees as the pensioner-to-worker ratio increases over time.

As a result of the majority of the changes described above, pension payments are expected to be on the decline, which in turn is likely to raise the risk of elderly falling back on the means-tested social assistance (where available) or fall into poverty.

## Systematic reforms and their possible impact

In essence there have been two broad types of systematic reforms – those inspired by the World-Bank multi-pillar model and those setting up NDC schemes. Though in both cases, the main difference with DB public schemes is that the structure of determination of pension benefits changes from DB to DC, there are some major differences between the two strands of reform and their impact on pensioners' incomes is also likely to be quite distinct.

**Table 2:**  
Countries that have made  
systematic reforms

Source:  
Based on Commission Staff Working  
Document: Synthesis report on adequate  
and sustainable pensions (Feb 2006).

	NDC	Funded Second Tier of Manda- tory Scheme	NDC First Tier of Mandatory Scheme
Estonia			
Hungary			
Italy			
Latvia			
Lithuania (voluntary)			
Poland			
Slovak Republic			
Slovenia (supplement)			
Sweden			

## World-Bank multi-pillar reforms

Prior to accession, a number of countries opted to go for multi-pillar pension systems, often after assistance from the World Bank. The new systems face serious challenges, with major issues surrounding coverage, high fiscal costs of transition and negative impact on certain groups (such as women).



<sup>3</sup> Gabor Orban and Daniel Palotai,  
'The sustainability of the Hungarian  
pension system: a reassessment',  
Magyar Nemzeti Bank, December 2005.

Poland, Estonia, Latvia, the Slovak Republic, Lithuania and Hungary all implemented multi-pillar reforms before they joined the EU (and three other applicant countries, Romania, Bulgaria and Croatia have also gone down this path). In general the multi-pillar reforms are still too new for their long-term impacts to be evident. Yet, in some of the countries that went through the reform earlier than others, e.g. Hungary, there have been studies that have yielded some interesting insights. A working paper published by the Hungarian Central Bank<sup>3</sup> notes that 'the pension system, in its present form, is unsustainable with net implicit public liabilities in the system around 240% of GDP'. More crucially it notes that 'the returns recorded so far in the private pension funds fall short of expectations and, on the condition that these low returns persist, the second pillar is projected to provide annuities that do not make up for the reduction in benefits received from the public pillar'. The Hungarian case is also interesting in that it shows that a move to full funding does not automatically result in sustainability as after the reform several parametric changes contributed to reverse any improvements in sustainability. The net implicit liabilities of the system had been just 60% of GDP prior to the reform, but a cut in contribution rates, the leveling of benefits across pensioners who retired in different years and the introduction of a 13th month pension contributed to boost the burden of the system.

Shifting to a pure DC structure increases risks shouldered by individual contributors (instead of the State, or the employer), and it can reduce the redistributive element present in public DB pension schemes. Given gender differentials in employment, it also tends to lead to greater gender inequality. Personal accounts reforms introduce two elements of risk to pensioner incomes – namely investment risk and administrative charges risk, and these may lead benefits to be significantly different from those available under the old regime of public DB-type pension schemes. The move to DC also implied that contributions and benefits of an individual became directly linked and this reduces the possibilities of redistribution. Thus, such a move was negative for lower income individuals, as progressive elements in pension formulae were removed or decreased, cases in point being Hungary (1998) and Poland (1992 and 1999). Moreover the shift from DB to DC means that the longevity risk is shifted squarely to the shoulders of individual contributors of the same generation (and not borne by the State). Taken together all these measures tend to disadvantage those with low lifetime earnings. To further complicate matters, though countries have tended to legislate that gender-neutral mortality tables are utilised, there have been practi-



cal problems of implementing these annuity regulations with insurance companies reluctant to offer them and the market proving to be difficult to kick-start. Thus, the net outcome of these reforms increases the risk that women will continue to have lower annual pension incomes.

A further complication arises when individuals are given the option to shift voluntarily into the personal accounts system. Evidence from Poland and Hungary indicates that many opted to shift without having recourse to enough information. In many cases, people above a given age had the option of staying within the old public DB-type PAYG system or move to the personal accounts pillar. Similar to what happened in the UK with contracting-out, there is evidence that in many cases people who switched may have become less well off as a result. A World Bank study carried out in 2000<sup>4</sup> based on surveys in Poland from the end of 1999 indicate that 'most people felt they were well informed and that information on the pension reform was readily available', but then surveys often showed 'that the knowledge of the pension system was limited to slogans rather than a deep understanding'. Moreover while there are indications of rational switching, there is 'some evidence that choices made were not based on a detailed understanding of the new system'. The study also notes that 'a significant proportion of people simply joined the pension fund of the first agent they came across'.

<sup>4</sup>Agnieszka Chlon-Dominczak,

'Pension reform and public information in Poland',

Social Protection Discussion Paper Series, World Bank, August 2000.

## NDC schemes

### Lower investment risks:

Whereas the personal account systems are based on investing funds in the financial market, the NDC systems involve just notional accounts and thus the investment risk faced by individuals is very different. The rate of return faced under an NDC is centrally determined and reflects the formula chosen, whereas under the personal accounts system the return depends on the choices made by individuals and the performance and stability of financial markets. This has significant implications in that all people face the same risks on return under the NDC scheme, and thus there is no income inequality that results because of better investment choices, something that could possibly be correlated to the income level of an individual. NDC schemes thus do not place lower income individuals at a relative disadvantage arising from their relatively lower level of financial education and experience in investment choices. That said NDC



schemes also have a form of 'investment' risk for contributors, which relates to any fluctuations in the notional rate of return that differs from the return under the PAYG DB scheme. The NDC schemes, in fact, attempt to make the PAYG schemes automatically stabilising so that the 'assets' and 'liabilities' of the system balance out. For instance, in Sweden through the 'automatic balance mechanism', the Government reviews the system annually and if the calculation reveals an unfunded liability, the notional account interest (set at the growth of average wages) and the indexing of annuities are reduced. Thus changes in the size of the contributing labour force are reflected in the rate of return earned on funds. With the NDC system, the financial risk of changing economic and demographic factors is shifted from the State to the contributors.

### **Annuity divisor:**

The NDC systems also adjust for longevity increases through changes in the annuity divisor, which converts the notional account upon retirement into pension benefits. As retirees' life span increases, the monthly benefit available to individuals declines unless they delay retirement. Capretta (2006) reports that "based on mid-range demographic and economic assumptions, the Government projects that the life span adjustment will cut average monthly benefits for those continuing to retire at age 65 by 14% by 2055". However, this may be compensated (albeit only partly) by behavioural adjustments (upwards) in the age at which people retire when faced with the prospect of low pension benefits and rising life expectancy. Moreover, as mentioned by Capretta, "the Government expects the automatic balance mechanism to be triggered only 'a few times' over the next 15 years, thus modestly cutting the rate of return applied to the notional accounts".<sup>5</sup> There is concern that the projections used by the Swedish Government may be optimistic (the current level of fertility and migration together with 2% permanent real wage growth) and the automatic balance mechanism will be used much more frequently than expected. In this case, the political acceptability of the NDC system may be put under threat as its transparency means that individuals will be able to compare the rate of return on their notional accounts with that on market instruments (and ignoring the question of risk, charges, etc). This will put pressure on Governments to sustain the system by shouldering part of the change in economic and demographic factors itself.

<sup>5</sup> James C. Capretta,  
"Building automatic solvency into  
US Social Security:  
Insights from Sweden and Germany",  
Policy Brief No.151,  
The Brookings Institution, March 2006



<sup>6</sup> Markus Knell,

“Demographic fluctuations, sustainability factors and intergenerational fairness – an assessment of Austria’s new pension system”, Monetary Policy and the Economy Q1/05, Österreichische Nationalbank, 2005.

<sup>7</sup> Daniele Franco and Nicola Sartor,

‘NDCs in Italy: Unsatisfactory present, uncertain future’, from ‘Pension Reform: Issues and Prospects for Non-financial Defined Contribution (NDC) Schemes’ edited by Robert Holzmann and Edward Palmer, The World Bank, 2006.

### **Securitisation of pensions:**

As noted in Knell (2005)<sup>6</sup> the NDC system leads to a securitisation of pension claims, making individual benefit levels difficult to modify whereas under the DB systems where benefits were determined at the end of the career, it was easier to modify the formula. However, the shift to NDC in itself, due to the move towards lifetime averaging and the shift of longevity risk, may lead to such a reduction in benefits. For instance, Franco and Sartor (2006)<sup>7</sup> report that in the Italian system “under the baseline scenario, the average pension earned at the age of 60 is reduced by 34 percent..., and the reduction in benefits reaches 50 percent if the lifetime stream of pension benefits is taken into account”. These reductions in benefits, if not compensated by additional contributions, are likely to increase the risk of elderly poverty.

### **Lower administration costs:**

Another major difference of the NDC schemes is that they are generally less expensive to administer than multi-pillar pension systems. This is not to say that multi-pillar systems cannot be organised in a way that reduces the administrative charges faced by contributors. The Swedish pension system also includes a relatively small personal account component (2.5 percentage points out of the total 18.5% contribution paid) which due to its centralised organisation faces low administrative costs, indicating that this type of risk can be reduced through reforms that decrease decentralisation. Nevertheless the personal account systems will always involve more administrative costs as they involve the actual management and investment of funds, and thus even if contributors are denied any rights of switching providers or are given very little choice (both factors that could reduce administrative charges substantially) there would be the costs to effect investments, track them and administer them. Given that these are often fixed costs, in a system of personal accounts these costs tend to disadvantage the lower income groups.

**Gender-neutral annuity calculations:**

The adoption of the gender-neutral annuity is arguably the most redistributive element of a DC-type system. However, this is true only when one looks at the overall cumulative sum of pensions payment. In terms of annual incomes, and thus poverty risk, the gender-specific risk of elderly poverty will not be affected by gender-neutral annuity rates.

**Pension crediting for absences from work:**

The shift to DC, and the determination of benefits by the amount of funds accumulated, make it crucial to have in place adequate crediting systems for periods during which an individual is prevented by circumstances, such as sickness, unemployment, training or child and adult caring, from contributing. However, there is evidence that in many cases this element of reform was underestimated. For instance, Steinhilber (2004) reports that in Hungary contributors to the personal accounts system contribute 6% of their child care benefit to the pension system (instead of having credits as under the old system) and since this benefit is much less than wages, especially for middle and upper income earners, carers are worse off, and that in Poland the State pays a subsidy but this is based on the minimum wage and is 'much less generous than it was before'. By contrast in Sweden, the State gives extra pension rights to parents with children under four, though Sweden's 2005 National Strategy Report for adequate and sustainable pensions still stated that while "in principle, the national pension system gives everyone the same possibilities of building an adequate pension...many women still devote more time to unpaid work and less time to paid work than men, which results in lower average pensions for women".

## Conclusion

The above analyses describe briefly the pension reforms that have taken place during the last decade or so in the present 25 Member States of the European Union. While in 1995, nearly all the Member States of the EU had an earnings-related DB PAYG scheme as the main centrepiece of their pension system, by 2005 nearly half of the Member States had reformed their pension systems. In most cases reforms were mainly driven by demographic pressures and fiscal sustainability concerns and the impact of these reforms on income adequacy and pensioner poverty does not always appear to have been given sufficient assessment. In particular, the effects on particular groups, such as women and lower income earners, have not been assessed in great depth. The research reported here takes a first step in that direction.

These issues point towards the need to reassess most of the reforms that have been carried out and outline those that are less likely to result in pensioner poverty. For instance, France's reform to link the number of contribution years required to qualify for the state pension with longevity may be less socially risky than Germany's policy to link the value of pension benefits to the dependency ratio. This is mainly because this policy sends clear signals to individuals that they need to work more to qualify for the same benefit, rather than simply giving them a smaller benefit and then possibly facing a political backlash and having to increase this benefit. The same clarity of incentive signals to work more is also achieved in the NDC systems. Similarly the administrative structure adopted by the multi-pillar reforms in the Eastern European Member States needs to be looked at and reformed in a way so as to reduce administrative costs and make the systems less burdensome on low-income earners. Moreover policy-makers need to ensure that individuals understand the choices before them, particularly the longevity risk, and that incentives for savings must increase. Policy-makers need to remember that pensions were not introduced by chance, but were the result of social consensus that poverty amongst the elderly must be eliminated. If pension systems end up failing this main task, it is very probable that they will be forced to unravel some of the recent reforms that have taken place.



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