

## Solving the Pensions Puzzle

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**How do pension systems protect people on low incomes?**

**Are pension promises affordable?**

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### Introduction

Reforming pensions is one of the biggest challenges of the 21st century. All OECD countries have to adjust to the ageing of their populations and re-balance retirement income provision to keep it adequate and ensure that the system is financially sustainable.

Experts have been warning us for some time that population ageing is looming and that, when it strikes, changes will be rapid. But many governments preferred to ignore the need for reform and to try to postpone reforms beyond the next election. Immigration of younger workers, more women in work and higher productivity were put forward in the hope that more painful solutions, such as cutting benefits or working longer, could be avoided. All of these factors can certainly help to cope with ageing and the financing of pensions, but the increases in each of them necessary to compensate for ageing are so large that one cannot rely on them alone.

OECD countries have woken up to the need to adapt to an ageing society, and reforms have taken place. But pension reform is a difficult task. Not only does it lead to heated ideological debates, it can result in street protests that force governments to retreat from urgently-needed reforms. Recently, however, public opinion on pensions has been changing. People are realising that a shrinking number of young workers will have trouble paying for more and more pensioners.

The time has come to open a frank debate among all members of society and finally address the question of how the cost of ageing should be shared between the different groups of society. In order to launch an informed debate, however, it is necessary to understand the reform options and their likely consequences. Cross-country comparisons are an important tool for this debate and the OECD is helping to provide them. ■

### Is there a perfect pension system?

Can a government create a perfect pension system, and if so, how? Some of the most frequently asked questions include: which country does it the best way, which country is doing the worst job, which systems are the most generous, will it be possible to reform without increasing pensioner poverty, and will countries be able to pay for the promises they are currently making?

There are no simple answers to any of these questions. National retirement-income systems are complex and pension benefits depend on a wide range of factors. Differences in retirement ages, required years of service, benefit calculation methods and adjustment of paid-out pensions make it very difficult to compare pension systems across countries. Another problem is that life expectancies at retirement differ from one country to another, which means that some countries will have to pay pensions for a much longer period than others. As a result, national debates are often full of misleading claims regarding the generosity and affordability of other countries' pension arrangements.

International comparisons to date have focussed mostly on the fiscal aspects of the ageing problem. The OECD has published projections of age-related expenditures, including public pensions. Much less attention has been paid to the social sustainability of pension systems and the impact of reforms on the adequacy and distribution of pensioners' incomes. But these aspects are also crucial if countries want to attain the dual objective of promising affordable pensions and preventing a resurgence of pensioner poverty.

The OECD has developed a framework to assess the future impact of today's pension policies, including their economic and social objectives, and to compare them between countries. The models consider someone starting work today in each of the 30 OECD countries. It then assumes that current rules remain the same for the next 40 years or so, until the person reaches retirement age.

The framework takes account of the detailed rules of pension systems but summarises them in measures that are easy to compare. Pension benefits are projected for workers at different levels of earnings, covering all mandatory sources of retirement income for private-sector workers, including minimum pensions, basic and means-tested schemes, earnings-related programmes and defined contribution schemes. Another novelty is the inclusion of the large effects of personal income tax and social security contributions on living standards in work and in retirement: all indicators are presented gross and net of taxes and contributions. These are presented in the new series, *OECD Pensions at a Glance*, which will be updated every two years. ■

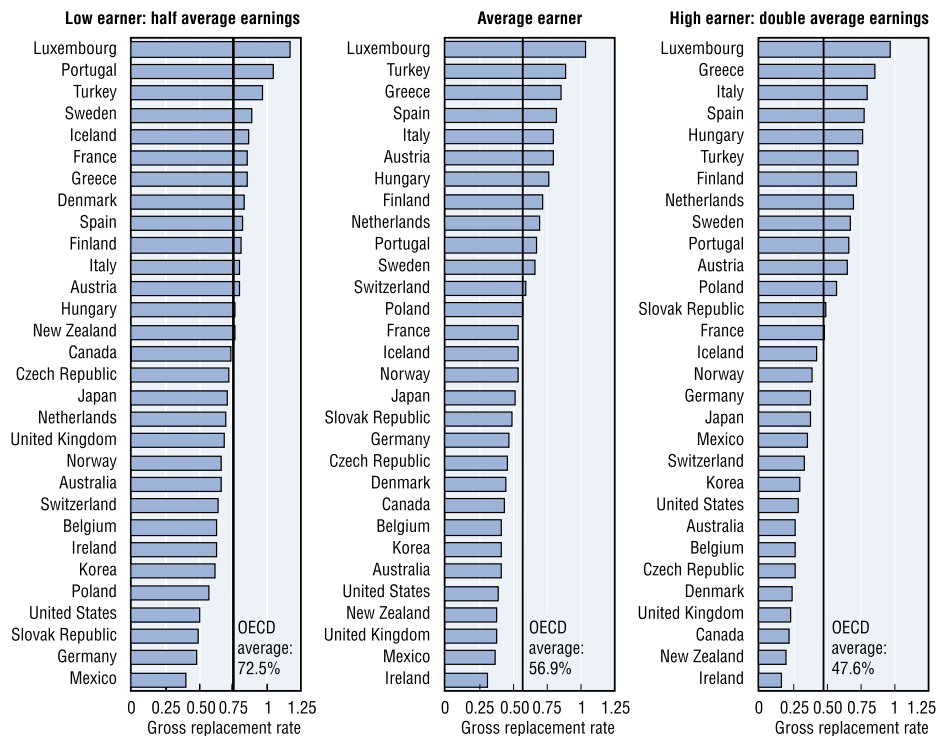
### What can pension systems deliver?

Pension programmes have two main objectives. The first is to redistribute income towards low-income pensioners and prevent destitution in old age. The second is to help workers maintain living standards during retirement by replacing income from work at an adequate level. Most countries pursue both

goals in their overall pension policy, but there is large variation across countries in the balance of emphasis between the two objectives. The OECD uses a range of indicators to measure the degree to which countries meet these twin objectives.

The *replacement rate* is perhaps the most familiar indicator in pension policy analysis. It measures pension entitlements as a share of individual lifetime average earnings. For OECD workers who earned the average wage throughout their career, the projected average gross replacement rate will be 57%, with substantial variation between member countries. In Luxembourg, the replacement rate for a worker exceeds 100% (meaning that the pension is higher than earnings before retirement). Austria, Hungary, Italy, Spain and Turkey also provide relatively high pensions to full-career workers on average earnings: replacement rates exceed 75%. In France, Iceland, Japan, Norway and the Slovak Republic, rates are around 50%. Not surprisingly, Ireland – which has only basic and targeted pensions and no earnings-related scheme – has the lowest replacement rate at average earnings. In the United Kingdom, the earnings-related public scheme does not result in a high pension: it has a low accrual rate and does not cover the first slice of earnings (up to around one fifth of the average).

**Figure 1.**  
**GROSS REPLACEMENT RATES AT DIFFERENT EARNINGS LEVELS**



Source: OECD pension models.

Looking at gross replacement rates, however, covers only part of the picture. The personal income tax system plays an important role in old-age income support. Pensioners often do not pay social security contributions and, as personal income taxes are progressive in most countries, pensioners usually pay a lower average tax rate than workers. In addition, most income tax systems give preferential treatment either to pension incomes or to pensioners.

Workers on average earnings in OECD countries can expect their post-tax pension to be worth just under 70% of their earnings after tax. High-income workers at twice average earnings will receive less than 60%. Even the countries with the lowest earnings-related payments (the United Kingdom and the United States) pay a net replacement rate of around 50% at average earnings. If, as seems likely, this level of payment represents the lower limit of politically acceptable replacement rates through mandatory systems, it does not appear to leave a huge degree of scope for further cuts in pension entitlements beyond the reforms that are already in place in the “average” OECD country. ■

### How do pension systems protect people on low incomes?

Low-income workers are a particularly vulnerable group when it comes to retirement, since they are less likely to have private pension arrangements or other personal assets as additional sources of income. To assess the situation of low-income pensioners, it is useful to look not only at the replacement rate but at another indicator: the relative pension level. This indicator measures individual pension entitlements as a share of average economy-wide earnings; it is thus a measure of the *social adequacy* of pension benefits.

Even though the average OECD low-income worker (defined as someone earning half of average earnings) will receive a net replacement rate of about 85%, pensions for low-income workers are very low in some countries. In Mexico, the Slovak Republic and the United States, for example, pension benefits can be worth 20% or less of average earnings. In Germany and Poland, pensions for low-income, full-career workers are worth less than a quarter of average earnings. In most cases, this is an intended consequence of a strong link between contributions and benefits and a low degree of income redistribution through the pension system. But it is important to note that in some countries, systems that are usually described as “generous” are much less so when it comes to benefits for lower-income groups.

Recent reforms in many countries have aimed to create closer links between contributions and benefits. Redistributive features of pension systems have been all but eliminated, for example, in Italy, Poland and Hungary. If the pension system itself does not redistribute funds to prevent pensioner poverty, means-tested safety-net provisions will have to play an ever more prominent role in the retirement incomes of elderly people.

All OECD countries have some form of safety-net for older people. Usually, these are means-tested programmes, either targeted to older persons or part

of the general social assistance scheme. The average minimum retirement benefit for full-career workers across OECD countries is equivalent to just under 29% of average earnings. ■

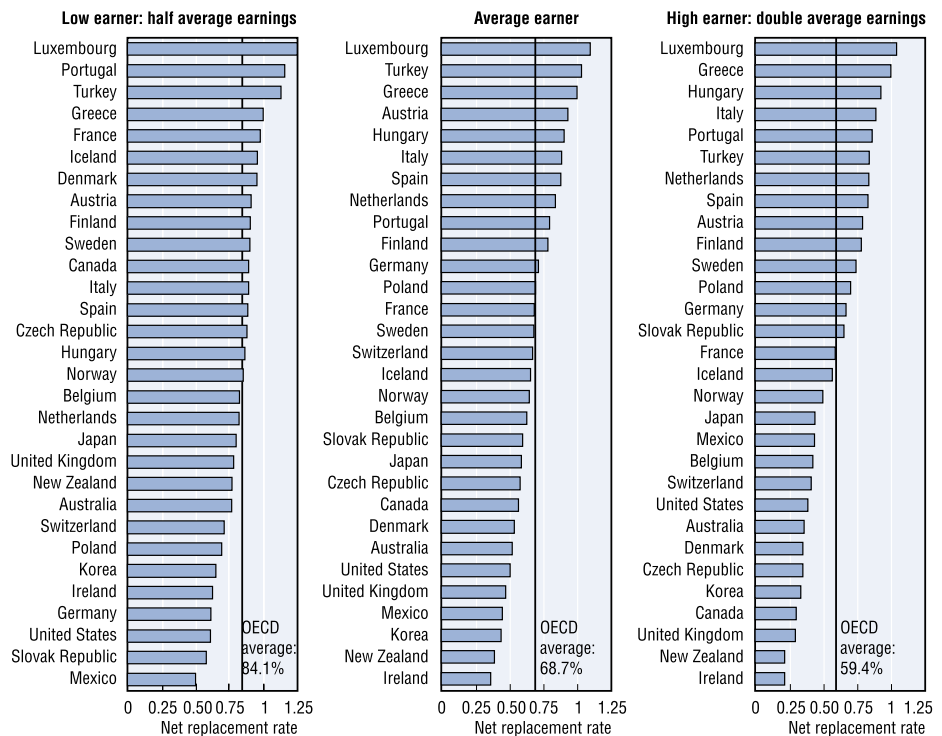
**Are pension promises affordable?**

The promises that countries make to their future pensioners may be adequate to prevent pensioner poverty and maintain standards of living. But are they also affordable?

To answer this question, the OECD study uses an indicator of so-called “pension wealth”. This indicator is the most comprehensive measure of pension promises. It is calculated as the present value of the future stream of pension payments and it takes into account the level at which pensions are paid, the age at which people become eligible to receive a pension, people’s life expectancy and how pensions are adjusted after retirement to reflect growth in wages or prices. It is the lump-sum equivalent to all the pension income someone can expect to receive.

Luxembourg has the highest pension wealth for a worker who earned average earnings: it is worth 18 times average earnings for men and nearly 22 times for women (due to higher female life expectancy). This means that if, instead

**Figure 2.**  
**NET REPLACEMENT RATES AT DIFFERENT EARNINGS LEVELS**  
Per cent of individual pre-retirement earnings



Source: OECD pension models.

of paying a regular income, the government gave each pensioner a single payment worth exactly the same, it would have to come up with an average lump sum of \$587 000 at the time of retirement. Pension wealth for Luxembourg is nearly treble the average for OECD countries. The lowest pension wealth for someone of average earnings is found in Ireland, Mexico, New Zealand, the United Kingdom and the United States, where it is less than six times average earnings.

Countries can more easily afford to promise a higher replacement rate at retirement if the pension eligibility age is higher and so the benefit is paid for a shorter period. The pension eligibility age in most OECD countries is 65. Iceland and Norway already have (and the United States will have) a normal pension age of 67. Pension eligibility ages are less than 65 in the Czech Republic, France, Hungary, Korea, the Slovak Republic and Turkey.

The impact of differences in life expectancy on pension wealth is quite large. Other things being equal, the countries with lower life expectancy – Hungary, Mexico, Poland, the Slovak Republic and Turkey – could afford to pay men a pension that is 10% higher than a country with OECD average mortality rates (Germany, Italy and the United Kingdom, for example). In contrast, longer life expectancies increase the burden on the pension system. For men, pension wealth is nearly 8% higher than the OECD average in the five countries with the longest life expectancies – Japan, Iceland, Norway, Sweden and Switzerland.

The impact of the combination of these elements on pension wealth can be illustrated using country examples: French gross replacement rates are below

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**Box.****HOW DO WORKERS' LIVING STANDARDS EVOLVE IN RETIREMENT?**

Two pension policies have a particularly strong impact on income levels: indexation and valorisation. Indexation refers to the adjustment of payments to pensioners to reflect changes in costs or standards of living; this feature of pension systems has long been central to the debate on the financial sustainability of pensions. In the past, many countries adjusted pensions to wages. Now nearly all OECD countries link pensions to consumer prices. Under the baseline assumptions used by the OECD, this may result in savings of more than 20% compared to indexing pension benefits to wages.

A related feature of earnings-related schemes is valorisation: the adjustment of past earnings to account for changes in living standards between the time when pension rights are earned and when they are claimed. Until very recently, valorisation has received much less attention than indexation despite its powerful impact on pension benefits. Most OECD countries revalue past earnings in line with economy-wide earnings growth. But there are several exceptions – Belgium, France, Korea, and Spain – where past earnings are valorised in line with prices. Wages usually grow faster than prices, so price valorisation leads to substantially lower replacement rates than earnings valorisation. Price valorisation for a full-career could result in a pension 40% lower than under earnings valorisation.

the OECD average, for workers earning between 75% and 200% of the French economy-wide average. Pension wealth in France, however, exceeds the OECD average because the pension eligibility age of 60 is relatively low and life expectancy is relatively long. In countries with shorter life expectancies, such as Hungary, Poland and Turkey, benefits are paid for a shorter retirement period and so the pension promise becomes more affordable. The effect is the reverse in Switzerland and the Nordic countries, where life expectancies are high. ■

### Do people understand their pension systems?

One clear message emerging from the evidence collected by the OECD is that many OECD countries have pension systems that are very complex. This lack of clarity in the pension system makes it difficult even for experts, let alone the average contributor, to know what future entitlements will be. In Sweden, for example, a full-career, white-collar worker on around average earnings would receive five different pensions: an income-tested public pension, an earnings-related public pension, a defined-contribution personal pension, a defined-benefit occupational pension and a defined-contribution occupational pension.

Sweden, to its great credit, has recognised the problems caused by having such a complex system, and has taken steps to improve the information given to pensioners about the future value of their entitlement. Elsewhere, Germany and the United Kingdom, for example, are providing statements to pension system members to inform them of their current and projected pension entitlements. Other countries need to consider a similar strategy.

The need to have younger generations understand pension systems is important partly because governments increasingly rely on them to make financial decisions (about how much to save, in what form, etc.) in order to have a decent pension upon retirement. People also need to be able to understand their pension systems in order to have a reasoned discussion about pension reform. ■

### For further information

For further information about the OECD's work on pensions, please contact Monika Queisser, Tel.: + 33 1 45 24 96 34 (Monika.Queisser@oecd.org).



### For further reading

**OECD Economic Outlook**, June 2001. ISBN: 92-64-19100-3.

**Pensions at a Glance. Public Policies across OECD Countries**, April 2005. ISBN: 92-64-01871-9.

OECD (2001), **Ageing and Income. Financial Resources and Retirement in 9 OECD Countries**, Paris. ISBN: 92-64-19542-4.

OECD, **Ageing and Employment Policies**. This series is devoted to ageing and employment policies in selected OECD countries. Already published: Belgium (in French), Czech Republic, Finland, Italy, Japan, Korea, Luxembourg (in French), Norway, Spain, Sweden, Switzerland (in French), United Kingdom. [www.oecdbookshop.org](http://www.oecdbookshop.org)

OECD, **Private Pension Series**. This series reviews private pension systems in member countries, analyses policy and technical issues, formulates policy recommendations and promotes policy dialogue with non-OECD countries. [www.oecdbookshop.org](http://www.oecdbookshop.org)

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