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Chapter 1

Recent pension reforms and their distributional impact

This chapter first sets out the most important elements of pension reform in the 34 OECD member countries between January 2009 and September 2013. It thus updates and continues the analysis in the 2009 edition of Pensions at a Glance *which examined pension reforms from 2004 to the end of 2008. The second part of the chapter examines the distributional impact of pension reforms over the last 20 years, looking only at those countries which have undertaken reforms that go beyond solely raising the retirement age.*

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Introduction

For a decade pension reform has been high on the agenda of many governments. Population ageing and declining fertility rates require reforms which also need to pre-empt, where possible, adverse social and economic effects of making pension systems more financially sustainable. Although the recent economic crisis has heightened the pressure for decisive action, it is important to consider long-term scenarios rather than short-term views.

Pension expenditure is forecast to increase in the vast majority of OECD countries over the next 40 years (see Table 6.7 in Chapter 6). Such a development is unsurprising as the predicted five-year rise in life expectancy at the age of 65 for the next half-century will lead to much higher numbers of pensioners than currently. By now it is widely accepted in most countries that pension systems and rules need to change over time. Reforms will, of course, vary from country to country and will be determined by the structure of the pension systems in place.

This chapter is divided into two separate parts. The first sets out the most important elements of pension reform in the 34 OECD member countries between January 2009 and September 2013. It thus updates and continues the analysis in the 2009 edition of *Pensions at a Glance* which examined pension reforms from 2004 to the end of 2008. The second part of the chapter examines the distributional impact of pension reforms over the last 20 years, looking only at those countries which have undertaken reforms that go beyond solely raising the retirement age.[1]

Recent pension reforms

Key goals of pension reform

This section examines pension reform against six of its key objectives:

1. Pension system *coverage* in both mandatory and voluntary schemes.
2. *Adequacy* of retirement benefits.
3. *The financial sustainability* and *affordability* of pension promises to taxpayers and contributors.
4. *Incentives* that encourage people to work for longer parts of their lifetimes and to save more while in employment.
5. *Administrative efficiency* to minimise pension system running costs.
6. *The diversification* of retirement income sources across providers (public and private), the three pillars (public, industry-wide and personal), and financing forms (pay-as-you-go and funded).

A seventh, residual, category covers other types of change, such as temporary measures and those designed to stimulate economic recovery.

Trade-offs and synergies between the objectives are frequent. For example, increasing fiscal sustainability by lowering the generosity of the pension promise is likely to have adverse effects on the adequacy of pension incomes. On the other hand, widening the coverage of occupational pensions eases the pressure on the state budget to provide a pension and helps to diversify risk and improve the adequacy of retirement incomes.

Overview of pension reforms

Table 1.1 below shows the type of reform package adopted in each of the 34 OECD countries between 2009 and 2013. Table 1.2 considers reform in much greater details.

Table 1.1. **Overview of pension reform measures in 34 OECD countries, 2009-13**

	Coverage	Adequacy	Sustainability	Work incentives	Administrative efficiency	Diversification/ security	Other
Australia	x	x	x	x	x		x
Austria	x	x	x				x
Belgium				x			
Canada	x		x	x		x	x
Chile	x	x			x	x	x
Czech Republic			x	x		x	
Denmark				x	x		
Estonia		x	x	x	x	x	
Finland	x	x	x	x		x	
France	x	x	x	x			x
Germany		x	x	x			
Greece		x	x	x	x		
Hungary		x	x	x		x	x
Iceland							x
Ireland	x		x	x		x	x
Israel	x	x				x	
Italy		x	x	x	x		
Japan	x	x	x		x		x
Korea	x		x		x		
Luxembourg	x		x	x			
Mexico		x			x	x	
Netherlands						x	
New Zealand		x	x				x
Norway		x	x	x			
Poland	x		x	x		x	
Portugal	x	x	x	x		x	
Slovak Republic			x		x	x	
Slovenia			x	x			
Slovenia	x	x	x	x	x	x	x
Spain		x	x	x			
Sweden		x	x	x	x	x	
Switzerland			x			x	
Turkey				x		x	x
United Kingdom	x	x	x	x	x	x	x
United States	x	x	x				

Note: See Table 1.2 for the details of pension reforms.

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All 34 OECD countries have made reforms to their pension systems in the period under scrutiny. In some countries, like Belgium and Chile, reform entails phasing in measures under the terms of legislation passed in the previous five-year period (2004-08). Since then, reform has increasingly focused on improving financial sustainability and administrative efficiency in response to the consequences of the economic crisis and ageing populations. Countries, like Greece and Ireland, that have revised the way in which they calculate benefits have been the worst affected by the economic downturn. Italy, too, stepped up the pace of its transition from defined benefit public pensions to notional defined-contribution (NDC) accounts in 2012.

Between 2004 and 2008 many countries – Chile, Italy and New Zealand, for example – undertook reform to improve pension coverage and safety net benefits as part of their efforts to fight poverty in old age more effectively. While some have continued in that direction, many others have concentrated on offering the incentive of an adequate retirement income to longer working lives. Most OECD countries are thus increasing their retirement ages, albeit gradually.

The following sections review and compare in detail the reform measures enacted or implemented by OECD countries between 2009 and 2013 to meet the six objectives identified above.

Coverage

Ensuring coverage of workers through one or more pension plans is fundamental to fighting income poverty in old age. All OECD countries have set up mandatory or quasi-mandatory pension plans, either public or private, to achieve quasi-universal coverage. Nevertheless, there is still a significant share of workers who are not covered – even by public or national schemes – or who are informally employed, particularly in low-income countries. In Mexico, for example, less than 40% of the workforce is covered by a statutory pension scheme, the rest being either employed in the informal sector or unemployed.

In four OECD countries, recent policy measures sought to increase participation rates in public pension plans among specific categories of workers: family-carers (Austria), recipients of maternity benefits (France) and recipients of research grants (Finland). Since 2009, new employees in Portugal's banking sector have been automatically enrolled in the national public scheme rather than in industry-wide, private pension plans as their predecessors were. The measure was driven by growing concern about the future sustainability of bank employees' pension funds, severely hit by the economic crisis.

In 2011, Chile ushered in the last phase of its 2008 reform to cover 60% of the poorest elderly people in its public solidarity pension system (SPS), a new pillar that provides means-tested benefits to those who receive no, or very little, pension. Many countries have introduced schemes to promote participation in occupational or voluntary pension plans. Because of public pension retrenchment, such schemes are expected to play a major role in ensuring future retirees an income. Policy interventions in this area have taken three main forms:

1. Private pension provisions in addition to public schemes, as in Poland and Austria.
2. The introduction or extension of mandatory occupational pensions, as in Israel and Korea.
3. Automatic enrolment in voluntary schemes, as in the United Kingdom.

Some policy initiatives aim to increase coverage among specific groups of workers. The United States, for example, offers tax relief to encourage participation in and continuous contribution to private plans among low earners. With a similar goal in mind, Luxembourg has lowered the minimum monthly contribution to voluntary pension plans. The Chilean government, too, has made a great effort recently to phase in a variety of measures to widen coverage, especially of young and low-paid workers. Actions include providing an annual public subsidy to match individual contributions, introducing an efficient new regulatory framework for voluntary plans, and stimulating competition among plans to lower operating costs. The Chilean government's objective is not only to increase voluntary participation or spread savings, but to optimise fund management efficiency.

A significant number of countries have taken measures to institute automatic enrolment in private voluntary plans. In the wake of Italy and New Zealand in 2007, the United Kingdom introduced a nationwide automatic enrolment retirement savings system in 2012 for all workers not already covered by a private pension plan. Ireland proposes to follow suit from 2014.

Adequacy

Reforms to improve the adequacy of retirement incomes may address income replacement, redistribution, or both.

Between 2009 and 2013, Greece and Mexico introduced new means-tested benefits, while Australia followed a different tack. It enhanced its existing targeted schemes to provide higher benefits to the elderly most at risk of poverty. Chile and Greece modified their income tests for the allocation of earnings-related benefits. A new minimum pension was available in Finland from March 2011 as a supplement to the income-based universal allowance. The benefit is payable to all pensioners below a minimum income level (EUR 687.74 per month in 2011). The minimum income security for pensioners is now significantly higher than it was under the previous arrangement.

Measures to improve the adequacy of pensions have also involved reforms to pension benefit formulae. Norway, for instance, modified its rules for calculating old-age benefits in 2011, choosing an income-tested pension to replace its flat-rate contributory public benefit.

A number of other countries have also sought to improve the progressive nature of their social security systems. Portugal has tightened rules for eligibility to Income Support Allowance as of 2013, while Spain has increased survivor benefits for those without a pension. Chile, for its part, abolished healthcare contributions for low earners, and Mexico has exempted pensions from tax. In Estonia, a new income supplement has been available since January 2013 to all pensioners who provide care for a child aged 3 years old or less. The amount of the Estonian monthly allowance varies according both to the number of children cared for and their dates of birth.

Greece, the United Kingdom and the United States granted one-off payments to pensioners in 2009 in a move to temper hardship stemming from the economic crisis. In Greece, where the bonus targeted low-income pensioners, the intention was to maintain it through subsequent years. However, fiscal consolidation saw it dropped in 2010, together with other lump-sum payments to high-income pensioners and seasonal bonuses to workers. Austria also made occasional transfers to lower-income pensioners in 2010 as part of its efforts to reduce old age poverty. In contrast, Portugal has stopped 13th- and 14th-month pension payments, so lowering the income expectations of many retirees.

The level of pensions for higher earners has also been affected by recent reforms, introduced chiefly as part of fiscal consolidation packages. In Greece, for example, the progressive cut of between 5% and 19% in monthly benefits and the taxation of pensions above a certain level have particularly affected high pension earners and thereby increased the redistributive capacity of the system. Korea has recently passed a pension bill that gradually brings the replacement rate of public sector pensions down from 49% to 40% between 2009 and 2028.

Financial sustainability

Many OECD countries have passed reforms to improve the long-term financial sustainability of their pensions systems, principally to secure greater savings for the state budget.

A particularly frequent measure has been the reform of pension indexation mechanisms, although the goals and effects of such action vary across countries and income levels. Some new indexation rules move towards less generous benefits, an especially sought-after effect in countries grappling with fiscal problems. For example, the Czech Republic, Hungary and Norway no longer index pensions to wage growth, while Austria, Greece, Portugal and Slovenia have frozen automatic adjustments for all but the lowest earners. In Luxembourg, the expected upward adjustment of benefits has been scaled back by 50%, while in 2010 Germany amended its planned increase in pension levels to avoid pressure on the federal budget and suspended the cut it had scheduled in contribution rates in 2009.

In Australia, Finland and the United States, by contrast, the freezes on pensions and changes in indexation rules were meant to offset the drop in benefit levels that the standard, inflation-based index would have involved. Policy action in the three countries was actually designed to preserve pensioners' purchasing power.

Greece and Ireland have taken some of the most far-reaching fiscal consolidation measures. Ireland now levies pensions from public sector wages and has limited both early withdrawals from pension funds and other tax privileges. Portugal, too, has enacted pension levies. In Greece, the government has lowered the average annual accrual rate and tied pension indexation to the variability of the consumer price index (CPI) rather than to civil servants' pensions. In addition, Greece now calculates pension benefits on the basis of lifetime average pay rather than final salary and, since January 2013, it has cut monthly pensions greater than EUR 1 000 by between 5% and 15% depending on pension income.

To lower the government's financial obligations in private plans, New Zealand has slashed tax credits for contributions by 50% up to a ceiling of NZD 521 and suspended tax exemptions for both employers and employees. Similarly, Australia halved the caps allowed on concessionally-taxed contributions to private plans (2009) and the tax rate for wealthier contributors to private pensions has been increased in order to better fund pension reforms in progress (2013). From July 2013, a higher cap allowed on concessionally-taxed contributions has been legislated for people aged 50 and over.

Significant changes to the pension formula are now effective in Norway, where benefit levels for younger workers have been linked to life expectancy and are now based on full contribution histories rather than on the best 20 years. Finland, too, now also ties earnings-related pensions to life expectancy and Spain will do the same for all pensions in

the near future. A reform proposal is currently under discussion in Spain (September 2013) that should anticipate the moment since when pensions will be linked to life expectancy: from 2027 to 2019.

Some Central European countries have altered the equilibrium between private and public schemes in order to divert financing from private funds and increase inflows to the state budget. Hungary has gradually dismantled the mandatory second pillar since the end of 2010 and transferred accounts to the first pillar. In Poland, contributions to private schemes are to be progressively reduced from 7.3% to 3.5% to allow an increase in contributions to its new pay-as-you-go public financing pillar. Finally, the Slovak Republic allowed workers to move back to the state-run scheme from private DC plans in June 2009 and made occupational pensions voluntary for new labour market entrants. However, the move was short-lived: in 2012, private pensions were again made compulsory.

Work incentives

Many OECD countries' pension reforms are aimed at lengthening working lives so that people build higher pension entitlements and improve the adequacy of their retirement income.

Measures adopted have been of three main types: *i)* increases in the statutory retirement age; *ii)* improved provision of financial incentives to work beyond retirement age, e.g. through work bonuses and increases in pension benefit at retirement; and *iii)* less or no early retirement schemes.

In the last decade, most of the 34 OECD countries have passed legislation that raises the retirement age or the contribution requirements that earn entitlement to full pension benefits. Many countries have raised the bar above 65 years of age to 67 and higher. Others, such as Norway and Iceland, were already on 67, and a few – such as Estonia, Turkey and Hungary – will not exceed 65 years of age.

Slovenia enacted a reform in January 2013 that gradually increased women's statutory retirement age to 65 by 2016, when it will be the same as men's. Likewise, legislation in Poland in June 2012 increased the age to 67 for both sexes, albeit on different timelines: retirement at 67 will be effective for men in 2020, but only by 2040 for women. Australian women's Age Pension age rose to 65 in July 2013 and will again rise – to 67 – for both men and women by 2023. In late 2011, Italy also introduced a reform that gradually increased the age at which both sexes start drawing a pension to age 67 by 2021 – a significant hike for women in the private sector who, until 2010, retired at 60. Similarly, in Greece women will stop working at the same age as men – 65 – as of December 2013. The retirement age will then gradually rise to 67 for men and women alike over the next decade.

These examples reveal a clear trend across countries towards the same retirement age for men and women. Only in Israel and Switzerland are projected retirement ages still different. In addition, some OECD countries – Denmark, Greece, Hungary, Italy, Korea and Turkey – have also opted to link future increases in pension ages to changes in life expectancy, meaning that retirement ages in both Denmark and Italy, for example, will go well beyond age 67 in the future. However, automatic adjustment is scheduled to run only from 2020 at the earliest. In the Czech Republic there will be a flat increase of two months per year in the retirement age from 2044, by which time the retirement age will already have reached age 67.

In France, pensions are generally determined by age and the number of years during which a worker contributes. Workers may retire with no penalty from the age of 62 at the earliest and should have paid in to a pension scheme for at least 42 years – a minimum requirement that will increase in the future. The age at which workers can retire – irrespective of the duration of their contribution period – will rise to 67 by 2022.

Some countries have used financial incentives to encourage people to continue working. Australia and Ireland have offered bonuses to older workers, while France and Spain award pension increments to workers who defer their pension take-up. The Swedish government increased its Earned Income Tax Credit (EITC) in two steps in 2009 and 2010. The EITC is designed to stimulate employment and increase incentive to work and is higher for workers above 65. The employer's social security contribution is also lower for workers over 66. However, a larger number of OECD countries have introduced benefit penalties for retirement before the statutory or minimum age – Denmark, Italy, Poland and Portugal are some examples. Poland and Portugal have abolished and suspended, respectively, their early retirement schemes, while Italy replaced its arrangement by a less generous one, tying eligibility criteria to specific age and contribution requirements in response to projected rises in life expectancy.

Other types of reform that encourage late retirement are, for example, the removal of upper age limits for private pension compulsory contributions in Australia. Luxembourg, by contrast, has lowered its rates of increase in pension savings. The effect of the measure is that, if workers are to enjoy pensions at pre-reform levels, they will need to contribute for an extra three years or accept an average pension entitlement in 2050 that will be approximately 12% less than the present one.

Some countries have directly addressed the labour market to lengthen working lives. They have taken measures to ensure older workers retain their employment status and/or that they are not discriminated against on the job market. The United Kingdom, for example, has abolished the default retirement age (DRA) in order to afford workers greater opportunities for, and guarantees of, longer working lives (the OECD series on *Ageing and Employment Policies* offers more detailed analysis of the issue of older workers, building on the work from (OECD, 2006).

Administrative efficiency

The high costs of administering private pension plans that are passed on to members have been a policy concern for many OECD countries in recent years – especially where systems are mandatory or quasi-mandatory. However, administrative efficiency is also a policy priority in voluntary plans. High fees discourage workers from joining voluntary plans and make mandatory ones very costly. In fact, cost inefficiencies are a threat to the sustainability and suitability of plans themselves. Estimates suggest, for example, that the fees a worker is charged for belonging to a private pension plan can account for up to 20% or 40% of his or her contribution.[2]

Several countries – Australia, Chile, Japan and Sweden – have made policy reforms to render national pension schemes more cost efficient. Australia introduced a simple, low-cost new scheme – MySuper – in July 2013 with the aim of providing a default superannuation product with a standard set of features for comparability. Similarly, the Chilean government has been fostering competition among plan managers to courage the emergence of affordable, cost-efficient schemes. In Sweden a new low-cost fund, AP7, has

been competing with expensive investment options since 2010. In the same vein, Japan set up a new authority in 2010 to run public schemes at a lower cost, while centralised private pension management is a policy objective in Mexico and the United Kingdom.

Denmark, Greece, Italy and Sweden have merged the different authorities in charge of managing and paying social security benefits. In Greece, for example, the number of plans had dropped from 133 to just three by the end of 2010. The Greek government has also unified all workers' benefit contributions in a single payment to simplify matters and prevent evasion. Greece (again) and Korea have set up information systems for managing social security records in order to keep their pension systems accessible and efficient. Finally, Estonia recently enforced caps on the fees passed on to contributors, while the Slovak Republic has tied fees to pension funds' returns on investment rather than to their asset value.

Diversification and security

Policies to diversify and secure savings have taken four main forms:

1. Voluntary pension plans to improve investment options for workers and increase competition among funds. Canada, the Czech and Slovak Republics, Poland and the United Kingdom have introduced such schemes.
2. Regulations that allow individuals greater choice over the way their retirement savings are invested in private plans. Canada, Estonia, Hungary, Israel, Mexico and Poland, for example, have adopted this policy, supported by measures to move people automatically into less risky investments as they get closer to retirement, a policy recommended in earlier OECD analysis (OECD, 2009).
3. The relaxing of restrictions on investment options to foster greater diversification of pension funds' portfolios. Chile, Finland, Switzerland and Turkey have followed this path, with Chile and the Slovak Republic allowing pension funds to take larger shares in foreign investments in order to hedge the risk of national default.
4. Action to improve pension funds' solvency rates. Canada, Chile, Estonia and Ireland have introduced stricter rules on investment in risky assets in order to protect pension plans' members more effectively. In Canada and Ireland, state direct intervention has helped financially insolvent funds to recoup losses in their asset values caused by the financial crisis. Finally, Finland and the Netherlands temporarily relaxed solvency rules to allow funds a longer time to recover.

Other reforms

The "other reforms" category covers a mixed bag of policy measures. Although their objectives differ from those typical of pension systems, they nonetheless affect pension parameters.

Helping people to ride the financial crisis has been a priority in many OECD countries and policy packages implemented to that effect have often involved pension systems. For example, Iceland has allowed early access to pension savings so that people hit hard by the economic downturn have some financial support. The Australian government issued new benefit packages designed to assist people in meeting such needs as home care and the payment of utility bills. Public contribution to the New Zealand Superannuation Fund was discontinued in 2009. The measure has accelerated the gradual run down of this fund which was originally scheduled from 2021 onward.

The purpose of all these measures has been to induce people to spend money to support domestic demand and thus speed up economic recovery. In many cases, they have also been part of action plans to prevent low earners and pensioners slipping below the poverty line.

Some countries have also retreated from earlier commitments to pre-finance future pension liabilities through reserve funds. Ireland, for example, has used part of its public pension reserves to recapitalise the country's banking sector teetering on the brink of financial default. The country has suspended any further contributions to the National Pension Reserve Fund in response to its large budget deficit. Similarly, the French government began to draw on its national pension reserve (*Fonds de réserve pour les retraites*) much earlier than originally envisaged – in 2011 rather than in 2020. Other countries, like Australia and Chile, however, have maintained their commitment to pre-funding, although it should be said that they have not been as badly affected by the economic crisis as Europe.

Distributional impact of pension reforms

The most widely discussed component of a pension system is the age at which workers can retire. It is also the easiest to change. Most OECD countries have done precisely that. Action may have involved planning comprehensively for the future either through legislation or by tying the retirement age to life expectancy. Alternatively, it may have entailed raising the age threshold by a set amount every year, as in the Czech Republic which is to increase its retirement age by two months annually from 2044. Some countries simply pass legislation to adjust women's retirement age upwards in line with men's or, like the United Kingdom, to align increases in both.

Historically, pensions were introduced at a time when life expectancy was just above the statutory retirement age. As people have come to live longer, however, they have also started to retire earlier across the OECD: men stopped working at 64.3 years old in 1949 and 62.4 in 1999. Women retired even earlier at 62.9 years in 1949 and 61.1 in 1999 (OECD, 2011). Not until the middle of this century will the average retirement age exceed 65 years old, with long-term forecasts indicating that in most OECD countries it will be 67 or higher (see Table 3.7 on normal, early and late retirement).

The age of retirement is only one component of a pension system and, although possibly the most politically sensitive, it is only a part of any reform package. The first section of this chapter outlined the reforms that the 34 OECD countries have actually enacted and implemented. This section concentrates on the results of modelled reform.

The first part of this section details the impact of reforms on gross replacement rates and gross pension wealth over the last 20 years. A more theoretical approach, examining the impact of reforms while maintaining a constant retirement age across the period under scrutiny is then examined. Otherwise, results of system reform simulation would be distorted by longer working lives and shorter retirement, as the modeling still assumes that workers enter the labour market at the same age. Finally some conclusions and policy implications that emerge from the chapter as a whole are highlighted.

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013**

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Australia	Abolition of age limit (70 years) on compulsory contributions to private pension schemes (2013).	Mandatory DC contributions will increase from 9% to 12% between 2013 and 2020 (2013 reform).[1] Increase in targeted benefits (Age Pension) of 12% for single pensioners and 3% for couples from September 2009. The increase in the single person's rate is 66.3% of a couple's. New indexation arrangements for the base pension (since March 2010). The benchmark for single pensioners increased from 25% to 27.7% of Male Total Average Weekly Earnings (41.76% for retired couples. Changes to the income test for earnings-related benefits (September 2009).	Increased superannuation taxes on contributions for high earners and raised threshold for tax free contributions by older workers. Effective from 2013. Private pension contribution rate increased gradually from 9% of basic wages to 12% in 2013-20 (2013 reform).[1] Decrease of 50% in both the government maximum entitlement and contribution to private pension schemes of low-earners employees (2013).	Gradual increase in pension age for both men and women born after 1952 from age 65 to 67, starting from 2017 until 2023. Abolition of age limit (70 years) for private pension compulsory contribution (2013). From July 2013, retirement age for women born between 1 January 1949 and 30 June 1952 has increased to 65 years. New, more generous work bonus to Age Pension recipients introduced in July 2011 that replaces the (now closed) Pension Bonus Scheme. Phase-out of mature age workers tax offset – from 1 July 2012, this offset is only available to people born before 1 July 1957.	New clearing house for firms with < 20 workers from July 2010; measures to cut charges for DC pensions by 40% (December 2010). New "MySuper" – simple, cost-effective DC product, which commenced in July 2013 and will cover new default contributions as of 1 January 2014. The minimum obligation required by employers is set to increase to 12% gradually from 2013 to 2020.[1] New "SuperStream" reform package to improve management of Superannuation schemes and consolidation of multiple accounts from 2011.		Tax bonus of up to AUD 900 for eligible taxpayers in 2009, as part of Nation Building Economic Stimulus Plan. Introduction of a new Pension Supplement, which combines the GST Supplement, Pharmaceutical Allowance, Utilities Allowance and Internet rate of Telephone Allowance and of a Senior Supplement. Enhancements to Advance Payment for pensioners from 1 July 2010 with an increase in the amount of pension that can be advanced and multiple advances made each year. Carer Supplement for Carer Payment and Carer Allowance recipients and an increase for Carer Allowance recipients.
Austria	Extension of state payment of pension contributions for family carers to lower-level long-term care benefits (from January 2009). Two new types of benefits from DC plans created with a view to increasing pension options to so as to supplement the public pension system (2012).	One-off lump-sum payments to lower-income pensioners (2010).	Only monthly pensions of up to EUR 2 000 were fully indexed in 2011.				

1. Prior to the recent federal election, the government – when in opposition – announced that it will keep the rate of mandatory DC contributions unchanged at 9.25% until 30 June 2016 and then gradually increase the rate to 12% by 2021-22).

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Belgium				Legal pension age for women increased to 65 in January 2009. Since January 2013, age limit for early (old age) retirement benefit is 60.5 (instead of 60) + 38 years of service. These requirements will increase to 62 + 40 years in 2016. Discouragement of employer's use of early retirement schemes by increasing the contribution rate for participating employers (effective from April 2010). The measure aims at preventing employers relying too early or too much on this system to dismiss older workers.			
Canada	Introduction of a new voluntary retirement savings plan (called Pooled Registered Pension Plan) that is expected to increase coverage in the federal jurisdiction (2012), in Alberta (2013) and in Saskatchewan (2013). Proposal (2013) to auto-enroll (with possibility to opt-out) all employees of employer with five employees or more in Quebec into a new voluntary retirement savings plan (called the Voluntary Retirement Savings Plan) (2013).		Increase (2011) of the contribution rate for Quebec's public contribution second-tier programme (the Quebec Pension Plan) (funded equally by employers and employees) from 9.9% in 2011 to 10.8% in 2017. As of 2018, an automatic mechanism will be implemented to ensure stable plan funding.	In the public contributory programmes (Canada/Quebec Pension Plan), increase accrual rate from 0.5% per month to 0.7% for workers who delay retirement up to 5 years after the retirement age (65), to a maximum of 36%. For early pension take-up (age 60 to 65), pensions are reduced at a rate of 0.6% per month instead of 0.5%.	Starting in 2013, a proactive enrolment regime for Old Age Security benefits is being implemented, which reduces the burden on seniors to apply for benefits and reduces administrative costs.	Introduction of new voluntary retirement savings plans (the Pooled Registered Pension Plans), in industries and territories under federal jurisdiction (2012), as well as in Alberta (2013) and Saskatchewan (2013). Other provinces are expected to pass similar legislation.	The Quebec government takes over the pension plans of companies that go bankrupt from January 2009 to January 2012, and manage them for five years. The government will guarantee that pensions will be at least equal to the reduced pensions that would have been payable upon termination of the pension plans.

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Chile	Last phase of incorporating 60% of the poorest elderly people into the first-pillar solidarity pension system (SPS) began in July 2011. New rules for employer-sponsored voluntary private pension arrangements (APVC) to incentivise adhesion (2011). State to provide annual subsidy of 15% of total contributions to voluntary retirement savings plans (2011).	Healthcare contribution for low-income pensioners abolished and reduced for middle-to-high income retirees (2011). From 2010, new way of measuring poverty, which includes modified definition of family and per capita income and use of different sources to verify income.			New *Modelo* plan won contract to manage DC accounts for new entrants 2010-12: fees 24% lower than existing average; also won 2012-14 contracts with 30% lower fees. Disability and survivors' insurance contracted through bidding (effective from 2011).	Permitted foreign assets increased from 60% to 80% of portfolios of DC plans in 2010-11. Investment choice between five funds per manager made easier by renaming funds "A" to "E" in a more informative way: riskier to conservative. Members can choose their fund allocation beforehand for their remaining time in the workforce.	Women and men to be charged the same premium for the disability and survivorship insurance (SIS). Since men are expected to have higher risk rates, the difference in premiums will be deposited in women's DC accounts.
Czech Republic			New ceiling on pensionable earnings at 400% of average earnings (2010). Temporary change to indexation rules for old age, survivor and disability pensions between 2013 and 2015 that will lower pension increases.	Progressive increase to the retirement age by two months each year, with no prescribed endpoint; a bridging of the gap of the retirement age for men and women by 2041 (2011). Contribution requirement for full benefit increasing from 20 to 35 years by 2019 (effective from 2010).		Option to divert 3% of contributions to a DC plan conditional on individuals making an extra 2% contribution, subject to a reduction in public-pension benefits from January 2013. Creation of a second pillar of voluntary individual accounts, effective from 2013.	
Denmark				Voluntary early retirement scheme (VERP or efterlon) scaled back since January 2012: increase in eligibility age from 60 to 64 during 2014-23 reducing pay-out period from five to three years; during 2012, choice between early-retirement benefits and a tax-free lump sum at eligibility age of DKK 143 300.	Creation of a centralised institution (Payment Denmark – Udbetaling Danmark), to handle the management and payment of several social security benefits, thus shifting communal responsibilities and improving responsiveness (2012).		
Estonia		From 1 January 2013, a new pension supplement from public pillar is available to pensioners having cared for a child up to age 3.	Cut in employer contributions to DC accounts (0% contributions in 2010, 2% in 2011, returning to 4% in 2012). Cuts to allow an equivalent rise in contributions to the state's first pillar (2009).	Pension age to increase gradually from 63 to 65 for men, from 60.5 to 65 for women between 2017 and 2026 (2010).	Since 2011, pension fund managers can no longer charge a unit-issue fee. Since 2011 annual management fees are also subject to a ceiling set in relation to the amount of assets under management.	Stricter investment limits on the conservative (least risky) of three funds in DC plans; members able to switch funds three times (rather than once) a year from August 2011.	

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Finland	Coverage of earnings-related scheme extended to recipients of research grants (January 2009).	New minimum pension supplements earnings-related universal pension from March 2011. Indexation rule for minimum pensions temporarily changed in 2010 so as not to go below zero. Earnings-related pensions linked to increases in life expectancy (applies from 2010).	Combined employer/employee contributions to earnings-related plans (TyEL) due to rise annually by 0.4% between 2011 and 2014.	Possibility of putting pension on hold while working (max. two years) extended to earnings-related pensions. Currently, temporary legislation covering 2010-13 (January 2010 – current government proposal to extend this period until the end of 2016). To stimulate employment, employer contributions to universal public plan lowered by 0.8% in 2009 and eliminated in 2010.		Temporary relaxation of solvency rules until 2012 to let DB plans hold on to riskier, higher-return assets (first time January 2009, validity extended April 2010).	
France	Cash maternity benefits count as earnings for pension purposes (November 2010).	Pension age stays at 60 for hazardous, arduous jobs leading to 10%+ permanent disability. The age requirement is dropped if the 10%+ disabled person has stayed into the arduous job for at least 17 years or if the permanent work-related disability is 20%+. In the latter case, the tenure requirement does not apply (November 2010).	Civil servants' contribution rates gradually rise from 7.85 to 10.55% by 2020 (2010).	Minimum pension age (subject to contribution conditions) increasing from 60 to 62 by 2017 (2012 amendment); restored possibility for early workers to retire at 60 with full contributory periods (2012); age for full rate pension increasing from 65 to 67 (November 2011); increment for late retirement increasing to 5% from 2009; employers must have an action plan for employing workers aged 50+ by January 2010. Public-sector workers contribution years for full pension increased in 2012. The new requirement depends on the year of birth of the civil servant and currently varies between 40 and 41.5 years.			Withdrawals from *Fonds de réserve pour les retraites* began in 2011 instead of 2020 to subsidise economic recovery.
Germany		Pension increase of 2.41% in 2009 (rather than 1.76% under 2005 rules) but no increase in 2010 (-2.1%).	Legislated reduction in contribution rates suspended in 2009 to preserve sustainability.	Increase in normal pension age from 65 to 67 for workers born after 1964 between 2012 and 2029 (2007).			

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Greece		New means-tested, non-contributory pension of EUR 360 for older people (2010). New flat bonus of EUR 800 replaces seasonal bonuses for pensioners receiving under EUR 2 500 per month (2010). Establishment of a solidarity fund for the self-employed (June 2011). One-off, means-tested, tax-free benefit (solidarity benefit) for low-income pensioners offered in 2009 (but then abolished in 2010 as austerity measure). Assets introduced in addition to income test for solidarity benefits; Reduction in monthly pensions greater than EUR 1 000 by 5% to 15%, depending on income (2011). Pensions greater than EUR 1 400 per month will be taxed by 5-10% (from August 2010).	Increase in mandatory public pensions frozen 2011-15 – extension of two years over original measure (June 2011). Pensions indexed to CPI from 2014 instead of changes in civil servants' pensions (2010 reform). Seasonal bonuses for largest 10% of pensions stopped from 2011 and bonuses for lower pensioners reduced from 2013. Lump-sum retirement payments reduced by at least 10% for civil servants and public enterprise employees from 2011. Increase in contribution rates (details to be announced) for social security funds (June 2011). Average annual accrual rate reduced from 2 to 1.2% (2010), resulting in less generous earnings-related pensions.	Retirement age for women increased from 60 to 65 between 2011-13 (2010 reform). Increase in pension age from 65 to 67 for all to receive full pension (November 2012). Contribution period required for full pension from 37 to 40 years from 2015 and actuarial reduction of 6% per year of early retirement (July 2010 reform). Early retirement age increases from 53 to 60 from 2011. Pension age linked to life expectancy from 2020.	Merge of 13 pension plans into three (July 2010). Implementation of a single unified payroll and insurance contribution payment method intended to reduce evasion and to collect more social security contributions (June 2011). Mandatory possession of social security record (AMKA) from January 2009 for all workers.		
Hungary		Workers allowed to opt out of private pillar, but those who do not opt into the public pillar face penalties (i.e. no longer entitled to state pension from 1 January 2012). 13th month pension abolished from 1 July 2009 and replaced with bonus if GDP growth is 3.5% or above.	Pensions indexed to prices if GDP growth is 3% or less. In 2010-11, indexed to average wages and prices. Indexed to inflation from 2012. Taxation of pension benefits from 2013.	Pension age increasing gradually from 62 to 65 between 2012 and 2017. Proposal to reduce and eventually withdraw the early retirement system for law enforcement professionals and tighter conditions for other workers (2011).		From 2009, mandatory requirement for private pension funds to establish a voluntarily life-cycle portfolio. This system offers members the option to choose between three different portfolios (conventional, balanced and growth). However, nationalisation of pension funds makes this largely irrelevant.	Diversion of contributions from mandatory DC plans to public scheme from November 2010 to December 2011. Transformation of the state pension from a PAYG to a funded system (by January 2013). Closure of mandatory DC schemes in December 2011, transfer of assets (USD 14.6 billion) to government.

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Iceland							Members of voluntary pension plans were allowed to withdraw money from their accounts after the 2008 crisis (January 2009). Large DB pension funds (34% of total assets) establish Iceland Investment Fund (IIF) to stabilise domestic economy and help recovery from the crisis (December 2009).
Ireland	Automatic enrolment in DC plan of young employees above a certain income threshold. Applies from 2014 (March 2010).		Tax levy of 0.6% on assets in private pension funds every year (2011-14). Pension levy on public sector wages average 7.5% from March 2009. Tax relief on private-pension contributions for high earners reduced from 41% to 20% between 2012 and 2014. Employer contributions no longer tax deductible. Earnings ceiling on tax deductible contributions lowered from EUR 150 000 to EUR 115 000 from 2011. End of exemption from public pension contributions with earnings of EUR 18 300 or less. Lifetime limit on tax privileges reduced from EUR 5.4 million to EUR 2.3 million (December 2010). Limitation of tax-free lump-sum withdrawals from pension accounts to EUR 200 000 and taxation of withdrawals above this ceiling (December 2010). Exemption from contributions to public pension scheme for people earning less than EUR 352 per week abolished (December 2010). Lowering of employer contribution rate from 8.5% to 4.25% between July 2011 and 2013 (2011).	Pension age increasing from 65 to 66 from 2014; to 67 from 2021 and to 68 from 2028 (2011 amendments).		Pension insolvency payment scheme (PIPS) to help insolvent DB plans with insolvent sponsoring employers (2009). Re-establishing the funding standard of DB plans over a three-year period, starting June 2012, to protect benefits against volatility in the financial markets (2012). DB plans have to hold additional assets, from 2016, in a risk reserve intended to help absorb shocks and to bring stability (2012). Require trustees of DB plans to periodically submit an actuarial funding reserve certificate to the Pension Board (2012).	EUR 24 bn National Pension Reserve Fund, started in 2001, transferred to Ministry of Finance, largely used to recapitalise banks; contributions (1.5% of GDP) suspended (December 2010).

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Israel	Mandatory DC occupational plans from January 2009 with extended coverage from January 2010. Employee contribution rate up from 2.5% to 5% and employer rate from 2.5% to 10% from 2013.	Compensation of 50% of crisis-related losses in voluntary private plans to a ceiling of potential coverage of 15% of over-55s (January 2009).				Individuals who began saving after January 1995 can switch retirement savings between life insurance policies and provident funds without paying fines or taxes (2009).	
Italy		Public pension contribution rates increased for the self-employed in the NDC, which will involve higher benefits (2011).	More rapid transition to NDC system from 2012. Introduction in 2012 of a new early retirement scheme with tight access requirements in replacement of the seniority pension.	Pension age increase for women from age 60 to 66, to match that of men by 2018; pension age for both sexes due to increase in line with life expectancy after that time. Pension age for women in the public sector increased from 61 to 65 in 2012 (2011).	Merger of three agencies managing public pensions (INPDAD and EMPALS accounts transferred to INPS by 31 March 2012).		
Japan	For corporate pensions, employees can contribute directly to employer-provided DC plans without having to go through their employers (effective from January 2012). Extension of coverage of voluntary DC plans to workers aged 60 and above (from January 2012). Shorten the period needed to be eligible for the national pension from 25 to 10 years (2012, effective from October 2015). Extend employees' pension insurance to more part-time workers (2012, effective from October 2016). Extend the basic pension for surviving family to motherless families (2012, effective from April 2014).	Provide low-income, old age pensioners with welfare benefits (2012, effective from October 2015). Exempt mothers on maternity leave from payment of employees' pension insurance contribution (2012, effective from April 2014).	The exceptional level of the amount of pension (2.5%) will be abolished from October 2013 to April 2015 (2012 policy measure). Permanently fixing the national government's burden regarding the basic pension at 50% by increasing the consumption tax rate (2012, effective from April 2014).		New Japan Pension Service to run public schemes at lower cost from January 2010. Unify employees' pension systems: inclusion of public servants and private school employees in the employees' pension (2012, effective from October 2015).		Possibility for different categories of workers to make up gaps in contribution records of 2-10 years by paying between October 2012 and September 2015. Legislation passed for dissolution of employees' pension funds (EPFs). EPFs that fall short of the liability for contracted-out benefits must be dissolved within five years. The others can continue, but must pass an asset test every year. No new EPFs can be set up. It is encouraged that financially sound EPFs switch to other types of pension plans (June 2013, effective April 2014).

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Korea	Extend mandatory occupational/severance-pay plans to firms with 5 or less workers from December 2010 (about 1.5 m people).		Target replacement rate of public scheme to decrease from 49.5% to 40% between 2009 and 2028 (July 2007).		Set up of an integrated, electronic information system for collection of social security contributions and monitoring (2010).		
Luxembourg	Minimal monthly contribution for voluntary insurance drop from EUR 300 to EUR 100 (2012-13).		Pension adjustments reduced to 50% (2012). The combined contribution rate (employee, state and employer) will be gradually increased from 24% to 30% of covered wage by 2052 (2012).	Contribution requirement for a full pension increases from 40 to 43 years by 2052 (2013). Reduced rates of increase are adopted to encourage people to work longer. To obtain a pension at current levels, insured persons will have to work for approximately three years more (2012).			
Mexico		In March 2013, a new non-contributory pension established for Mexicans older than 65 years and with no other pension. Income tax exemption for pensioners with income up to 25 minimum wages.			Re-organisation of pension funds (SIEFOREs) within the system of individual accounts (2013).	New rules were implemented in 2011 that allowed retirement account holders more fund choices and promoted competition among management companies (2012).	
Netherlands						Recovery period for underfunded DB plans temporarily increased from three to five years (February 2009).	

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
New Zealand		Default contribution rate for KiwiSaver cut from 4% to 2% of wages in 2009, but increased to 3% from April 2013. From April 2013, minimum required contribution for employees and employers will rise from 2% to 3% of earnings (2011).	From July 2011, 50% reduction in tax credit for KiwiSaver members, up to a ceiling of NZD 521. Tax credits for employer contributing to KiwiSaver accounts eliminated in 2009. In April 2012, both employee and employer contributions no longer tax free.				Suspension of contributions to public reserve fund (New Zealand Superannuation Fund) in 2009, projected to resume payments in 2016-17 (three years earlier than originally planned). Retirement Commission recommended (December 2010): *i)* pension age to increase from 65 to 67 by 2023 with new means-tested benefit at age 65-66; *ii)* shift from wage indexation to 50:50 wages and prices; and *iii)* concern over cost of KiwiSaver tax incentives, about 40% of contributions so far. Treasury review recommends (October 2009): *i)* pension age to increase from 65 to 69; or i*i)* shift from wage to price indexation; or *iii)* means-testing basic pension.
Norway		New income-tested pension to replace the current flat-rate contributory public pension. New pension is guaranteed to be at least as high as the minimum pension payable under current law.	Notional accounts scheme from January 2011: fully for cohort 1963+ and partly for cohorts 1954-62; pensions linked to life expectancy, based on full-career earnings not 20 best years (2011). Indexation of pensions in payment to wages – 0.75% rather than wages.	Flexible retirement age 62-75 with adjustments of benefit to be effective age of retirement (2011). Individuals can combine work and pension receipt and no necessary to defer pension.			

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Poland	New third-pillar, voluntary savings vehicle (IKZE) introduced in 2012, to complement current voluntary retirement accounts (IKEs).		From May 2011, a portion of employee contributions from second-pillar individual accounts, managed by open pension funds, were diverted to newly created first-pillar subaccounts, managed by Poland's social insurance institution (ZUS). As a result, the contribution rate for DC accounts was lowered from 7.3% to 2.3%; but will gradually increase to 3.5% between 2013 and 2017. The residual 5% (declining to 3.8%) goes to the new subaccounts, indexed according to the average of the previous five years' nominal GDP growth. The diversion has been considered necessary to lower Poland's budgetary deficit.	Retirement ages of 60 (women) and 65 (men) gradually increase to 67 for both from 2013 until 2020 (men) and 2040 (women). Early retirement (at 62 for women and 65 for men) possible with pension reduced by 50% (2012). Several early retirement schemes were abolished at beginning of 2009.		Fewer investment restrictions on DC accounts, including permitted equity share rise from 40% to 62% from 2020 (2011).	
Portugal	Workers in banking sector recruited after March 2009 automatically covered by the public pension system.	Eliminating the 13th and 14th month payments to pensioners with incomes of more than EUR 1 100 per month. Those with over EUR 100 000 in bank accounts not eligible for income support allowance (2013); other tighter conditions to be introduced for renewal of benefits.	Public pensions frozen in 2011. Increase in contribution rate from 11% to 18% for private sector but employer contribution will be reduced in exchange (2013). The aim is to lower labour cost. Introduction of a special contribution levy on pensions of more than EUR 1 500 per month (2010-12).	Lower social security contribution rate for workers aged 65+, as a means to encourage extension of working life (September 2009). In 2012, suspension of early retirement for employees covered by public scheme until 2014.		New rules for the Social Security Reserve Fund (FEFSS) that ensures liabilities are appropriately hedged and some investment flexibility (2009).	

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Slovak Republic			Until June 2009, workers could switch contribution back from DC accounts to public scheme. DC scheme made optional for new entrants in employment but compulsory again from April 2012.		Cut fees as a percentage of assets and link them to investment returns from July 2009.	Introduction of three funds types – conservative, mixed and growth – supplemented by a new equity-index fund from April 2012. Principal guarantee on investment performance introduced, but will be restricted to the least risky (bond) fund from April 2012. Reduction in ceiling on foreign mutual fund investment from 50% to 25% in 2009.	
Slovenia			Pensions frozen in 2011 (and 2012 if inflation less than 2%) (September 2010).	Proposal to increase normal pension age from 63 to 65 for men, and 61 to 63 for women between 2021 and 2024; and eligibility for early retirement on full pension to increase from 40 to 43 years for men and 37.25 to 41 years for women was rejected by referendum in June 2011.			

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Spain		Increase in survivors' benefits from January 2012 for retirees and the over 65s with no public pension entitlement of their own from 52% to 60% of deceased's pensionable earnings (subject to income limits).	Adjustment of relevant parameters of the pension system to change in life expectancy every five years from 2019 instead of 2027 [2011 reform; the anticipation of the linking moment is contained in a reform proposal currently under discussion (September 2013)].	Normal pension age to increase from 65 to 67 between 2013 and 2027 but full benefit available at age 65 with 38.5 years of contributions (2011 reform, effective from 2013); sustainability adjustment to be anticipated to 2019 instead of 2027 (reform proposal of September 2013); early pension age increasing from 61 to 63 (but 61 in times of economic crisis); contributions for full benefit increasing from 35 to 37 years; contribution for early retirement increasing from 30 to 33 years. Amendment in April 2011 allows partial retirement: workers close to retirement age work part time and receive a proportionally reduced pension. However, social security contributions must be paid based on a full-time position. Incentives for work after retirement age: pension increase of 2-4% for each year of deferred pension (2011 reform).			

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

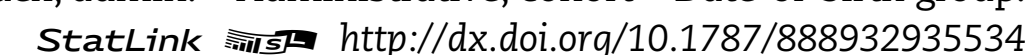
	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
Sweden		Enhanced basic deduction for people over 65 years of age introduced in 2009 and increased in 2010 and 2011.	Change to the balancing mechanism underlying the NDC scheme: from 2009, calculation of balance based on average value of the buffer fund at the end of the last three years rather than the last year. This implies cuts in the pension of 3% in 2010 instead of 4.5%.	Earned Income Tax Credit enhanced in 2009 and 2010, as part of the 2007 reform to encourage labour supply among workers. The EITC is higher for workers over 65. Simplification of the formula of the EITC for older workers from 2009. In 2011, maximum credit for under 65s of SEK 21 249, compared with SEK 30 000 for over 65s. Employee's social security contributions are lower for over 65s.	Swedish Pension Agency took over work of two separate agencies managing national pensions in January 2010. New fund managed by AP7 available from 2010, representing low-cost government alternatives to private-sector investment options.	Review of investment rules and governance of buffer funds in 2012.	
Switzerland			Minimum rate of return on mandatory private pensions cut from 2.75% to 2% in 2009 and to 1.5% from 2012. In 2012, maximum contribution for insured persons who are not gainfully employed increased to CHF 19 350 (50 times the minimum contribution).			Ceilings on real-estate investments and mortgage loans reduced (2009).	
Turkey				Pension age to increase from 60 to 65 for men and from 58 to 65 for women by 2048 (2006).		Use of derivatives by pension funds for investment purposes permitted for the first time in 2010. Government tax deduction on wage to private pensions was abolished, with the aim of encouraging domestic savings (2012).	From January 2013, the government matches 25% of individual contributions up to a gross monthly salary of TRY 978. Participants will have access to government contributions through a gradual vesting system – 15% after the first three years, 35% after six years, 60% after ten years and 100% at retirement at the age of 56. Tax levied on exit is applied to net returns as opposed to accumulated value as previously.

Table 1.2. **Details of pension reforms enacted or implemented between January 2009 and September 2013** *(cont.)*

By country and prime objective

	Coverage	Adequacy	Financial and fiscal sustainability	Work incentives	Administrative efficiency	Diversification and security	Other
United Kingdom	Large employers (120 000 plus employees) must automatically enroll workers in company scheme or state-run National Employment Savings Trust (NEST) from October 2012; medium-sized employers (50 plus) from June 2013, and small employers (fewer than 50) from May 2015. Contributions will be increased from total of 2% of earnings in 2012 to 5% in 2016 and 8% in 2017.	One-off payment of GBP 60 to pensioners (January 2009). Increase basic State Pension by higher of CPI, earnings growth or 2.5% from April 2011.	Contribution rates increase of 1% to 2% for both employer and employee in 2012-16. A 1% contribution-related tax credit introduced. In October 2017, the employer will pay 3% and the employee will pay 4% (Pensions Act 2011).	Equalise pension ages at 65 by 2018. Bring forward pension age to 66 by 2020 and increase from 66 to 67 by 2026 (October 2010 and amendments in January 2011 and 2012 that accelerated the pace of reform). Removal of the default retirement age (DRA) of 65 to provide workers greater opportunities to remain in the labour market afterwards. From October 2011, employers cannot compel employees to retire using DRA.	New NEST scheme planned in 2010 and implemented in 2012. It aims at reducing investment – management charges significantly, compared to current DC plans.	New NEST scheme planned in 2010 and implemented in 2012.	In January 2013, the Department for Work and Pensions published a draft bill introducing a flat-rate single-tier pension (STP) to replace the existing multi-tier State Pension system. The STP will be implemented in April 2016. The reform is expected to particularly benefit people who were expecting a low amount of Addition Pension due to their work history. It will represent a significant simplification of the state system and be a clear foundation for retirement saving. The government has also legislated to accelerate increase in State Pension age and introduced a regular review process to set SPa based on the principle that a fixed proportion of adult life should be spent in retirement. Increase contribution rates of public sector workers and amend the DB plan for Members of the Parliament (2010).
United States	Payroll tax rates for OASDI cut during 2011 and 2012 as a stimulus measure.	One-off payment of USD 250 to all public pension recipients (May 2009). Automatic adjustment of pensions to inflation (COLA) suspended in 2010 to avoid lowering benefits. However, benefit increase was frozen in 2011.	In December 2011, "Bowles-Simpson" plan for improving solvency of the Social Security system: increase in the Social Security payroll tax and reductions in benefits, especially for upper-income workers while raising them for low earners. The plan has been strongly opposed.				

Note: DB = Defined benefit; DC = Defined contribution; NDC = Notional account; GDP = Gross domestic product; CPI = Consumer price index; admin. = Administrative; cohort = Date-of-birth group.


StatLink http://dx.doi.org/10.1787/888932935534

Impact of pension reform on replacement rates

The gross replacement rate – the ratio between gross pension entitlement upon retirement and gross pre-retirement earnings – is the most widely used indicator of future pension entitlements. Any change in its value reflects the extent to which a reform will impact on retirees' future initial pensions. The impact will not necessarily be the same across all earnings levels, which is one reason why the distributional impact of reform needs to be evaluated. The effect on low earners' pension entitlements requires special attention as it determines poverty rates in years to come.

The findings in this chapter apply to people who have worked a "full career", defined as working each year from the age of 20 to a country's standard retirement age. Previous OECD analysis of reform (see OECD, 2007) used proportions of average earnings to calculate replacement rates. Whilst such an approach is sufficient for analysing reforms, it does not supply enough detail about the lowest earners. Accordingly, this section considers the findings yielded by a calculation method that uses earnings distribution data rather than a simple multiple of the average wage. The earnings distribution data in question are taken from 2008. They have been reweighted using average earnings for 2012 in order to be consistent with the data in the rest of this edition of *Pensions at a Glance*. The assumption is that individuals stay at the same point in the earnings distribution throughout their careers. Calculation is forward looking: it presumes that a full career is spent working to the long-term rules envisaged in the pension system at each stage of the reform process.

Earlier OECD analysis of reforms (OECD, 2007, 2009) concentrated on comparing pension systems in place "currently" (at the time of writing) with those of the early 1990s. This approach, however, clearly misses out everything that has occurred in between. To fill that gap and fully assess the impact of each reform, this chapter considers the modeled results of reforms in the intervening years. For a number of countries no such data are available, so the only results examined are those for the early 1990s and currently. Within this group, a further distinction can be made between countries where reform had a uniform impact across earnings levels and those where it was more redistributive.

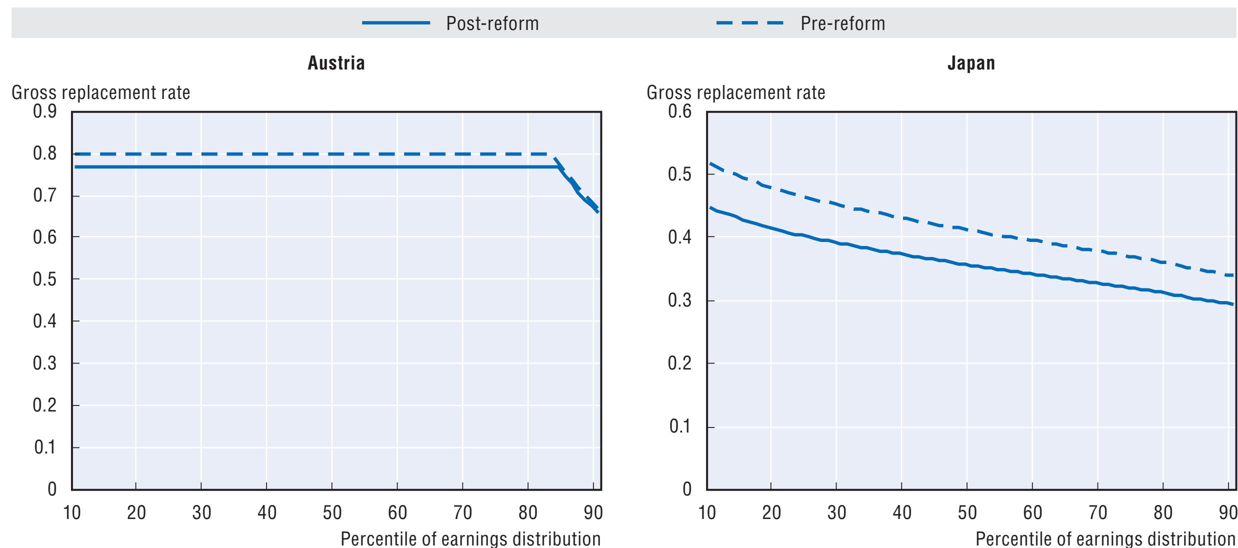
Countries with only one major reform in the last 20 years

The vertical axis in the graphs is the gross replacement rate at the time of retirement, while the horizontal axis indicates the percentile of the income distribution. The "pre-reform" curve applies to the pension system in place in the early 1990s, while "post-reform" denotes the results of the latest – or "current" – scheme introduced up to 20 years later.

Figure 1.1 shows how pension system reform in Austria and Japan has had a uniform impact on replacement rates. Both countries made a reduction to accrual rates, with all individuals being treated the same irrespective of their earnings. Austria's highest earners – who exceed the contribution ceiling – are a slight exception.

The uniform effect across earnings levels is unusual as in most countries recent pension reforms have included special provisions to protect lower earners, with the largest cuts in replacement rates applying to those at the top of the earnings distribution. Figure 1.2 shows how the second group of countries – Finland, Greece, Hungary, Italy, Mexico and Portugal – all display lower reductions for low earners than for high ones, albeit on a widely varying scale.

Figure 1.1. **The uniform impact of pension reform on replacement rates in Austria and Japan, 2009-13**



Source: OECD pension models.

Finland, Italy and, to a lesser extent, Hungary and Portugal show virtually uniform falls in replacement rates, much like Austria and Japan. In Finland and Portugal, however, drops are smaller for the lowest earners – i.e. those earning below the 15th percentile in Finland and around the 25th in Portugal. So, whilst all workers' pension entitlements are affected, the safety-net benefits in both countries protect the most vulnerable. Of all the countries in the second group, Italy shows the lowest reduction for higher earners because of its ceiling on contributions.

In Hungary both the pre-reform and post-reform models refer to a defined benefit earnings-related system. However, accrual rates and retirement ages have changed as a result of the country's 2009 pension reform, which also removed the 13th annual payment. Although changes in the accrual rate have had little impact on full-career workers, the post-reform model produces a higher replacement rate as men's retirement age has been increased by five years.

Both Greece and Mexico reduce future pension entitlement increases as earnings rise, with Mexico showing no reduction for earners below the 30th percentile, as they are entitled to the minimum pension. Greece's pre-reform replacement rate was at a constant level of just under 100% across all earnings levels until reform in 2010 cut accrual rates and the 2012 reform increased the retirement age. The replacement rate now falls as earnings mount – to 80% for the lowest earners and 45% for the highest earners at the 90th percentile.

Greece and Mexico have both cut low earners' replacement rates by less than high earners". Nevertheless, reductions continue to rise across the income distribution in both countries – because of Greece's cap on the size of pensions and Mexico's introduction of a defined-contribution scheme.

Figure 1.2. **Reform offers lower earners relatively better protection**

Post-reform
Pre-reform

Finland

Gross replacement rate
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Greece

Gross replacement rate
1.2
1.0
0.8
0.6
0.4
0.2
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Hungary

Gross replacement rate
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Italy

Gross replacement rate
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

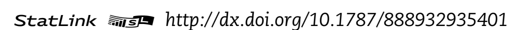
Mexico

Gross replacement rate
1.2
1.0
0.8
0.6
0.4
0.2
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Portugal

Gross replacement rate
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Note: Hungary introduced a defined-contribution system in 1998. It closed it in 2012 as a result of the 2009 pension reform. It is not therefore included in the analysis.
Source: OECD pension models.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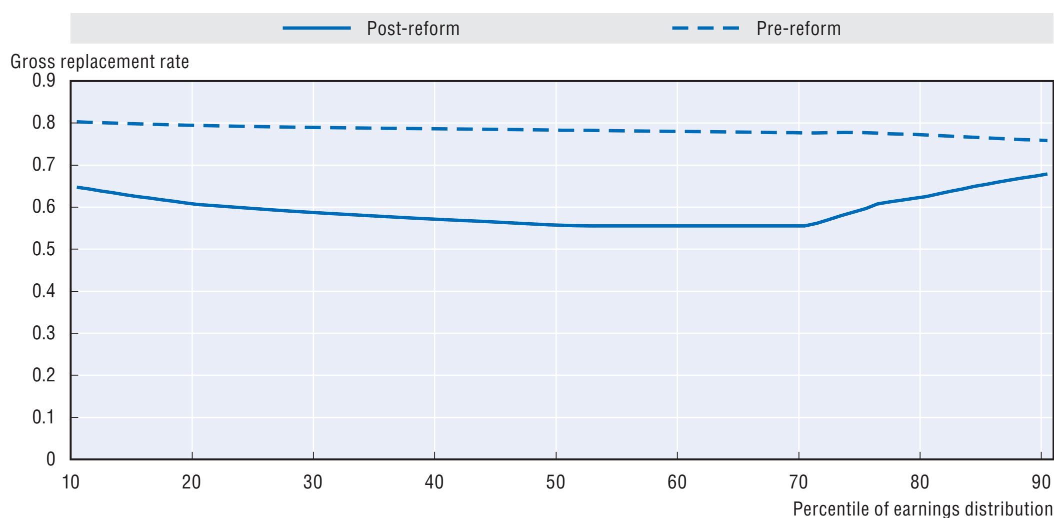
As Figure 1.3 shows, an exception to protection for low earners' replacement rates is Sweden. Reform there affects the highest earners least of all, while low earners fare reasonably better than average earners. Earners who lie between the 40th and 70th percentiles bear the brunt of reform, with their gross replacement rate slashed by over 20 percentage points. By contrast, the replacement rates of earners above the 80th percentile have fallen by just under 10 percentage points.

Figure 1.3. **Pension reform in Sweden spares highest earners' replacement rates**



Source: OECD pension models.

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Countries with several reforms in the last 20 years

All the countries covered so far have passed a single major reform in the last 20 years. The impact on earnings distributions has been uniform, although low earners have generally enjoyed some degree of protection. However, as the future impact of population ageing has become more apparent and pension systems come under growing pressure, a number of OECD countries have responded with several reforms. Six such countries are Norway, Poland, the Slovak Republic, Spain, Turkey and the United Kingdom. Again, all reforms are assumed to apply to an entire working career so that their impacts can be fully assessed.

The graphs use an additional curve, "recent", to denote reforms undertaken in the interim period between the early 1990s ("pre-reform") and the latest legislation ("post-reform"). "Recent" reforms were generally in place in 2008 and modelled in the last edition of *Pensions at a Glance* (OECD, 2011). Figure 1.4 shows the effect on replacement rates of reform from each of the three periods – "post-reform", "recent", and "pre-reform".

The post-reform final replacement rate is usually lower than the pre-reform scenario of the 1990s. However, it is not uncommon for "recent", or interim, reform to have led to a higher replacement rate, as in Norway and Spain across the entire earnings distribution, in Poland above the 35th percentile, and in Turkey over the 50th.

Findings for the pre-reform Slovak Republic are based on an earnings-related scheme, whilst the "recent" reform scenario includes the additional defined-contribution component introduced in 2005. The 2005 measure strips the system of its redistributional nature, as defined-contribution schemes create individual pension pots that are then

Figure 1.4. **Replacement rates after interim reforms**

Post-reform — Pre-reform — Recent

Norway

Gross replacement rate (0 to 0.7); Percentile of earnings distribution (10 to 90)

Poland

Gross replacement rate (0 to 0.8); Percentile of earnings distribution (10 to 90)

Slovak Republic

Gross replacement rate (0 to 0.8); Percentile of earnings distribution (10 to 90)

Spain

Gross replacement rate (0 to 0.9); Percentile of earnings distribution (10 to 90)

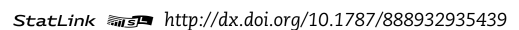
Turkey

Gross replacement rate (0 to 1.2); Percentile of earnings distribution (10 to 90)

United Kingdom

Gross replacement rate (0 to 0.7); Percentile of earnings distribution (10 to 90)

Source: OECD pension models.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converted to annuities upon retirement. Conversely, a defined benefit, earnings-related scheme pays out of a collective pot which, because it is based on final or average career salary, does not directly reward each contributor and proportionately benefits lower earners more. The Slovak Republic's pre-reform system led to a flat replacement rate across all earnings levels – in other words, a reduction in the rate for below-median earners and an increase for those above. With the considerable increase in retirement age that has been incorporated in the post-reform model, final replacement rates are higher than either the pre- or "recent" reform scenarios.

The same pattern is true for Poland. It has also introduced a two-stage reform that initially replaced its earnings-related scheme with a defined-contribution component and then secondly increased retirement age. Norway, for its part, also implemented a defined-contribution scheme that slightly tempered redistribution. However, as it has kept the earnings-related component, the impact is minimal. The other three countries in Figure 1.6 – Spain, Turkey and the United Kingdom – all have earnings-related components to their systems and so retain their redistributional approaches.

In the United Kingdom, those who earn under the 60th percentile have benefitted from a (slightly) higher replacement rate at each stage of reform. The pattern holds true of the pension system after the introduction of a minimum, targeted component, in 2003, and the increase in retirement age that is being implemented over the next 30 years. In contrast, earners above the 60th percentile have had virtually identical replacement rates at all reform stages, as there are ceilings on various pension components which lead to reductions in replacement rates for higher earners.

Impact on pension wealth

Gross pension wealth measures the total value of the discounted lifetime flow of retirement incomes. This measure takes into account a wider range of factors than replacement rates, which estimate only the annual pension that will be paid immediately upon retirement. The replacement rate is a single calculation for a particular year. It does not, for example, take indexation into account, which can significantly affect the benefit in payment. Thus, if the pension is index-linked to wages then the pensioner's status relative to the working population will be constant. If, however, it is indexed to prices – or a combination of prices and wages – his or her relative position is likely to decline in a context of positive wage growth, and the value of benefit several years after retirement will not hold the same relative value.

Gross pension wealth also takes account of changes in future life-expectancy estimates which have been calculated using the latest United Nations mortality data. The figures here are expressed as multiples of gross annual individual earnings.

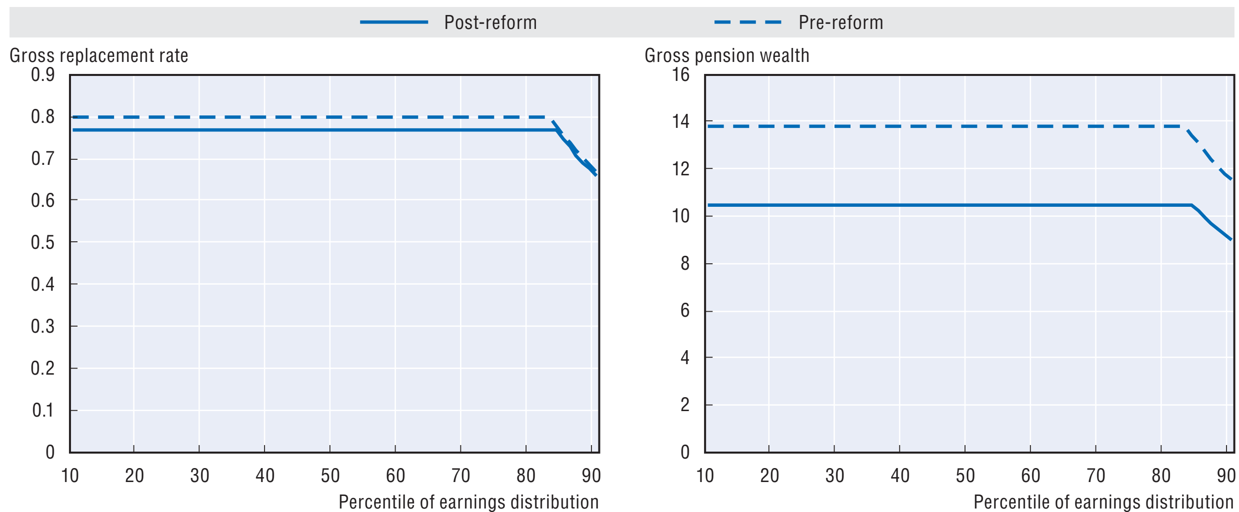
Pension wealth enables more accurate analysis of the impact of reforms, particularly those that increase the retirement age. By their very nature higher retirement ages should, in theory at least, lead to shorter periods of payment, although estimated increases in life expectancy and the pace of increase in retirement age determine, of course, to what extent. What is certain, however, is that the duration of contributions will lengthen, as modelling still assumes that individuals enter the labour market at the age of 20 and work until the formal retirement age.

As with the gross replacement rate, the countries analysed may be divided into different categories. In order to reflect the full impact of reform, graphs displaying results for gross replacement rates are shown adjacent to the new pension wealth figures. Countries can thus be grouped according to the relationship between the two indicators. Graphs for most of the countries considered display pension wealth curves that are similar to those of replacement rates. They are not therefore included below. Those countries are Austria, Finland, Greece, Italy, Japan, Mexico, Norway, Poland, Portugal, Spain, Sweden and the United Kingdom.

The only slight exception is the United Kingdom. Within its pension scheme there is a flat-rate basic component paid to all after a sufficient number of years of contribution, irrespective of previous earnings levels. As legislation has ushered in a pension age that is to rise from 65 to 68 years of age, the average duration of payment of the basic pension will be shortened and the associated pension-wealth component will therefore also be lower.

Although the impact on pension wealth may follow a pattern similar to the effect on both pre- and post-reform replacement rates, there are significant differences in levels. The Austrian case study, for example, offers an interesting comparison between the two graphs (Figure 1.5).

Figure 1.5. **Austria case study**



Source: OECD pension models.

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Figure 1.5 shows that the reduction in pension wealth may be much more substantial than in replacement rates. The post-reform gross replacement rate is 3.4 percentage points lower – at 76.6% compared to the pre-reform 80% – for most of the earnings distribution. However, the drop in the replacement rate in conjunction with a change in indexation has led to a more substantial decline in the pension wealth promise. Pre-reform pension wealth was 13.8, meaning that an individuals would, on average, receive a pension that was 13.8 times their last annual earnings. The post-reform pension wealth estimate, however, is only 10.5. It may be inferred that even a small drop in the replacement rate can have more significant long-term effects – confirmation that both replacement rates and pension wealth are needed to properly assess the impact of reforms on future pension entitlements.

The rest of the countries whose replacement rates were considered in Figure 1.4 – Hungary, the Slovak Republic and Turkey – reveal different patterns in which pension wealth results do not follow replacement rates. The reasons differ from country to country and need to be explained in certain detail.

For ease of reference and comparison the estimates of gross replacement rate have been replicated on the left-hand side of Figure 1.6 and the gross pension wealth results on the right. For Hungary, the two lines for pre- and post-reform are identical in shape. Their relative position has changed entirely, however, reflecting the increase in the age at which pensions may be drawn. The explanation is that, although the post-reform replacement rate will be higher, the rate of increase in the retirement age is greater than forecasted rises in life expectancy. Combining the high rate of the increase in the state pension age with the switch in indexation from wages to prices leads to the logical conclusion that there is a fall in pension wealth.

In the Slovak Republic the main change in pension wealth figures occurred when the earnings-related scheme moved from accrual to a point-value system in 2004 and a defined-contribution benefit was introduced in 2005. Moreover the latest reform added a life expectancy component to future retirement ages. The pace of these retirement age increases will lead to a slight fall in the highest earners' pension wealth, as there is a ceiling on contributions. Other components of the reform include adjustments to pension reduction and increasing coefficients in accordance with the pension's point value, which will lead to slightly higher pensions.

In Turkey the rules governing the retirement age make comparison with other OECD countries difficult, as it was possible for men to retire at 45 and women at 40 under the pre-reform system. Bearing that in mind, it is no surprise that the pension-wealth figures under the pre-reform scenario were the highest of any countries, bar Mexico. The increase in the retirement age obviously led to an increase in the replacement rate over the period between the pre-reform scheme and "recent" reforms for those not receiving minimum pensions. However, a direct consequence was also that pension wealth fell by about 40%. The latest reform to date reduced the accrual rate, thereby explaining the drops in both replacement rates and pension wealth between the "recent" reforms and post-reform pensions.

The results considered so far show what has happened to the pension system in each country. All changes to accrual rates have been included and direct contribution schemes modelled. Most important, all the legislation introducing changes in retirement ages has been implemented. The next section removes changes in retirement age to better gauge the impact of reform on pension systems.

What if pension ages had not increased?

As pointed out at the beginning of this section, any pension reform that includes an increase in the retirement age will clearly lead to an increase in the OECD pension modelling framework if everything else remains constant. However, a reform incorporates numerous components. Considering replacement rates alone can be misleading and make it difficult to assess reforms that do not relate to retirement age. For example, if reform slightly reduces the accrual rate in a defined-benefit scheme and raises the retirement age by five years, the overall replacement rate is likely to be higher. Yet, it should actually be lower if the replacement rate is cut.

Figure 1.6. **Comparison of gross replacement rate and gross pension wealth**

Post-reform — Pre-reform — Recent

Hungary

Gross replacement rate
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Gross pension wealth
14
12
10
8
6
4
2
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Slovak Republic

Gross replacement rate
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Gross pension wealth
16
14
12
10
8
6
4
2
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Turkey

Gross replacement rate
1.2
1.0
0.8
0.6
0.4
0.2
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Gross pension wealth
35
30
25
20
15
10
5
0
10 20 30 40 50 60 70 80 90
Percentile of earnings distribution

Source: OECD pension models.

StatLink http://dx.doi.org/10.1787/888932935477

In order to remove the impact of increases in retirement age three different scenarios need to be modelled. The first is the current statutory system with all scheduled ("post-reform") changes incorporated. The second is the same statutory system without any increase to the retirement age ("post-oldret"). The third scenario is the "pre-reform" scheme that was in place in the early 1990s before any of the "post-oldret" or "post-reform" measures were introduced. The impact of pension age increases may then be clearly distinguished from those of the other reform measures implemented.

The results of the three models for the countries of interest – namely Australia, the Czech Republic, France, Germany, the Slovak Republic and Turkey – are shown in Figure 1.7. Reforms in the first four countries did nothing but increase the retirement age (Age Pension age in the case of Australia), while in the Slovak Republic and Turkey the increase in the pension age still plays a major role, even though both countries have instituted other major pension system reforms.

The graphs on the left-hand side of Figure 1.7 show the gross replacement rate and those on the right-hand side pension wealth. The main conclusion to be drawn is that changes in the retirement age have a greater effect on replacement rates than on pension wealth. This is not particularly surprising as it is to be expected that the replacement rate from a long working career should be high, assuming that the age of labour market entry is constant and that individuals may work until the highest retirement age. Similarly, if the length of retirement is shortened, pension wealth will only increase if the statutory increase in retirement age is below forecasted increases in life expectancy.

Turkey shows the largest increase in replacement rates if post-reform changes are compared with the pre-reform status and the retirement age remained unchanged. Again, such results may be expected as the increase in Turkey's retirement age was 20 years, while the norm in the other countries under scrutiny is between five and seven years. It is worth noting, though, that there is no change in the replacement rates of earners under the 60th percentile from post-oldret to post-reform, as they would receive the minimum pension in both cases. Despite this large rise in replacement rates, the value of pension wealth is actually lower than it would have been had the retirement age remained constant – due of course to the reduced period of payment. If working lives are extended by 20 years, the duration of retirement will be shortened by close to this amount, even when the model incorporates life expectancy changes.

Rises in the Slovak Republic's replacement rate would have been similar to Turkey's if the retirement age had not increased. Interestingly, pension wealth is barely affected because the increase in pension age at seven years cancels out changes to the accrual rates. For all the other countries included in the analysis, replacement rates are always higher under current systems than they would have been if retirement ages had remained at their pre-reform levels. Pension wealth, however, falls in the fully reformed scenarios for Australia, the Czech Republic and Germany, while it climbs for France.

Figure 1.7. **Comparison of gross replacement rates and gross pension wealth with unchanged retirement age, 1990-2013**

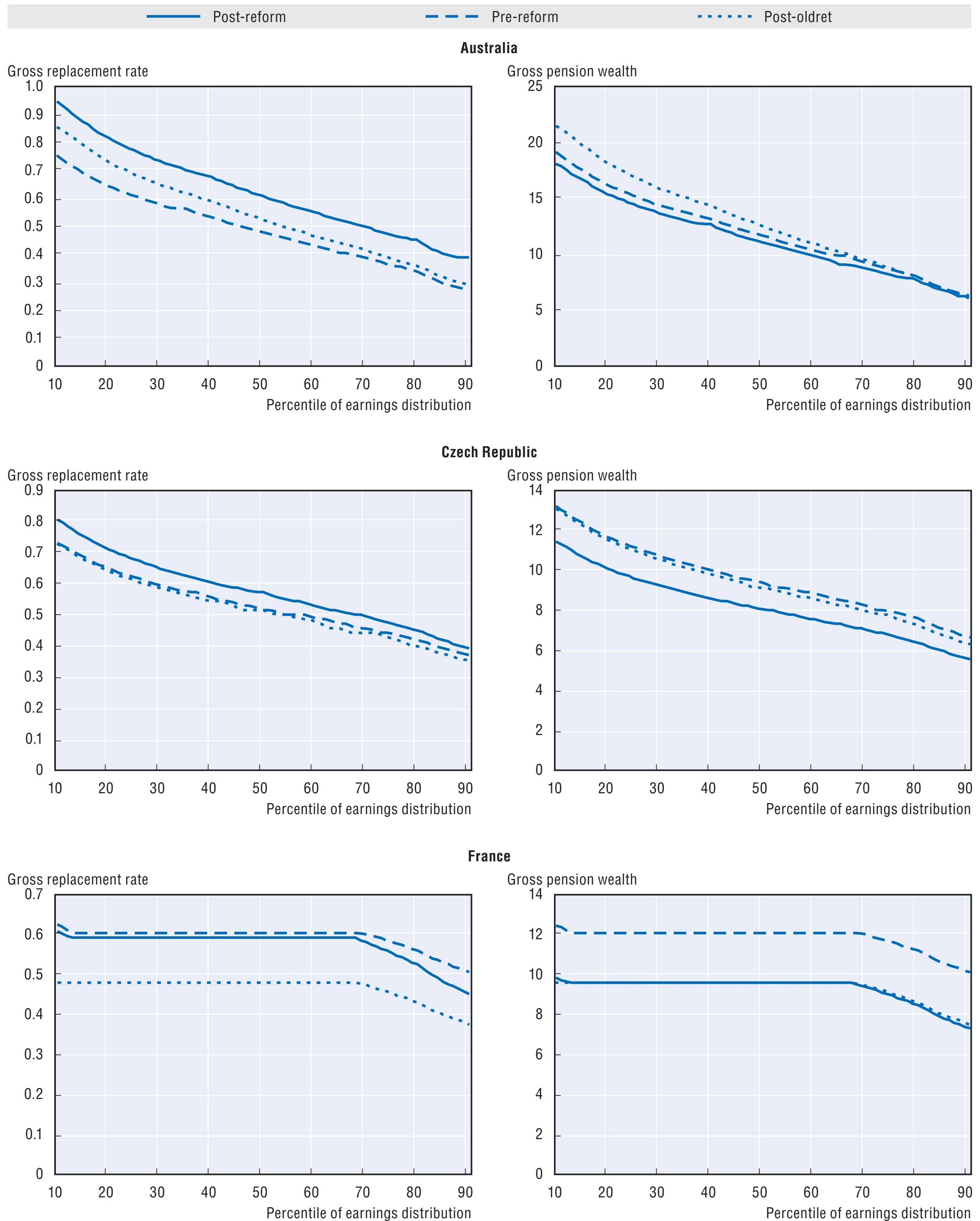


Figure 1.7. **Comparison of gross replacement rates and gross pension wealth with unchanged retirement age, 1990-2013** *(cont.)*

Post-reform | Pre-reform | Post-oldret

Germany

Gross replacement rate

Gross pension wealth

Percentile of earnings distribution

Slovak Republic

Gross replacement rate

Gross pension wealth

Percentile of earnings distribution

Turkey

Gross replacement rate

Gross pension wealth

Percentile of earnings distribution

Source: OECD pension models.

StatLink http://dx.doi.org/10.1787/888932935496

Conclusions and policy implications

This chapter documented and discussed pension reforms in OECD countries undertaken over the last five years. It also examined the impact of pension reforms over the last 20 years on future pension promises to individuals at different earnings levels.

Work longer, save more

Increasing the normal pension age has been the most common reform during the past five years. As a consequence, the majority of OECD countries will have a retirement age of at least 67 years by the middle of this century. A few countries are going beyond this age by linking increases of the pension age directly to the evolution of life expectancy.

Large structural reforms leading to a complete overhaul of the pension system have been rare in recent years. But several countries introduced or have decided on the future introduction of a defined-contribution pension scheme, for example the Czech Republic, Israel and the United Kingdom. At the same time, two countries reduced or closed their privately-managed funded defined-contribution schemes: Poland and Hungary respectively.

Poor currently protected but everyone will get less in future

While pensioners were largely protected in the initial phases of the financial and economic crisis and sometimes even benefited from discretionary increases in pensions as part of economic stimulus programmes, retirees are now also being affected by expenditure cuts in the context of fiscal consolidation. Pension benefits have not been increased since 2009 in Ireland, for example, but retirees were still relatively less affected by declines in income than the working-age population. In Portugal, pension benefit levels were frozen in 2011, and the 13th and 14th monthly payments were abolished for higher-paid pensioners. Future increases of pensions have also been reduced in the Czech Republic through a change in the way that pensions are indexed over time.

Workers who enter the labour market today will be promised lower pension benefits than previous generations due to the series of reforms OECD countries implemented over the last 20 years. Working longer may compensate for some of these reductions but in general every year that workers contribute toward their future pension is credited with lower benefits in defined-benefit schemes than before the reforms. In Korea, for example, the target replacement rate for pensions is falling from 50% to 40% for workers who have contributed during 40 years. In Austria, the pension entitlement accrual rate is being reduced from 2% per year of contributions to 1.78% over time, while in Belgium the number of years to reach the maximum accrual rate has been increased. Accruals at various earnings thresholds have also been reduced in the Czech Republic and the United Kingdom.

More workers need to be covered in emerging economies

For the non-OECD countries recent reforms have concentrated primarily on increasing the level of coverage, which is currently much lower than that of OECD countries. For example, China introduced a new rural pension in 2009 to provide social assistance to rural residents as they are not covered by the urban pension. This was extended nationally to include non-salaried urban residents from 2012, after regional trials in 2011. In May 2009 the Indian government permitted voluntary participation for all private-sector workers in the New Pension System as previously only state employees were covered. This scheme is currently being expanded to include the 300 million workers in the unorganised sector by

partially matching contributions and investing heavily in public awareness campaigns. Although South Africa has not had any specific reforms they have produced a number of consultation papers produced for parliament to try and increase coverage and provide higher levels of benefit.

For the non-OECD countries with more widespread coverage there have not been any major reforms in the last couple of years. But over the last ten years the situation has changed completely. In the Russian Federation, for example, an NDC pension was introduced in 2003 to supplement the flat-rate basic pension. In Argentina in 2008 the individual accounts scheme was closed and all workers and their account balances were transferred to the new single pillar pay-as-you-go system. In Brazil there have not been any changes to the public system but in May 2012 a new defined-contribution scheme was introduced for federal employees, but is not covered in detail here as this publication only covers private sector workers. The other two countries, Indonesia and Saudi Arabia have not made any changes to their pension systems even within this extended time period.

Pension promise will decrease

Future benefits are set to decline across all of the earnings distribution, but the patterns differ markedly between countries. In most cases, countries did aim to protect the lowest earners from benefit cuts. In Mexico, full protection was given to the poorest 30% of all workers who will be eligible for the minimum pension, provided that they have made the necessary contributions during their working lives. In Greece and Portugal, the reduction of pension benefits is considerably lower for those in the bottom quarter of the earnings distribution. Sweden is a particular case in this respect: lower earners were protected compared to average earners, but the reforms actually benefit the richest 20% of workers most while the largest reductions are borne by those between the 40th and 70th percentiles.

In all other countries apart from Sweden the highest earners will be most affected by the reforms. In Greece, for example, future pensions for the richest 10% of workers will be only half of what they would have been if no reforms had taken place. The same is true for Mexico, while Portugal will also see a reduction of about 40% of the pension for this group of highest earners.

In Austria, Finland, Italy and Japan the reduction in future pension entitlements is practically constant for all workers across the entire earnings distribution; only Finland has a slightly lower reduction for the very lowest earners. In Hungary, future replacement rates will increase after the latest reform; this, however, is primarily due to the increase of the retirement age rather than any major systemic changes. Both the pre-reform and the post-reform systems are based on defined benefit.

Early retirement access is being tightened

The analysis of reforms in this chapter focused on the impact on full-career workers. This means that the issue of early retirement has not been covered. But it should be noted that many countries have also tightened or discouraged access to early retirement schemes. In Belgium, employer contributions to early retirement benefits have been increased, while in Denmark access to the voluntary early retirement scheme has been scaled back since January 2012. In Canada, the reduction of the pension benefit for each year of early retirement has been increased from 6% to 7.2% while in Greece the early retirement age has gone from 53 to 60 years. Finally, in Portugal access to early retirement was suspended until at least 2014. But it is unlikely that all workers will be in a position, for health or other

reasons, to actually work fully up until the sometimes substantially higher retirement ages; countries will need to monitor this situation, ensure that working conditions are such that working longer is a possibility and provide targeted support both to keep workers with health problems or physically demanding occupations in the labour force and to provide benefits to those who cannot work. In some countries there is also a policy debate around the career length needed to reach full, unreduced benefits and whether it is fair to expect people who started to work at young ages in work until 67 or beyond.

Table 1.3. **Recent and post-reform pension reforms**

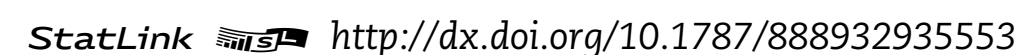
	Pension eligibility age	Adjusted retirement incentives	Change of years in benefit formula or qualifying conditions	Link to life expectancy and/or financial sustainability	Defined-contribution scheme	Other
Australia (post)	Age Pension for women rose from 60 to 65. Further increase in Age Pension for men and women from 65 to 67 in 2017-23.	New income test concession for public pension.				Higher withdrawal rate for income test in the public pension.
Austria (post)	Early retirement age increased by 1.5 years. Pension corridor between 62 and 65. Pension ages for women aligned with those of men.	Benefit reduction for early retirement introduced and set to increase. Access to early retirement restricted.	Best 15 to 40 years.	Introduction of sustainability factor under discussion.		Reduction in accrual rate. Less generous indexation for higher pensions.
Czech Republic (post)	Gradual increase in pension age to 65 by 2030. Pension age to be increased by two months every year after 2025. Models assume a retirement age of 69.	Changes in increments and reductions for early/late retirement.	Increase in contribution years required from 25 to 35.			
Finland (post)		Increased accrual rate for people of working age 63-67.	Ten last years to lifetime average.	Life-expectancy multiplier (from 2010).		Basic part of national pension income-tested. Higher valorisation of past earnings and lower indexation of pensions in payment.
France (post)	Increase in retirement age to 62 according to OECD models.	Changes in adjustment to benefits for early/late retirement in public and occupational pensions.	Minimum contribution period increased. Earnings measure in public scheme from best 10 to best 25 years.	Minimum contribution period to increase further with changes in life expectancy.		Targeted minimum income of 85% of minimum wage. Valorisation now effectively to prices in both plans.
Germany (post)		Reduction in benefits for retirement before 65.		Valorisation and indexation cut back as system dependency ratio worsens.	Voluntary DC pensions with tax privileges.	Phased abolition of favourable tax treatment of pension income.
Greece (post)	Pension age rising from 58 to 65.			Pension age linked to life expectancy from 2020.		

Table 1.3. **Recent and post-reform pension reforms** *(cont.)*

	Pension eligibility age	Adjusted retirement incentives	Change of years in benefit formula or qualifying conditions	Link to life expectancy and/or financial sustainability	Defined-contribution scheme	Other
Hungary (post)	Gradual increase in pension age from 55 for women and 60 for men to 62 for both. Pension age increases from 62 to 65 between 2012 and 2017.	Accrual rates linear rather than higher for earlier years.	Pension calculation based on gross rather than net earnings.	Through annuity calculation in DC scheme.	DC scheme closed in 2012.	Minimum pension to be abolished. Less generous Indexation of pensions in payment. Pensions subject to income tax.
Italy (post)	Pension age for men increased from 60 to 65 and for women from 55 to 60. Pension age for women to match that of men, and both will then increase to 67 by 2021.	Adjustment to early-retirement benefits through notional annuity calculation.	Qualification years for long service pension increased from 37 to 40 years.	Through notional annuity calculation.		From DB to notional accounts. Less generous indexation of higher pensions.
Japan (post)	Pension age increasing from 60 to 65.		Earnings used to calculate pension extended to include bonuses.	Benefits adjusted to reflect expected change in dependency ratio.		Accrual rate reduced.
Mexico (post)					Mandatory private DC scheme replaces public DB plan.	
Norway (recent)				Mandatory employer DC contributions.		
Norway (post)					Notional accounts scheme from January 2011.	
Poland (recent)	Withdrawal of early retirement for certain groups of workers.		From best consecutive 10 in final 20 years to lifetime average.	Through notional annuity calculation in public scheme and annuity calculation in DC.	DC scheme mandatory for new entrants and workers under 30.	Abolition of basic pension. From DB to notional accounts.
Poland (post)					Contribution rate for DC accounts reduced from 7.3% to 2.3% from 2011. Gradual increase to 3.5% from 2017. Residual 5% reduced to 3.8% goes to second NDC scheme.	
Portugal (post)	State pension age for women aligned with men's at 65.	Introduction of increments for late retirement and reductions for early retirement.	From best 10 out of last 15 years to lifetime average earnings.	Life-expectancy adjustment to benefits.		Less generous indexation of higher pensions.
Slovak Republic (recent)	Increase in pension ages to 62 for men and women.		From best five in final ten years to lifetime average earnings.	Through annuity calculation in DC scheme.	DC scheme mandatory for new entrants and voluntary for incumbent workers.	From DB to points system.
Slovak Republic (post)				Retirement age linked to life expectancy.	Contribution rate lowered to 4% from 1 September 2012 but to rise to 6% by 2024.	

Table 1.3. **Recent and post-reform pension reforms** *(cont.)*

	Pension eligibility age	Adjusted retirement incentives	Change of years in benefit formula or qualifying conditions	Link to life expectancy and/or financial sustainability	Defined-contribution scheme	Other
Spain (recent)		Introduction of small increment for late retirement.				
Spain (post)	Pension age to increase to 67 by 2027.		Automatic link between pension parameters and life expectancy from 2027.			Changes in accrual rate calculation.
Sweden (post)			Best 15 years to lifetime average (public earnings-related scheme).	Through calculation of notional annuity and annuity in DC schemes. Additional sustainability adjustment in notional accounts.	DC scheme mandatory for nearly all workers. Occupational plans switch from DB to DC.	From DB to notional accounts. Abolition of income-tax concessions for pensioners.
Turkey (recent)	Pension age to increase to 65.					Changes to accrual rate calculation.
Turkey (post)						Reduced accrual rate.
United Kingdom (recent)	Women's pension age and eligibility for guarantee credit rises from 60 to 65.	Increment for deferring State Pension claim increased. Lump-sum option added.			Employers required to provide access to DC ("stakeholder") pension.	Increase in basic State Pension. Extension of means-tested supplements. Increased progressivity of earnings-related State Pension.
United Kingdom (post)	Pension age to be increased to 68.					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Pension adequacy issues remain

The financial impact of the pension reforms discussed here cannot be fully examined yet as many of the reforms are recent and have not been included in the expenditure projections shown in Chapter 6 of this publication. As population ageing progresses expenditures will rise but the recent reforms will likely at least stabilise, if not reduce, future pension spending. At the same time, policy concerns around adequacy are likely to increase in some countries. Countries with traditionally limited public pension systems, such as New Zealand and the United Kingdom, are addressing adequacy concerns by promoting individual pension provision through auto-enrolment schemes. In Australia, contributions to mandatory funded pensions have been increased for the same reason while Germany has chosen to offer tax credits to people taking up voluntary private pensions. The distributional implications of a stronger reliance on private defined-contribution pension schemes will need to be monitored carefully as lower-income workers will find it harder to contribute sufficient amount over long periods to such schemes.

Notes

1. Details of all the reforms included in the models under the various scenarios are included in Table 1.3 at the end of the chapter. The pre-reform scheme refers to the scheme immediately in place prior to any of these reforms being enacted.
2. Reform proposals currently under discussion are also mentioned in Table 1.2 under this residual group.

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