PART III

Country Profiles

This part of Pensions at a Glance *presents profiles of the parameters and rules of national pension systems. Before illustrating the country profiles, however, the introduction sets out a cross-country comparison of their key features and provides a guide to the contents of the country profiles. A table at the end of the introduction summarises the pension-scheme parameters and rules.*

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Pensions at a Glance 2009
Retirement-Income Systems in OECD Countries

Introduction

Key features of pension-system design

The "Framework of *Pensions at a Glance*" set out above categorised the main components of national retirement-income systems into tiers (see Figure 0.1 in the "Framework"). The first two of these tiers are mandatory. The first tier is publicly provided and comprises schemes that are focused on income adequacy in retirement. The second tier can be publicly or privately provided and comprises schemes whose primary goal is to provide retirement incomes that replace some level of earnings when working. Table III.1 summaries the key features of these two tiers: the key parameters and rules that determine how much retirement income people will receive.

First-tier, redistributive schemes

The level of benefits under first-tier, redistributive schemes is expressed as a percentage of average earnings in each country (see the indicator of "Average earnings" in Part II). Because some countries have a mix of different programmes, the benefit level is shown separately for each. Basic schemes pay a flat-rate benefit conditional either on residency (in the Netherlands and New Zealand, for example) or on years of contributions (Ireland and the United Kingdom). Resource-tested schemes have a target level of income and reduce benefits in proportion to all other income sources. In contrast, minimum pensions only take the value of pension income into account when calculating entitlements.

In the cases of minimum pensions and basic schemes, the benefit entitlement is shown for a worker who enters at age 20 and works without interruption until he or she reaches the *normal* pension eligibility age. In most OECD countries, this is age 65, as shown in the last lines of Table III.1. Only full-career workers with very low earnings will be eligible for the resource-tested programmes; the majority of beneficiaries will be those with short and interrupted contribution histories.[1] The final row shows the total, first-tier benefit for a full-career worker. In some cases, workers can receive several different types of first-tier benefits, while in other cases they are only eligible for one programme.

On average in the OECD countries, first-tier benefits are worth 27% of national average earnings. Benefits are especially high relative to average earnings in Belgium, Luxembourg and New Zealand. They are at their lowest in Finland, Germany, Hungary, Japan and the United States, at less than 20% of national average earnings.

Second-tier, insurance schemes

The information on the second, insurance tier of retirement-income systems is shown separately for earnings-related and defined-contribution (DC) plans.

Table III.1. **Summary of pension-scheme parameters and rules**

	Australia	Austria	Belgium	Canada	Czech Republic	Denmark	Finland	France	Germany	Greece
First tier (% average earnings)										
Resource-tested	23	26	22	18	23	18	18	22	19	11
Basic	–	–	–	14	8	18	–	–	–	–
Minimum	–	–	28	–	11	–	–	23	–	34
Overall entitlement (full-career worker)	23	26	28	32	23	36	18	23	19	34
Second tier										
Earnings-related										
Type	None	DB	DB	DB	DB	None	DB	DB/points	points	DB
Accrual rate (% indiv. earnings)	–	1.78	1.33	0.63	0.45 [w][1]	–	1.5 [a][2]	1.75 [w][3, 4]	1.00	2.57[3]
Earnings measure	–	40	L	b34	f30	–	L	b25/L	L	f5
Valorisation	–	w[5]	p	w	w	–	80 w/20 p	p/p	w[6]	[7]
Indexation	–	d	p	p (c)	33 w/67 p	–	20 w/80 p	p/p	w[6]	d
Defined contribution										
Contribution rate (% indiv. earnings)	9	–	–	–	–	1 + 10.8[8]	–	–	–	
Ceilings (% average earnings)										
Public	–	146	118	104	None	–	–	99	149	325[9]
Private/occupational	244	–	–	–	–	–	None	298	–	–
Pension age										
Normal	65	65	65	65	65	65	65	61	67	65
(women)					62-65[10]					
Early	55		60	60	60		62		63	55
(women)					59-60[10]					

Parameters are for 2006 but include all legislated changes that take effect in the future. For example, some countries are increasing pension ages and extending the earnings measure for calculating benefits; pension ages for women are shown only if different from those for men. Early pension ages are shown only where relevant.

– = not relevant; [a] = varies with age; b = number of best years; (c) = indexation conditional on scheme finances; d = discretionary indexation; f = number of final years; fr = valorisation at a statutorily fixed rate; L = lifetime average; p = valorisation/indexation with prices; w = valorisation/indexation with average earnings; [w] = varies with earnings; [y] = varies with years of service.

DB = defined benefit; DC = defined contribution; GDP = linked to gross domestic product; NDC = notional accounts.

1. Czech Republic: higher accrual rates on lower earnings, lower accruals on higher earnings.
2. Finland: higher accrual rates at older ages.
3. France and Greece: data shown combine two different programmes.
4. France: higher accrual rate on higher earnings under occupational plans.
5. Austria: valorisation assumed to move to earnings as the averaging period for the earnings measure is extended.
6. Germany: indexation and valorisation are both subject to a sustainability adjustment.
7. Greece: valorisation in line with pension increases for public-sector workers.
8. Denmark: 1% is for the mandatory special pension, 10.8% is the typical contribution rate for quasi-mandatory occupational plans.
9. Greece: effective ceiling calculated from maximum pension.
10. Czech Republic: pension ages for women vary with number of children.

The information on earnings-related schemes begins with the scheme type: defined benefit (DB), points or notional accounts (NDC). The main parameter accounting for differences in the value of these schemes is the accrual rate per year of contribution, that is, the rate at which a worker earns benefit entitlements for each year of coverage. The accrual rate is expressed as a percentage of the earnings that are "covered" by the pension scheme. Most pension schemes cover only part of workers' earnings to calculate pension benefits.

For points systems, the effective accrual rate shown in Table III.1 is the ratio of the cost of a pension point to the pension-point value, expressed as percentage of individual earnings. This, like the accrual rate in DB schemes, gives the benefit earned each year as a proportion of earnings in that year. In notional-accounts schemes, the effective accrual

Table III.1. **Summary of pension-scheme parameters and rules** *(cont.)*

	Hungary	Iceland	Ireland	Italy	Japan	Korea	Luxembourg	Mexico	Netherlands	New Zealand
First tier (% average earnings)										
Resource-tested	–	18[11]	32	–	19	–	–	–	–	–
Basic	–	9	34	–	16	22	10	4.6	31	39
Minimum	16	–	–	–	–	–	38	28	–	–
Overall entitlement (full-career worker)	16	27	34	22	19	22	38	28	31	39
Second tier										
Earnings-related										
Type	DB	DB	None	n.acs	DB	DB	DB	None	DB	None
Accrual rate (% indiv. earnings)	1.22	1.40	–	1.75	0.55	1	1.85 [y][12]	–	1.75[13]	–
Earnings measure	L	L	–	L	L	L	L	–	L[14]	–
Valorisation	w	(fr)	–	GDP	w	w	w	–	w (c)	–
Indexation	50 w/50 p	p	–	p[15]	p	p	w	–	w (c)	–
Defined contribution										
Contribution rate (% indiv. earnings)	8	–	–	–	–	–	–	6.5[16]	–	–
Ceilings (% average earnings)										
Public	220	–	–	367	149	142	231	–	–	–
Private/occupational	220	None	–	–	–	–	–	607	None	–
Pension age										
Normal	62	67	66	65	65	65	65	65	65	65
(women)				60						
Early			65	60	60	60	57	60	60	
(women)										

11. Iceland: includes two different programmes.
12. Luxembourg: higher accrual rate for longer contribution periods.
13. Netherlands: accrual rate varies between occupational schemes.
14. Netherlands: earnings measure is average salary for around two-thirds of occupational plans and final salary for one-third.
15. Italy: indexation is fully to prices for low pensions, 90% of prices or 75% of prices for higher pensions.
16. Mexico: additional contribution of 5.5% of minimum wage is shown as a basic pension. The lower value of the annuity calculated is for women.

rate is calculated in a similar way to obtain the annual pension entitlement as a proportion of earnings in a given year. The calculations, which depend on the contribution rate, notional interest rate and annuity factors, are described in detail in Queisser and Whitehouse (2006).

In a little under half of the countries with earnings-related plans (of all three types), the accrual rates are linear. In the other countries, the pension benefit earned for each year of coverage varies, either with individual earnings, with the number of years of contributions or with individual age.

In eight cases, the accrual rate varies with earnings (indicated in Table III.1 by [w]). In the public schemes of the Czech Republic, Portugal, Switzerland and the United States, the pattern is progressive, giving higher replacement rates to lower-income workers. In the United Kingdom, the accrual rates are U-shaped, highest for low earners, then smaller, then higher again. In Norway, accrual rates are lower at higher earnings. In the occupational plans of France and Sweden, the schemes are designed to offset the redistribution in the public scheme; they pay a higher replacement rate to high earners on their pay above the ceiling of the public plan.

In the occupational plans of Finland and Switzerland, pension accrual increases with age (shown as [a]).

Table III.1. **Summary of pension-scheme parameters and rules** *(cont.)*

	Norway	Poland	Portugal	Slovak Republic	Spain	Sweden	Switzerland	Turkey	United Kingdom	United States
First tier (% average earnings)										
Resource-tested	31	–	16	–	–	26	24	5	19	18
Basic	16	–	–	–	–	–	–	–	14	–
Minimum	–	24	32	22[17]	27	–	18	37	14[17]	–
Overall entitlement (full-career worker)	31	24	32	22	27	26	24	37	28	18
Second tier										
Earnings-related										
Type	Points	n.acs	DB	Points	DB	n.acs	DB	DB	DB	DB
Accrual rate (% indiv. earnings)	1.05 [w][18]	0.67	2.25 [w][19]	1.19	3.0 [y][20]	1.21 [w]	[w/a]	2.0	0.89 [w][21]	0.91 [w][19]
Earnings measure	b20	L	L	L	f15	L	L	L	L	b35
Valorisation	w	w[22]	25 w/75 p	w	p	w	fr (2.0%)	GDP	w	w[24]
Indexation	p	p[22]	p/GDP[23]	50 w/50 p	p	w–1.6 (c)	50 w/50 p	p	p	P
Defined contribution										
Contribution rate (% indiv. earnings)	2.0	7.3	–	9	–	2.5 + 4.5[25]	–	–	–	–
Ceilings (% average earnings)										
Public	188	250	None	300	164	111	106	265	105	240
Private/occupational	–	–	–	–	–	–	106	–	–	–
Pension age										
Normal	67	65	65	62	65	65	65	65	68	67
(women)		60					64			
Early			55		60	61	63			62
(women)							62			

17. Slovak Republic and United Kingdom: minimum benefit calculated from minimum credit.
18. Norway: lower accrual rate on higher earnings.
19. Portugal and United States: higher accrual rates on lower earnings, lower accruals on higher earnings.
20. Spain: higher accrual rate on early years of service and lower on later years.
21. United Kingdom: accrual rate highest for low earnings, then lower then higher again.
22. Poland: valorisation to real wage bill growth but at least price inflation. Indexation has been 80% prices and 20% wages but moved to prices from 2005.
23. Portugal: indexation will be higher relative to prices for low pensions and *vice versa*. Indexation will be more generous the higher is GDP growth.
24. United States: earnings valorisation to age 60; no adjustment from 60 to 62; prices valorisation from 62 to 67.
25. Sweden: The contribution rate is 2.5% for personal plans. For quasi-mandatory occupational plans the contribution rates are 4.5% on a lower slice of earnings and 30% on an upper slice (in the largest scheme for private-sector workers).

Source: Information provided by national authorities and OECD calculations. See country profiles below.

Two countries have accrual rates that vary with length of service ([y]). In Luxembourg, the accrual rate increases for people with a longer contribution history. In Spain, there are three accrual rates. The pattern is the reverse of that in Luxembourg: the highest accrual rate is for the first few years of coverage and the lowest for later years in longer contribution histories.

Measuring earnings to calculate benefits

DB pension entitlements depend on the past earnings of the individual worker but the way in which these are measured differs. Table III.1 shows whether lifetime average or a limited number of best or final years' salaries are used. It is important to remember that the information shown here relates to the long-term rules of the system.

Seventeen OECD countries use the full lifetime average of earnings to calculate benefits. In Canada, the Czech Republic and the United States earnings are averaged over the great majority of the career (30-35 years). In Austria, the duration taken into account to compute benefits is gradually increasing to 40 years. There are, however, some exceptions.

Final salaries will be used to calculate benefits in Greece and Spain (over the past 5 and 15 years respectively). Benefits under public pension schemes in France and Norway will be based on the best 20 and 25 years' earnings respectively.

Valorisation

Closely linked with the earnings measure is the policy of valorisation or revaluation, whereby past earnings are adjusted to take account of changes in living standards between the time pension rights accrued and the time they are claimed. (This is sometimes called pre-retirement indexation.) If benefits are based on the final year's salary, there is no need for valorisation. But it is necessary to protect the value of pension entitlements when benefits are based on earnings over a longer period. The uprating of the pension-point value and the notional interest rate in points and notional-accounts systems, respectively are the exact corollaries of valorisation in DB plans (see Box 4 in Queisser and Whitehouse, 2006, for a detailed explanation).

The effect of valorisation policy on pension entitlements is large due to a "compound-interest" effect. On the baseline economic assumptions used in this report – *i.e.*, real wage growth of 2% and price inflation of 2.5% – prices valorisation for a full career (between age 20 and 65) results in a pension that would be 40% lower than a policy of full adjustment of earlier years' pay in line with economy-wide average earnings.

The most common practice – followed in 15 OECD countries – is to revalue earlier years' pay in line with the growth of average earnings in the economy. Belgium, France, Iceland and Spain, however, revalue earnings only with price inflation, although the effect in Spain is relatively small because only the final 15 years' salary enters the benefit formula, compared with 25 years in the French public scheme and the lifetime average in Belgium and the French occupational plans. Finland, Portugal and Turkey revalue earlier years' earnings to a mix of price and wage inflation.

Defined-contribution plans

The key parameter for DC plans is the proportion of earnings that must be paid into the individual account by employees, employers or the government. Contribution rates into these schemes vary substantially across countries. The mandatory DC schemes in the Nordic countries have relatively small contribution rates: 1% in Denmark, 2% in Norway and 2.5% in Sweden. However, occupational plans in Denmark and Sweden are categorised as "quasi-mandatory" because they cover nearly all the workforce. Contribution rates for these schemes are typically 10.8% of earnings in Denmark; and in Sweden, they are 4.5% on a lower slice of earnings and 30% on an upper slice (in the largest scheme for private-sector workers). The average contribution rate for the eight countries shown is 8.3%.

Ceilings on pensionable earnings

Most countries do not require high-income workers to contribute to the pension system on their entire earnings. Usually, a limit is set on the earnings used to calculate both contribution liabilities and pension benefits. This ceiling on the earnings covered by the pension system has an important effect on the structure, size and cost of the second-tier systems. The average ceiling on public pensions for 20 countries is 190% of average economy-wide earnings. (This average excludes eight countries where there is no public pension scheme for which a ceiling is relevant, such as basic or targeted programmes, and two countries that have no ceiling on earnings eligible for a public pension.)

Table III.1 also shows (separately) ceilings for mandatory private pension schemes and for the public, occupational plans in France and Finland. Of the nine countries with this type of programme, three have no ceiling: Finland, Iceland and the Netherlands. The ceilings of the occupational plans in France and Sweden are three and 2.8 times respectively the cap on pensionable earnings in the public programme. The overall ceiling on pensionable earnings in the 22 countries where this is relevant and there is a ceiling averages 230%, significantly higher than the ceiling on public schemes alone.

Pension eligibility ages

The majority of OECD member countries have a standard retirement age of 65 for men and women. Pension eligibility ages for women are still lower than men's in several countries but, in most of these, they will be equalised gradually with those of men (in Belgium, Hungary and the United Kingdom, for example). Only Italy, Switzerland and Poland plan to retain lower pension ages for women in the long term.

Iceland, Norway and the United States have a standard pension age of 67 and other countries, such as Denmark, Germany and the United Kingdom, will increase pension age above 65.

More than half of OECD countries, however, allow retirement before the normal pension age, although usually only with reduced benefits.

Indexation of pensions in payment

Indexation refers to the policy for the uprating of the value of the payment from the point of claim of the pension benefit onwards (see Whitehouse, 2009). Pension benefits are usually adjusted in line with an index of consumer prices. Five countries have mixed uprating of benefits, to a combination of price inflation and wage growth: the Czech Republic, Finland, Hungary, the Slovak Republic and Switzerland.

Austria, Greece, Italy and Portugal have adopted progressive indexation mechanisms, which give higher increases to low pensions than to higher benefits. Italy provides full price adjustment for low pensions while the percentage of the adjustment varies for higher pensions. In Portugal, pensions are adjusted to a mix of price inflation and GDP growth; the exact increases depend both on the level of pensions and on GDP growth rates.

Indexation of pension-system parameters

Indexation affects not only pensions in payment but also the parameters of pension systems. In resource-tested and basic pension schemes, the adjustment of benefit levels when they are first claimed is more important than the adjustment of benefits in payment.

Take the United Kingdom's basic pension scheme as an example. This has been linked to prices since 1981, when it was worth 24% of average earnings. Today, it is worth just 14% of average earnings. The change in indexation procedure reduced the entitlements not only of pensioners but also the benefits of all future workers. If the procedure were to continue, then the basic pension for new entrants would be worth a very low percentage of average earnings when they retire in 45 years' time.

Canada and Sweden also link their resource-tested schemes to prices (while the United Kingdom now links this to average earnings). The implication, over the long periods involved in pension policy, is that these programmes will all but disappear. For new entrants, the minimum retirement income in 45 years time would be very low. It is difficult to believe that it will be politically possible to pay such low incomes to poor, old people. As a result, these policies are unlikely to be sustainable or, indeed, sustained.

A similar argument applies to other parameters of the pension system as for example to the ceiling to earnings-related pension scheme that in some countries (*e.g.* Canada) is indexed on prices.

Therefore, the modelling in this report explicitly assumes that these benefits and parameters are linked to average earnings, and not prices, even though this is what legislation specifies. Obviously, this assumption has a big effect on the results when calculating the value of the pension promise.

Guide to the country profiles

The country profiles use a common framework. First, there is a brief summary of the national retirement-income system and a table of key indicators. This background table comprises average earnings, public pension expenditures, life expectancy and the dependency ratio (the number of pensioners for every 100 workers). Data both for the country in question and the average for the OECD as a whole are presented.

Secondly, there is a detailed description of the rules and parameters of the pension schemes that make up each country's retirement-income system. These are structured as follows.

- *Qualifying conditions:* pension eligibility (or "retirement") age and years of contributions required to receive a pension.
- *Benefit calculation:* the rules for each schemes making up the pension system, such as basic, resource-tested and minimum pensions as well as public, earnings-related and mandatory private plans.
- *Voluntary private pensions:* the parameters of typical voluntary plans are provided for the countries for which replacement rates under these schemes were modelled in the indicator of "Gross replacement rates from public and private pensions" in Part II.
- *Variant careers 1:* the rules and conditions under which workers can retire early or continue to work beyond the standard retirement age and the impact on pension entitlements.
- *Variant careers 2:* rules for protecting pensions for people who are out of paid work due to unemployment or caring for children.

The treatment of pensioners under the personal income tax and social security contributions, for reasons of space, is not described in this edition.[2] However, the on-line version of the country profiles, available at *www.oecd.org/els/social/pensions/PAG*, does include this information. For details on the taxes and social security contributions paid by workers, see OECD (2007).

Values of all pension parameters and other relevant figures such as minimum wages are given in national currencies and as a proportion of average earnings. (See the indicator of "Average earnings" in Part II.)

In each country profile, a table gives expected relative pension values, replacement rates and pension wealth at different individual levels of earnings for mandatory pension schemes. (See Part I of this report for definition and measurement of the different indicators.) These are given in both gross and net terms (the latter taking account of taxes and contributions paid when working and when drawing the pension).

Summary charts show the breakdown of the gross relative pension value into the different components of the pension scheme (the first row of the charts). As far as possible, the same, terminology is used to describe these schemes. The particular national scheme that is described can be found in the text of the country study. Some standard abbreviations are used in the legends of the charts:

- *SA:* social assistance.
- *Targeted:* separate resource-tested schemes for older people.
- *Minimum:* a minimum pension within an earnings-related scheme.
- *Basic:* a pension based only on number of years of coverage or residency.
- *Earnings-related:* all public earnings-related programmes, including notional accounts and points schemes as well as traditional defined-benefit plans.
- *DC:* defined-contribution, mandatory private plans.
- *Occupational:* mandatory or quasi-mandatory pensions, which can be provided by employers, industry-wide schemes (Netherlands), profession-based schemes (Sweden) or publicly (Finland, France).

The second row of country charts shows the effect of personal income taxes and social security contributions on relative pension values and replacement rates, giving the gross and net values.

The charts use a standard scale to ease comparisons between countries: the scale for replacement rates runs to 125% while that for relative pension values runs to 2.5 times average earnings. The charts show pension entitlements for people earning between 50% and 200% of economy-wide average earnings.

Notes

1. For information on benefits for such workers, see the discussion of old-age safety nets in Box 2.1 in the special chapter on "Incomes and poverty old older people" and the country profiles that follow here in Part III.
2. For all OECD countries, taxes and social security contributions paid by workers are those in force in the year 2006.

References

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Australia

Australia: Pension system in 2006

Australia's retirement income system has three components: a means-tested age pension funded through general taxation revenue; the superannuation guarantee, a compulsory employer contribution to private superannuation savings (mainly through defined-contribution plans); and voluntary superannuation contributions and other private savings, which are encouraged to support self-provision in retirement.

Key indicators

		Australia	OECD
Average earnings	AUD	55 200	47 600
	USD	41 600	35 800
Public pension spending	% of GDP	3.5	7.2
Life expectancy	At birth	81.1	78.9
	At age 65	84.9	83.4
Population over age 65	% of working-age population	21.5	23.8

Qualifying conditions

Age Pension is payable from age 65 for men. Women's pensionable age – currently 63 – will increase gradually to become 65 by 2014. The minimum age for withdrawing superannuation guarantee benefits is currently 55, but this will increase gradually to 60 by 2025.

Benefit calculation

Defined contribution

The superannuation guarantee was introduced in 1992. It consists of a mandatory employer contribution to a private pension plan. The pension plans may be operated by the employer, industry associations, and financial service companies or even by individuals themselves. The mandatory contribution rate has been 9% of employee earnings since the 2002-03 tax year.

Employers need not contribute for workers earning less than AUD 450 a month (equivalent to AUD 5 400 a year), but they can choose to contribute for these workers (note that this minimum has not been raised in the past). There is also a limit to the earnings covered by the superannuation guarantee: employers need not contribute for employees' pay above this threshold. For each quarter of the financial year 2004-05, this amount is AUD 32 180 and for each quarter of the year 2005-06, it is AUD 33 720. This limit is worth around 2½ times average wages and is indexed to a measure of average earnings.

The withdrawal stage of the superannuation guarantee complicates the calculations. Although there are some defined-benefit occupational plans, most employees are members of defined-contribution schemes. Members can take out the accumulated capital as a lump sum or some sort of income stream. Currently, most benefits are taken as a lump sum. For comparison with other countries (where defined-benefit plans predominate), the capital from the superannuation guarantee is assumed to be converted to a price-indexed annuity. The annuity calculation is based on mortality data for Australia.

Targeted

Age Pension is designed to provide a safety net for those unable to save enough through their working life and to supplement the retirement savings of others. The income and assets tests (means test) are used to target payments to those in need.

The value of the Age Pension is adjusted biannually and is paid fortnightly. In September 2005, the maximum single rate of pension was AUD 489 a fortnight, increasing to AUD 500 in March 2006 and AUD 512 in September 2006. (All values have been rounded to the nearest dollar.) This gives an average for the tax year of an annual benefit of AUD 12 737, equivalent to 23% of average earnings.

Age Pension's value is increased in line with price increases as measured by the Consumer Price Index (CPI). Where necessary, a further increase is made to ensure that it does not fall below 25% of the average of pre-tax Male Total Average Weekly Earnings on the national definition (which is slightly different from the earnings measure used in OECD analysis).

The Age Pension is withdrawn once annual income from other sources exceeds a threshold known as the "free area". This is adjusted annually in July. The values for 2006 were AUD 124 in the first half and AUD 128 in the second half of the year (again calculated fortnightly). The tax year figure for 2006 was therefore AUD 3 224, or 5.8% of average earnings. The withdrawal rate is 40% (single or couples combined). There is also an assets test. However, over 90% of pensioners affected have their benefits reduced by the income rather than the assets test (and so it has been assumed in the modelling that the income test is binding). Almost 40% of pensioners have their benefit reduced by the means test, and are therefore on part-rate Age Pension. Just over 60% of pensioners are on the maximum rate Age Pension.

Variant careers

Early retirement

Access to superannuation benefits (including superannuation guarantee benefits) is currently possible for retirement on or after age 55 (increasing to age 60). Individuals who are still working can also access their benefits from age 55, but only in the form of a non-commutable income stream. Age Pension is not paid earlier than the qualifying age for men (age 65) and women (age 63, increasing to 65 by 2014).

Late retirement

It is possible to defer claiming superannuation after 65. Employers are required to make superannuation contributions under the superannuation guarantee arrangements for their eligible employees up to the age of 70.

It is also possible to defer claiming the Age Pension after 65. The pension bonus scheme pays a once-only, tax-free lump sum to eligible members who defer claiming age pension and continue to work. The bonus is paid when the eligible member claims and receives age pension. A person must register and work a minimum of 12 months from date of registration, and must complete at least 960 hours of gainful work each year. The bonus can be accrued for up to five years. The amount of bonus depends on the rate of Age Pension a person qualifies for when they eventually claim and receive it. The bonus is 9.4% of the basic age pension entitlement for the first year of deferral. For two years, the bonus

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is four times that amount, nine times for three years, 16 times for four years and 25 times for five years. The maximum, five-year bonus is equivalent to 2.35 times one year's maximum Age Pension entitlement.

Childcare

There is no specific protection for periods out of work in the superannuation guarantee. Voluntary contributions are possible for periods out of paid work.

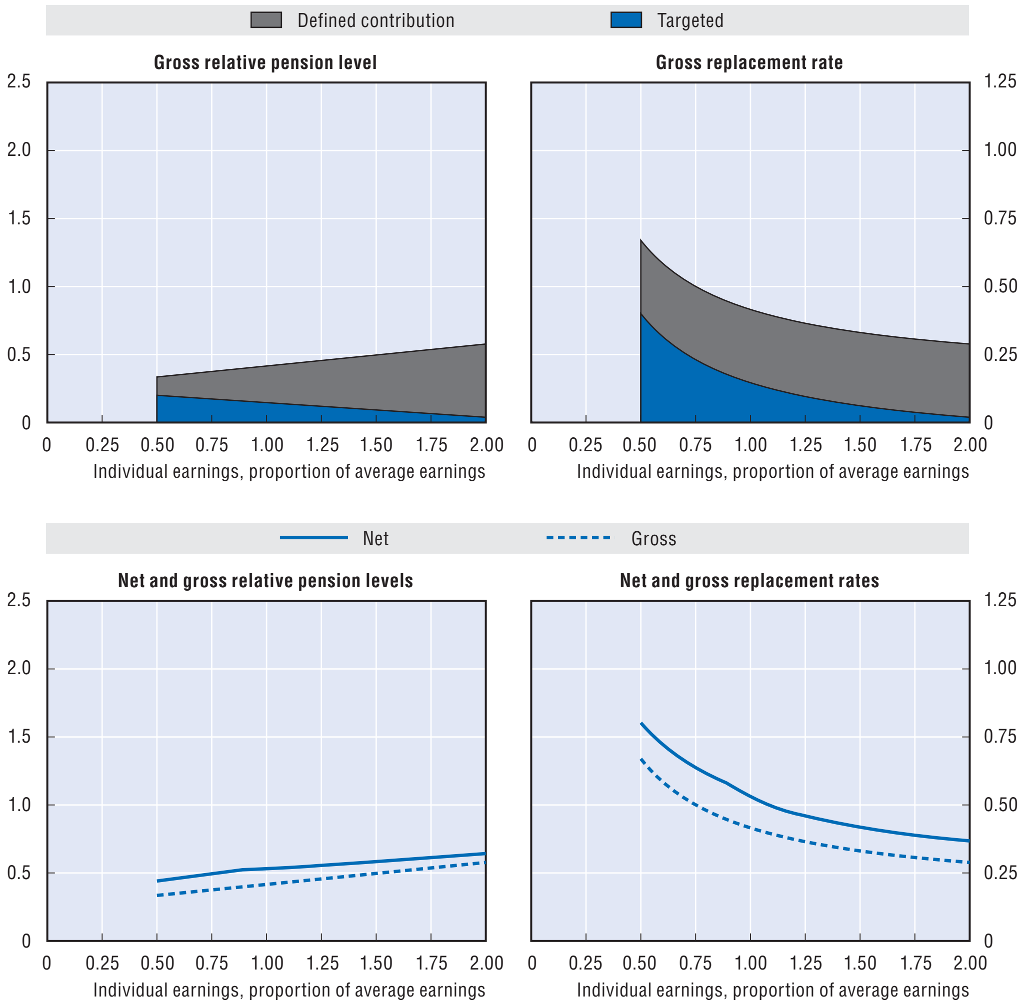
The means-tested structure of the Age Pension provides some protection for people with periods out of the workforce, in that it provides a safety net and supplements the retirement incomes of those unable to save enough during their working life.

Unemployment

There is no specific protection in the superannuation guarantee for periods out of work. Voluntary contributions are possible for periods out of paid work.

There are no credits in the superannuation scheme for periods of unemployment.

Pension modelling results: Australia



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	39.3	33.5	37.5	41.6	49.7	57.7
(% average gross earnings)						
Net relative pension level	51.7	44.1	49.4	53.1	58.3	64.3
(% net average earnings)						
Gross replacement rate	45.7	67.0	50.0	41.6	33.1	28.9
(% individual gross earnings)						
Net replacement rate	59.2	80.2	63.7	53.1	41.8	36.8
(% individual net earnings)						
Gross pension wealth	7.7	11.7	8.5	6.9	5.3	4.5
(multiple of individual gross earnings)	*9.0*	*13.7*	*9.9*	*8.1*	*6.2*	*5.2*
Net pension wealth	7.7	11.7	8.5	6.7	4.8	3.8
(multiple of individual gross earnings)	*9.0*	*13.7*	*9.9*	*7.8*	*5.5*	*4.4*

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Austria

Austria: Pension system in 2006

The pension system consists of a defined-benefit public scheme with an income-tested top-up for low-income pensioners.

Key indicators

		Austria	OECD
Average earnings	EUR	36 700	28 600
	USD	46 100	35 800
Public pension spending	% of GDP	12.6	7.2
Life expectancy	At birth	79.9	78.9
	At age 65	83.9	83.4
Population over age 65	% of working-age population	27.1	23.8

Qualifying conditions

Normal pension age is 65 for men. For women, retirement age is currently 60 years but will be increased to 65 between 2024 and 2033. There is a coverage condition: 180 months (15 years) in the last 30 years or 300 months (25 years) during the full lifetime. Alternatively, 180 months of contributions actually paid (as opposed to coverage alone) are sufficient. Insured months are either contributory months (from employment or voluntary contributions) or supplementary (*i.e.*, credited months, known as *Ersatzzeiten*) for which only limited contributions are paid. Within the pension reform of 2005 the number of contribution years due to gainful employment required for old-age-pension has been reduced from fifteen to seven years. The remaining minimum insurance period of eight years can be reached *e.g.* by child raising periods.

Benefit calculation

Earnings-related

The pension benefit currently accrues at 1.88% of earnings for each year of contributions but this will fall gradually, reaching 1.78% by 2009.

The earnings measure is currently the best 18 years' earnings. The valorisation procedure is complex although in practice adjustments have been closer to price inflation than to earnings growth. The averaging period is being extended; it will reach 40 years from 2028. Valorisation under this new procedure is still under discussion. The modelling takes this full-career measure and assumes that earlier years' earnings are revalued in line with earnings growth.

Contributions are payable up to a ceiling of EUR 52 500 a year, corresponding to 143% of average earnings.

In 2005, pensions in payment were adjusted in line with prices up to the median pension; pensions above this threshold were increased by a flat amount, which was equal to the absolute increase given to the median pensioner. From 2006 to 2009, it is envisaged that pensions will be fully indexed to prices up to 15 times the daily contribution ceiling which for 2006 was EUR 125 × 15 = 1 875. The modelling assumes that this practice will continue.

Targeted

There is a means-tested top-up (*Ausgleichszulage*) that ensures a minimum retirement income of EUR 690 per month for single people and EUR 1 056 for a couple. There are fourteen annual payments. Again, adjustment of the safety-net income is discretionary; the modelling implicitly assumes that it will rise in line with average earnings.

Variant careers

Early retirement

Retirement is currently possible from 62 for men and from 57 for women, subject to 37.5 years of contributions or credits. From 2017 on, the earliest retirement age for women will be 60. Pensions taken before the age of 65 are reduced by 4.2% for each year that the pension is claimed early.

Late retirement

For retirement between the ages of 65 and 68 the pension is increased by 4.2% per year and there is no such increment after 68. Workers who defer their pension continue to pay contributions thereby increasing their pension entitlements.

Combining work and pensions is possible but there is an earnings limit. If pensioners below the age of 65 earn more than EUR 333.16 (in 2006), the pension is fully withdrawn. After age 65, unlimited earnings from work and pension receipt are permitted.

Childcare

Periods spent out of paid work for childcare are taken into account in two different ways. Childcare periods of up to four years per child are credited on the basis of a fictitious pensionable salary of EUR 1 350 per month. But only two years per child are covered years and count towards the qualifying period for pension entitlement.

Unemployment

Periods of receiving unemployment insurance benefits and unemployment assistance (at 70% of the assessment base) count as contribution years.

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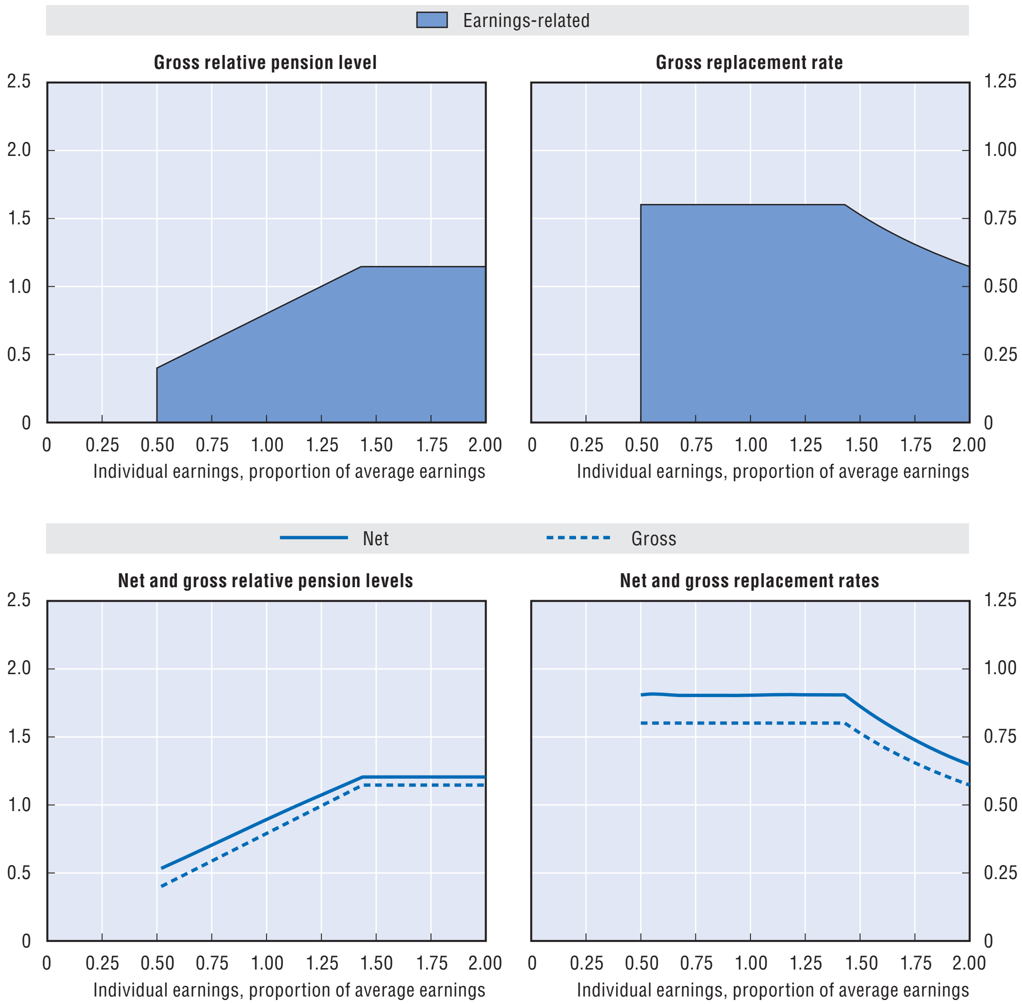
Pension modelling results: Austria



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	68.1	40.0	60.1	80.1	114.6	114.6
(% average gross earnings)						
Net relative pension level	79.1	53.3	71.7	90.3	120.6	120.6
(% net average earnings)						
Gross replacement rate	80.1	80.1	80.1	80.1	76.4	57.3
(% individual gross earnings)						
Net replacement rate	90.3	90.5	90.3	90.3	86.3	64.8
(% individual net earnings)						
Gross pension wealth	12.0	12.2	12.2	11.6	10.5	7.9
(multiple of individual gross earnings)	*13.9*	*14.2*	*14.2*	*13.5*	*12.1*	*9.1*
Net pension wealth	9.3	10.9	9.7	8.8	7.4	5.6
(multiple of individual gross earnings)	*10.8*	*12.6*	*11.3*	*10.1*	*8.5*	*6.4*

Belgium

Belgium: Pension system in 2006

The pension system has two components: an earnings-related public scheme with a minimum pension and a means-tested safety net.

Key indicators

		Belgium	OECD
Average earnings	EUR	37 700	28 600
	USD	47 300	35 800
Public pension spending	% of GDP	9.0	7.2
Life expectancy	At birth	79.5	78.9
	At age 65	83.8	83.4
Population over age 65	% of working-age population	28.7	23.8

Qualifying conditions

Normal pensionable age is 65 for men. For women, the eligibility age is 64 since 1.1.2006. It will increase to the age of 65 starting from 1.1.2009. Following legal rules in Belgium a full career requires 45 years for a man and 44 years for a woman (since 1.1.2006). As of 1.1.2009 a full career will also require 45 years for women.

Men and women can be eligible for early retirement from the age of 60, when they meet career length conditions. Since 1.1.2005, with 35 years' contributions, the pension can be claimed at 60.

Benefit calculation

Earnings-related

The full rate for the calculation of the pension for a single pensioner is 60% and for those with a dependent spouse, 75%. The annual accrual rate is therefore 60%/45 = 1.33% for men (and starting from 2009 for women). The earnings measure is average lifetime pay. Earlier years' earnings are revalued in line with prices and at the same time a revaluation coefficient is applied in order to revalue elderly wages in line with the increase of living standards (different coefficient for each year). This application of this revaluation coefficient is not modelled.

The full pension is paid provided the qualifying conditions above are met. For shorter contribution histories, the pension will be provided, but calculated on the lower number of career years.

There is a ceiling to yearly pensionable earnings of EUR 44 081.27 for 2006 (around 117% of average earnings).

Pensions in payment are uprated in line with a consumer price index (that excludes some goods). There have also been discretionary real increases (called "adaptations to well-being"). However, these increments have recently been more targeted to the lowest or the longest-running pensions. From 2008 onwards, legislation obliges the government to make decisions on uprating of all pensions every two years, based on advice of the social partners.

There are additional payments ("holiday" and "supplementary" allowances) payable once a year. These are equal to the value of the monthly pension up to a ceiling of EUR 525.50 for a single person and EUR 656.88 for pensioners with a dependent spouse (amounts payable in May 2006).

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Minimum annual credit

In cases of pensioners with low earnings or part-time work throughout their career, there is a minimum annual credit designed to increase the attributed pension entitlements for them. Annual earnings of less than EUR 14 810.70 (level applicable on 1.1.2006, equivalent to 39% of average earnings) are inflated to this level. From 1.10.2006 onwards, this minimum annual credit was raised to EUR 17 674.73 following the so-called “Generation pact”-measures. To qualify for the minimum credits, at least 15 years’ insurance is necessary, for an equivalent of at least one-third of a full time employment. (This gives an effective minimum pension for a full-career worker for a single person with a 45 year contribution history raised to this level for each year of the career.) The application of this minimum annual credit cannot lead to the attribution of a pension superior to EUR 15 553.48 for a pension at “family pension” rate or EUR 12 442.78 for a pension at “isolated person” rate. If the pension calculation should result into such a pension, the “minimum annual credit” application will not be applied for all eligible career years, until the pension passes under this ceiling.

Minimum earnings-related pension

There is also a minimum earnings-related pension which corresponded to EUR 10 232.50 at 1.1.2006 (EUR 10 603.65 from 1.10.2006 onwards) for a single person or EUR 12 990.85 with a dependent spouse (EUR 13 250.39 as of 1.10.2006) meeting the full contribution condition (45 years). For a single person, this is around 28% of average earnings. The benefit will be a proportion of this minimum in the case of less-than-full careers, if the beneficiary has at least two-thirds of the full number of years. In the other case, the benefit value will simply be obtained through the application of the benefit formula (there will be no “levelling up” of the benefit in line with the minimum pensions).

The minimum pension is indexed to prices, excluding certain goods. Benefits are increased by 2% each time cumulative inflation exceeds a certain threshold (2%) since the last adjustment.

Pensioners will receive the higher of the minimum pension described here and the pension calculated according to minimum annual credit.

Safety-net income: targeted

In the case of elderly people, who have no pension rights based on a professional activity or whose pension rights are very low, a means tested safety net income can be attributed. This so called GRAPA (*Garantie de revenu aux personnes âgées*) is a part of the social assistance measures, which are complementary to the social security provisions (*e.g.* legal pension for workers of the private sector as modelled).

The means tested safety-net income for the elderly is EUR 8 234.87 (EUR 8 399.39 from 1.10.2006) for a pensioner living alone (22% of average earnings) and EUR 5 489.91 (EUR 5 599.59 from 1.10.2006) for an older person living with others. Indexation is again to prices excluding certain goods. For the means test, “normal” pension revenue is taken into account for only 90% of its real amount.

Age limits correspond to the legal age: 65. During a transitional period (for GRAPA attributed between 1.1.2006 and 31.12.2008) it is possible to apply for GRAPA at the age of 64 (for women). From 1.1.2009 onwards, the age limit will be 65 in all cases.

Voluntary private pensions

A new scheme of "sectoral complementary pensions" was introduced in 2003 to further extend the 2nd pillar pension system. The contribution rates are fixed through (sectoral) collective labour agreements, and can vary between economic sectors. These occupational plans are defined-contribution and around 56% of employees have them. The modelling assumes a contribution rate of 4.25%, which is around the national average.

Variant careers

Early retirement

Since 2005, early retirement is possible from age 60, subject to 35 years contributions. There is no actuarial reduction in the pension calculation. The pension, however, can be incomplete, due to the possible incompleteness of the career (less than 45 years). There is an earnings test limiting the opportunity to combine an early retirement pension with work. This is stricter than the earnings test applied after normal pension age (see below).

For pensions starting from 1.1.2007 onwards and before 2013, work after the age of 62 or beyond 44 years of contributions will be credited with a bonus (EUR 2 for each day worked, limited to EUR 624 (not indexed) for each full year of work), following the "generation pact".

Late retirement

It is possible to defer pension after the normal retirement age. For people who continue working after normal retirement age, this can permit to plug career gaps to obtain a full(er) pension or can improve the pension amount, since only the 45 last years (44 years for women) are used in the calculation of the pension benefit.

Otherwise, it is possible to combine pensions and earnings (after normal pension age) within limits. For annual earnings under EUR 15 590.18 (single) or EUR 19 300.98 (with a dependent child), the pensions will not be reduced. Above this ceiling, the pension will be reduced by the amount that earnings surpass these limits. If actual earnings are 15% above the limits mentioned above then the pension will be completely withdrawn.

Before the legal (normal) pension age, the limits for cumulating pensions and earnings are limited to EUR 7 421.57 or EUR 11 132.37 respectively, with the same 15% earnings restriction.

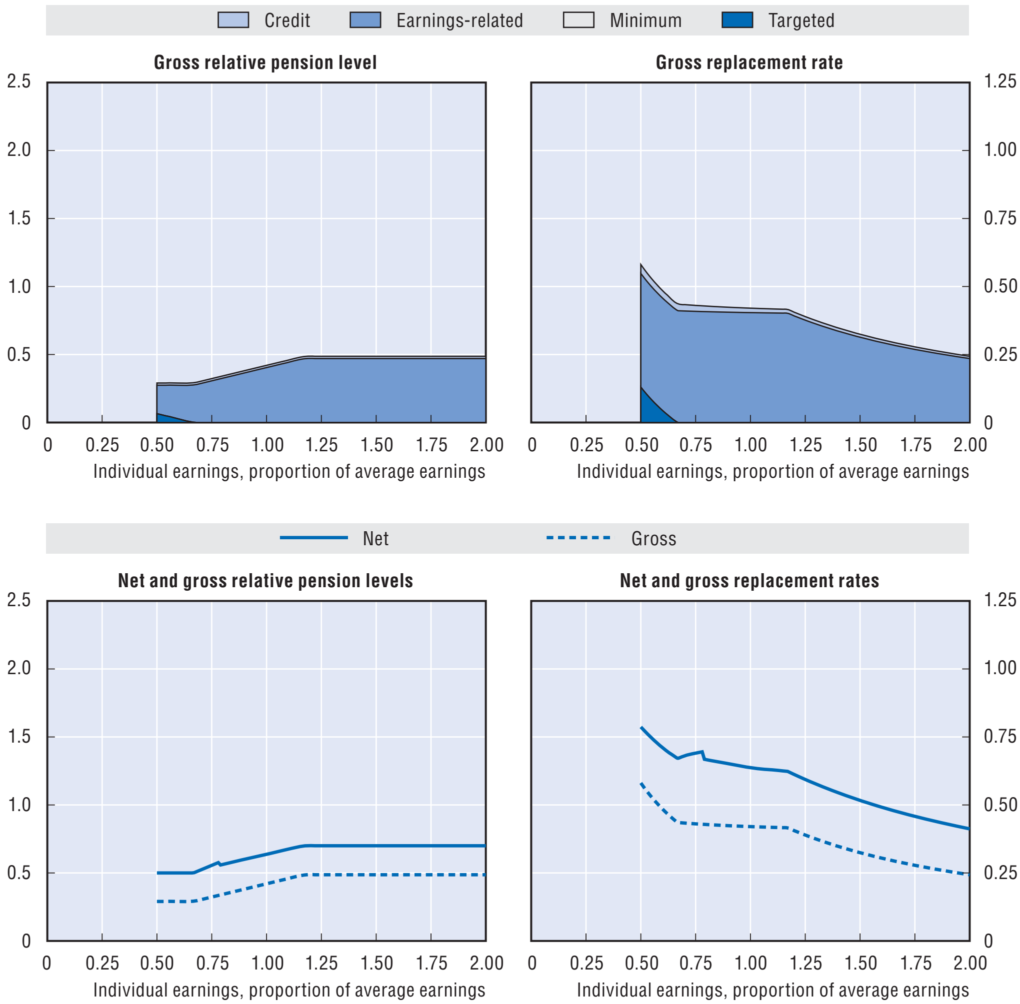
Childcare

A maximum of three years in total caring for children may count as gainful employment, if the person benefits from the so called "tijdskrediet". *Tijdskrediet* is a right for all employees in the private sector and they could benefit from a full suspension of labour activities or of a half-time reduction of labour time if they had worked more than three-fourths of full time for at least 12 months preceding the start of *tijdskrediet*. They also need to have worked for the same employer for more than a year, during the 15 months before the application for the "*tijdskrediet*". When a person withdraws totally from the labour market, no compensation is made. These years count in the numerator of the benefit formula. The value for earnings in the formula is the last earnings before the labour-market absence.

Unemployment

Periods on unemployment insurance benefits are credited under the pension system. The unemployment years count in the numerator of the benefit formula and earnings prior to the period of unemployment are used in the calculation base for the entire unemployment period. There is no limit on the number of years credited. The application of this crediting however, will lead to a slightly lower pension benefit than in case of a full active career as this credit amount does not necessary follow completely the full real wage growth over the credited period. Unemployment above the age of 62 or after 42 years of career will not allow for the application of the "pension bonus" for these years.

Pension modelling results: Belgium



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	37.8	29.0	32.3	42.0	48.7	48.7
(% average gross earnings)						
Net relative pension level	59.7	50.0	55.6	63.7	70.0	70.0
(% net average earnings)						
Gross replacement rate	42.4	58.1	43.1	42.0	32.5	24.3
(% individual gross earnings)						
Net replacement rate	65.3	78.7	69.0	63.7	51.7	41.2
(% individual net earnings)						
Gross pension wealth	6.5	8.9	6.6	6.4	5.0	3.7
(multiple of individual gross earnings)	*7.5*	*10.3*	*7.6*	*7.5*	*5.8*	*4.3*
Net pension wealth	6.0	8.9	6.6	5.7	4.1	3.1
(multiple of individual gross earnings)	*6.9*	*10.3*	*7.6*	*6.6*	*4.8*	*3.6*

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Canada

Canada: Pension system in 2006

The pension system offers a universal flat-rate benefit, which can be topped up with an income-tested benefit, and earnings-related public schemes.

Key indicators

		Canada	OECD
Average earnings	CAD	40 600	40 500
	USD	35 800	35 800
Public pension spending	% of GDP	4.1	7.2
Life expectancy	At birth	80.4	78.9
	At age 65	84.5	83.4
Population over age 65	% of working-age population	21.1	23.8

Qualifying conditions

The basic old age security (OAS) pension is subject to a residence test, with 1/40th of the maximum pension earned for each year of residence after age 18 up to a maximum of 40 years. A minimum of ten years' residence is required to receive any benefit. It is payable from age 65.

For the earnings-related scheme, a full pension requires about 40 years' contributions but a single valid contribution is sufficient to generate an entitlement. Normal pension eligibility age is 65 but an early pension can be claimed from age 60.

Benefit calculation

Basic

The 2006 full pension level for the OAS pension was CAD 5 846.19. The value of the basic pension is price-indexed.

This pension is subject to an income test operated through the tax system (a "claw-back"). For income above CAD 62 144 a year, the basic pension in 2006 was withdrawn at a 15% rate. It is also indexed to prices.

Targeted

The guaranteed income supplement (GIS) is added to the basic OAS pension. The combination gave a maximum benefit of CAD 13 011.33 in 2006.

The GIS is reduced against income other than the basic pension at a 50% rate. The target benefit level is price-indexed.

Earnings-related

Earnings-related pensions and benefits are provided by the Canada Pension Plan (CPP)/ Québec Pension Plan (QPP). The CPP and QPP offer broadly similar benefits. The scheme targets a replacement rate of 25% of earnings, based on average lifetime salary (excluding the 15% of years with the lowest earnings). Earlier years' pay is revalued in line with economy-wide earnings. As noted previously, the full benefit requires about 40 years' contributions with proportional reductions for shorter work histories. The maximum earnings-related retirement pension for 2006 was CAD 844.58 a month.

People earning less than CAD 3 500 a year are not required to contribute. There was a ceiling of CAD 42 100 in 2006 to contributions. The ceiling is indexed to increases in average earnings while the contribution floor is frozen in nominal terms.

The value of the earnings-related pension after retirement is uprated annually in line with prices.

Voluntary private pensions

Around 40% of employees are covered by occupational pension schemes. In 2003, around 80% of these were defined-benefit plans. The defined-benefit plan modelled, based on the results of a national survey of schemes, has an accrual rate of 1.3% of earnings up to the ceiling of the public scheme and 2% thereafter. Pensions are based on final salaries.

Overall coverage of voluntary private pensions – including both personal and occupational plans – is around 57%. For calculating defined-contribution pension values, a contribution rate of 8.5% of earnings is assumed.

Variant careers

Early retirement

Early retirement beginning at age 60 is possible in the state earnings-related scheme subject to a benefit reduction of 6% per year. Early retirement is not possible in the other two public schemes (basic and means-tested).

Late retirement

The earnings-related pension can be deferred earning a 6% increment for each year after age 65 – up to a maximum of five years. The basic and income-tested benefits cannot be deferred. The income-test for the latter includes earnings, for the former there is a claw-back against large incomes, again including earnings.

Childcare

Years of caring for children under the age of 7 are excluded from the averaging period in the pension calculation and these years are excluded from the contributory period under the earnings-related scheme.

Unemployment

Up to 15% of the contributory period may be excluded in calculating average earnings. This drop-out is intended to compensate for periods of unemployment, illness, schooling, etc. There are no credits for periods of unemployment.

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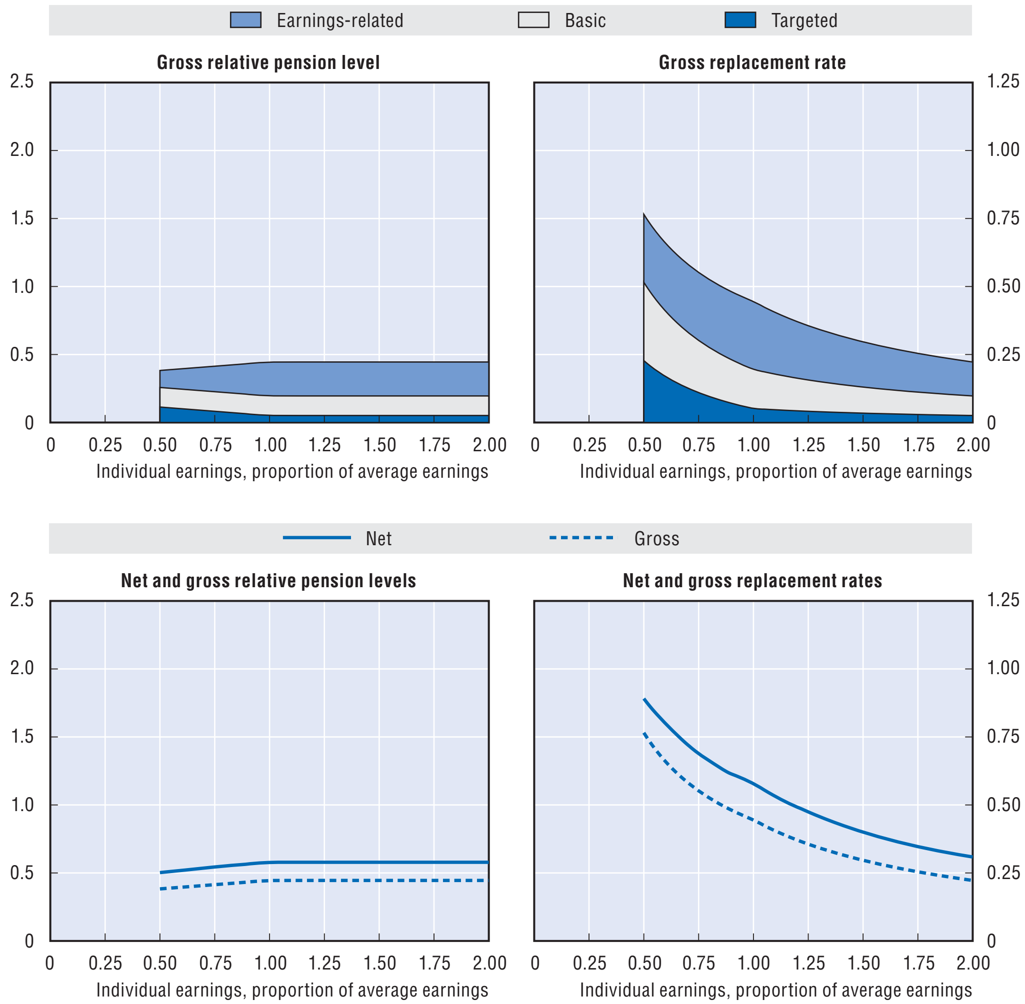
Pension modelling results: Canada



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	42.6	38.3	41.4	44.5	44.5	44.5
(% average gross earnings)						
Net relative pension level	55.9	50.3	54.4	57.9	57.9	57.9
(% net average earnings)						
Gross replacement rate	50.2	76.5	55.2	44.5	29.7	22.2
(% individual gross earnings)						
Net replacement rate	63.6	89.1	68.9	57.9	40.0	30.9
(% individual net earnings)						
Gross pension wealth	7.7	11.7	8.4	6.8	4.5	3.4
(multiple of individual gross earnings)	*8.9*	*13.6*	*9.8*	*7.9*	*5.3*	*4.0*
Net pension wealth	7.6	11.7	8.4	6.7	4.5	3.4
(multiple of individual gross earnings)	*8.9*	*13.6*	*9.8*	*7.8*	*5.2*	*3.9*

Czech Republic

Czech Republic: Pension system in 2006

The public pension scheme has a basic element and an earnings-related part calculated according to a progressive formula. There is also a minimum pension.

Key indicators

		Czech Republic	OECD
Average earnings	CZK	234 800	808 700
	USD	10 400	35 800
Public pension spending	% of GDP	7.3	7.2
Life expectancy	At birth	76.7	78.9
	At age 65	81.6	83.4
Population over age 65	% of working-age population	22.1	23.8

Qualifying conditions

The standard retirement age will be gradually increased to 65 for men under phase 1 of the new pension reform. The pension eligibility age will be 62-65 for women with children (depending on the number of children that they raised) and 65 for women without children. A minimum required 25 years' coverage will be gradually increased to 35 years (by one year per year from 2010) but people with 15 years' coverage (gradually increasing to 20 years) can receive a pension from 65.

Benefit calculation

Basic

The value of the basic pension is CZK 1 470 per month, equivalent to 7.5% of average earnings. There is no statutory indexation requirement for the value of the basic benefit alone. However, total pensions in payment must be increased by at least prices plus one-third of real wage growth (see below).

Earnings-related

The earnings-related pension gives 1.5% of earnings for each year of contributions. The earnings measure currently averages across all years since 1985, but it will gradually reach 30 years (in 2015). Earlier years' earnings are valorised by the growth of economy-wide average earnings.

There is a progressive benefit formula, with the first CZK 9 100 per month replaced at 100%, the slice of earnings between this limit and CZK 21 800 at 30%, with a 10% replacement above this level. The first threshold, below which there is 100% replacement, is equivalent to 46.5% of average earnings, while the second threshold is 111.4% of average earnings. There is no statutory indexation requirement for these thresholds, but both these thresholds have changed annually.

There is no specific statutory indexation requirement for the earnings-related pension component in payment. However, the combined total pension benefit (flat-rate and earnings-related components) is adjusted at least to price inflation plus at least one-third of real wage growth.

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Minimum

The total value of the minimum monthly pension benefit is CZK 2 240, which is made up of a minimum earnings-related pension of CZK 770 plus the basic component of CZK 1 470. This combined minimum pension is indexed in the same way as described above. It is worth 11.4% of average earnings.

Social assistance

Older people are covered by the general social-assistance scheme and related benefits in kind. The target safety-net income for a single-person household is CZK 4 420 per month, or 22.6% of average earnings. This is made up of a personal needs amount of CZK 2 400 plus a household needs amount of CZK 2 020.

Voluntary private pensions

Around 45% of employees have a voluntary occupational or personal pension. Because of limits on the tax incentives for these plans, contributions tend to be small. For the modelling a contribution rate of 2.8% of earnings is assumed.

Variant careers

Early retirement

It is possible to retire three years (increasing to five years, but no earlier than age 60) before the standard retirement ages, *i.e.* at 60 for men and 59-60 for women subject to 25 years' coverage (increasing in line with general qualification conditions to 35 years). The total accrual factor (*i.e.*, number of years of contributions multiplied by the accrual rate) is permanently reduced by 0.9% for each 90 days for the first 720 day of early retirement (3.6% per year), and 1.5 % for each 90 days thereafter (6 % per year from 2010). For a full-career worker, this is equivalent to a decrement in the pension level (rather than the replacement rate) for early retirement of 3.6/64.5 (1.5% times 43 years) = 5.6%.

Late retirement

It is possible to defer claiming the pension beyond the normal pension age. The total accrual factor (see section on early retirement above) is increased by 1.5% for each 90-day period of deferral (6% per year). There is no additional pension accrual for deferred retirement. It is also possible to combine pension receipt while continuing to work.

Childcare

Women are entitled to retire earlier depending on the number of children they have had:

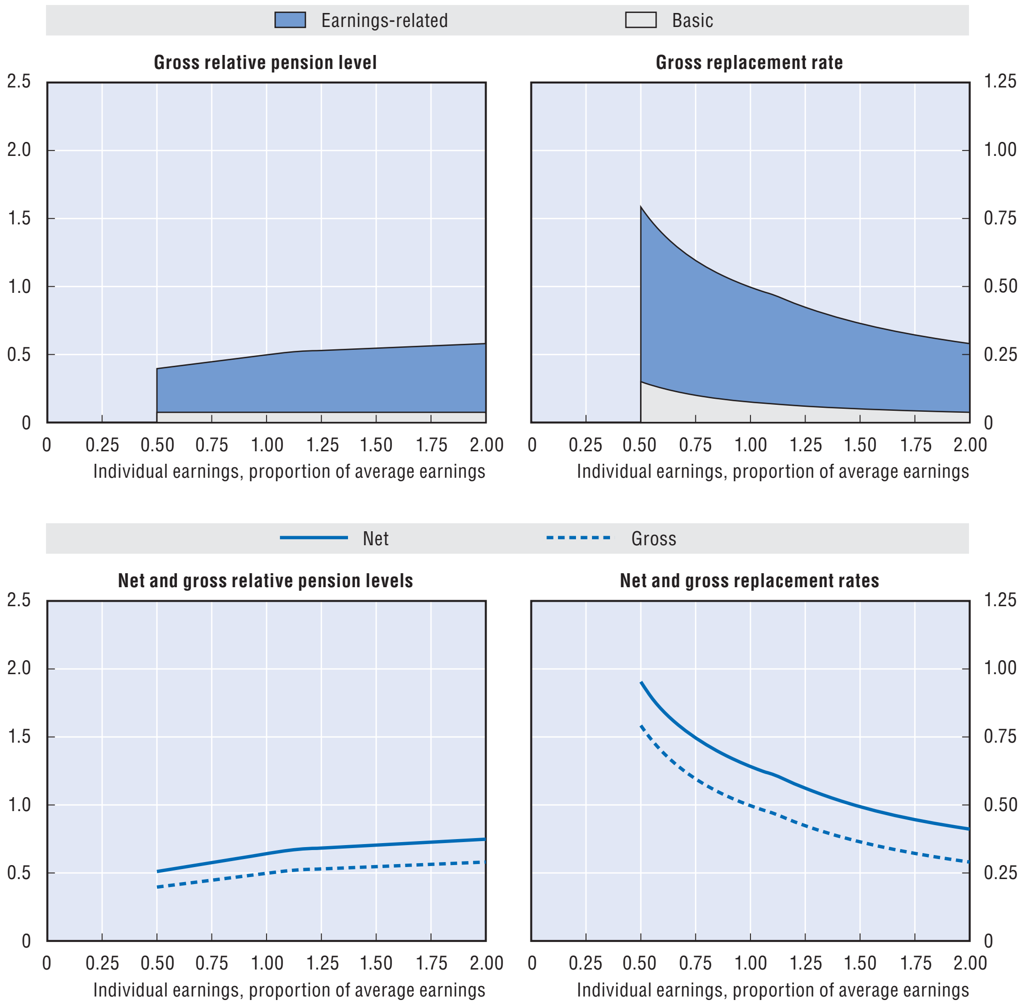
Number of children	1	2	3	4+
Early retirement (years)	0	1	2	3

In addition, there are credits for labour-market absences during periods caring for children up to four years old (or older in case of severe disability). These years are then ignored in the calculation of earnings for pension purposes so that these absences do not reduce the assessment base. (This approach is used for all non-contributory periods.)

Unemployment

Periods on earnings-related unemployment insurance are credited in the pension system. The duration of unemployment insurance entitlement varies with age: six months up to age 50, nine months from 50 to 55 and 12 months for over 55s. In addition, up to three years spent unemployed without entitlement to unemployment insurance are also credited. The unemployment period used for the pension calculation is reduced to 80%, meaning that if an individual had five years' unemployment over the career, this would count as four years for pension purposes. If the unemployment period is in the decisive (reference) period (last 30 years before retirement starting 1986) for the average assessment base calculation, this period is excluded from the calculation and only the income from which the premium is paid is used.

Pension modelling results: Czech Republic



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	46.7	39.6	44.7	49.7	54.7	58.0
(% average gross earnings)						
Net relative pension level	60.2	51.1	57.6	64.1	70.5	74.8
(% net average earnings)						
Gross replacement rate	54.9	79.2	59.6	49.7	36.4	29.0
(% individual gross earnings)						
Net replacement rate	69.8	95.3	74.7	64.1	49.4	41.1
(% individual net earnings)						
Gross pension wealth	8.4	12.1	9.1	7.6	5.6	4.4
(multiple of individual gross earnings)	*9.9*	*14.3*	*10.8*	*9.0*	*6.6*	*5.2*
Net pension wealth	8.4	12.1	9.1	7.6	5.6	4.4
(multiple of individual gross earnings)	*9.9*	*14.3*	*10.8*	*9.0*	*6.6*	*5.2*

Denmark

Denmark: Pension system in 2006

There is a public basic scheme (public old age pension, "folkepension") which consists of a basis amount and an income-tested pension supplement. A means-tested supplementary pension benefit is paid to the financially most disadvantaged pensioners. There are also two schemes based on individuals' contribution records, the ATP (the Danish labour market supplementary pension) and the SP (the special pension savings scheme). In addition, compulsory occupational schemes negotiated as part of collective agreements cover about 90% of the full-time employed workforce.

Key indicators

		Denmark	OECD
Average earnings	DKK	330 900	212 700
	USD	55 700	35 800
Public pension spending	% of GDP	5.4	7.2
Life expectancy	At birth	78.4	78.9
	At age 65	82.7	83.4
Population over age 65	% of working-age population	25.3	23.8

Qualifying conditions

The normal pension age is currently 65 but will be increased gradually to age 67 in the period 2024-27. A full public old-age pension requires 40 years' residence. Shorter periods qualify for a pro-rated benefit.

A full entitlement under the labour-market supplementary pension (ATP) and the special saving scheme (SP) requires a full career of contributions. The ATP scheme was established in 1964. The ATP scheme is a collective insurance-based DC scheme. The SP scheme was established in 1999. SP is a statutory, purely savings-based scheme, where contributions are paid to individuals accounts.

Benefit calculation

Basic

The full basic pension amount is DKK 4 836 per month or DKK 58 032 per year, equivalent to 17.5% of average earnings. There is an individual earnings test which means that the basic pension will be reduced if work income exceeds DKK 246 500 (approximately three-quarters of general earnings per year for an average production worker). The benefit is reduced at a rate of 30% against earned income above this level.

Targeted

The full pension supplement is DKK 4 868 per month or DKK 58 416 per year for single persons and DKK 27 276 per year for couples. The actual amounts are tested against all sources of personal income (including ATP, SP and occupational pensions) apart from public pension. If personal income exceeds DKK 54 400, the targeted pension supplement is reduced by 30% of the excess income for single persons. For couples this income test is calculated of income beyond DKK 109 200 at a rate of 15%.

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Connected with the public old-age pension, a new supplementary pension benefit of DKK 6 300 (2006) was introduced in 2004. The supplementary pension benefit is taxable and paid once a year. The benefit is means-tested and targeted to the poorest pensioners without significant cash savings (max cash savings DKK 56 800).

The public old-age pension (the basic and targeted amounts plus the pension supplement) and the supplementary pension benefit are adjusted annually in line with average earnings. The adjustment is based on an index of wage increases during the two preceding years. If nominal earnings growth exceeds 2%, a maximum of 0.3 percentage points of the excess increase is allocated to a social spending reserve. Thus, indexation of pensions and other social benefits is based upon wage increases less any allocation to the reserve.

Occupational

These schemes are fully funded defined-contribution schemes agreed between the social partners. Coverage of these schemes is almost universal. Contributions are typically between 9% and 17% of earnings. In 2006, the percentage for the majority of Danish workers has been raised to 10.8% and this contribution rate is used for the modelling. Benefits are usually withdrawn as an annuity. The assumed interest rate is 1.5% for recent contributions or new schemes. However, the schemes operate on a "with-profit" basis, with pension increases depending on the return on assets and mortality experience of the fund. Many schemes also allow lump sum withdrawals. Since 2000, the annuity calculation must use unisex mortality tables.

Defined contribution

ATP is a statutory, fully funded, collective insurance based, defined-contribution scheme. ATP provides a lifelong pension from the age of 65 and a survivors' lump sum benefit for dependents in the case of the death of the individual member. ATP covers all wage earners and almost all recipients of social security benefits. ATP membership is voluntary for the self-employed. ATP covers almost the entire population and comes close to absolute universality.

Technically, the old age pension of ATP is a guaranteed deferred annuity. The contribution is a fixed amount – as opposed to a percentage of income – varied only against the number of hours worked. A full-time employee paid DKK 2 924 in 2006. Contributions are split with two-thirds paid by the employer and one-third by the worker. The contribution schedule (the sum of employer and employee contribution) against hours worked is shown in the following table (for monthly paid workers):

Monthly hours	< 39	39-77	78-116	> 116
Contribution, DKK/month up until 2009	0	81.3	162.6	243.9
Contribution, DKK/month as from 2009	0	90	180	270

The contribution is adjusted if and when the social partners decide to do so as part of collective agreements. Over the past 20 years the contribution has been increased in steps more or less in line with average earnings. The modelling assumes that the contribution will increase in line with average earnings. An increase of approximately 10% has been agreed for 2009.

Until 2002, each DKK 396 of contributions earned DKK 100 of pension benefits paid from 65 regardless of the age at which they were made. This implied an average (across all accruing cohorts) interest rate of around 4.5%. From 2002, a nominal interest rate of 1.5% has been assumed. In the model, it is assumed that the ATP earns the same interest rate as assumed for funded defined-contribution schemes in other OECD countries.

The ATP scheme increases pensions in payment and pension rights alike if its financial condition allows. This is done in the form of bonus allowances. Increases are guaranteed as are earned rights.

The modelling assumes full indexation to price inflation.

An entirely new ATP pension accrual system has been introduced as from 2008. The model is based on swap interest rates as opposed to a fixed nominal interest rate of *e.g.* 1.5%.

Defined contribution (Special pension, SP)

Employees, self-employed and recipients of unemployment and sickness benefits contribute 1% of earnings to this mandatory individual retirement savings scheme. Investments are currently managed centrally. As from 2005, members have been able to choose their manager and portfolio. There is no ceiling to earnings covered by this scheme. Benefits are paid at normal pension age. If the account balance is less than DKK 15 000, it is paid as a lump sum and taxed at 40%. If it is between DKK 15 000 and DKK 120 000, the balance is paid out over a period of ten years. If the balance is more than DKK 120 000 at normal pension age, the balance is paid out periodic monthly over ten years Periodic payments are taxed as personal income.

As part of agreements, contributions to the SP scheme have been suspended since 2004. The model takes a long-term perspective and so assumes that SP contributions resume.

Variant careers

Early retirement

There is a partial early retirement pension for workers aged between 60 and 65 who continue to work for 12 to 30 hours a week. The scheme is being phased out. It now applies only for workers born before 1 January 1959. The beneficiary must reduce weekly hours worked by at least seven hours a week or at least one quarter of total hours worked in an average week. The partial pension is calculated as a fixed amount for every hour that is reduced. The amount is approximately DDK 76 an hour for 2007. Since 1999 beneficiaries are subject to a pension deduction.

There is also a voluntary early retirement programme linked with unemployment insurance, which pays benefits between ages 60 (gradually increased to age 62 in the period 2019-22) and until the normal pension age. To qualify, individuals must have been members of the unemployment insurance fund for at least 25 years within the last 30 years and have paid voluntary early-retirement contributions during this period. They must also satisfy the conditions for entitlement to unemployment benefits in the event of unemployment at the time of transition to the voluntary early-retirement scheme. The benefit amount corresponds to the rate of unemployment benefits, subject to a limit of 91% of the maximum rate of unemployment benefit, equivalent to DKK 3 110 per week for full-time workers and DKK 2 075 or part-time workers (2006 figures). It is not possible to combine receipt of voluntary early-retirement benefits with the social pension.

People who defer the take up of voluntary early-retirement benefits for at least two years after they have become entitled to the benefit and are still working receive a higher rate of voluntary early-retirement benefit that is equivalent to the maximum rate of unemployment benefit (or DKK 3 415 per week in 2006). For three years' full-time work when an individual qualifies for voluntary early retirement or the equivalent, a one-off lump-sum is paid up to a maximum of DKK 124 860 in 2006.

People covered by either early-retirement programme revert to the standard old-age pension once they reach the normal retirement age of 65 (due to their age they will not be affected by the legislated rise in the retirement age in the period 2024-27).

Late retirement

It is possible to defer the public old age pension for up to ten years. The increment for deferring pension for a year is the ratio of the period of deferral to average life expectancy at the time the pension is drawn. For example, the World Bank/UN population projections show life expectancy for a 68-year old to be 17.1 years. Thus, the increment for deferring for a year from age 67 would be 1/17.1 = 5.8%.

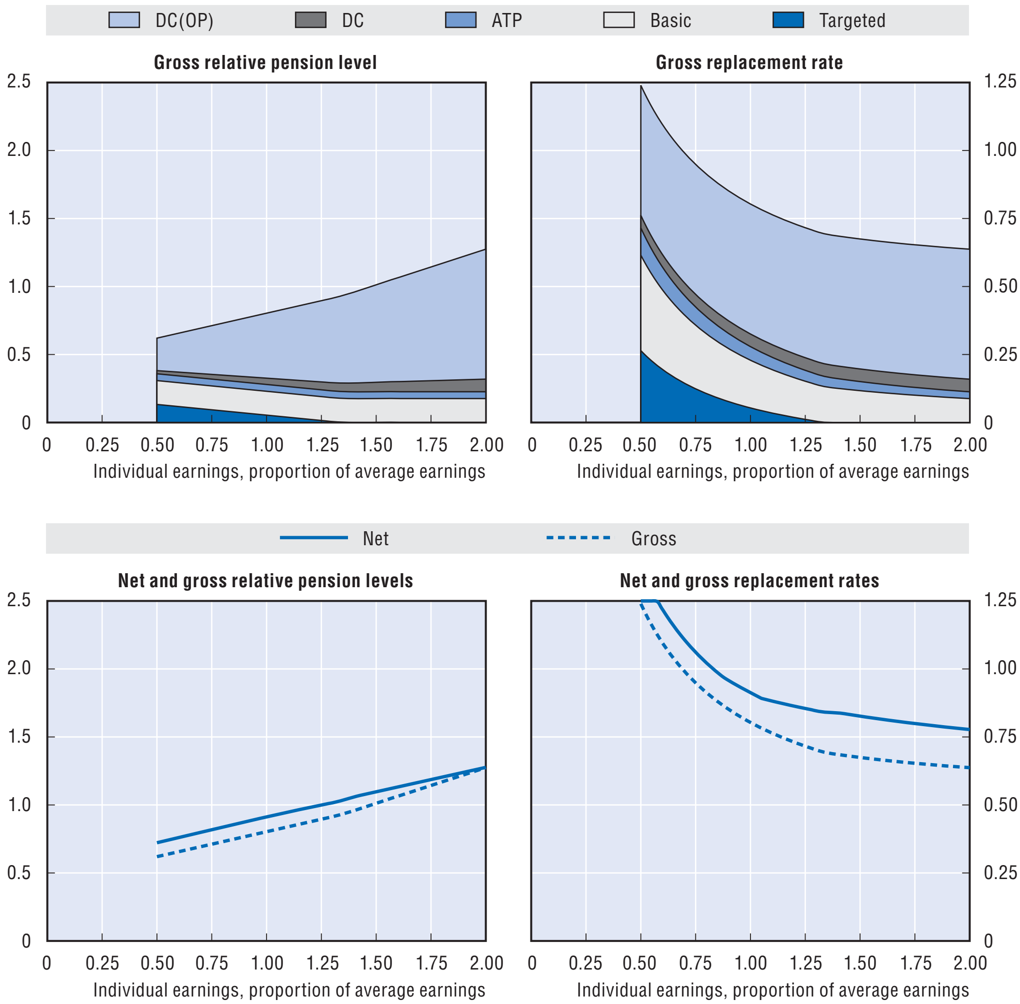
Childcare

For periods on maternity/paternity/parental benefits, the double amount of contributions is paid for ATP. The beneficiary will pay one-third of the contribution, two-thirds is paid by the government/municipality. Maternity/paternity/parental benefits can be paid for up to 52 weeks in total. Four weeks prior to the birth and the first 14 weeks after the birth are reserved for the mother. The father is entitled to two weeks of leave during the first 14 weeks after the birth (paternity leave). The last 32 weeks can be divided or shared between the father and the mother (parental leave). Those out of the labour market caring for children beyond the maternity period typically switch to another scheme which also carries an ATP contribution. Young parents usually resume work when the leave period ends unless the child is *e.g.* ill or disabled in which cases there normally will be possibilities for drawing on some sort of public benefit with contribution to ATP. Parents on maternity/paternity/parental benefits have contributed to SP and will do so again when the SP contributions resume. There are no credits or contributions for occupational pension schemes for periods out of paid work caring for children.

Unemployment

During unemployment, the unemployment insurance (or municipality if not insured) take over the payment obligation of employer and ATP contributions are paid at the double rate when receiving benefit from the unemployment insurance (normal rate if social assistance benefit). The government pays two-thirds of the payment when unemployment insurance is exhausted and the individual is on unemployment/social assistance. There are no credits or contributions for occupational pension schemes for periods of unemployment.

Pension modelling results: Denmark



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	74.8	62.0	71.2	80.3	101.2	127.4
(% average gross earnings)						
Net relative pension level	85.6	72.2	81.8	91.3	109.7	127.6
(% net average earnings)						
Gross replacement rate	88.0	124.0	94.9	80.3	67.5	63.7
(% individual gross earnings)						
Net replacement rate	98.7	137.0	106.2	91.3	82.7	77.7
(% individual net earnings)						
Gross pension wealth	12.8	18.5	13.9	11.6	9.6	9.0
(multiple of individual gross earnings)	*14.7*	*21.3*	*16.0*	*13.3*	*11.0*	*10.3*
Net pension wealth	8.6	12.7	9.4	7.8	6.1	5.3
(multiple of individual gross earnings)	*9.9*	*14.6*	*10.8*	*8.9*	*7.0*	*6.1*

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Finland

Finland: Pension system in 2006

The two-tier pension system consists of a basic state pension (national pension), which is income-tested, and a range of statutory earnings-related schemes, with very similar rules for different groups. The schemes for private-sector employees are partially pre-funded while the public-sector schemes are pay-as-you-go financed (with buffer funds to even out future increases in pension contributions). Major pension reform was introduced in Finland in 2005 and all rules presented here take account of these reforms.

Key indicators

		Finland	OECD
Average earnings	EUR	33 500	28 600
	USD	42 100	35 800
Public pension spending	% of GDP	8.4	7.2
Life expectancy	At birth	79.5	78.9
	At age 65	84.1	83.4
Population over age 65	% of working-age population	26.9	23.8

Qualifying conditions

The national pension is subject to a residency test (but no contribution requirements), withdrawn against pension income from the earnings-related schemes. The national old-age pension is payable from age 65. The full old-age national pension benefit is payable with 40 years residence as an adult, with pro rata adjustments for shorter periods of residence. It is possible to retire to early old-age national pension between ages of 62 and 65 (early old-age pension is available from the beginning of the month following one's 62nd birthday).

From 2005 the retirement age of earnings-related old-age pension is flexible between the ages of 63 and 68 (*i.e.* including the month of the 68th birthday). It is possible to retire to early old-age pension between ages of 62 and 63 and it is possible to take a deferred old-age pension after 68. There are no waiting periods or euro limits to obtain a right to earnings-related pension, even though there are minimum earning levels for pension insurance. Pension accrues only after the age of 18.

Benefit calculation

Earnings-related

Among different earnings-related schemes, the scheme for private sector employees (TEL) is covered here.

From 2005, the accrual rate is 1.5% of pensionable earnings at ages 18-52, 1.9% at ages 53-62 and 4.5% at ages 63-67. For a full-career worker working from age 20 until retirement at age 65, the total lifetime accrual will be 77.5% of pensionable earnings (if pensionable earnings are assumed to remain constant the whole career).

Pensionable earnings are, from 2005, based on average earnings of the whole career. However, as pension accrues differently in different age groups (see above), the earnings received by older workers have more weight in the total pension. When the pensionable earnings are calculated the amount corresponding to employee's pension contribution is deducted from the earnings. In 2006, the employee's pension contribution was 4.3% for employees under 53 years old and 5.4% for employees 53 years old or older. Note, however, that the replacement rates are shown relative to total gross earnings (for comparison with other countries) rather than this measure of pensionable earnings.

Earlier years' earnings are revalued in line with a mix of economy-wide earnings and prices. From 2005, wage growth has an 80% weight and price inflation, 20%. At the baseline assumptions for prices and wages growth, this policy reduces the value of the pension to 91.5% compared with a policy of full earnings valorisation of earlier years' pay. After retirement, the earnings-related pension is uprated using a formula of 20% of earnings inflation and 80% of price inflation.

From 2010 new earnings-related pensions will be reduced according to increases in life expectancy from 2009. (The calculations use lagged mortality data: for 2010, for example, the data are the average for 2004-08 compared to base year which is based on data for 2003-07.) Between 2002 and 2040, the UN/World Bank mortality projections imply an increase in life expectancy at age 65 from 16.8 years to 20.4 (calculated from unisex mortality rates). The adjustment takes the form of an annuity calculation using a discount rate of 2% per year. The adjustment expected in the year 2040, based on the mortality projections, is to reduce benefits to 83.1% of their value under the pre-reform rules. The life expectancy coefficient is calculated for each cohort at the age of 62.

There is no contribution floor and no ceiling to contributions or pensionable earnings, which means there is no pension ceiling either. However, there are minimum earnings limit for pension insurance.

The Finnish Centre for Pensions co-ordinates the schemes, resulting in a single pension payment even for people who have been members of different plans.

Targeted (national pension)

The parameters of the system differ from one municipality group to another to reflect regional differences in the cost of living. The full basic monthly benefit for a single pensioner in 2006 was EUR 510.80 until September and EUR 515.86 thereafter in the first municipality group and EUR 489.85/494.91 in the second municipality group (around a fifth of average earnings). For couples, the corresponding amounts were EUR 450.29/455.34 and EUR 432.44/437.50 per month. The national pension is reduced by 50% of the difference between other pension income and a small disregard which in 2006 was EUR 567 per year. No pension is payable once other pension income exceeds EUR 1 046.08/1 056.17 or EUR 1 004.17/1 014.25 per month (singles depending on municipality group). Note that the modelling uses the higher value for the national pension.

From 2005 on, earnings-related (employment) pension accrued after the age of 63 will be disregarded when national pension entitlement is calculated.

The basic pension benefit, the parameters of the means test and pension payable are uprated annually in line with prices. In practice there have been additional increases based on separate decisions.

Variant careers

For interrupted careers a salary base is used when calculating pension for unpaid periods. If the pension accrual is based on the salary on which the benefit is based there is no deduction of pension contribution (see benefit calculation/earnings-related above). Usually the corresponding amount has already been deducted when the wage for the calculation of the benefit has been calculated.

Early retirement

Early national old-age pension is available from the beginning of the month following one's 62nd birthday. Its amount is permanently reduced (in comparison with the ordinary old age pension) by 0.4% for each month the pension is to be paid before the normal pensionable age of 65 years. The pension will not rise to its regular level when the recipient reaches the age of 65. These rules operate from 2005.

Early retirement is possible at age 62 under the earnings-related scheme, subject to a 0.6% benefit reduction per month of early retirement until the age of 63. After the age of 63 there is no reduction in pension. However, there is more rapid accrual of earnings-related benefits after this age (see above).

Late retirement

From 2004 the national pension can be deferred after the age of 65 and the pension is then increased by 0.6% for each month by which retirement is postponed.

From 2005 onwards, the increment for late retirement is reduced to 0.4 % for each month (4.8% per year) in the earnings-related scheme after age 68. There is no adjustment between ages 63 and 68 because of the accelerated accrual of pension at those ages.

It is possible to combine receipt of pension and earnings from work. From 2005 after taking the old-age pension, earnings accrue additional pension and the accrual rate is 1.5% per year until the age of 68.

Childcare

From 2005 onwards, during periods of maternity, paternity and parent's allowance, the pension accrues based on 1.17 times the salary, on which the family benefit is based. The maximum paid parental leave period is 11 months.

For unpaid periods of childcare by either parent during which child home-care allowance is claimed, pensions accrue as if the person received a salary of EUR 556.60 per month (2006), which is around a fifth of average earnings. This is the case until the child reaches the age of 3.

People on parental leave are not liable for pension contributions. The pension accruing for paid parental leave is paid by the earnings-related pension system. The state finances the pension for periods of unpaid childcare leave.

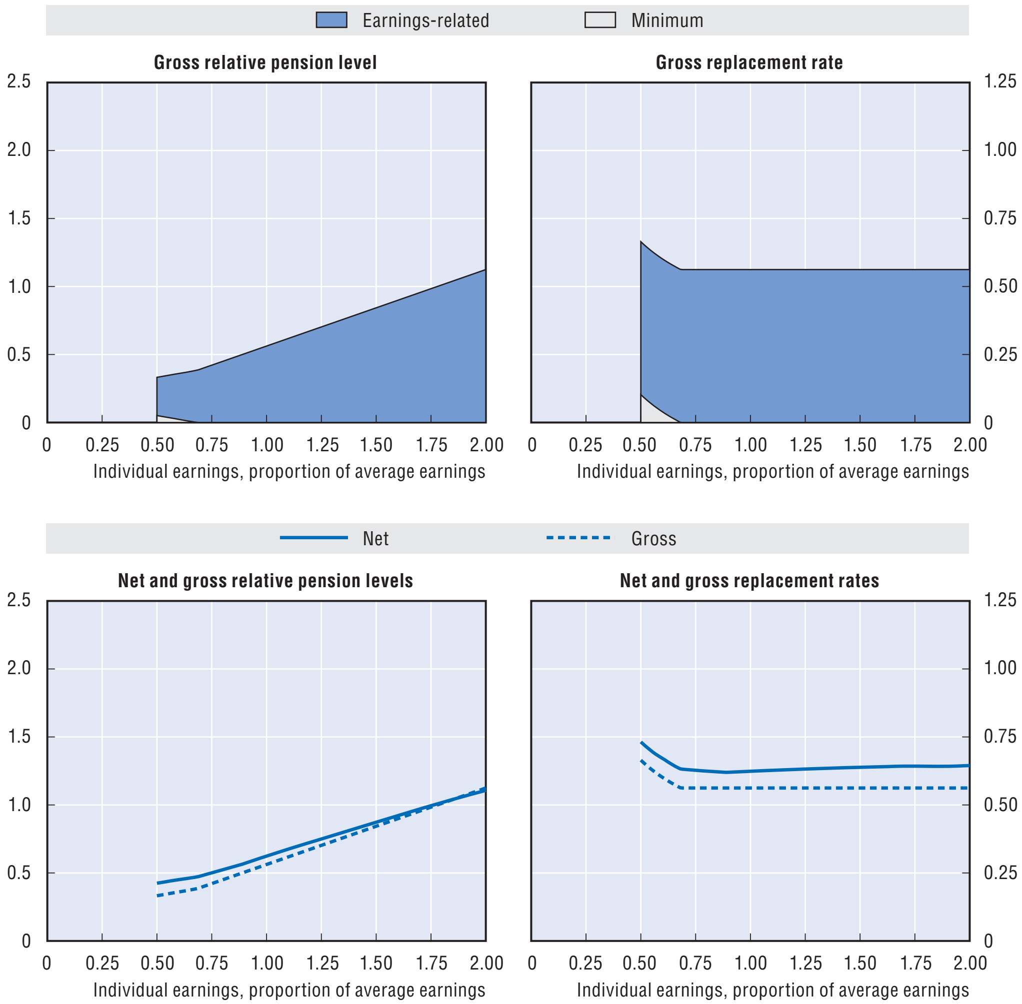
The part of the pension that is based on unpaid periods of child care (and studies) is not included in the income test of the national pension.

Unemployment

Following the 2005 reform, earnings-related unemployment benefits accrue pension rights based on the proportion of the salary (75%) on which the benefit is based. Only unemployment benefits received before the age of 63 generate a pension credit.

Unemployment-insurance benefits are paid for 500 days (around 23 months, in average 21.5 days per month). If an unemployed person reaches age 59 before the 500 days have accrued, earnings-related unemployment can be paid until age 65. (Due to age limits these rules will not be applied before 2009.) Individuals receiving allowance after 500 days are entitled to choose claiming old age pension from age 62. In such case, there is no reduction for early retirement and earnings-related unemployment benefits cease. After the period with earnings-related unemployment benefits, flat-rate or income-tested (under various conditions) unemployment assistance could be claimed but the period under these benefits are not credited for the pension entitlement.

Pension modelling results: Finland



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	49.5	33.2	42.2	56.2	84.3	112.5
(% average gross earnings)						
Net relative pension level	56.0	42.5	50.1	62.4	87.3	110.7
(% net average earnings)						
Gross replacement rate	56.2	66.5	56.2	56.2	56.2	56.2
(% individual gross earnings)						
Net replacement rate	62.0	73.2	62.7	62.4	63.8	64.5
(% individual net earnings)						
Gross pension wealth	8.8	10.4	8.8	8.8	8.8	8.8
(multiple of individual gross earnings)	*10.5*	*12.3*	*10.5*	*10.5*	*10.5*	*10.5*
Net pension wealth	6.8	9.0	7.1	6.6	6.2	5.9
(multiple of individual gross earnings)	*8.0*	*10.6*	*8.4*	*7.9*	*7.3*	*7.0*

France

France: Pension system in 2006

In the private sector, the pension system has two tiers: an earnings-related public pension and mandatory occupational schemes, based on a points system. The public scheme also has a without means test minimum contributory pension ("*minimum contributif*"). In addition there is a targeted minimum income for the elderly ("*minimum vieillesse*").

Key indicators

		France	OECD
Average earnings	EUR	31 000	28 600
	USD	38 900	35 800
Public pension spending	% of GDP	12.4	7.2
Life expectancy	At birth	80.9	78.9
	At age 65	85.4	83.4
Population over age 65	% of working-age population	28.0	23.8

Qualifying conditions

A full first-stage public pension requires 40 years' contributions since 2003, compared with 37.5 years previously. Between 2008 and 2012, this is planned to increase gradually to 41 years (to be reviewed in 2008). After 2012, the minimum contribution period to reach a full pension is planned to increase in line with increases in life expectancy, so that the ratio of period of pension payment to the working period remains constant.

Normal pension age for the earnings-related public pension is from 60. The minimum contributory pension ("*minimum contributif*") is paid when the retiree reaches the full contribution condition or is aged 65 and over. In the modelling, entry in the labour market occurs at 20 and a full contribution period (41 years) is assumed. These assumptions correspond to a pension age of 61.

Benefit calculation

Earnings-related

The public pension targets a replacement rate of 50% after a full career (which is 40 years' contributions and then increased further as described above). For each missing quarter, the pension is reduced by two means:

- the pension rate is reduced by 1.25% for one missing quarter (or by 5% for each missing year), these rates ("décote") concern people born after 1952;
- in addition, the pension amount is reduced pro rata (0,625% – 1/160 for one missing quarter).

The earnings measure is based on a number of best years of earnings, valorised in line with price inflation. From 2008 onwards, pay will be averaged over 25 years, whereas it is over 24 years in 2007, and was over 23 years in 2006.

Because of the limited number of years included in the earnings measure for calculating pension benefits and the policy of valorisation in line with prices, the replacement rate in the French public system is very sensitive to the time profile of earnings throughout the worker's career. Given the baseline assumption of continuous real earnings growth of 2% over a worker's career, combined with the fact that the OECD calculations use the lifetime revalued average earnings as reference salary, the replacement rates calculated are lower than those calculated using the observed salary progression in France, where increases are concentrated primarily in the first half of the career. The 2003 reform introduced an objective from 2008 for people with a full career on the minimum wage to receive a pension equivalent of at least 85% of the net minimum wage.

There is a ceiling on eligible earnings, which in 2006 was EUR 31 068. This is approximately equal to average earnings on the OECD measure (EUR 31 269). Benefits in payment are indexed to prices.

Contributory minimum pension ("minimum contributif")

There is an untargeted minimum pension in the "régime général" – regardless of the amount of pension received from other basic or supplementary schemes –, which was EUR 6 760.82 from 65 years old with at least a one quarter registered career – EUR 7 172.54 if the recipient has at least 40 actually contributed years – for the calendar year 2006. This is worth 23% of average earnings on the OECD measure. To be eligible for the full benefit, 40 years (planned to be extended to 41 years in 2012) of contributions, or being aged 65 and over are needed (the minimum pension is pro-rated for shorter periods). The value of the minimum pension is indexed to prices.

Mandatory occupational

The ARRCO scheme covers the majority of private-sector employees. Different rules apply to "cadres" (those in professional or managerial positions) under the AGIRC programme; the following regulations apply to non-cadres.

Although actual contributions are higher, benefits are only earned on 6% of earnings under the ceiling of the public scheme. Between one and three times the public-scheme ceiling, benefits are earned on 16% of pay. Thus, the ARRCO ceiling is three times that of the public pension scheme: EUR 93 204. (Note that there is no ceiling for the AGIRC scheme for cadres.)

Each year, the number of points earned is the value of contributions divided by the cost of a pension point. At retirement, the accumulated number of points is converted into a pension benefit by multiplying them by the value of a pension point. The pension-point value was EUR 1.1104 from April 2005 to April 2006 and EUR 1.1287 from April 2006, giving an annual figure for calendar 2006 of EUR 1.1241. The pension-point cost was EUR 13.027 for calendar year 2006.

Uprating of the cost and value of pension points is agreed between the social partners. The current agreement, valid until 2008, is to increase the cost of pension points in line with earnings and the value of pension points in line with prices. The modelling assumes that this differential uprating between the cost and value of a point will continue. Again, this policy of effective valorisation of earlier years' entitlements to prices results in lower benefits than valorisation to earnings. At the baseline assumptions, the reduction is to 69% of the pension entitlement under earnings valorisation.

It is important to note that the uprating policy for these two parameters affects both the path of pensions in payment (here termed "indexation") and the change in value of pension entitlements between the time they were earned and the time they are withdrawn (akin to the process of "valorisation" in earnings-related schemes).

Targeted minimum pension ("minimum vieillesse")

There is a means tested minimum income benefit for people aged 65 worth EUR 7 323.48 a year for a single person (EUR 13 137.69 for a couple) in 2006. This benefit, equivalent to 23% of average earnings (on the OECD measure) is adjusted in line with prices. Full-career workers will rarely be eligible for the old-age assistance programme ("*minimum vieillesse*"), since the mandatory occupational pension supplements the public pension benefit.

Variant careers

Early retirement

Pre-retirement operates through a separate programme administered by the employment fund (FNE). Early retirement is possible from 57 and from 56 under certain circumstances related to working conditions. The replacement rate is around 80%. At the normal pension age (or at the age when workers become eligible for a full regular old age pension up to 65), individuals switch to the public pension. The period on FNE benefits is fully credited for the public pension.

Early retirement, namely before 60, is allowed in the public pension scheme, in the following conditions:

- at 56 for people who have entered the labour force before 16 and have validated at least 42 years, among them at least 42 years with effective contribution;
- at 58 for people who have entered the labour force before 16 and have validated at least 42 years, among them at least 41 years with effective contribution;
- at 59 for people who have entered the labour force before 17 and have validated at least 42 years, among them at least 40 years with effective contribution.

Under the occupational pension, early retirement is also possible, often subject to reductions related either to age of retirement or years of contributions or both. Retirement is possible at age 60 with 40 years' coverage without a reduction. With fewer than 40 years' coverage, the pension is adjusted as shown in the table with the adjustment being that which is more favourable: relating to the retirement age or to the number of missing years. For retirement at age 61, for example, the pension is reduced to 83% of the full value. However, if the individual retires at 61 with 39 years' contributions, the reduction is only to 96%, because there is only one missing year.

Retirement age	55	56	57	58	59	60	61	62	63	64
Missing years						5	4	3	2	1
Coefficient	0.43	0.50	0.57	0.64	0.71	0.78	0.83	0.88	0.92	0.96

Late retirement

If people work after age 60 and have reached the qualifying conditions for a full pension (which is 40 years' coverage), each additional year increases the benefit under the public scheme by 3%. From 2007 onwards, this incentive to delay retirement age is increased to 4% per year from the second year of deferment and 5% per year from age 65. For the period of deferred retirement, people continue to accumulate ARRCO points. Work and pension receipt can be combined subject to some limits, provided people leave their usual job.

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Childcare

A mother raising a child for at least nine years (before the child reaches 16) is credited with two years' coverage per child in the public scheme, whether she continued to work or not during that time, provided she does not have a full contribution period. Both parents can receive a 10% increase in final pension payout in the public plan if they have raised three or more children for at least nine years before age 16.

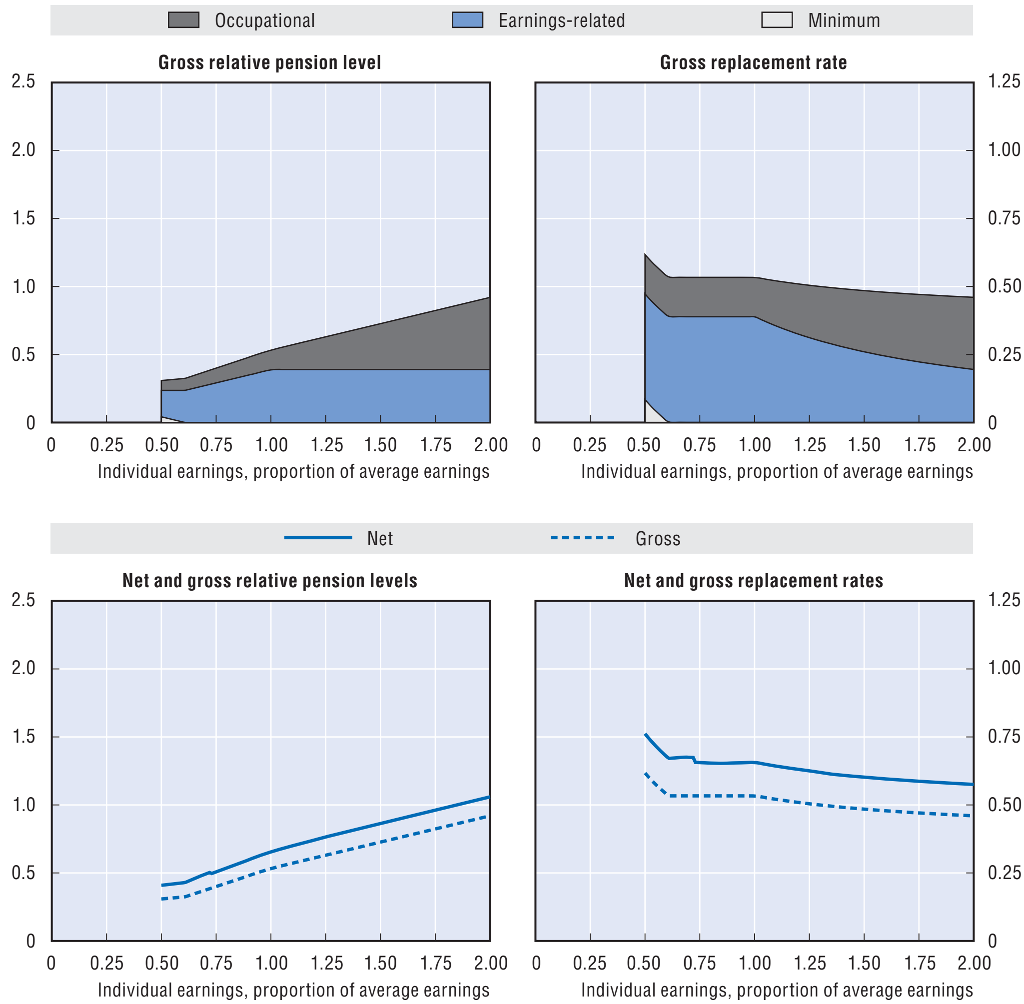
Periods out-of-work or working part time caring for a child under three are also credited in the public and occupational pension schemes. Credits are awarded as if the parent had earned the minimum wage. The three-year maximum applies to the first two children: credited periods are longer for subsequent children. To qualify, parents must be entitled to family benefits and have earnings below thresholds (EUR 17 600 for the first child and 30% more for subsequent children). This credit is cumulated with the two years credited per child in the public scheme.

Unemployment

Periods of involuntary unemployment are fully credited towards the state pension when unemployment benefits are received, including the following programmes: *allocation unique dégressive*, *allocation chômeurs âgés*, *allocation formation reclassement*, *allocation de solidarité spécifique*, *allocation spécifique d'attente* and *allocation d'insertion*. For each completed 50 days of unemployment per year, one quarter of contributions is attributed (with a maximum of four quarters per year). These periods enter the pension calculation assuming earnings of EUR 1 438 per quarter or EUR 5 752 per year.

There is also a credit for the first period of unemployment without unemployment benefits to a maximum of one year. Subsequent periods of involuntary unemployment without unemployment benefits are credited to a maximum of one year only if this follows a period of unemployment with unemployment benefits. There is no credit for periods in receipt of social assistance (*revenu minimum d'insertion*).

Pension modelling results: France



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	45.3	30.9	40.0	53.3	72.7	92.0
(% average gross earnings)						
Net relative pension level	56.7	40.9	50.8	65.7	86.4	106.0
(% net average earnings)						
Gross replacement rate	53.3	61.7	53.3	53.3	48.5	46.0
(% individual gross earnings)						
Net replacement rate	65.3	76.2	65.6	65.7	60.2	57.5
(% individual net earnings)						
Gross pension wealth	9.3	10.8	9.3	9.3	8.5	8.0
(multiple of individual gross earnings)	*10.8*	*12.5*	*10.8*	*10.8*	*9.8*	*9.3*
Net pension wealth	8.3	10.2	8.4	8.2	7.1	6.6
(multiple of individual gross earnings)	*9.6*	*11.7*	*9.7*	*9.4*	*8.2*	*7.6*

Germany

Germany: Pension system in 2006

The statutory public pension system has a single tier and is an earnings-related PAYG system. Calculation of pensions is based on pension points. There is a social assistance safety net for low-income pensioners.

Key indicators

		Germany	OECD
Average earnings	EUR	42 400	28 600
	USD	53 200	35 800
Public pension spending	% of GDP	11.4	7.2
Life expectancy	At birth	79.8	78.9
	At age 65	83.9	83.4
Population over age 65	% of working-age population	32.2	23.8

Qualifying conditions

The pension is payable from age 67 with five years' contributions and from age 63 with 35 years' for those born 1964 and later. Fewer than five years' contributions earn no benefit.

Benefit calculation

Earnings-related

A year's contribution at the average earnings of contributors earns one pension point. The relevant average earning is approximately identical to National Accounts average earnings. Contributions based on lower or higher income earn proportionately less or more pension points. Contributions are levied on annual earnings up to EUR 63 000 in 2006. The ceiling is equivalent to 214% of the relevant average earnings. The relevant earnings were EUR 29 494 in 2006, equivalent to 70% of the OECD average earnings measure.

At retirement, the pension points of every year are summed up. The sum of pension points is multiplied by a "pension-point value", which was EUR 313.56 in calendar year 2006. The pension point value is valid for newly retired and already retired pensioners. It is uprated annually in line with gross wages as a starting point but depends on two additional factors. The first factor incorporates changes of the contribution rates to the statutory pension scheme and to the subsidised voluntary occupational and personal pension schemes. An increase of contribution rates will reduce the adjustment of pension point value. The second, so-called sustainability factor, links the adjustment of the pension-point value to changes in the system dependency ratio, that is, the ratio of pensioners to contributors.

These factors were integrated into the indexation rules with the aim to limit the increase of the contribution rate from currently 19.9% to 22%. The increase of the pensioner/contributor ratio will result in indexation to less than average wages. In the long run, the adjustment of the pension-point value is expected to be 18% below the increase of average earnings.

The relevant average earnings for calculating the pension points as well as the pension-point value are slightly different in the new Länder. This difference is assumed to disappear in the long run as wages will align.

Social assistance

For people with low income there is a social assistance which is also applicable for pensioners. The social-assistance amounts in the western Länder in 2006 to EUR 8 172 per year including average benefits for housing and fuel costs; this is equivalent to 19.3% of average earnings.

Voluntary private pensions

There is an additional voluntary private pension which can be provided by banks, insurance companies or investment funds. The contribution rate for this *Riester* pension is gradually increasing to 4% by 2008. Coverage of occupational plans is 64% of employees and coverage of personal schemes is 44%. There are numerous types of voluntary personal and occupational plans in Germany and there is significant double-counting of individuals between these two categories. Most provision now is provided on a defined-contribution basis and a contribution rate of 4% is assumed: this is the most common because it is the maximum that attracts a significant public subsidy.

Variant careers

Early retirement

For those born 1964 or later, early retirement is possible from 63 with 35 years' contributions and eight years of contribution immediately before retirement with reductions. If retiring before the age of 67, benefits are reduced by 3.6% per year of early retirement. In addition, compared to someone retiring at 65, pension entitlements are significantly lower due to working two years less and not earning additional pension points. Early retirement without reductions at the age 65 is possible with 45 years of contributions.

Late retirement

Deferring the pension after 67 earns a 6% increment for each year of additional work.

Childcare

The state pays pension contributions for three years per child born in 1992 or later. This can be taken by either employed or non-employed parent or shared between parents. These years are credited with one pension point (equal to contributions based on average earnings) per child. There are also credits for periods caring for children up to age 10. These years count toward the number of years needed to qualify for a pension (*Berücksichtigungszeit*) and in addition have an effect on the pension entitlement. If people work and contribute when their children are under 10 or if at least two children under 10 are parented, they receive a bonus of up to 0.33 pension points per year. However, this cannot result in a total accrual exceeding one pension point per year.

Unemployment

The unemployment insurance contributes to the pension scheme on behalf of the unemployed. During the first period of unemployment benefits (*Arbeitslosengeld I*), contributions are paid on the basis of 80% of previous gross earnings. The first period lasts between six and 24 months depending both on age and contribution years. Thereafter, the unemployed person moves to the second type of unemployment benefit (*Arbeitslosengeld II*), which is both paid at a lower rate and means-tested. For this period, the unemployment insurance pays contributions on the basis of EUR 205 per month, so that 0.0834 pension-points are earned for each year during the second period of unemployment.

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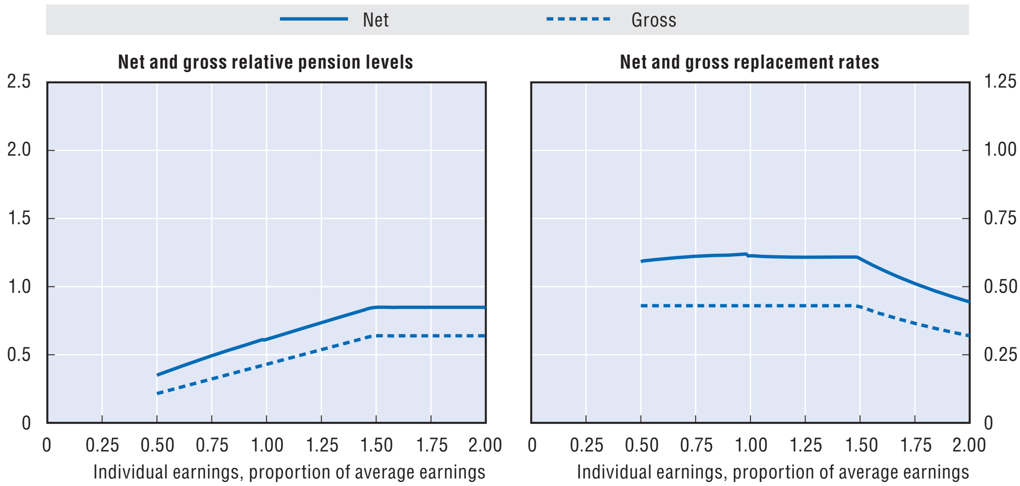
Pension modelling results: Germany



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	38.3	21.5	32.3	43.0	63.9	63.9
(% average gross earnings)						
Net relative pension level	56.5	34.9	49.3	61.3	84.8	84.8
(% net average earnings)						
Gross replacement rate	43.0	43.0	43.0	43.0	42.6	32.0
(% individual gross earnings)						
Net replacement rate	61.5	59.2	61.1	61.3	60.3	44.4
(% individual net earnings)						
Gross pension wealth	7.2	7.2	7.2	7.2	7.1	5.3
(multiple of individual gross earnings)	*8.5*	*8.5*	*8.5*	*8.5*	*8.4*	*6.3*
Net pension wealth	6.0	6.6	6.2	5.8	5.3	4.0
(multiple of individual gross earnings)	*7.1*	*7.8*	*7.3*	*6.8*	*6.3*	*4.7*

Greece

Greece: Pension system in 2006

Pensions are provided through an earnings-related public scheme with two components plus a series of minimum pensions/social safety nets.

Key indicators

		Greece	OECD
Average earnings	EUR	23 000	28 600
	USD	28 900	35 800
Public pension spending	% of GDP	11.5	7.2
Life expectancy	At birth	79.6	78.9
	At age 65	83.5	83.4
Population over age 65	% of working-age population	30.0	23.8

Qualifying conditions

The normal pension age is 65 for both men and women. A pension from this age requires a minimum of 4 500 days of contributions (equivalent to 15 years). Workers with a contribution record of 11 100 working days (37 years) can retire on a full benefit regardless of age. There are concessions for people who work in arduous or unhygienic occupations and for women with dependant or disabled children.

The minimum social pension requires 15 years' contributions.

Benefit calculation

Earnings-related scheme: main component

For labour-market entrants from 1993, the pension is 2% of earnings for each year of contributions up to 35 years. There is therefore a maximum replacement rate of 70% for people retiring at the normal age or earlier. However, for working after the age of 65 and a contribution period of 35 years, there is a higher accrual of 3.3% per year, for a maximum of three years, while there is no accrual rate for those working after this period (maximum replacement rate of 80%).

The earnings measure is the average over the last five years before retirement. Earlier years' pay is adjusted in the pension value ("valorised") in line with increases defined in national incomes policy.

There is a maximum pension, calculated as four times the 1991 GNP per capita (this is a fixed amount of 105.000 drachmas, equal at that time to the amount of the average GNP per capita), linked to the increases on pensions each year according to the income policy. For 2006, this cap on pension benefits was EUR 2 538.28 per month. The calculations indicate that, for a full-career worker, this is equivalent to a ceiling on pensionable earnings of 325% of average earnings.

Adjustment of pensions in payment is discretionary. Pension increases have been progressive in the years 1999-2004. Since 2005, all pensions are increased by the same proportion (see below). In 1999-2001, increases of low pensions were substantially larger than price inflation. However, in 2002, they lagged behind. Given the lack of consistent practice in recent benefit adjustments, pension wealth calculations are based on price indexation.

	1999	2000	2001	2002	2003	2004	2005	2006
Inflation	2.60%	3.20%	3.40%	3.60%	3.00%	2.90%	3.50%	2.90%
Increases	3.9% (< EUR 733)	4.00%	5.5% (< EUR 352)	3.5% (< EUR 400)	4.0% (< EUR 500)	5.0% (< EUR 500)	4.0%	4.0%
	3.4% (> EUR 733)		2.75% (< EUR 587)	1.5% (< EUR 620)	2.0% (< EUR 1 000)	3.0% (< EUR 1 000)		
			1.4% (< EUR 880)	0.75% (< EUR 910)	0% (> EUR 1 000)	0% (EUR 1000)		
			0% (> EUR 880)	0% (> EUR 910)				

Earnings-related scheme: supplementary component

The full supplementary pension is 20% of the earnings measure under the main component of the earnings-related scheme for workers with 35 years of contributions. The pension is proportionally reduced for shorter contribution periods, implying a linear accrual rate of 0.57%. The value is increased by ?5th for each year of contributions (300 days) beyond 35 years.

Minimum pension

For 2006, the value was EUR 445.37 per month, equivalent to 27.1% of average earnings. This value is adjusted annually as part of the incomes policy. The minimum supplementary pension was EUR 111.25.

Income-tested scheme: social solidarity benefit

This scheme, introduced in 1996, is a non-contributory, means-tested benefit payable to low-income pensioners eligible under most schemes (apart from the farmers' pension programme).

Eligibility for benefits under this scheme, known as EKAS, requires that total net income from all sources is less than EUR 7 165.71 (2006). Total taxable income must not exceed EUR 8 360.00 and the total taxable family income, EUR 13 009.20.

Income level, lower limit	0	EUR 6.525.91	EUR 6 781.87	EUR 6 952.44	EUR 7 165.71
Benefit per month	EUR 160.15	EUR 120.11	EUR 80.08	EUR 40.04	0

Variant careers

Early retirement

Early retirement is possible subject to reductions, as shown in the table below. The adjustment is 1/200 per month of early retirement, which is equivalent to 6% per year.

Number of years	Eligibility	Conditions
15	65	No reduction
15	60	With reduction (1/200)
35	55	With reduction (1/200)
37	Any	No reduction

Late retirement

It is possible to retire after the normal pension age of 65 and a contribution period of 35 years. An increased accrual rate of 3.3% is applied in the main component up to 68 years of age and for a maximum of 3 extra years; there is no accrual rate for those working after this period (maximum replacement rate of 80%). The supplementary component also continues to accrue.

It is possible to combine work and pension receipt as long as the people are no younger than 55 years of age. In that case the part of their monthly pension income that exceeds EUR 733 is reduced by 70%; there is an increment for dependent children.

Childcare

As of 2003, there is a credit towards the pension qualifying conditions of one year for the first child, and two years for each subsequent child to a maximum of three children (at a rate of 300 days insurance per year). This credit can be claimed by either parent and cannot count towards the minimum required insurance period, or for the cases of 37 years, 4 500 days or 3 500 days of insurance.

Unemployment

Periods of unemployment can be credited up to 200 days during the lifetime. If the unemployment period overlaps with the final five years used as a base for the calculation of pensionable earnings, it is omitted and the period used for computing pensionable earnings is extended backwards.

Long term unemployed (*i.e.* unemployed for at least 12 consecutive months) aged at least 60 (men) or 55 (women) (or 55 and 50, respectively, when employed in arduous and unhealthy jobs) who lack up to a maximum of 1 500 days for qualifying for an old age and/or supplementary pension by IKA-ETAM, may optionally continue their insurance until they fulfil the minimum pension requirements. The corresponding social contributions are paid by a special account of the Labour Employment Office (LAEK).

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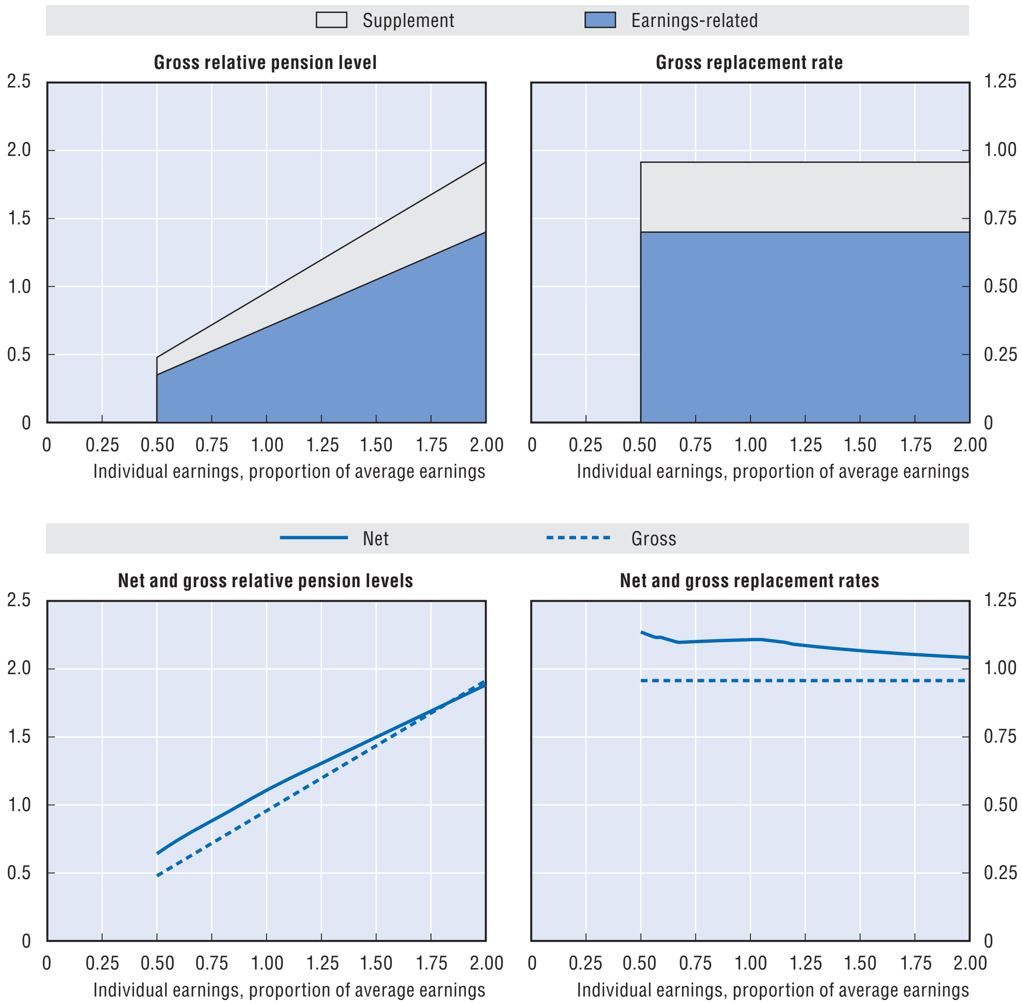
Pension modelling results: Greece



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	81.4	47.9	71.8	95.7	143.6	191.4
(% average gross earnings)						
Net relative pension level	97.3	64.1	88.3	110.8	149.8	188.3
(% net average earnings)						
Gross replacement rate	95.7	95.7	95.7	95.7	95.7	95.7
(% individual gross earnings)						
Net replacement rate	110.4	113.6	110.1	110.8	106.7	104.2
(% individual net earnings)						
Gross pension wealth	14.3	14.3	14.3	14.3	14.3	14.3
(multiple of individual gross earnings)	*16.6*	*16.6*	*16.6*	*16.6*	*16.6*	*16.6*
Net pension wealth	12.8	14.3	13.1	12.3	11.1	10.5
(multiple of individual gross earnings)	*14.7*	*16.5*	*15.2*	*14.3*	*12.9*	*12.1*

Hungary

Hungary: Pension system in 2006

The new system combines an earnings-related public pension with mandatory fully funded defined contribution schemes. This applies to new labour-market entrants and people aged 42 or under at the time of reform. Older workers could choose between this mixed system or a pure pay-as-you-go, public pension. The modelling assumes that workers are covered by the mixed system.

Key indicators

		Hungary	OECD
Average earnings	HUF (million)	1.99	7.53
	USD	9 500	35 800
Public pension spending	% of GDP	8.5	7.2
Life expectancy	At birth	73.2	78.9
	At age 65	80.3	83.4
Population over age 65	% of working-age population	25.3	23.8

Qualifying conditions

A phased increase in the pension eligibility age will equalise this at 62 for both men and women (from 60 and 55 respectively). The age for men reached 62 in 2000 and will reach 62 for women from the end of 2009. In addition, 20 years' service is required for both the earnings-related pension and the minimum pension. For those retiring before the start of 2009, 15 years' service is required to receive a partial pension.

The reformed system was introduced in January 1998. People who switched voluntarily to the new, mixed system were allowed to return to the pure pay-as-you-go system until the end of 2002. Moreover, the obligation for new entrants to join a private pension fund was suspended 2002 but reintroduced in 2003.

Benefit calculation

Earnings-related

For those covered by the mixed system, the accrual rate is 1.22% of earnings for each year of service (subject to the contribution ceiling, see below). This compares with an accrual rate of 1.65% for those covered by the pay-as-you-go system alone.

The earnings base is currently net-gross pay (*i.e.* gross wage less employee's contribution) in all years since 1988, moving towards the full lifetime. This will be changed into net pay from 2008. Earlier years' earnings are valorised with economy-wide average earnings to a point two years before retirement. The last three years' earnings prior to retirement are entirely unvalorised. This will be changed from January 1, 2008, to full valorisation (to the year preceding retirement). The summary effect of the two changes will be about 8% reduction.

A ceiling to pensionable earnings was introduced in 1992. Roughly speaking, the ceiling is about three times the gross wage since 2005 but it is set in advance. The ceiling was HUF 17 330 per day in 2006.

The pension in payment has been indexed half to wages and half to prices since 2001 but further *ad hoc* increases were applied.

There is currently an additional month's pension from 2006.

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Minimum

There is a minimum pension, which was worth HUF 25 800 per month in 2006 (around 16% of gross average earnings and it is around 30% of net average monthly earnings). The value is indexed in the same way as benefits under the earnings-related scheme, that is, half prices and half average earnings.

Defined contribution

Some 8% of gross pensionable earnings are diverted to the funded plan from 2004 for people covered by the mixed public-private pension option (either by choice or by mandate). This represents an increase from 6% (1998-2002) and 7% (2003). The accumulated capital must be converted into an annuity on retirement. According to the current legislation the annuity must provide at least the same Swiss indexation of the pension in payment as the public pension scheme. Unisex life tables must be used to calculate annuity rates. Since 2007, the employer' pension contribution rate has been raised from 18 to 21%, while employee's part has remained unchanged: 8.5%.

Variant careers

Early retirement

Early retirement is currently possible at age 60 for men and at age 57 for women without actuarial reduction. When pension ages are equalised at 62, early retirement will be available from 59 for both men and women. This early-retirement age will increase to 60 from 2013 subject to at least 37 years of service.

The reduction per month until reaching 62 years of age is as follows:

- After reaching 61 until reaching 62: 0.3% reduction per missing month.
- 3.6% + 0.4% per missing month until reaching 61.

Late retirement

It is possible to defer the earnings-related pension. The pension is increased by 0.5% for each month of deferral.

Childcare

The pension systems provide varying degrees of protection for both periods of pregnancy and childcare. The benefits existing are: pregnancy confinement benefit, child care fee and child care allowance. Pension contributions now have to be paid when receiving these benefits, and if it is favourable the amount of benefit is included in the calculation of the pension base.

The pregnancy confinement benefit (*terhességi gyermekágyi segély*) is paid for 24 weeks (168 days) during pregnancy and after birth. The benefit is 70% of the daily average gross earnings of the previous year. The child care fee (*gyermekgondozási díj*) can be claimed by one of the parents after the expiry of the pregnancy confinement benefit; the entitlement runs to the second birthday of the child (maximum 24 months). The benefit amount is 70% of the daily average gross earnings of the previous year up to the maximum of twice of the minimum wage (HUF 87 500 per month in 2006). Child care allowance (*gyermekgondozási segély*) is paid to one of the parents who care for the child until the child's third birthday (maximum 36 months). The monthly amount is equal to the minimum old-age pension of HUF 25 800 in 2006, irrespective of the number of children in the family.

In 2006, pension contributions for child care benefits are paid by:

	Individual	Employer	Government
Child care fee	X	–	X
Child care allowance	X	–	X

Unemployment

The unemployed are covered by the earnings-related pension system. All periods of unemployment are qualified as a pensionable service. The earnings measure for the period of unemployment is the most favourable of: *i)* the amount of unemployment benefits; or *ii)* the average of previous and subsequent earnings.

The early pension scheme (*Előnyugdíj*) was paid to many long-term unemployed older workers during the economic transition but this is no longer significant. However, older unemployed people can receive special pre-retirement benefits if they satisfy a number of conditions: they have received unemployment insurance benefits for 140 days, will reach pensionable age within five years, exhausted their unemployment benefit entitlement within eight years before pensionable age and have contributed to the pension scheme for at least 20 years.

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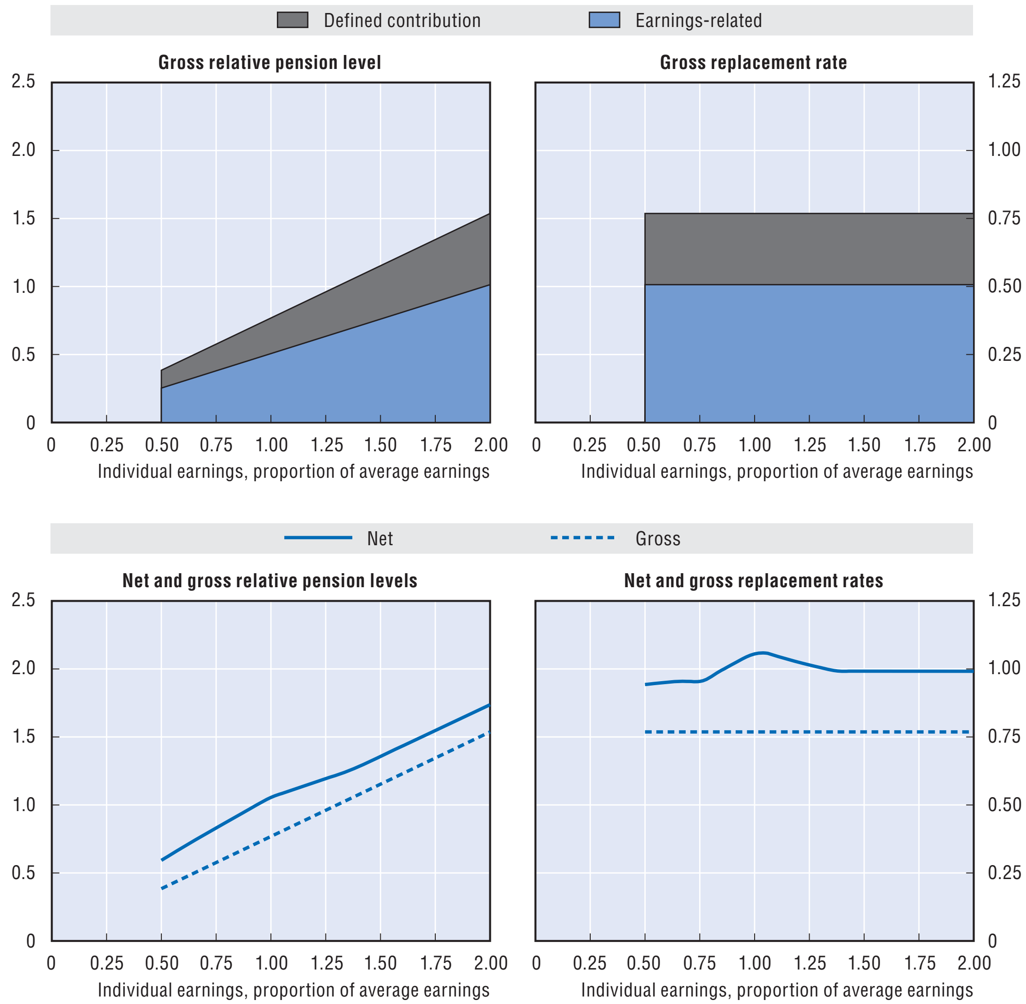
Pension modelling results: Hungary



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	56.9	38.4	57.6	76.9	115.3	153.7
(% average gross earnings)						
Net relative pension level	82.1	59.3	83.1	105.5	135.7	173.7
(% net average earnings)						
Gross replacement rate	76.9	76.9	76.9	76.9	76.9	76.9
(% individual gross earnings)						
Net replacement rate	95.4	94.3	95.4	105.5	99.2	99.2
(% individual net earnings)						
Gross pension wealth	12.4	12.4	12.4	12.4	12.4	12.4
(multiple of individual gross earnings)	*15.4*	*15.4*	*15.4*	*15.4*	*15.4*	*15.4*
Net pension wealth	11.6	12.4	11.6	11.0	9.5	9.1
(multiple of individual gross earnings)	*14.3*	*15.3*	*14.3*	*13.6*	*11.7*	*11.2*

Iceland

Iceland: Pension system in 2006

The public pension has three components: a basic and two income-tested schemes. There are also mandatory occupational pensions with a hybrid (albeit mainly defined-benefit) formula.

Key indicators

		Iceland	OECD
Average earnings	ISK (million)	3.48	2.50
	USD	49 800	35 800
Public pension spending	% of GDP	2.0	7.2
Life expectancy	At birth	81.2	78.9
	At age 65	84.5	83.4
Population over age 65	% of working-age population	19.5	23.8

Qualifying conditions

The normal pension age is 67. A full basic pension is earned with 40 years' residency. The pension is proportionally reduced for shorter periods of residency, with a minimum of three years required. The pension age is also 67 for members of private-sector occupational plans but is 60 for seamen who have been working in this occupation for at least 25 years.

Benefit calculation

Basic

The full basic pension value is ISK 24 131 per month, equivalent to around 8% of average earnings. This benefit is income-tested: withdrawal begins once income (from sources other than the supplementary pension) exceeds ISK 1 998 438, equivalent to 57% of average earnings, and lapses at ISK 2 963 678. This income test applies only to non-pension income, such as earnings from work or social assistance as well as 50% of capital income.

Targeted

A second element is the pension supplement. The maximum value of this benefit is ISK 44 838 per month for a single person, some 15% of average earnings. This benefit is withdrawn against income above ISK 607 850 per year (around 17% of average earnings). The basic pension, however, does not affect the value of the pension supplement. The withdrawal rate for the income test in the pension supplement is 45%.

Finally, there is an additional pension supplement with a maximum entitlement of ISK 22 109 per month, just under 8% of average earnings. This is withdrawn against all other income at a rate of 45% and lapses at a level of 589 573.

The benefit levels are adjusted annually in accordance with the current State Budget. Adjustments are to take account of public-sector pay (which is assumed here to be equal to the standard assumption of economy-wide earnings growth) and the price level pursuant to the cost-of-living index.

Mandatory occupational

Employer schemes are mandatory. The law requires schemes to target a replacement rate of 56% with 40 years' contributions, giving an accrual rate of 1.4% for each year of service. Coverage is mandatory for people aged 16 to 70. The earnings base in this

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calculation is average lifetime salary for each year of membership. There is no ceiling to pensionable earnings. Past earnings are valorised in line with price inflation plus 3.5% interest rate.

Occupational pensions in payment must by law be increased in line with consumer price inflation.

In practice, many schemes pay more than the legal minimum outlined above, typically introducing a hybrid defined-contribution/defined-benefit element into the system. There is a minimum contribution to occupational schemes of 12% of earnings. The employee pays 4% and the employer 8%. Contributions above the level needed to finance the statutory benefits described above can be used either to increase defined-benefit entitlements or diverted to individual accounts thus delivering a defined-contribution pension. However, the modelling covers only the mandatory component and not these extra-statutory benefits as they are not guaranteed.

Variant careers

Early retirement

Under the mandatory occupational scheme, early retirement rules vary between funds, depending on the structure of fund membership. In the private sector, the normal retirement age is 67 and the pension can be claimed from 62. In general, pensions are reduced by 7% for each year that pension is claimed early.

It is not possible to claim the basic or targeted pensions before the normal pension age.

Late retirement

Under the mandatory occupational scheme, workers can postpone retirement until the age of 70 with a pension increase of 9% for each year of deferral. Workers who defer their pension continue to contribute and earn extra pension entitlements. In some cases, the total contribution period is limited to 32 years.

It is not possible to defer the basic or targeted pension after normal pension age. The basic pension is subject to an earnings test (see above), while the targeted schemes are tested against all income, including earnings.

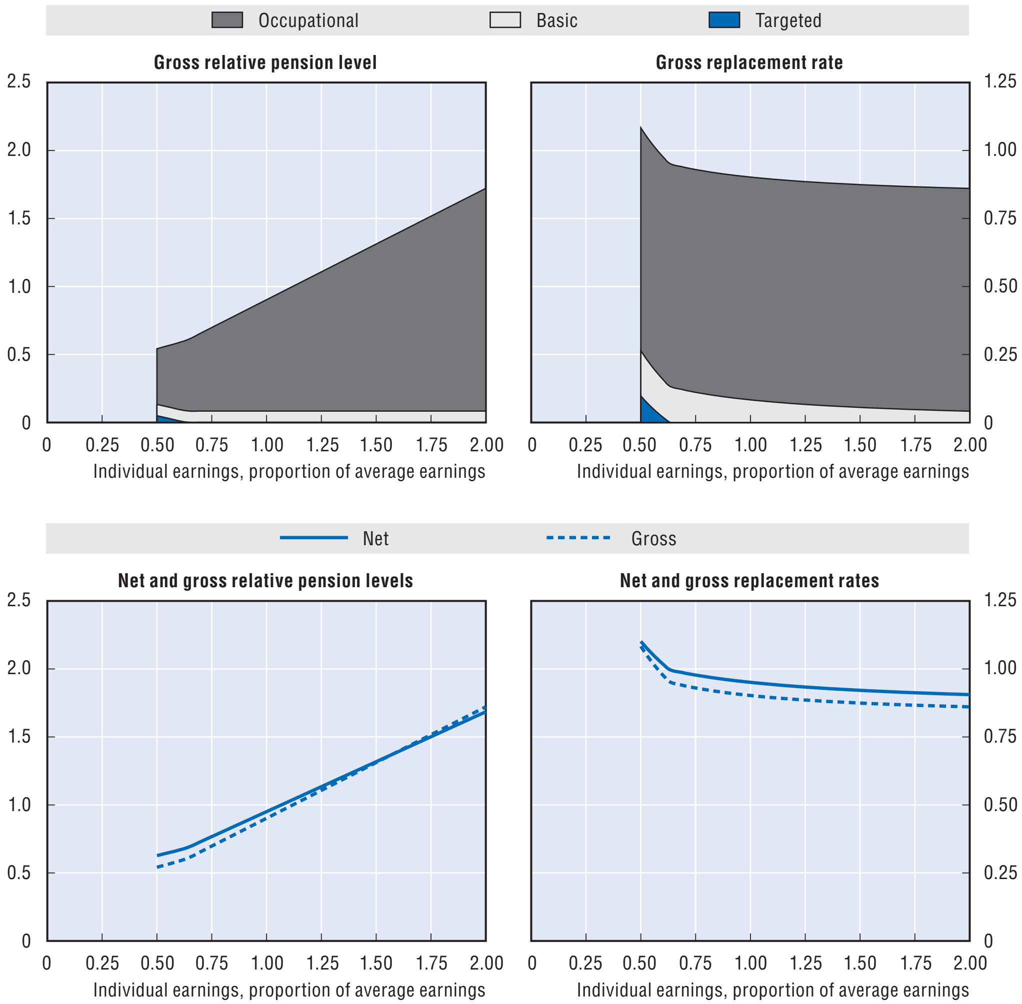
Childcare

The residency-tested basic pension and the targeted schemes automatically protect women who leave paid work to care for children. There are no specific credits for childcare absences. The occupational pension funds themselves make no provisions for women who must leave work to care for children. The government social assistance scheme contains benefits for parents (men or women) who must take care of children with long-term illnesses or disabilities. Such benefits are also provided in cases where people must take care of close relatives (*e.g.* adult son or daughter taking care of aged parent).

Unemployment

The contribution base, on which the minimum 10% contribution is levied, includes unemployment insurance benefits as well as earnings but excludes all other benefits.

Pension modelling results: Iceland



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	77.9	54.2	69.8	90.2	131.2	172.1
(% average gross earnings)						
Net relative pension level	84.1	62.7	76.7	95.1	131.8	168.5
(% net average earnings)						
Gross replacement rate	91.7	108.3	93.0	90.2	87.5	86.1
(% individual gross earnings)						
Net replacement rate	96.5	110.1	97.7	95.1	92.1	90.6
(% individual net earnings)						
Gross pension wealth	14.0	17.0	14.2	13.7	13.2	12.9
(multiple of individual gross earnings)	*15.7*	*19.1*	*15.9*	*15.4*	*14.8*	*14.5*
Net pension wealth	10.6	13.9	11.0	10.2	9.3	8.9
(multiple of individual gross earnings)	*11.9*	*15.6*	*12.4*	*11.4*	*10.5*	*10.0*

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Ireland

Ireland: Pension system in 2006

The public pension is a basic scheme paying a flat rate to all who meet the contribution conditions. There is also a means-tested pension to provide a safety net for the low-income elderly. Voluntary occupational pension schemes have broad coverage: around half of employees.

Key indicators

		Ireland	OECD
Average earnings	EUR	30 000	28 600
	USD	37 600	35 800
Public pension spending	% of GDP	3.4	7.2
Life expectancy	At birth	79.7	78.9
	At age 65	83.5	83.4
Population over age 65	% of working-age population	17.7	23.8

Qualifying conditions

The state pension (contributory) is payable from age 66 while the state pension (transition) is paid from 65. Full entitlement to both benefits requires an average of 48 weeks contributions or credits per year throughout the working life. The pension value is proportionally reduced for incomplete contribution histories. However, the old-age contributory pension requires a minimum average of ten weeks' contributions per year and the retirement pension, 24 weeks per year. There is also a minimum total period of contributions of 260 weeks (equivalent to five years' full coverage).

The means-tested pension is payable from age 66.

Benefit calculation

Basic

The values of the State Pension (contributory) old-age pension and the State Pension (transition) are both EUR 193.30 per week (paid for 53 weeks per year) for 2006, which is 34.2% of average earnings (on the OECD measure of average earnings). There is an addition of EUR 128.80 for a dependant adult of working age and EUR 149.30 for a dependant age 66 or over. Pensions are increased on an annual basis, decided by Government in the context of the annual budget. In recent years, increases have been in excess of earnings growth.

Pensioners are entitled to many benefits-in-kind. The government estimates that the price of these goods and services would be EUR 950 per year, excluding health benefits. (Note that the modelling covers only cash benefits and not benefits-in-kind.)

Targeted

The maximum value of the means-tested benefit is EUR 182 per week for a single person with an extra EUR 120.30 for an adult dependant for 2006. The single person's benefit is worth 32% of average earnings. There is a small weekly disregard of EUR 20 in the means test, and as from 2006 there is an additional earnings disregard of EUR 100: otherwise, the benefit is withdrawn at 100% of income. There is also an assets test, with capital of more than EUR 35 000 being converted to income using a standard formula.

The value of the target safety-net income in the means-tested scheme broadly follows the uprating of the basic schemes.

Voluntary private pensions

Around 43% of employees have an occupational pension plan. Of members working in the private sector, around 50% of these are in defined-contribution and 50% in defined-benefit plans. (This relates to schemes subject to funding regulations, which are mainly in the private sector.) The defined-benefit plan is assumed to pay 1/60th of final salary for each year of service, a contribution rate of 1.67%. It is assumed that the defined-benefit scheme is "integrated with the public scheme", meaning that the value of the basic pension is deducted from the entitlement. When people change jobs, the value of the deferred occupational pension is indexed to price inflation.

For defined-contribution occupational plans, the average contribution rate is about 10% of earnings. In addition, around 15% of people have defined-contribution personal plans.

Variant careers

Early retirement

Pensions cannot be claimed before the normal eligibility age.

Late retirement

Work and pension can be combined subject to earnings being less than EUR 38 per week under the state pension (transition), which is payable for one year. However, the state pension (contributory) is not subject to an earnings test. It is not possible to defer claiming the pension.

Childcare

Eventual public pension entitlement is not affected by periods out of paid work for caring purposes.

Unemployment

Eventual public pension entitlement is not affected by periods of unemployment.

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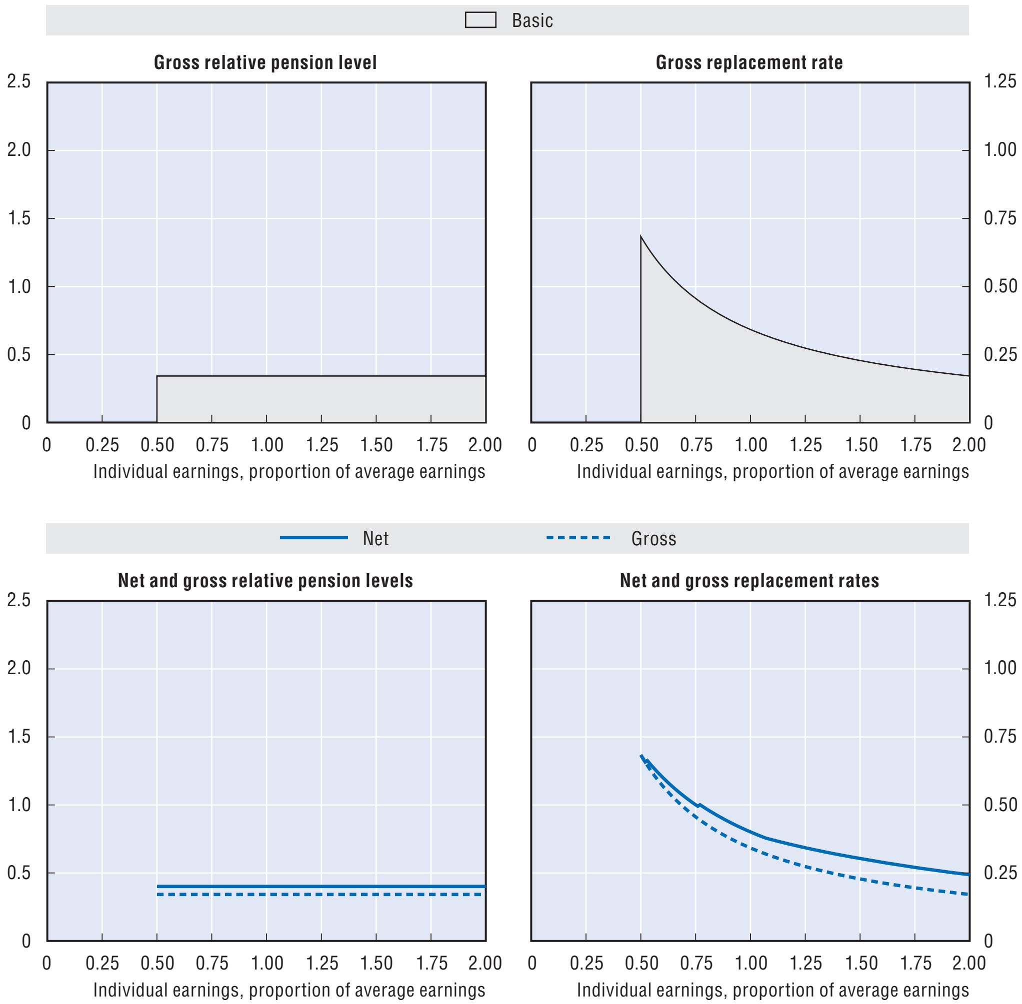
Pension modelling results: Ireland



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	34.2	34.2	34.2	34.2	34.2	34.2
(% average gross earnings)						
Net relative pension level	40.1	40.1	40.1	40.1	40.1	40.1
(% net average earnings)						
Gross replacement rate	39.8	68.4	45.6	34.2	22.8	17.1
(% individual gross earnings)						
Net replacement rate	45.6	68.4	50.1	40.1	30.3	24.4
(% individual net earnings)						
Gross pension wealth	7.1	12.1	8.1	6.1	4.0	3.0
(multiple of individual gross earnings)	*8.4*	*14.5*	*9.6*	*7.2*	*4.8*	*3.6*
Net pension wealth	7.1	12.1	8.1	6.1	4.0	3.0
(multiple of individual gross earnings)	*8.4*	*14.5*	*9.6*	*7.2*	*4.8*	*3.6*

Italy

Italy: Pension system in 2006

The new Italian pension system is based on notional accounts. Contributions earn a rate of return related to GDP growth. At retirement, the accumulated notional capital is converted into an annuity taking account of average life expectancy at retirement. It applies in full to labour-market entrants from 1996 onwards.

Key indicators

		Italy	OECD
Average earnings	EUR	24 600	28 600
	USD	30 900	35 800
Public pension spending	% of GDP	14.0	7.2
Life expectancy	At birth	80.9	78.9
	At age 65	84.5	83.4
Population over age 65	% of working-age population	32.5	23.8

Qualifying conditions

The normal pension age under the new system will be 65 for men and 60 for women from 2008 onwards. However, early retirement will still be possible under various contribution conditions (see below). The baseline modelling assumes that men retire at 65 and women at 60.

Benefit calculation

Earnings-related scheme

Under the contribution-based regime the private and public employees contribution rate is 33%, of which about one-third is paid by the employee and two-thirds by the employer; the amount of pension is calculated as a product of two factors: the total lifelong contributions, capitalised with the nominal GDP growth rate (in line with a five-year moving average) and the transformation coefficient whose calculation is mainly based on the probabilities of death, the probabilities of leaving any widow or widower and the number of years that a survivor's benefit will be withdrawn. As a consequence, benefits are strongly related to retirement age – the lower the age, the lower the pension.

The transformation coefficients are reviewed every three years. They are available for the age bracket 57-65, but workers may not retire earlier than 65 unless they have reached the eligibility requirements stated by the current legislation and an amount of pension not less than 1.2 times the old age allowance.

Age of retirement	57	58	59	60	61	62	63	64	65+
Transformation coefficient (%)	4.014	4.113	4.217	4.328	4.446	4.572	4.705	4.847	4.999

Note: The coefficients above are based on ISTAT 2001 demographic forecasts.

The baseline assumption in modelling all countries is 2% annual real wage growth. Given the projected decline in the Italian labour force, a consistent assumption is that real GDP growth is 1.6% per year.

For employees, in 2006, minimum pay for contribution purposes is EUR 171.03 per week (36% of average earnings). Maximum earnings for benefits are EUR 85 478 per year under the new scheme, or just under 347% of average earnings.

The indexation of pensions in payment is complex, since smaller pensions are accorded a more generous treatment than larger pensions. For benefits up to three times the minimum pension, there is full price indexation of pensions in payment. This threshold is EUR 1 260 per month for 2005 (which is used to index pensions in 2006) and EUR 1 283 for 2006 (for 2007 indexation) or approximately two-thirds of economy-wide average earnings. For benefits between three and five times the minimum pension, pensions in payment are uprated by 90% of price inflation. Above this threshold, indexation falls to 75% of prices. Note that the indexation applies separately to each slice of a large pension.

Social assistance

The minimum pension (see below) is abolished for people covered only under the new system; *i.e.*, entrants after 1996. However, pensioners with incomes below the social-assistance level can claim a means-tested benefit from age 65. Including supplements, the 2006 value of the social-assistance benefit (*assegno sociale*) was EUR 5 130. There is a higher benefit of EUR 7 167 for over 70s. These are equivalent to 21% and 29% of average earnings, respectively.

Voluntary private pensions

There is an additional voluntary, supplementary occupational system. It consists of both open funds and closed collectively agreed funds. The closed funds can be funded by both employers and employees as well as from the TFR. The open funds provide an annuity based on contributions. The current TFR contribution rate is 6.91%. The number of workers enrolled in a private pension fund is still low. For this reason, the Finance Act for 2007 has anticipated (with some changes) the pension reform recently passed (Law 243/2004 and legislative decree 252/2005) which introduced further measures in order to speed up the development of the second pillar: *a)* higher fiscal incentives; and *b)* silence-as-assent for the transfer of the private severance pay (TFR).The latter means that the current severance pay accumulation will be transferred to a private pension fund, unless the worker communicates his or her refusal. However, enrolment in the private pension funds remains voluntary.

Occupational pension coverage in Italy remains low: around 11% of employees. The government has encouraged workers and employers to switch severance pay schemes (known as the *Trattamento di Fine Rapporto*) to occupational pension schemes, though the coverage figures show that few have done so.

Given the low coverage, these plans are not included in the modelling of voluntary private pensions.

Variant careers

Early retirement

Under the previous system, workers could retire at age 57 if they had contributed to the system for 35 years. From January 2008, minimum age has been increased to 58 years (59 years if self employed). A recent reform, approved as part of the 2008 budget process, has introduced a quota system based on a combination of age and seniority, so the minimum age to request early retirement (seniority pensions) will increase from 57 to 61 years old by 2013. However, it will remain possible to retire at any age with 40 years' contributions.

Late retirement

Women have the right to continue working until the normal pension age for men. Retirement is not compulsory at 65 but employers have the right to dismiss employees reaching that age. From January 2009 it is possible to totally combine employment and pension receipts. Referring to pensions under the contribution-based regime: *a)* it is possible to totally combine employment and anticipated old-age pension receipts for pensioners who have 40 or more years of seniority; *b)* it is possible to totally combine employment and old-age pension receipts for pensioners who are 65 years old or more, if male, and 60 years old or more, if female.

It is possible to defer the pension claim after age 65, however the transformation coefficient (see above) remains the same, and benefits increase only because of the accumulation of further contributions and their (notional) capitalisation for one or more further years.

Childcare

The pension is increased for mothers by giving them a more generous transformation coefficient. For mothers of one or two children this is the transformation coefficient of their actual retirement age plus one year. For three or more children this is the actual retirement age plus two years. Thus, according to the projected transformation coefficients, the effect is to increase the pension by around 3% for one or two children, and 6% for three or more children.

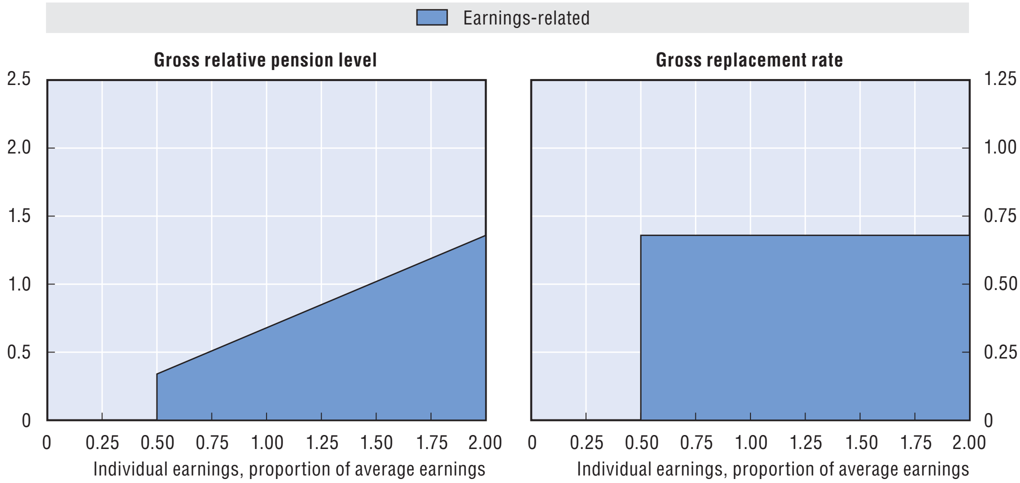
Unemployment

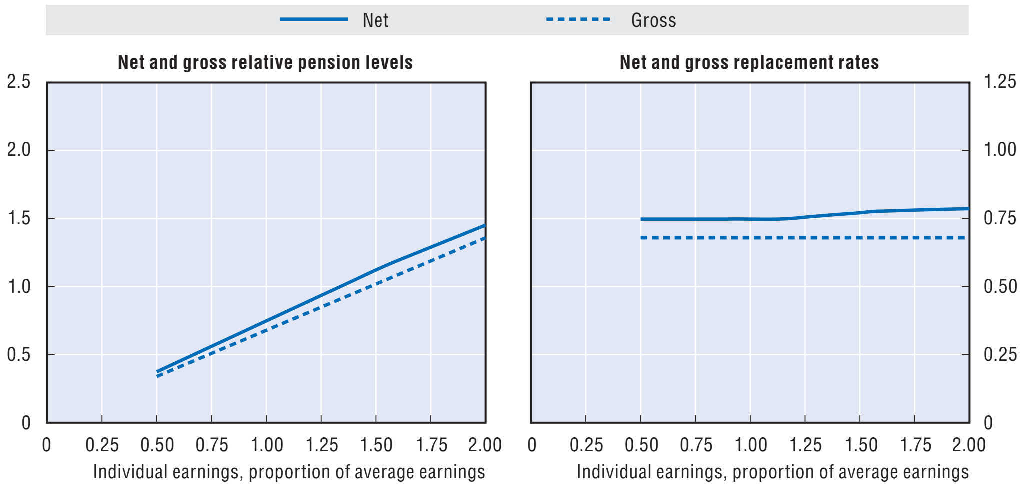
All the unemployment insurance schemes – *cassa integrazione guadagni* (CIG), *indennità di mobilità* and *indennità di disoccupazione* – give rise to credited contributions for the time the benefit is received. Previous earnings are used as a base for pension calculation.

The maximum credit period is five years over the lifetime for people that entered the labour market from 1993 onwards. This affects only the right to receive a seniority pension. Furthermore, credited contributions for *indennità di disoccupazione* – the general unemployment scheme – cannot be counted towards the 35-year contribution requirement although they do count (under the 5-year limit) towards the 40-year requirement.

Contributions are normally paid by the government, with the exception of *indennità di mobilità* in the first year of receipt and CIG, which are partially paid by the employee at a reduced rate of 5.54%.

Pension modelling results: Italy





Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	59.8	34.0	51.0	67.9	101.9	135.9
(% average gross earnings)	*46.5*	*26.4*	*39.6*	*52.8*	*79.2*	*105.6*
Net relative pension level	65.8	37.4	56.1	74.8	112.2	145.2
(% net average earnings)	*51.2*	*38.3*	*43.6*	*58.1*	*87.2*	*116.3*
Gross replacement rate	67.9	67.9	67.9	67.9	67.9	67.9
(% individual gross earnings)	*52.8*	*52.8*	*52.8*	*52.8*	*52.8*	*52.8*
Net replacement rate	74.8	74.8	74.8	74.8	77.1	78.7
(% individual net earnings)	*58.1*	*76.6*	*58.1*	*58.1*	*59.9*	*63.0*
Gross pension wealth	10.0	10.0	10.0	10.0	9.9	9.8
(multiple of individual gross earnings)	*10.7*	*10.7*	*10.7*	*10.7*	*10.7*	*10.6*
Net pension wealth	7.6	7.6	7.6	7.6	7.5	7.2
(multiple of individual gross earnings)	*8.1*	*10.7*	*8.1*	*8.1*	*8.1*	*8.0*

Japan

Japan: Pension system in 2006

The public pension system has two tiers: a basic, flat-rate scheme and an earnings-related plan (employees' pension scheme).

Key indicators

		Japan	OECD
Average earnings	JPY (million)	4.99	4.17
	USD	42 900	35 800
Public pension spending	% of GDP	8.7	7.2
Life expectancy	At birth	82.4	78.9
	At age 65	86.0	83.4
Population over age 65	% of working-age population	34.4	23.8

Qualifying conditions

The old-age, basic pension is paid from age 65 with a minimum of 25 years' contributions. The full basic pension requires 40 years of contributions, with benefits adjusted proportionally for shorter or longer contribution periods.

The earnings-related pension is paid in addition to basic pension, with a minimum of one month contribution, provided a pensioner is entitled to the basic pension. The pension age is gradually being increased from 60 to 65 years (between 2001 and 2013 for men and between 2006 and 2018 for women) for the flat-rate component and from 60 to reach 65 years for men in 2025 and for women in 2030 for the earnings-related component. The earnings-related component of the employees' pension scheme is adjusted for shorter or longer contribution periods.

Benefit calculation

Basic

The full basic pension for 2006 was JPY 792 100 per year, corresponding to 15.9% of average earnings. The basic pension is price indexed.

Social assistance

Older people are covered by the general social assistance scheme. The social assistance amount for single household aged 60-69 in Tokyo in 2006 is JPY 969 810 (*i.e.* 19% of average earnings) per year excluding housing benefit and other relevant benefit.

Earnings-related

The employees' pension scheme has a flat-rate and an earnings-related component, of which the earnings-related part is by far the most important. The accrual rate was 0.75% of earnings excluding bonuses until fiscal year 2002. From fiscal year 2003, the base for calculating pension was extended to include bonuses. With the extension of the base for calculating the pension, the accrual rate has been reduced to 0.5481% of earnings (including bonuses).

Earlier years' earnings are valorised in line with economy-wide average net earnings.

There is a ceiling on earnings subject to contributions of JPY 620 000 a month equivalent to 149% of average earnings.

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The flat-rate benefit depends on year of birth. In 2006, it ranged between JPY 1 676 and JPY 3 143 per month of contributions. This is paid only to pensioners between 62 and 64 years and this benefit will be phased out by 2013 for men.

The employees' pension in payment is price indexed.

Contracting out

Employers, who have at least 1 000 employees, may "contract out" a portion of the earnings-related pension (substitution part) if they cover their employees themselves; around 15% of employees participate in these schemes. Contracting-out requires that employers offer at least 150% (before 2005: 110%) of the benefit that the public earnings-related scheme would have provided. The calculation of the pension required for contracting out is based on lifetime average nominal earnings. Indexation of pensions in payment and valorisation of past earnings is financed by the government.

The contribution rate in contracted-out schemes is determined by the government depending on the age structure of the covered employees and the actuarial assumption. Until 1996, however, the rate was uniform across plans. Since 2005, the rate ranges between 2.4% and 5% of total remuneration.

Since 2001, the government has also been promoting defined-contribution pension schemes and defined-benefit occupational pension schemes. As a consequence, several employees' pension funds have been dissolved.

Variant careers

Early retirement

Until 2001, a "specially provided" employees' pension was available at age 60. This is being phased out and retirement with a full benefit will not be possible before age 65.

Early retirement at a reduced benefit is possible in both the basic and earnings-related schemes. The benefit is reduced by 0.5% per month of early retirement, *i.e.* 6% per year. Individuals can claim the flat-rate component of the employees' pension between 60 and 65. The pension in payment is indexed to net average earnings until the pensioner reaches age 65 and price-indexed after age 65.

Late retirement

It is possible to defer receipt of the basic and earnings-related pensions. Deferral increases the pension benefit by 0.7% per month, *i.e.* 8.4% per year. Pension rights continue to accrue for each year of contributions beyond 65.

From 2006, combining work and pension after age 65 became possible provided total income (from earnings and pension) does not exceed JPY 480 000. Above this limit, half of the excess will be reduced from the full earnings-related pension payment but the basic pension will be paid in full. From April 2007, the reduction has also been applied to workers over 70 but they do not need to pay a contribution.

Childcare

Periods spent out of paid work for childcare are credited in the earnings-related scheme. As of 2005, the maximum period has been extended from one to three years. If additional children are born while caring for a child, this period is extended until when the last child becomes three years old. During this period, contributions are considered to be made fully based on the earnings just before leave, and in calculating the benefit and qualifying conditions the entire exemption period is credited. In case parents work part-time because of childcare responsibilities, the contribution will be made based on the current earnings but the pension benefits will be calculated based on their full-time previous earnings.

If people stay out of paid work after three years and income level drops, the rule under unemployment below also applies.

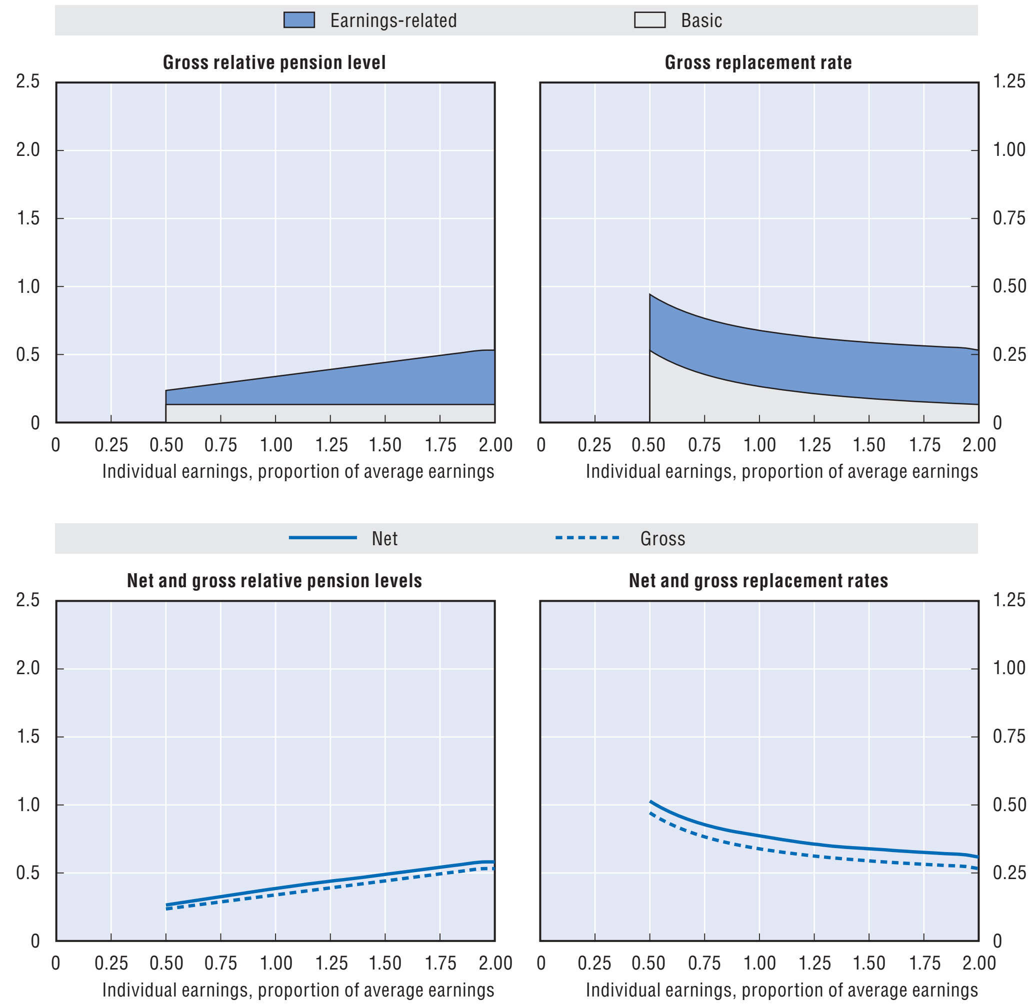
Unemployment

Workers who become unemployed or whose income is below a certain level do not need to contribute to the earnings-related scheme but they need to contribute to the basic scheme. Unemployed people may be exempted from paying all, three-quarters, a half or one-quarter of contributions, depending on the household income level. A single person with previous year's income less than JPY 570 000 is exempted from paying any contribution. People with income less than JPY 930 000 are entitled to one-quarter of contributions, those with income lower than JPY 1 410 000 pay one-half of contributions and those with income less than JPY 1 890 000 pay three-quarters of contributions.

For the periods of full exemption, people are entitled to one-third of the basic pension and for the period with one-quarter of contribution, one-half the basic pension. For the periods with one-half contribution, people gain two-thirds of the basic pension and for the period with three-quarters of contribution, five-sixths of the basic pension is credited. The exempted period is counted as full contribution period in assessing the qualifying conditions.

It is possible to pay contributions later to receive higher pension after retirement.

Pension modelling results: Japan



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	31.4	23.6	28.7	33.9	44.2	53.2
(% average gross earnings)						
Net relative pension level	35.8	26.4	32.6	38.7	48.9	58.1
(% net average earnings)						
Gross replacement rate	35.7	47.1	38.3	33.9	29.4	26.6
(% individual gross earnings)						
Net replacement rate	40.3	51.4	42.8	38.7	33.9	30.8
(% individual net earnings)						
Gross pension wealth	5.9	7.8	6.3	5.6	4.9	4.4
(multiple of individual gross earnings)	*6.7*	*8.8*	*7.1*	*6.3*	*5.5*	*5.0*
Net pension wealth	5.4	7.1	5.8	5.2	4.4	3.9
(multiple of individual gross earnings)	*6.1*	*7.9*	*6.5*	*5.8*	*4.9*	*4.4*

Korea

Korea: Pension system in 2006

The Korean public pension scheme was introduced relatively recently. It is an earnings-related scheme with a progressive formula, since benefits are based on both individual earnings and the economy-wide average of earnings.

Key indicators

		Korea	OECD
Average earnings	KRW (million)	30.44	34.08
	USD	32 000	35 800
Public pension spending	% of GDP	1.6	7.2
Life expectancy	At birth	79.1	78.9
	At age 65	83.1	83.4
Population over age 65	% of working-age population	14.5	23.8

Qualifying conditions

The pension is currently available from age 60 provided the individual has contributed for ten years or more. A reduced, early pension can be drawn from age 55.

The normal pension age is gradually being increased and will reach 65 from 2033. The modelling assumes the long-term pension age of 65 and that the early pension age will also be raised from 55 to 60.

Benefit calculation

Earnings-related

The earnings replacement rate of the pension for 40 years of contributions is 60% of the earnings in 2007, but it will be reduced to 50% in 2008 and then will be reduced by 0.5 percentage points every year until making 40% from 2009 to 2028. The model assumes that the 40% is calculated over a 45-year period. The earnings measure is the average of individual lifetime average earnings, valorised in line with wage growth, and average earnings of the insured of the national pension, measured over the previous three years and valorised in line with prices. There is a ceiling on pensionable earnings of KRW 3.6 million per month, equivalent to 142% of average earnings of the insured in whole in 2006.

The maximum level of benefit is 100% of individual earnings. The benefit is indexed to prices after retirement. People aged 60 and over do not pay contributions and benefits are not accrued after this age.

Basic age pension

Some 60% of the aged 65 and over can get the means tested “basic age pension” from 2008. It was planned that the beneficiaries-to-be would be increased to 70% in 2009. This benefit is a flat rate of 5% of the three-year average earnings of the insured of the national pension every year. The benefit is reduced in phases according to income and assets of the aged. Couple rate is 80% of single rate each.

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Variant careers

Early retirement

When, starting in 2013, the normal pension age increases from 60 to 65, the early pension age is assumed to increase from 55 to 60. At 60, the early old-age pension will then be 70% of the normal old age pension. The benefit is increased by 6% every year, so a person who retires at age 64 will be entitled to 94% of the full old age pension.

Late retirement

People can earn extra pension from retiring late. The benefit is increased by 6% every year and the maximum of deferral is 5 years until age 70.

If the pensioners between 65 and 69 get income-earnings higher than the average earnings of the insured in whole, their pension paid at 65 will be 50% of full old age pension with the benefit increasing by 10% according to age increase, which is known as the "active old-age pension". Therefore, if the pensioner between 65 and 69 is working, (s)he can choose either the "deferred pension" or the "active old-age pension".

Childcare

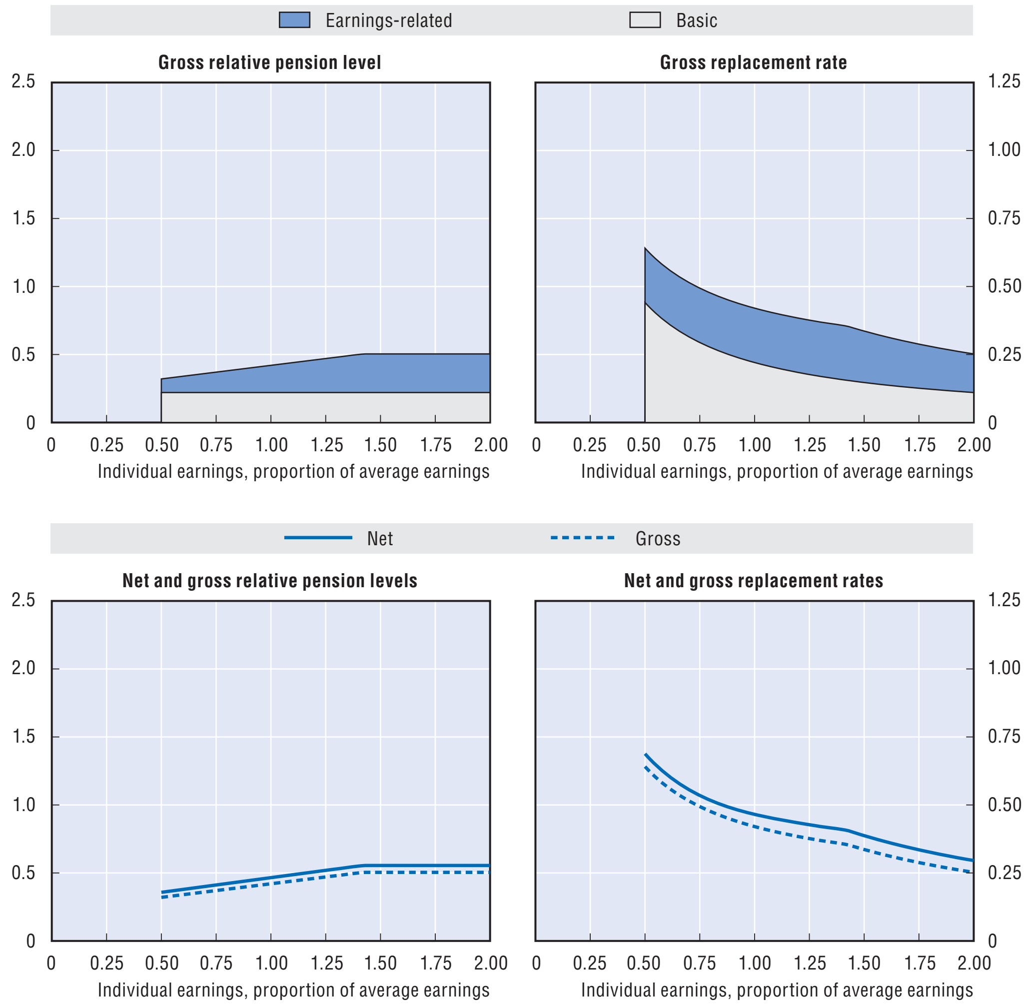
A person who is not working due to childcare can be exempted from payment of contributions during the period requested. The insured period can be increased by paying the exempted contributions (total, including the one for employers) after resuming work.

An insured woman who gives birth to a child (except for the first child) after January 2008 can get pension credits. The credits given are 12 months to a maximum of 50 months according to number of children born after that time.

Unemployment

An unemployed person can be exempted from payment of contributions during the period requested. The insured period can be increased by paying the exempted contributions (total, including the one for employers) after resuming work.

Pension modelling results: Korea



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	39.7	32.1	37.1	42.1	50.4	50.4
(% average gross earnings)						
Net relative pension level	44.0	35.8	41.2	46.6	55.5	55.5
(% net average earnings)						
Gross replacement rate	45.1	64.1	49.4	42.1	33.6	25.2
(% individual gross earnings)						
Net replacement rate	49.2	68.8	53.5	46.6	38.7	29.6
(% individual net earnings)						
Gross pension wealth	6.3	8.9	6.9	5.9	4.7	3.5
(multiple of individual gross earnings)	*7.5*	*10.7*	*8.2*	*7.0*	*5.6*	*4.2*
Net pension wealth	6.2	8.9	6.8	5.8	4.6	3.4
(multiple of individual gross earnings)	*7.4*	*10.6*	*8.1*	*6.9*	*5.5*	*4.1*

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Luxembourg

Luxembourg: Pension system in 2006

The public pension scheme has two components: a flat-rate part depending on years of coverage and an earnings-related part. There is also a minimum pension.

Key indicators

		Luxembourg	OECD
Average earnings	EUR	43 600	28 600
	USD	54 800	35 800
Public pension spending	% of GDP	7.2	7.2
Life expectancy	At birth	79.4	78.9
	At age 65	83.7	83.4
Population over age 65	% of working-age population	22.8	23.8

Qualifying conditions

An early pension is payable from age 57 with 40 years' (compulsory or voluntary) contributions. With 40 years' coverage of compulsory, voluntary or credited contributions, the pension can be paid from age 60. Since the modelling assumes a full career from age 20, it is assumed in the base case that workers retire at age 60. Otherwise, the normal pension age is 65 (subject to at least ten years' contributions).

Benefit calculation

Basic

This was worth EUR 362 per month in 2006, subject to 40 years' coverage. This is equivalent to around 10% of average earnings. For incomplete insurance, the benefit is reduced proportionally. (Formally, the basic pension is 23.5% of a reference amount, which was EUR 1 541 in 2006.)

There is also an "end-of-year allowance", which adds EUR 49 per month to the pension for 40 years' contributions. This is proportionally reduced for insurance periods under 40 years, implying around EUR 1.23 per month for each year covered. The end-of-year allowance is indexed to nominal earnings (see below).

Earnings-related

The accrual rate for the earnings-related pension is 1.85%. The earnings measure used in the formula is lifetime average pay revalued in line with nominal earnings.

The accrual rate is higher for older workers and those with longer contribution periods. For each year of work after age 55, the accrual rate is increased by 0.01 percentage points. Furthermore, each year of contributions beyond 38 also attracts an additional accrual of 0.01 percentage points. The maximum accrual rate is 2.05% per year. Under the standard assumption of a full career starting at age 20, the accrual rate is 2.01%.

The maximum pension in 2006 was EUR 6 422 per month (formally specified as 25/6 of the reference amount). This is just under 177% of average earnings.

Benefits are automatically indexed to changes in the cost of living (if cumulative inflation is at least 2.5%). In addition, adjustments to increases in real wages must be considered every two years. Recent practice has seen increases close to earnings and the modelling assumes that this practice continues.

Minimum

The minimum is EUR 1 387 per month (defined as 90% of the reference amount), conditional on 40 years' coverage, equivalent to about 38% of average earnings. This is proportionally reduced for shorter periods subject to a minimum of 20 years of service periods (compulsory, voluntary or credited contributions).

Social assistance

The social-assistance safety-net level is EUR 1 098 per month for a single person.

Variant careers

Early retirement

It is possible to retire at 57 with 40 years' paid contributions and at 60 with 40 years' paid or credited contributions. Early retirees may work periodically provided earnings do not exceed one third of the minimum social income. There is no actuarial adjustment to benefits for early retirement.

In addition, there are a number of pre-retirement programmes. Relevant here are the pre-retirement solidarity and pre-retirement adaptation schemes. The first allows early retirement on the condition that the employer hires a job seeker assigned by the employment administration. The second allows early retirement for older workers losing their jobs due to restructuring or bankruptcy. Both schemes apply from age 57 up to age 60. The pre-retirement benefit is 85% of prior earnings in the first year, 80% in the second year, and 75% in the third. The earnings measure is pay in the final three months.

Late retirement

The pension has to be claimed at the retirement age of 65. After this age, it is possible to combine work and pension benefits without reductions in the pension benefit.

Childcare

"Baby years" (two years for one and four years for two children) are credited as insured time. Pensionable earnings are based on pay immediately before the baby years are claimed. The period counts as qualifying conditions and enters in the flat rate component of the pension formula.

Employees who could not claim baby-years due to insufficient contribution period have the right to a special monthly allowance in retirement of EUR 89 per child.

Non-contributory periods bringing up children under 6 count towards the qualifying conditions.

Unemployment

Periods of receiving unemployment benefits are credited: pension contributions from the benefits are paid by state (2/3) and beneficiary (1/3). The period unemployed counts towards the qualifying conditions and enters in the earnings-related component of the pension formula. For this period, unemployment benefit is used as a base for pension calculation.

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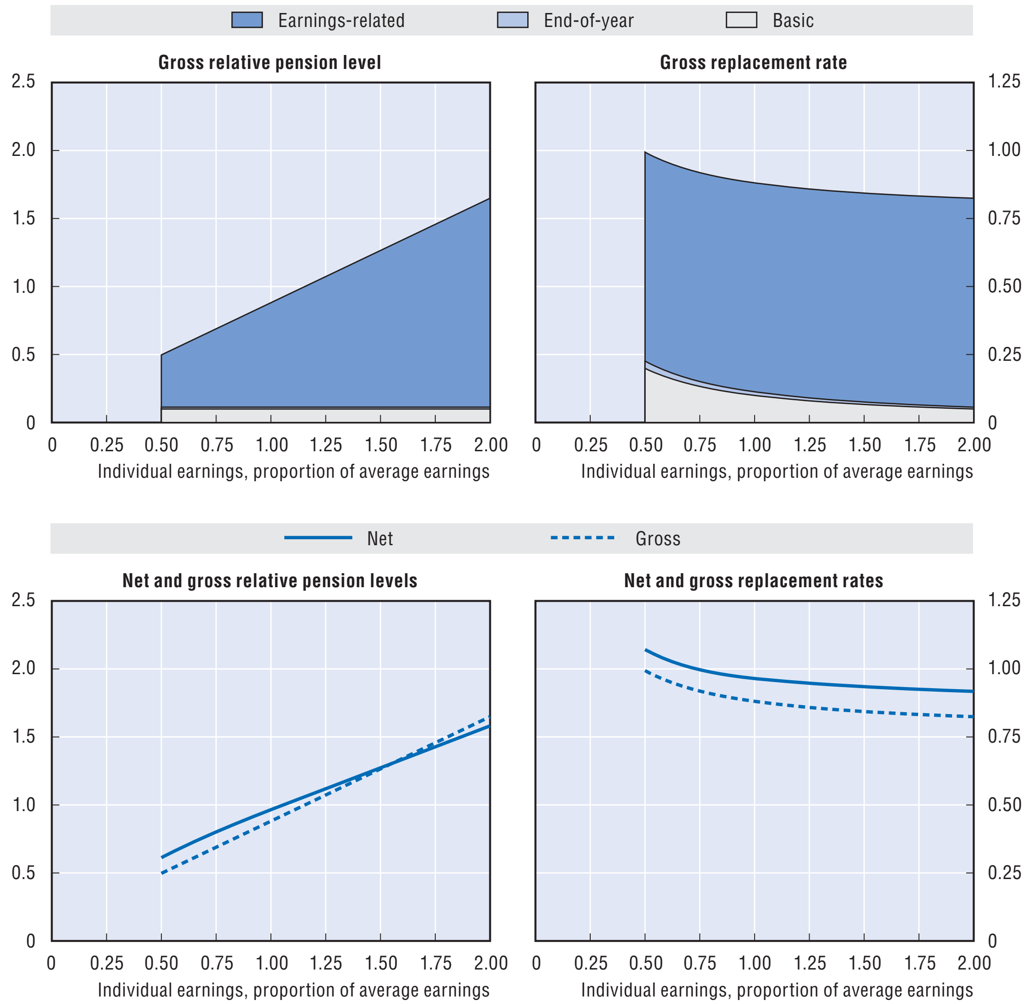
Pension modelling results: Luxembourg



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	76.6	49.7	68.9	88.1	126.5	164.9
(% average gross earnings)						
Net relative pension level	87.0	61.2	80.1	96.5	127.3	158.2
(% net average earnings)						
Gross replacement rate	90.1	99.4	91.9	88.1	84.3	82.5
(% individual gross earnings)						
Net replacement rate	98.1	107.1	99.7	96.5	93.5	91.8
(% individual net earnings)						
Gross pension wealth	19.7	21.7	20.0	19.2	18.4	18.0
(multiple of individual gross earnings)	*24.0*	*26.5*	*24.5*	*23.5*	*22.5*	*22.0*
Net pension wealth	16.1	19.2	16.8	15.2	13.3	12.4
(multiple of individual gross earnings)	*19.6*	*23.5*	*20.5*	*18.5*	*16.3*	*15.2*

Mexico

Mexico: Pension system in 2006

Old-age pensions are covered under a defined contribution scheme mandatory for private sector workers, privately managed and funded. The contributions are made by workers, employers and government. There is a minimum pension for those who listed at least 24 years.

Key indicators

		Mexico	OECD
Average earnings	MXN	73 200	390 200
	USD	6 700	35 800
Public pension spending	% of GDP	1.3	7.2
Life expectancy	At birth	75.7	78.9
	At age 65	83.0	83.4
Population over age 65	% of working-age population	9.9	23.8

Qualifying conditions

Normal retirement age is 65 for men and women subject to 1 250 weeks (around 24 years) of contribution.

Benefit calculation

Funded scheme

Workers and employers contribute a total of 6.275% of earnings to an individual account to which is added a government contribution equivalent to 0.225% of earnings. An additional 5% contribution is made to an individual housing account (a scheme known as Infonavit) which reverts to the retirement account when it is not used. Finally, the government contributes 5.5% of the 1997 real minimum wage indexed to inflation into all individual retirement accounts; this is considered to be the equivalent of a basic pension component here, amounting to 1.4% of average earnings.

There is a ceiling on contributions which is 24 times the minimum wage (July 2006-June 2007) and 25 times the minimum wage thereafter.

The calculations assume that the individual converts the accumulated account balance (discounting a survival insurance that must be bought to cover the survivors' benefits) into a price-indexed annuity at normal pension age. Annuity rates are sex-specific.

Minimum pension

The minimum pension is equivalent to the same 1997 real minimum wage value indexed to inflation (MXN 20 225.40 in 2006). The link to the real minimum wage means that the minimum pension is effectively price-indexed.

Variant careers

Early retirement

Early retirement is possible from age 60 for men and women. Conditions are that the worker is not employed and that at least 1 250 weekly contributions have been made.

Workers who leave the labour market permanently and who have not met the minimum pension requirements may withdraw the entire balance from their defined contribution (Afore) account.

Late retirement

It is possible to defer the pension after age 65.

Childcare

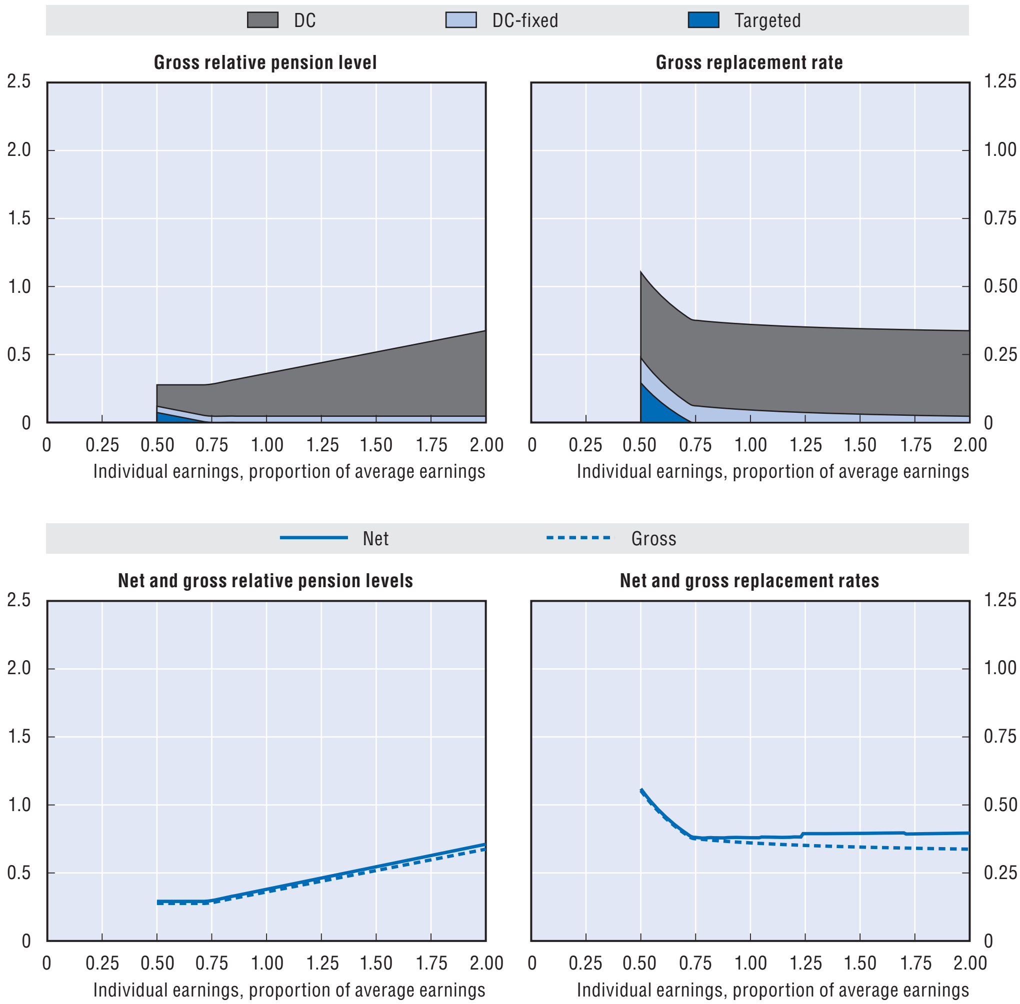
There are no credits for periods spent out of paid work due to childcare responsibilities.

Unemployment

There are no credits for periods of unemployment.

However, Article 191, Fraction II, of the Mexican Social Security Law, states that when a worker is unemployed, he/she will have the right to withdraw some money from his/her old age/retirement sub-account. The amount permitted to withdraw is the smaller of 75 days of the worker's wage base of quotation of the last 250 weeks, or 10% of the balance of his/her old age/retirement sub-account. The workers can claim this amount from the forty-sixth day of unemployment. Workers are eligible for this benefit, if they have credit in their corresponding account statements, and have not made any withdrawals in the last five years.

Pension modelling results: Mexico



Men *Women* (where different)	Median earner	Individual earnings, multiple of average 0.5	0.75	1	1.5	2
Gross relative pension level	31.3	27.6	28.2	36.1	51.8	67.5
(% average gross earnings)	*27.6*		*27.6*	*29.9*	*42.9*	*56.0*
Net relative pension level	33.0	29.1	29.7	38.0	54.6	71.2
(% net average earnings)	*29.1*		*29.1*	*31.5*	*45.3*	*59.0*
Gross replacement rate	36.9	55.3	37.6	36.1	34.5	33.7
(% individual gross earnings)	*32.5*		*36.8*	*29.9*	*28.6*	*28.0*
Net replacement rate	38.0	56.0	38.1	38.0	39.6	39.7
(% individual net earnings)	*33.5*		*37.3*	*31.5*	*32.8*	*32.9*
Gross pension wealth	4.9	7.3	5.0	4.8	4.6	4.5
(multiple of individual gross earnings)	*5.2*	*8.9*	*5.9*	*4.8*	*4.6*	*4.5*
Net pension wealth	4.9	7.3	5.0	4.8	4.6	4.5
(multiple of individual gross earnings)	*5.2*	*8.9*	*5.9*	*4.8*	*4.6*	*4.5*

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Netherlands

Netherlands: Pension system in 2006

The Dutch pension system has two main tiers, consisting of a flat-rate public scheme and earnings-related occupational plans. Although there is no statutory obligation for employers to offer a pension scheme to their employees, industrial-relations agreements mean that 91% of employees are covered. These schemes are therefore best thought of as quasi-mandatory.

Key indicators

		Netherlands	OECD
Average earnings	EUR	39 700	28 600
	USD	49 900	35 800
Public pension spending	% of GDP	5.0	7.2
Life expectancy	At birth	79.8	78.9
	At age 65	83.4	83.4
Population over age 65	% of working-age population	23.4	23.8

Qualifying conditions

The basic old age pension is payable from age 65. Normal retirement age is typically also 65 in occupational plans. All residents are eligible for this benefit.

Benefit calculation

Basic

For a single person, the gross pension benefit in 2006 was EUR 942.33 in the first half of the year and EUR 948.21 in the second half. There was an additional holiday allowance of EUR 53.22 and EUR 53.15, respectively. This gives an annual total of EUR 12 017 or 30% of average earnings. For a couple, the total yearly benefit would be EUR 16 477. The benefit value is linked to the net minimum wage, which is uprated biannually.

The basic benefit accrues at 2% of the full value for each year a worker lives or works in the country. There is also a social-assistance scheme for older people. Its value is equal to the net basic pension.

Occupational schemes

The Netherlands also has a private pension system with broad coverage. The system consists of 767 pension funds (end of 2006); 103 of these funds concern industry-wide schemes. Under certain conditions, Dutch companies may opt out of these plans if they offer their own scheme with equivalent benefits. Furthermore, there are around 700 single-employer plans. Another 46 000 (in the year 2005) mainly smaller employers offer schemes operated by insurance companies.

Approximately 94% of the employees in pension funds are covered by a defined-benefit scheme. The remaining employees in pension funds are covered by a defined contribution scheme.

For about 77% of participants in defined benefit schemes, the earnings measure is based on lifetime average earnings, and for 10% on the final salary. For the remainder it is either a combination of the two (8%) or a fixed amount (1%).

There is no statutory requirement for entry ages for occupational plans. In 2006, approximately 55% of the employees in a pension scheme were in schemes with no entry age, 7% in schemes with an age of 16-20 and 36% with an age of 21-25.

Most final-salary schemes give 1.75% of those earnings for each year of service, implying a replacement rate of 70% after a complete 40-year career. In most average-salary schemes the accrual rate varies from 1.75% to 2% per year of service.

There are no legal requirements for valorisation of earlier years' pay and practice varies between schemes according to rules agreed upon by the social partners. For approximately 75% of the participants in average wage schemes, past earnings are valorised in line with growth of average earnings while for 8% the rate of inflation is used. The modelling assumes an average-salary scheme with valorisation to average earnings.

Although there is no legal uprating requirement, most pensions in payment are raised on an annual basis as well. Nearly half of the pensions in payment are indexed to wage growth in the respective industry. 27% of the pensions are indexed to prices.

Pension rights are fully transferable when people change jobs. There is a legal requirement to index pension rights of people leaving a scheme before retirement in exactly the same way as pensions in payment are indexed. Vesting periods are very short.

There is no ceiling to pensionable earnings.

Occupational pensions are integrated with the public pension system. The current tax rules allow a maximum benefit of 100% of final pay at 65 from both public and private systems. Most schemes have a target total replacement rate of 70% of final pay, so private benefits are reduced by a franchise amount. In 2006, the average franchise amount was EUR 12 019.

Variant careers

Early retirement

The basic pension is not payable before age 65.

In 2005, the tax-favoured status of separate early retirement programmes (called "VUT") and which led to pre-pension benefits between ages 60 and 65 was abolished to stimulate labour-market participation of older workers.

Late retirement

It is not possible to defer the basic old age pension scheme after 65. It is possible to combine the basic pension receipt with work.

The rules on pension deferral vary between occupational plans. It is possible to combine the occupational pension scheme with work. Indeed, some schemes allow a member to draw a pension and continue to work with the same employer. There is no legislation regarding this issue.

Childcare

In the basic old age pension scheme, periods out of paid work are automatically covered. In the occupational schemes, there are no credits for childcare periods during which people are out of paid work but the accrual of pension rights continues over remaining working years. However, many schemes allow voluntary contributions to cover the aforementioned periods of absence.

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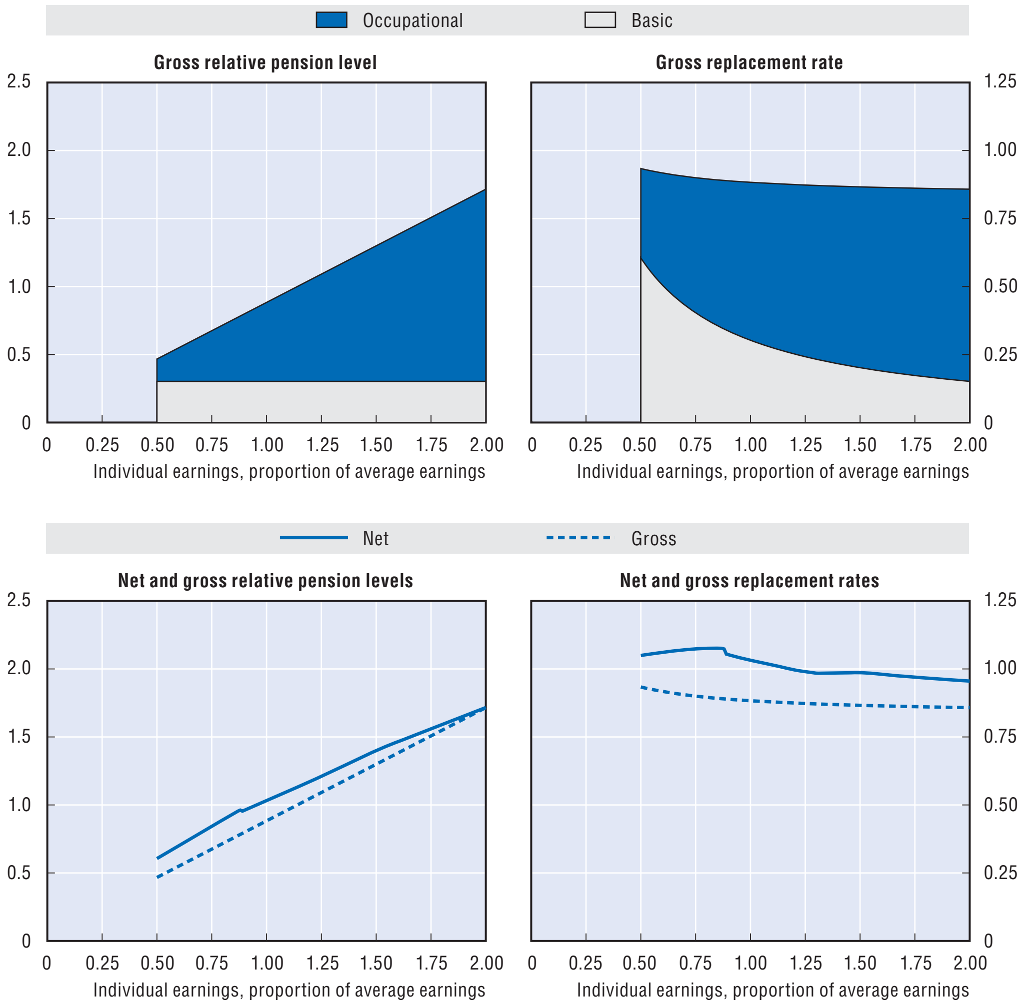
Unemployment

There are no credits in the occupational plans for periods of unemployment. Again, the basic old age scheme covers such periods automatically. In addition, the social partners administer a fund (FVP) which makes it possible for older workers to extend their pension accrual for a certain period during unemployment. The government has no formal relationship with this fund.

Pension modelling results: Netherlands



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	79.2	46.7	67.5	88.3	129.9	171.6
(% average gross earnings)						
Net relative pension level	95.4	60.6	84.3	103.2	140.0	171.6
(% net average earnings)						
Gross replacement rate	88.9	93.4	90.0	88.3	86.6	85.8
(% individual gross earnings)						
Net replacement rate	105.5	105.0	107.4	103.2	98.6	95.5
(% individual net earnings)						
Gross pension wealth	16.4	17.2	16.6	16.3	16.0	15.8
(multiple of individual gross earnings)	*19.2*	*20.1*	*19.4*	*19.1*	*18.7*	*18.5*
Net pension wealth	12.6	14.2	13.2	12.1	11.0	10.1
(multiple of individual gross earnings)	*14.7*	*16.6*	*15.4*	*14.2*	*12.8*	*11.8*

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New Zealand

New Zealand: Pension system in 2006

The public pension is flat rate based on a residency test. Occupational schemes exist but have decreased in coverage since 1990 from 22.6% of the employed workforce to 14.7% for the year ended 30 June 2006.

Key indicators

		New Zealand	OECD
Average earnings	NZD	43 000	55 100
	USD	27 900	35 800
Public pension spending	% of GDP	4.4	7.2
Life expectancy	At birth	80.2	78.9
	At age 65	84.4	83.4
Population over age 65	% of working-age population	20.7	23.8

Qualifying conditions

Ten years' residency since the age of 20 (including five years after age 50) entitles people to the public pension at 65 years of age.

Benefit calculation

Basic

The pension for a single person living alone was NZD 336.65 gross per week from 1 April 2007. For 2006/07, the rate was NZD 320.13. The increase is due in part to the normal adjustment process, outlined below and in part to the government's confidence and supply agreement with the NZ First political party, also outlined below. This gives a total pension for the tax year 2007 of NZD 17 506, equivalent to around 41% of average earnings.

State pension entitlements from other countries are taken into account in calculating the total payable.

The rate of public pension is indexed to prices, but is subject to a floor and ceiling linked to movement in wages. For a couple, the governing legislation requires that the net-of-tax rate at each 1st April must be not less than 65% and not more than 72.5% of a net-of-tax surveyed weekly earnings measure. The net-of-tax rates for single people are set at 65% (living alone) and 60% (sharing accommodation) of the net-of-tax couple rate. If movements in prices remain consistently below movements in the net-of-tax surveyed weekly earnings, effectively the latter becomes the index.

As the result of a confidence and supply agreement between the government and the NZ First political party after the 2005 election, the net-of-tax rate at each 1 April is to be 66% rather than 65% of the net-of-tax earnings measure for the duration of the agreement.

Voluntary private pensions

Coverage of occupational pension plans has been falling for some time, and is currently around 13% with around 5% of people of working age contributing to personal pensions. The new KiwiSaver scheme, however, achieved coverage of 44% within its first year of operation (from July 2007). The default contribution rate for this scheme is 4% of earnings, divided equally between employees and employers.

Variant careers

Early retirement

It is not possible to claim the pension before the normal eligibility age of 65.

Late retirement

Receipt of the public pension is not dependent on retirement. It is therefore possible to combine pension and employment.

While people are not obliged to claim the public pension on reaching the qualifying age, there is no advantage in deferring a claim.

Childcare

Eventual public pension entitlement is not affected by periods out of paid work for caring purposes.

Unemployment

Eventual public pension entitlement is not affected by periods of unemployment.

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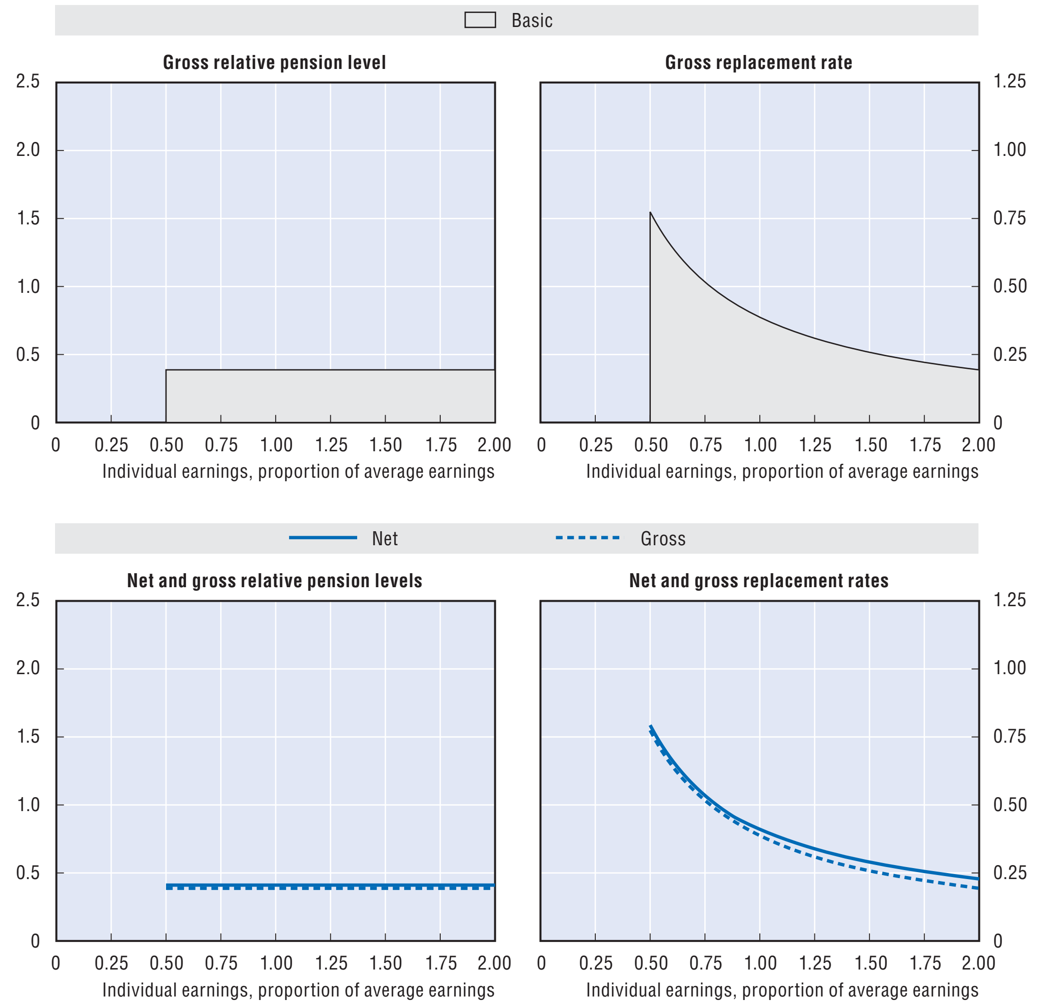
Pension modelling results: New Zealand



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	38.7	38.7	38.7	38.7	38.7	38.7
(% average gross earnings)						
Net relative pension level	41.1	41.1	41.1	41.1	41.1	41.1
(% net average earnings)						
Gross replacement rate	45.6	77.5	51.6	38.7	25.8	19.4
(% individual gross earnings)						
Net replacement rate	47.3	79.3	53.5	41.1	29.0	22.8
(% individual net earnings)						
Gross pension wealth	8.4	14.3	9.6	7.2	4.8	3.6
(multiple of individual gross earnings)	*9.9*	*16.8*	*11.2*	*8.4*	*5.6*	*4.2*
Net pension wealth	6.9	11.8	7.9	5.9	3.9	3.0
(multiple of individual gross earnings)	*8.2*	*13.9*	*9.2*	*6.9*	*4.6*	*3.5*

Norway

Norway: Pension system in 2006

The public pension system in Norway consists of a flat-rate basic pension and an earnings-related (supplementary) pension. Pensioners who have no, or only a small, supplementary pension, are entitled to a special supplement. The special supplement is income-tested against the earnings-related pension. Recently, a mandatory occupational pension was introduced.

Key indicators

		Norway	OECD
Average earnings	NOK	397 800	229 500
	USD	62 000	35 800
Public pension spending	% of GDP	4.8	7.2
Life expectancy	At birth	80.6	78.9
	At age 65	84.3	83.4
Population over age 65	% of working-age population	24.7	23.8

Qualifying conditions

The current public system was introduced in 1967. As the required earnings period for a full pension is 40 years, the first cohort of old age pensioners that fulfilled the insurance period was the one that retired in 2007.

The normal pension age is 67. Persons with a residence period in Norway of at least three years between the ages of 17 and 67 (inclusive) are entitled to the minimum pension, consisting of basic pension and special supplement. Full benefits are granted after a 40 year long residence period. The requirement for a supplementary pension is minimum three years of annual pension point earnings and a full pension is granted after 40 years. Both benefits are proportionally reduced for shorter earnings histories.

Benefit calculation

Basic pension

Many benefits under the National Insurance Scheme are determined in relation to the *basic amount*, G, that was NOK 62 161 in 2006. The full basic pension for a single person equals the basic amount. This is equivalent to 15.6% of average earnings. Historically, indexation of the basic amount has been lower than average wage growth. However, the government has since 2003 linked the value of the basic amount to average earnings. The modelling assumes that this practice continues.

Minimum pension

The basic pension above and a special supplement form the minimum pension. The minimum pension has been upgraded intermittently, as the special supplement has been increased in real terms. It has over time tended to increase more than earnings growth. Since 2003 the minimum pension has been indexed to average earnings.

In 2008 however a new increase in the special supplement from 79.33% of the basic amount in 2007 to 94% in 2008 was decided. It is agreed to increase the special supplement further to 100% of the basic amount by 2010. This supplement is income-tested against the earnings-related supplementary pension and the minimum pension is worth about 31% of average earnings.

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Earnings-related

Since the basic pension replaces the first slice of earnings, the earnings-related scheme only covers earnings above the value of the basic amount. The special supplement then replaces a further slice of earnings, up to 3.38 times the basic amount. The earnings-related scheme has a regressive formula, *i.e.*, the replacement rate falls for higher earnings. Annual earnings between 3.38 times the basic amount and six times the basic amount are replaced at a 42% rate (the rate was lowered from 45 % in 1992 and is for each pensioner the average of these two weighted by the number of years with annual points prior to 1992). Between six and 12 times the basic amount, the replacement rate is one third of that level. Given that 40 years' contributions are needed for a full pension, these are equivalent to annual accrual rates (for those with all entitlements earned after 1992) of 1.05% and 0.35% respectively. The first threshold, where the accrual rate declines, is a little under average earnings (94%). The ceiling on earnings eligible for benefits is therefore a little under double average earnings (188%).

The calculation of the pension uses the best 20 years of point earnings. The valorisation of earlier years' accruals depends on the adjustment procedure for the value of the basic amount (G). As discussed previously, the modelling assumes that the basic amount will in future be uprated in line with average wage earnings.

Defined-contribution scheme

From 2006, employers must make a minimum contribution of 2% of the earnings of their employees to a defined-contribution pension plan. (If employers offer a defined-benefit scheme instead, then the benefits must be at least the same level as the expected benefits under the mandatory 2% contribution.) Contributions are only required on earnings between the basic amount (G) and 12 times the basic amount.

Benefits can currently only be taken at age 67. They must be withdrawn over a minimum period of ten years. For comparison with the results for other countries, it is assumed that the benefit is taken as a price-indexed annuity calculated using unisex mortality tables.

Voluntary private pensions

Around 60% of employees are covered by voluntary occupational pension schemes. Including the 2% mandatory employer contribution, a typical large scheme would have a total contribution rate of 5% of earnings between 1G and 6G and 8% of earnings between 6G and 12G.

Variant careers (public scheme)

Early retirement

About two-thirds of employees work in businesses participating in early retirement programmes under the Contractual Early Retirement Scheme (AFP). This scheme, which was introduced in 1989, allows retirement from age 62. The pension level under this scheme is about the same as the ordinary old-age pension from 67 years of age, *i.e.* if the person had continued until that age in the job he/she was holding at the time he/she actually retired.

The calculation of AFP pensions differs between sectors. In the private sector, AFP pensions are calculated in the same manner as the permanent disability pension (granting pension points for the remaining years until 67). In addition, these pensioners receive a so-called AFP-supplement of NOK 11 400 per year. This supplement is not taxed.

There are some qualifying conditions (the listing is not complete). First, the pensioner must be employed in the same firm for the last three years (alternatively covered in an AFP scheme for the last five years). Second, the annual earnings must be at least the basic amount (G) at the time of retirement. The annual wage must also exceed one basic amount (G) during at least ten years after age 50. Earnings in the ten best years in the period from 1967 until the year prior to retirement have exceeded at least twice the basic amount.

Late retirement

People can defer their pension after 67 and continue to work and people can combine working with receiving a pension. There is no additional increment earned by deferring pension after 67.

Originally, the pension age was set at 70 but reduced to 67 in 1973. The opportunity to earn pension points based on labour income up to age 70 was kept, but for age groups 69-70 the pension is income-tested against labour income. This pension is reduced by 40% of income exceeding two basic amounts (G).

Childcare

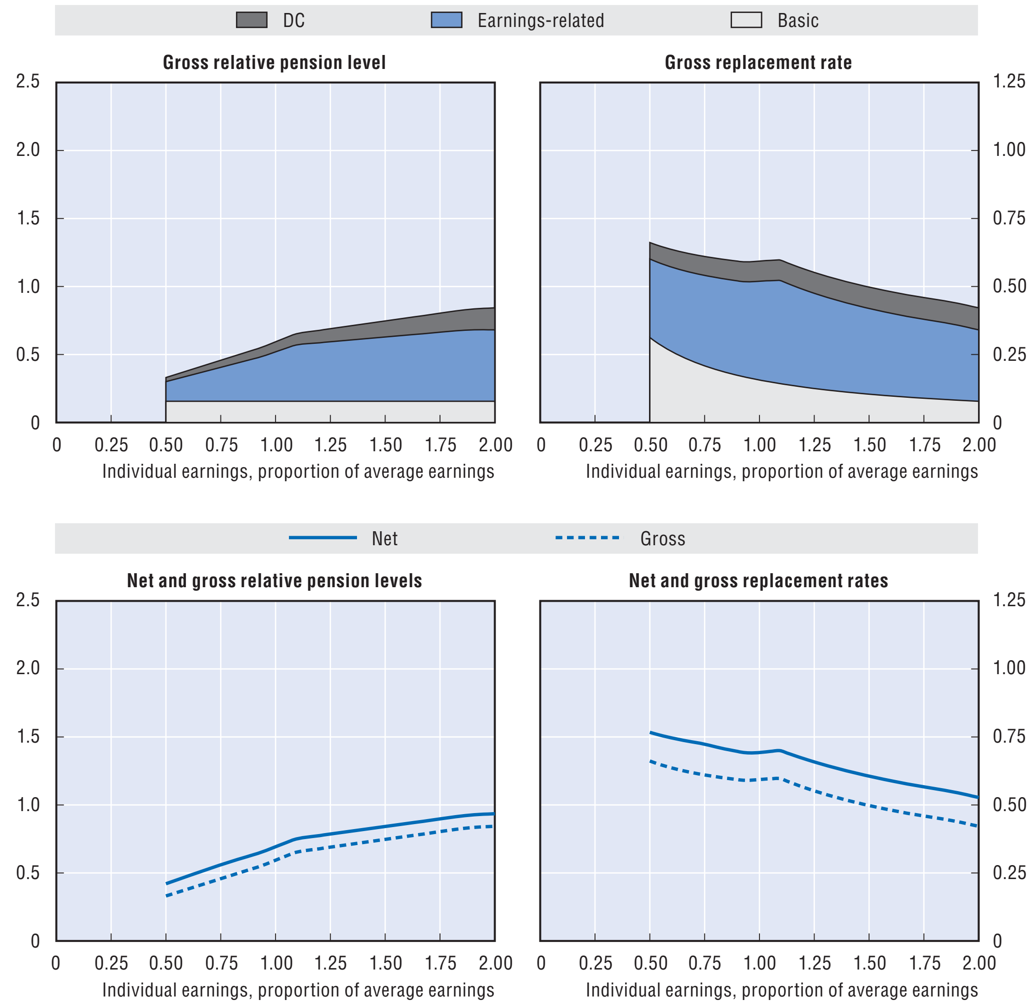
Caregivers are credited with three pension points per year in the supplementary earnings-related pension scheme. This corresponds to pension point earnings from labour income of NOK 248 644. These caregivers comprise parents caring for children below seven years of age and individuals taking unpaid care of disabled, sick or elderly persons in the home.

Mothers with annual point earnings lower than 3 have these earnings topped up. Mothers with annual point earnings exceeding 3 do not get any top up. The family may apply for having the points granted to the father instead. For the other group, points are granted on the basis of individual applications.

Unemployment

Unemployment benefits, which are set at 62.4% of former earnings up to 6 times the basic amount, earn pension points in the same way as wage income.

Pension modelling results: Norway



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	51.9	33.1	45.8	59.3	74.7	84.3
(% average gross earnings)						
Net relative pension level	62.0	42.1	56.1	69.3	84.2	93.6
(% net average earnings)						
Gross replacement rate	59.6	66.2	61.0	59.3	49.8	42.2
(% individual gross earnings)						
Net replacement rate	70.2	76.7	72.3	69.3	60.6	52.8
(% individual net earnings)						
Gross pension wealth	10.3	11.4	10.5	10.2	8.5	7.2
(multiple of individual gross earnings)	*12.0*	*13.4*	*12.3*	*11.9*	*9.9*	*8.4*
Net pension wealth	8.7	10.3	9.1	8.4	6.8	5.6
(multiple of individual gross earnings)	*10.2*	*12.1*	*10.7*	*9.9*	*7.9*	*6.6*

Poland

Poland: Pension system in 2006

The new pension system was introduced in 1999; it applies to people born in 1949 or after. The new public scheme is based on a system of notional accounts. People under 30 (born in 1969 and after) at the time of the reform must also participate in the funded scheme; people aged 30-50 (born between 1949 and 1968) could choose the funded option. However, the choice had to be made in 1999 and it was irrevocable, with exception of those who could retire early in years 2007-08 due to extension of possibility for early retirement granted by Parliament. This extension was a result of lack of proposed "bridging pensions" system. Additionally, from 2005 the miners have their early retirement pension system reinstated according to the pre-1999 rules.

Key indicators

		Poland	OECD
Average earnings	PLN	29 300	111 000
	USD	9 400	35 800
Public pension spending	% of GDP	11.4	7.2
Life expectancy	At birth	75.3	78.9
	At age 65	81.7	83.4
Population over age 65	% of working-age population	21.1	23.8

Qualifying conditions

The minimum pension age in the new system will be 65 for men and 60 for women. For the minimum pension, 25 and 20 years' contributions are required from men and women, respectively.

Benefit calculation

Earnings-related

A contribution of 12.22% of earnings (or 19.52% for workers born between 1949 and 1968 who do not choose the defined-contribution option) will be credited to individuals' notional accounts. Initially, these contributions were uprated between the time they are made and the time of retirement by price inflation plus 100% of the growth of the real covered wage bill. From 2004 onwards, the notional interest rate has been defined as 100% of the growth of the real covered wage bill and no less than price inflation. This notional interest rate is applied retrospectively to accounts from the year 2000.

At retirement, accumulated notional capital is divided by the "g-value" to arrive at the pension benefit. The g-value is average life expectancy at retirement age: this process is equivalent to the process of annuitisation in funded pension systems. The g-value is calculated using life tables published by the Central Statistical Office. In the modelling, actuarial data from the UN/World Bank population database is used.

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The ceiling to contributions and pensionable earnings is set at 2.5 times average earnings projected for a given year in the state budget law. It was PLN 68 700 or 2.5 times average earnings in 2004, PLN 72 690 in 2005, PLN 73 560 in 2006 PLN 78 480 in 2007, PLN 85 290 in 2008 and PLN 95 790 in 2009.

Between 1999 and 2004 pensions in payment were uprated in line with 80% of prices and 20% of average earnings, projected for a given year. Note, however, that from 2005 the minimum indexation is to prices from past years, in years when compounded inflation from the year preceding previous indexation is above 5%. From 2008 pensions in payment are uprated in line with at least 80% of prices and 20% of average earnings in the past year. Indexation of pensions above the minimum level is negotiated with the Tripartite Committee.

Minimum pension

There is a minimum pension under the pay-as-you-go scheme, which was PLN 597.46 per month from March 1, 2006, corresponding to 24% of average earnings.

Defined contribution

Some 7.3 percentage points of the total contribution are diverted to the funded scheme for those compulsorily covered or choosing this option. The law on annuities, adopted by the Parliament at the beginning of 2009 assumes that pension savings will be converted into the single annuity using unisex life tables at retirement age, but not before age of 65. Women, who retire before that year will receive payments based on programmed withdrawal until they reach age of 65. Annuities will be increased by 90% of returns from reserves on annuity companies

It is assumed that at retirement, the accumulated capital will be converted to an annuity, and at the minimum annuities will be price-indexed (used in the model calculation). It has been decided that annuity rates will have to be based on unisex life-tables.

Variant careers

Early retirement

There are no provisions for early retirement in the pension system. The old pension system (applicable to persons born before 1949) allowed various forms of early retirement for specific groups, such as miners, railway workers, teachers, people working in special conditions and women. Possibilities to early retirement have been postponed in years 2007-08 (previously 2006). This extension was a result of lack of proposed “bridging pensions” system. Additionally, from 2005 the miners have their early retirement pension system reinstated according to the pre-1999 rules.

The bridging pensions system that comes into force from 2009 assumes that people working in special conditions (*c.a.* 270 000 workers) will receive a bridging pension up to five years before retirement age. This benefit will be financed from state budget and calculated following the pension formula in the earnings-related system.

Late retirement

It is possible to defer both the notional and the funded, defined-contribution pension component without any age limits. People who defer claiming pension after normal pension age contribute and earn extra pension.

It is possible to combine work and pension receipt. For old-age pensioners below legal retirement age (in the old pension system), there are limits of income. If the work income is above 70% of average wage, the pension is reduced, if it is above 130% of average wage, the pension payment is suspended.

Childcare

During periods of maternity leave, contributions to the pension system are paid from the state budget based on the maternity benefit, which is the average wage over the past six months, net of social security contributions. From 2004, the averaging period has been extended to 12 months. Maternity leave period is 16 weeks for the first child, 18 weeks for the second child and 26 weeks for multiple births. From December 2006 maternity leave period is 18 weeks for the first child, 20 weeks for the second child and 28 weeks for multiple births. It has been decided that from January 1, 2009 maternity leave period will be 20 weeks for the first and the second child, while it will lasts 31 weeks, 33 weeks, 35 weeks, 37 weeks for multiple births depending on number of children.

Parental leave is possible for a period up to 36 months per child. During this time, pension contributions are paid for the schemes in which a person is a member and the amount of social welfare benefit which corresponds to about 18% of average earnings is used as a base.

In both cases, the government pays the contributions on behalf of the parent on leave.

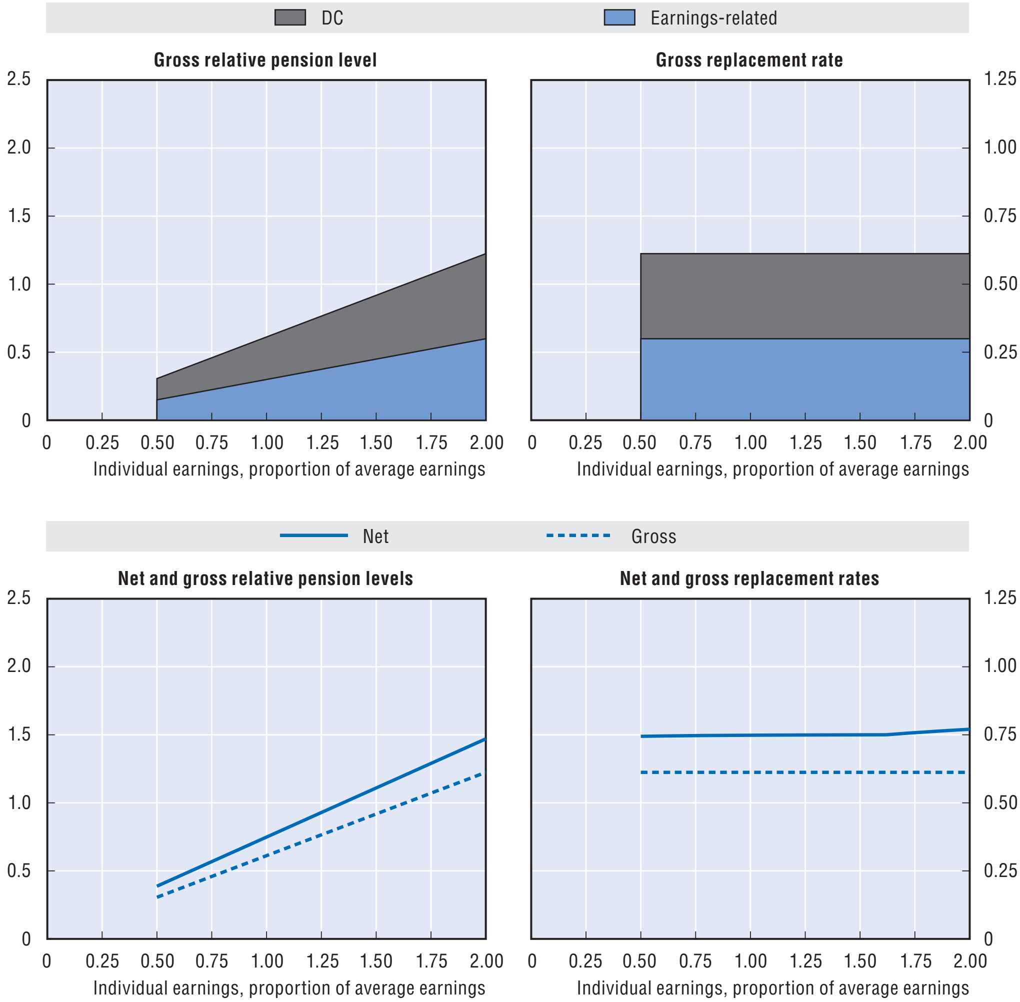
All periods for which contributions are paid are qualified for minimum pension guarantee.

Unemployment

There is a scheme of pre-retirement benefits, available to unemployed people who were laid off (for example, due to liquidation, bankruptcy or restructuring). Pre-retirement benefits are paid from the state budget to women from 55 and men from 60 until reaching pension age. These rules are in force from May 2004. Earlier pre-retirement benefits were granted to women from 50 and men from 55. Pre-retirement benefits are not subject to contributions to the pension scheme.

During periods of unemployment benefit receipt, the government pays the contributions to the pension system based on the size of the unemployment benefit (12.22% of the benefit to notional account and 7.3% to defined contribution scheme). All the periods for which contributions are paid are qualified for minimum pension guarantee.

Pension modelling results: Poland



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	50.2	30.6	45.9	61.2	91.8	122.4
(% average gross earnings)	*36.5*	*24.5*	*33.4*	*44.5*	*66.8*	*89.0*
Net relative pension level	61.9	38.8	56.8	74.9	110.9	147.0
(% net average earnings)	*45.7*	*31.6*	*42.0*	*55.2*	*81.4*	*107.6*
Gross replacement rate	61.2	61.2	61.2	61.2	61.2	61.2
(% individual gross earnings)	*44.5*	*49.0*	*44.5*	*44.5*	*44.5*	*44.5*
Net replacement rate	74.8	74.4	74.7	74.9	75.0	77.0
(% individual net earnings)	*55.2*	*60.6*	*55.3*	*55.2*	*55.0*	*56.4*
Gross pension wealth	8.4	8.4	8.4	8.4	8.4	8.4
(multiple of individual gross earnings)	*8.6*	*9.5*	*8.6*	*8.6*	*8.6*	*8.6*
Net pension wealth	7.0	7.2	7.0	7.0	6.9	6.8
(multiple of individual gross earnings)	*7.3*	*8.3*	*7.3*	*7.2*	*7.1*	*7.1*

Portugal

Portugal: Pension system in 2006

Portugal has an earnings-related public pension scheme with a means-tested safety net.

Key indicators

		Portugal	OECD
Average earnings	EUR	15 300	28 600
	USD	19 300	35 800
Public pension spending	% of GDP	10.2	7.2
Life expectancy	At birth	78.9	78.9
	At age 65	83.4	83.4
Population over age 65	% of working-age population	27.8	23.8

Qualifying conditions

The standard pension age is 65 although early retirement is possible from age 55. A minimum of 15 years of contributions are required for retirement at 65. Early retirement is possible with 30 years of contributions.

The social pension is payable from age 65.

Benefit calculation

Earnings-related

The pension accrues at 2% of the earnings base for each year of contributions for 20 or fewer years' contributions. For beneficiaries with 21 or more years of contributions, the accrual rate ranges between 2% and 2.3% depending on earnings. The schedule for the accrual rate depends on individual earnings relative to the value of the national minimum wage (EUR 385.90). Each slice of earnings accrues pensions at a different rate.

Earnings/minimum wage	≤ 1.1	> 1.1-2.0	> 2.0-4.0	> 4.0-8.0	> 8.0
Accrual rate (%)	2.3	2.25	2.2	2.1	2.0

Pension accrues for a maximum of 40 years.

The earnings measure is presently the best 10 of the final 15 years. However, this base is currently being extended, such that it will reach lifetime average earnings from 2017. Those already paying contributions by 31 December 2001 and who met the eligibility conditions for old-age pension at that date will have their pension calculated from the most favourable of three possible formulas: 1) applying the previous rules (2% accrual for each year of contributions and earnings being those of the best ten years of the final 15 years); 2) applying the new rules above described to the entire contributory career; 3) or pro rata application of both rules according to the contributory career. Those already paying contributions by 31 December 2001, but who have not met the eligibility conditions for old-age pension at that date, will have their pension calculated from the most favourable of the above three possible formulas, if they retire between 2002 and 2016; or by the most favourable of formulas No. 2) and 3), if they retire after 2016. People who joined the system after 2002 will be fully covered by the new rules. For people with more than 40 years' contributions, only the best 40 count in the benefit formula.

Valorisation of earnings for pension calculation from the beginning of 2002 is to a mix of earnings and prices. The weights are 75% price inflation and 25% earnings growth, subject to a maximum real increase of 0.5%.

Pensions in payment are indexed to prices, with larger increases on smaller pensions. In December 2006 the increases of pensions already in payment are: 3.1% for pensions not higher than EUR 596.79; 2.6% for those between EUR 596.79 and EUR 2 387.16; 2.4% for those between EUR 2 387.16 and EUR 4 774.32; and 0% for those equal or higher than EUR 4 774.32.

Minimum

For workers with up to 15 years of contributions there is a monthly minimum pension of EUR 223.24 from January to November 2006 and EUR 230.16 from December 2006. For workers with 15 to 40 years, the amount of the minimum pension varies between the lower limit of EUR 249.00 (January-November) and EUR 256.72 (December 2006 onwards-) and the upper limit of EUR 343.45 and EUR 354.10 for the same two periods, as described in the table below.

There are 14 monthly payments.

Years of contribution	Minimum pension (EUR)	
	January-November	December
15 to 20	249	256.72
21 to 30	274.76	283.28
31 and over	343.45	354.1

Targeted

For people who do not qualify for the earnings-related scheme, the monthly social pension was EUR 171.73 (January-November 2006) and EUR 177.05 (December-).

This is only paid if total income for a single person does not exceed 30% of the minimum wage or 50% of the minimum wage in case of couples. Again, there are 14 monthly payments.

Pensioners of the social pension are entitled to receive the Solidarity Extra Supplement on top of their pension (the monthly amount of this benefit being EUR 15.89 (EUR 16.38 after 1st December 2006) for those under 70 years old and EUR 31.77 (EUR 32.75 after 1st December 2006) for those with at least 70 years of age).

In the beginning of 2006, a new targeted benefit aimed at fighting poverty among the elderly came into effect: the Old-Age Solidarity Supplement (OSS). Eligibility conditions for this benefit are: 80 years of age or older in 2006 (extended in 2007 for those with 70 years of age or older and in 2008 to 65 years or older); receiving old-age or survivors pension (national citizens not entitled to the social pension because they don't fulfil its means test may also be eligible); and fulfilling the OSS means test.

The OSS resembles the Social Insertion Income as it is a supplement equal to the difference between the beneficiary's income and a given threshold, which is at the same time the means test condition. The OSS is therefore equal to the difference between the beneficiary's income and the following Reference Amounts (RA):

- EUR 4 200 per year for singles.
- EUR 7 350 per year for couples.

The beneficiary's income is composed of: his/her own income; the spouse's income; part of the income of their sons' households, denominated "family solidarity". The "family solidarity" component is added to the beneficiary's income to determine entitlement and the amount of the OSS.

To calculate the "family solidarity", for each son/daughter the total yearly income of his/her household is taken and divided by the number of adult equivalents in that household (scale of equivalence: 1 to the 1st adult; 0.7 for each subsequent adult and 0.5 for each minor) and then, according to the table below, the family solidarity is determined as a percentage of the equivalent income of the household. Those whose sons or daughters households' equivalent income is placed in the 4th tier are not eligible for the OSS.

Tier	Equivalent income of the household	Family solidarity (% of the equivalent income)
1st	2.5 × RA	0
2nd	> 2.5 × RA and ≤ 3.5 × RA	5
3rd	> 3.5 RA and ≤ 5 × RA	10
4th	> 5 × RA	Exclusion

Minimum pension amounts and other social benefits will be linked to the IAS according to the following table:

Benefits	Amount (% IAS)
Minimum pension (earnings-related)	
15 years of contributions	57.8
15 to 20 years of contributions	64.5
21 to 30 years of contributions	71.2
More than 30 years of contributions	89.0
Social pension	44.5

Variant careers

Early retirement

From August 2005 onwards, the early retirement scheme was suspended. Therefore, it is no longer possible to anticipate retirement except in the case of long term unemployment (see below under section "Unemployment").

Late retirement

It is possible to defer the pension until the age of 70. The benefit is increased by 12% per year of deferral to a maximum of five years.

Childcare

Maternity periods (both full leave and part-time work) count in calculating the pension entitlement. These are credited towards the qualifying conditions. Pensionable earnings for these periods are based on pay in the six months before the second month of the start of the leave.

From 2002, periods of up to 3 years caring for children under 12 working part time can be treated as if these were periods of full-time work.

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Unemployment

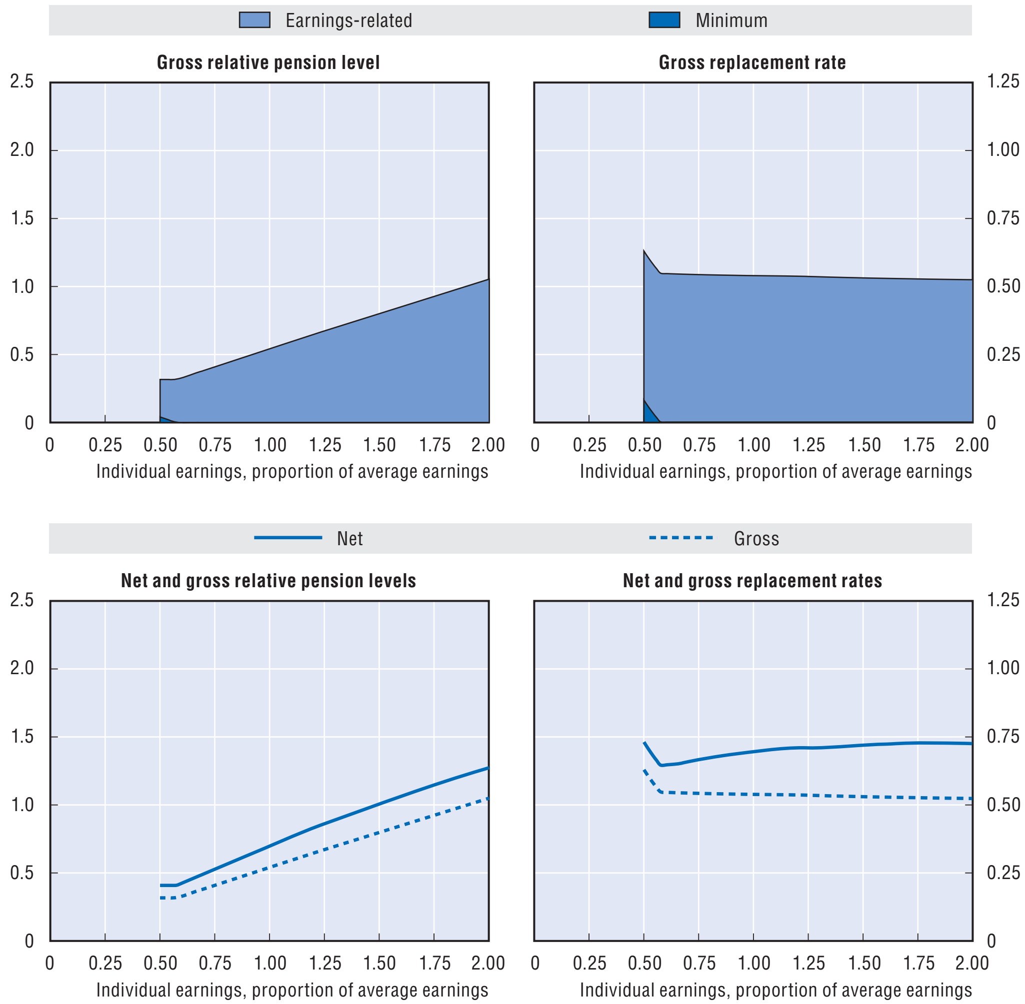
Periods on unemployment benefits count in calculating pension benefits. Pensionable earnings for these periods are based on pay in the six months before the second month of the start of the unemployment period. This applies both to unemployment and to social unemployment benefits.

There are special rules applying to people in long-term unemployment. People aged 55 or over who are long-term unemployed can retire at age 60 with full pension without decrement. It is required that the minimum contribution conditions are met and unemployment-benefit entitlement is exhausted.

Early retirement is also possible from age 55 with 20 years' contributions for individuals who become unemployed at age 50 or more. In these cases, the pension is reduced with a 4.5% annual decrement, with a maximum of five years' reduction applied.

Means-tested unemployment assistance subsidy is provided if registered contribution is more than 180 days in the 12 months prior to unemployment and monthly earnings before unemployment is less than 80% of the minimum wage. This allowance can be extended until beneficiaries meet the conditions for early retirement provided that they are 50 years of age.

Pension modelling results: Portugal



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	46.0	27.4	40.7	53.9	79.6	104.8
(% average gross earnings)						
Net relative pension level	59.4	35.4	52.6	69.6	100.5	127.2
(% net average earnings)						
Gross replacement rate	54.1	63.0	54.3	53.9	53.1	52.4
(% individual gross earnings)						
Net replacement rate	68.0	73.2	66.7	69.6	72.0	72.6
(% individual net earnings)						
Gross pension wealth	8.1	9.2	7.9	8.1	8.0	7.9
(multiple of individual gross earnings)	*9.5*	*10.7*	*9.2*	*9.5*	*9.3*	*9.2*
Net pension wealth	8.1	9.2	7.9	8.1	7.8	7.4
(multiple of individual gross earnings)	*9.5*	*10.7*	*9.2*	*9.5*	*9.1*	*8.7*

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Slovak Republic

Slovak Republic: Pension system in 2006

The earnings-related public scheme is similar to a points system, with benefits that depend on individual earnings relative to the average. There is no minimum pension, but low-income workers are protected by a minimum amount of earnings on which pension is calculated. All pensioners are eligible for social assistance benefits. Defined-contribution plans were introduced at the beginning of 2005. It is impossible to evaluate these defined-contribution plans at this time.

Key indicators

		Slovak Republic	OECD
Average earnings	SKK	231 200	1 061 500
	USD	7 800	35 800
Public pension spending	% of GDP	6.2	7.2
Life expectancy	At birth	74.3	78.9
	At age 65	80.2	83.4
Population over age 65	% of working-age population	18.4	23.8

Qualifying conditions

Ten years of pension insurance are needed to be eligible for a benefit. Pension ages are being increased gradually, to be equalised between the sexes at age 62. For men, pension age will reach 62 in 2006. For women, the increase in pension age will be spread over the period 2004-14.

Benefit calculation

Earnings-related

Contributors to the pension scheme earn annual pension points. These are calculated as the ratio of individual earnings to economy-wide average earnings. The pension entitlement is the sum of pension points over the career multiplied by the pension-point value.

This was SKK 214.68 for 2006. The pension-point value is indexed to average earnings. National average earnings in 2006 were SKK 19 268 per month. Dividing the point value by the earnings figure gives the equivalent to the accrual rate in a defined-benefit scheme, which is just under 1.2%.

There is a ceiling to earnings for contribution and benefit purposes, which is set at three times average earnings. The earnings data are lagged, so the ceiling for the first half of 2006 was three times average earnings in 2004 (SKK 15 825 per month). In the second half, the ceiling was based on 2005 data for average earnings (SKK 17 274 per month). (At the baseline assumptions for earnings growth and price inflation, the lagging means that the ceiling is slightly less than three times contemporaneous average earnings.)

Pensions in payment are indexed to the arithmetic average of earnings growth and price inflation.

For workers joining defined-contribution plans, the benefits under the public, earnings-related scheme are half of those of workers who remain only in the public plan. These workers are supposed to get the second half of their pension from life insurance or combined from life insurance and an old-age pension company.

Minimum

There is no minimum pension. However, there is a minimum assessment base for pension purposes that is equal to the minimum wage. The minimum wage was SKK 7 600 from the beginning of October 2006 and SKK 6 900 earlier in the year. The minimum wage is worth just under 40% of average earnings.

Defined contribution

The contribution rate for the defined-contribution scheme is 9% of earnings. Participation is mandatory for workers entering the labour market from January 2005; all others should have chosen by June 2006 to remain solely under the public scheme or join the mixed system. The defined-contribution pension can be taken as an annuity or as a combination of scheduled withdrawal and annuity. The modelling assumes withdrawal in the form of a price-indexed annuity using unisex annuity rates.

Variant careers

Early retirement

Early retirement is possible. Benefits are reduced by 0.5% per month since the pension is claimed early (equivalent to 6% per year). Early retirement also requires that the resulting pension is equal to at least 1.2 times the adult subsistence income level, which was SKK 4 980 per month in 2006. The subsistence minimum for the calendar year 2006 was worth 25.8% of average earnings, meaning that the minimum pension required for early retirement is SKK 5 976 per month which is 31% of average earnings. Average early retirement pension, in 2006, was SKK 8 970 per month which is 46.7% of average earnings.

There is currently no age limit on early retirement: it is theoretically possible at any age provided the ten-year contribution condition and the requirement for the level of the benefit are both met.

Late retirement

It is possible to defer claiming the pension after the normal pension age. The benefit is increased by 0.5% for each month of deferral (6% per year). For people who claim the pension and continue to work, the pension will be recalculated when the individual eventually retires adding one half of the points earned during that period.

Childcare

There are pension credits for people caring for children up to the age of 6, with the state paying the relevant contributions. The assessment base for pensions is 60% of earnings prior to the period spent caring for children. In the first half of each calendar year, it is based on average earnings two years before the absence started. In the second half, the calculation uses earnings in the calendar year immediately before the absence. There is more generous provision for carers of disabled children.

These rules also apply for the defined contribution scheme (old-age pension scheme).

Unemployment

Unemployed people receive no credits in the pension system. However, they can make use of provisions for voluntary pension insurance.

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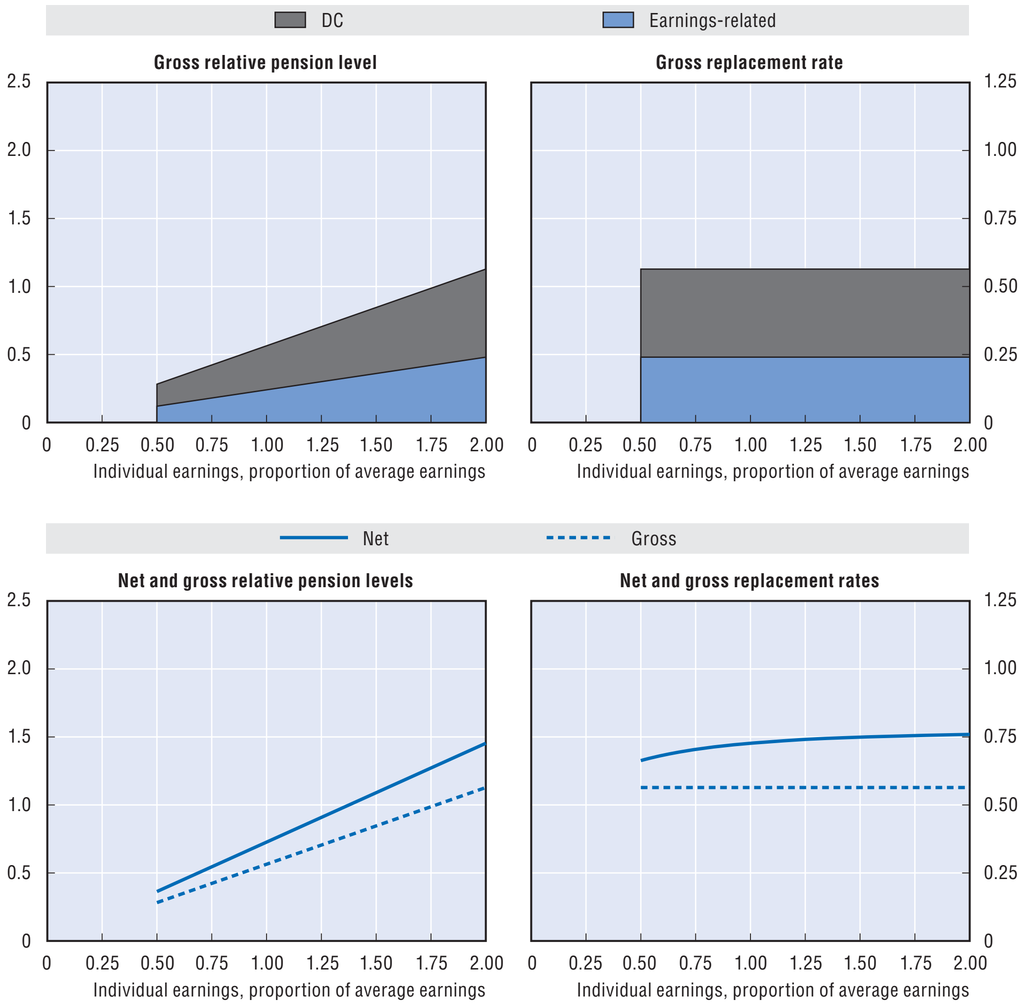
Pension modelling results: Slovak Republic



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	47.9	28.2	42.3	56.4	84.6	112.8
(% average gross earnings)						
Net relative pension level	61.8	36.3	54.5	72.7	109.0	145.4
(% net average earnings)						
Gross replacement rate	56.4	56.4	56.4	56.4	56.4	56.4
(% individual gross earnings)						
Net replacement rate	71.5	66.3	70.4	72.7	74.9	75.9
(% individual net earnings)						
Gross pension wealth	8.8	8.8	8.8	8.8	8.8	8.8
(multiple of individual gross earnings)	*10.6*	*10.6*	*10.6*	*10.6*	*10.6*	*10.6*
Net pension wealth	8.8	8.8	8.8	8.8	8.8	8.8
(multiple of individual gross earnings)	*10.6*	*10.6*	*10.6*	*10.6*	*10.6*	*10.6*

Spain

Spain: Pension system in 2006

The Spanish public pension system consists of a single, earnings-related benefit in the contribution level, with a means-tested minimum pension. There is also a non-contributory means-tested level, which replaces the previous special social assistance scheme.

Key indicators

		Spain	OECD
Average earnings	EUR	21 200	28 600
	USD	26 500	35 800
Public pension spending	% of GDP	8.1	7.2
Life expectancy	At birth	81.1	78.9
	At age 65	85.0	83.4
Population over age 65	% of working-age population	26.2	23.8

Qualifying conditions

The retirement age for a full benefit is 65 years for men and women. Fifteen years of contributions are necessary to qualify for a pension benefit.

Benefit calculation

Earnings-related

The benefit accrues according to a schedule. After 15 years' contributions, it is 50% of the earnings base. Over the next ten years, an extra 3% is accrued per year, followed by 2% per year thereafter. The maximum accrual is 100%, reached after 35 years' contributions.

The earnings base is pay over the last 15 years, up-rated in line with prices, apart from the last two years. This means that the replacement rate relative to final salary is less than 100%. On the standard assumptions for earnings growth and price inflation, this is calculated to be 88%.

There is a ceiling to earnings for contributions and benefit purposes of EUR 34 772.4 corresponding to 164% of average earnings.

Benefits are price-indexed.

Minimum and maximum

There is a minimum pension payable from age 65 amounting to EUR 469.73 per month, or 31.1% of average earnings, for pensioners without a dependent spouse, and 569.07 per month, or 37.7% of average earnings, for pensioners with a dependent spouse. There are 14 payments per year.

Due to specific policy from 2004, minimum pensions have increased above the price index in the last years.

The maximum pension is EUR 2 245.67 per month in 2006 (14 payments per year).

Variant careers

Early retirement

Early retirement is available from age 61 for people entering the system in 1967 or later who are unemployed, provided they have contributed for at least 30 years. The actuarial reduction depends on the number of years of contributions: 8% (30 years), 7.5% (31-34 years), 7% (35-37 years), 6.5% (38-39 years), and 6% for more than 40 years of contributions.

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For people who entered the system before 1967, early retirement is possible from age 60. If retirement is voluntary the reduction is 8% per year. If it is not voluntary reductions are the same as in the case of people aged 61 or more who entered the system in 1967 or later.

The minimum pension for early retirees is EUR 437.68 or 29% of average earnings for pensioners without a dependent spouse, and 531.84 per month, or 35% of average earnings for pensioners with a dependent spouse, and after 65 they moves to the higher level.

Between 60 and 64, it is possible to combine partial pension receipt and a part-time job, if working hours are reduced between 25% and 85%. Another employee must replace the remaining working hours left by the partial pensioner. Fifteen years of contributions are required.

With the new law 40/2007 rules about partial pensions have changed from 1-1-2008:

1. Working hours must be reduced between 25-75%.
2. Partial retired workers must have been six years or more with the last employer and contributed 30 years or more in total.
3. For people entering the system after 1967, the possibility for partial pensions starts from 61.

Late retirement

It is possible to defer the pension after normal retirement age. For people of age 65 and with 35 years of contributions, the amount of the pension may exceed 100% of the calculation base. The benefit increases by 2% per year of deferral.

From 65 there is also the possibility of combining partial pension and part-time job. In this case, there is no obligation to replace the remaining working hours.

With the new law 40/2007, workers who have contributed 15 years or more and continue working after 65 years old will increase their benefit by 2% of the base of calculation per additional year. The increase is 3% with 40 years of contributions. Pensioners entitled of a maximum pension entering retirement with 66 years or more will receive an annual lump sum (2% of the maximum pension per additional year after 65, 3% with 40 years of contributions).

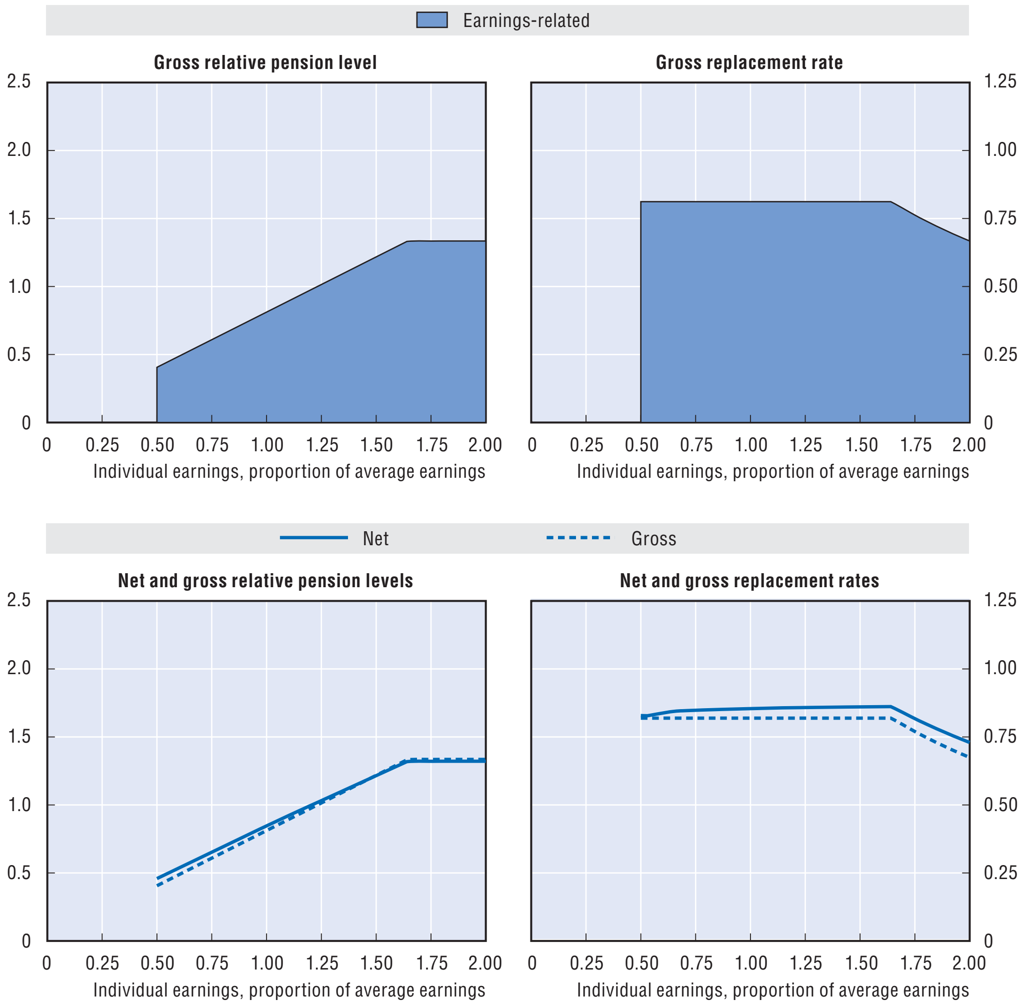
Childcare

There is coverage for the maternity period. Two years out of the labour market looking after children count towards the calculation of pension benefit.

Unemployment

During periods of unemployment-benefit receipt, the government pays all of the employers' contribution and 35% of the employee's contribution to the pension insurance scheme. The remaining 65% of the employee's contribution is paid by the worker. The base salary for contributions is the average salary in the six months prior to unemployment. The duration depends on the number of contribution days during the prior six years, varying between four months and two years. The unemployment assistance which is paid thereafter does not create any pension credits, except for people 52 or more. For these people, contributions for old age pension are paid by the government up to retirement age. These contributions are levied on the minimum base of EUR 631.20 per month.

Pension modelling results: Spain



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	64.9	40.6	60.9	81.2	121.8	133.5
(% average gross earnings)						
Net relative pension level	69.1	45.9	65.3	84.7	121.6	132.1
(% net average earnings)						
Gross replacement rate	81.2	81.2	81.2	81.2	81.2	66.7
(% individual gross earnings)						
Net replacement rate	84.2	82.1	84.1	84.7	85.3	72.2
(% individual net earnings)						
Gross pension wealth	12.2	12.2	12.2	12.2	12.2	10.0
(multiple of individual gross earnings)	*14.3*	*14.3*	*14.3*	*14.3*	*14.3*	*11.7*
Net pension wealth	10.3	10.9	10.4	10.1	9.7	7.9
(multiple of individual gross earnings)	*12.1*	*12.8*	*12.2*	*11.8*	*11.3*	*9.2*

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Sweden

Sweden: Pension system in 2006

The new pension system, introduced in 1999, applies to people born in 1954 and after. The old and the new systems will cover older workers proportionally: people born 1938-53 will receive pensions under a mix of the old and new rules. The earnings-related part is based on notional accounts and there is a small mandatory contribution to individual, defined-contribution funded pensions. There is also a pension-income-tested top-up. Occupational pension plans – with defined-benefit and defined-contribution elements – have broad coverage.

For the occupational plan, in 2006 the new ITP scheme was passed. The scheme has long transitional rules but came into effect fully for those born in 1979 and after.

Key indicators

		Sweden	OECD
Average earnings	SEK	324 600	263 800
	USD	44 000	35 800
Public pension spending	% of GDP	7.7	7.2
Life expectancy	At birth	80.8	78.9
	At age 65	84.2	83.4
Population over age 65	% of working-age population	29.4	23.8

Qualifying conditions

The pension from the income and premium pension can be received from the age of 61.

Eligibility for the guarantee pension will be earned with three years' residency. It is possible to get a guarantee pension from age 65.

Maximum guarantee pension is earned with 40 years' residency and is reduced proportionally for shorter periods. The pension can be claimed from age 65.

Benefit calculation

Contributions of 18.5% of pensionable pay are credited and then up-rated in line with a three-year moving average of economy-wide average earnings. Pensionable pay is defined as earnings less the employee contribution to the pension system (*i.e.* to both the notional accounts system and the premium pension system) of 7% of gross earnings, giving an effective contribution rate on gross earnings of 17.21%, 14.88% to the notional-accounts system and 2.33% to the defined-contribution funded pensions. Contributions are only levied when annual earnings exceed a small floor of SEK 16 800 in 2006, just over 5.2% of average earnings, although they are due on the whole of earnings for all people earning above the floor. There is a ceiling to benefits calculated in terms of pensionable earnings of SEK 333 750 in 2006. However, this again relates to pensionable earnings, giving an effective ceiling relative to gross earnings of SEK 359 100 in 2006 (around 111% of average earnings). Employer contributions are also paid only to the ceiling, but there is an additional tax on earnings above the ceiling. This tax has the same percentage as the pension contribution but goes directly to the central government budget. It does not accrue any pension rights.

Earnings-related

The new earnings-related scheme uses notional accounts. The notional accounts are increased every year by the distribution of the pension balances of deceased persons of the same age as the survivors (inheritance gains). The inheritance gains from people who die before the earliest possible retirement age (61 years) are relevant. After this age the inheritance gains factor is estimated on the basis of the mortality observed for an earlier period (computed from five year unisex mortality tables).

At retirement, the accumulated notional capital will be converted into an annuity. This calculation will use a coefficient depending on individual retirement age and contemporaneous life expectancy (based on the previous five year unisex mortality tables). A real discount rate of 1.6% a year will be assumed in this calculation. Illustrative values for the annuity coefficient at age 65 are 15.4 for 2000 rising to 16.8 by 2020 and 17.4 by 2040. The annuity coefficient is currently 18.0 for retirement at 61 and 12.8 at age 70 for people born in 1940.

After retirement, pensions are uprated with the increase in nominal average earnings less the imputed interest rate in the annuity divisor of 1.6%.

There is also a "balance mechanism": if assets (the buffer fund plus the estimated value of assets in the form of contribution revenues) fall below liabilities (accrued notional pension capital and capital value of outgoing pensions), then indexation of pensions in payment and returns credited to notional accounts are reduced by the ratio of assets to liabilities. The balancing ratio reached a low point of 1.0014 in 2004 and remained just over one until 2007 (1.0097 in 2003, 1.0014 in 2004, 1.0044 in 2005 and 1.0149 in 2006). In 2008, however, this has fallen to 0.9672. The balancing ratio for year t is used to calculate the balance number or the need for activating the balancing mechanism in year $t + 2$. An activated balancing mechanism would mean lower replacement rates from the national system but could also produce higher results when the pension system recovers and the balance figure increases (the balance index can exceed the income index during the recovery period).

For modelling purposes, the annuity coefficients are calculated using the above rules and the relevant mortality data from the UN/World Bank population database. It is assumed that the balance mechanism does not affect the uprating of benefits.

Minimum

The "guarantee pension" is an income-tested top-up for people with low levels of benefit from notional accounts. For a single person, the full guaranteed benefit in 2006 was SEK 84 561 for a single pensioner born after 1938 or 26% of gross average earnings.

The guarantee pension is withdrawn at 100% against the first SEK 50 022 (2006) of income, for a single person, from the earnings-related pension, thereafter at 48%. This threshold is equivalent to 15% of average earnings. Only when earnings-related pension exceeds SEK 121 879 – nearly 38% of average earnings – is entitlement to the guarantee exhausted.

The guarantee level is price indexed under current legislation. However, the baseline assumption in the modelling for all countries is that the value of safety-net retirement benefits will tend, over time, to track average earnings rather than decline relative to general living standards.

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There is also a housing benefit that covers 93% of housing costs up to a maximum of SEK 5 000 per month for a single pensioner. The benefit is an important part of the minimum living standard for Swedish pensioners. This means-tested benefit is not included in the modelled calculations.

Defined contribution

A further 2.5% of pensionable income (giving an effective contribution rate against gross earnings of 2.325%) will be paid into personal pension accounts: the premium pension. People have a broad choice of where these funds are invested.

At retirement, people have a choice over the way benefits are withdrawn. First, people can convert the pension into an annuity to avoid investment risk. Alternatively, people will be able to choose a variable annuity, where their funds continue to be invested by their chosen fund manager. These annuities do not have a guaranteed value. The principle of the pension calculation in this case is that the value of the account is divided by an annuity divisor (based on estimated average life expectancy) and the pension benefit is credited with an estimated future interest rate of 3% minus administrative costs. If returns exceed 3%, then either an additional payment is made or the balance of the account is higher and so, therefore, is the base for calculating the annual pension.

Quasi-mandatory occupational

The occupational schemes together are estimated to cover almost 90% of employees. There are only four major occupational schemes. The modelling has used the ITP scheme for white-collar workers, which mixes defined-benefit and defined-contribution elements. This plan has now been renegotiated. The old plan is current for those born 1978 or earlier with some minor changes and the new plan covers those born 1979 or later.

ITP1

From 1 January 2007, salaried employees born in or after 1979 begin to accrue a retirement pension under the new ITP1 plan from the age of 25. The plan is a complete defined-contribution plan. The contribution is 4.5% of salary portions up to 7.5 income base amounts (SEK 333 750 for 2006). For salary portions in excess of 7.5 income base amounts (divided by 12 for one month) the contribution is 30%. The pensionable salary becomes the gross salary paid out in cash, excluding reimbursement of expenses. Premiums are paid from the first SEK of salary.

The employee can choose the form of the savings and the fund manager. However, at least half the contribution is invested in traditional pension insurance. The employee can also choose repayment cover and family cover of one, two, three or four price base amounts per year over five, ten, 15 or 20 years. The contributions of those who do not specify a choice are invested in traditional pension insurance with no repayment cover or family cover. This default choice is the one that is modelled.

Employees whose yearly salary exceeds ten income base amounts (SEK 445 000 in 2006) may choose to be covered under the new plan upon agreement with their employer. This applies regardless of whether the employee has a traditional ITP2 plan or has taken out an alternative ITP.

Variant careers

Early retirement

Retirement is possible from age 61 in the public pension scheme (both the income pension and the premium pension). There is no fixed retirement age. The notional-accounts and annuity calculations provide an automatic actuarial reduction depending on the age of retirement.

The income-tested guarantee pension cannot be claimed before 65. If the notional-accounts pension is withdrawn before or after age 65, the guarantee pension is still calculated as if the pension had been withdrawn at age 65.

In the new ITP1 plan, pensions are normally paid from the age of 65, but may be taken out from the age of 55. Pensions are life-long but can be paid in full or in part for a limited period of at least five years. The annuity is modelled as one that gives lifelong payments. The size of the pension is determined by the amount of premiums paid, the return, fees and taxes, and for how long the pension is to be disbursed.

Late retirement

It is possible to defer the notional accounts and premium pension with no upper age limit, again with automatic actuarial adjustments. It is also possible to combine work and pension receipt. Finally, pensions can be withdrawn partially (at 25, 50 or 75% of the full pension). The guarantee pension is adjusted against other pensions from the Swedish old-age pension system and from comparable foreign national pensions, but is not reduced by wage income, capital income, occupational pension or private pension insurance. Thus, it is also possible to combine work with receipt of the guarantee pension.

It is possible to defer the ITP1 occupational pension after age 65. No additional pension rights can be accrued after age 65.

Childcare

Years are credited under the public pension scheme for any period spent caring for children aged four or under. In a household with two parents the credits go to the parent with the lowest income if an active choice is not made. Individuals receive the best of three different ways of calculating the credit. First, if income is zero or lower than previous earnings, then the credits are based on the earnings the year before the child was born. Secondly, for low-income workers or people who were not working before childcare responsibilities started, the credits are based on 75% of economy-wide average earnings. Thirdly, if income actually rises or does not decrease to a great extent as childcare responsibilities begin, then the credit is set at one income base amount. In all three cases, the government makes the total contributions to the pension system (covering both the income pension and the premium pension). This is, however, up to the earnings ceiling in the pension system. Furthermore, parental benefits paid to people on parental leave from work are also considered pensionable income. The beneficiary pays the employee pension contribution of 7% on benefit income. The government makes all the "employer contributions" of 10.21% for incomes from social security including parental benefits.

The parental benefit is payable for a period of 480 days as follows:

- 390 days at 80 % of the parent's annual income up to a ceiling of ten price base amounts (SEK 39 000 in 2006).
- 90 days at a universally applicable flat rate of SEK 180/day.

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The parental benefit is computed daily. Parents on low income or no income at all receive a minimum guaranteed benefit of SEK 180/day. The 480 cash benefit days are divided equally between the parents (*i.e.* 240 days to each parent). A parent may also transfer up to 180 of her or his days to the other parent.

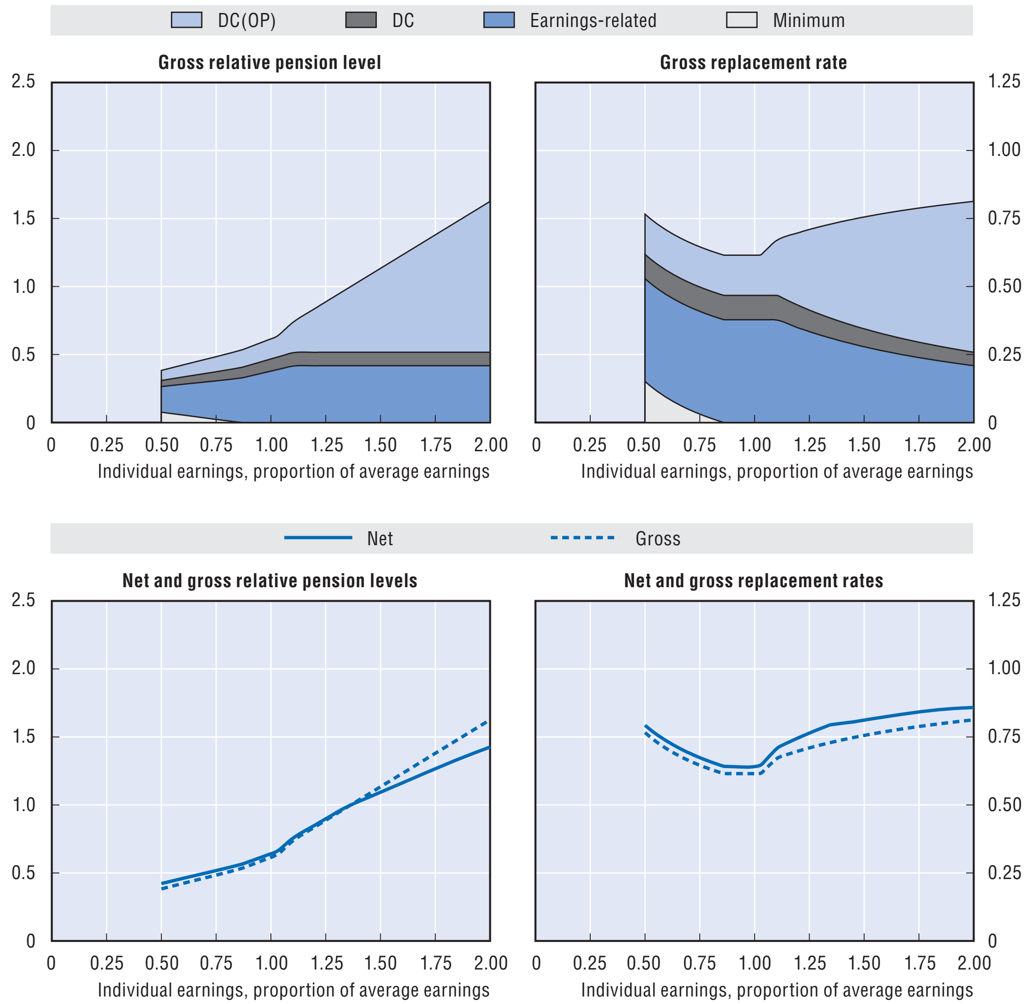
Under the ITP occupational plan, there is a recommendation that the employer contributes to an employee's pension during periods of up to 11 months for parental leave (and most do so).

Unemployment

Unemployment benefits and training allowances paid to unemployed people taking up labour market programmes are pensionable income, with the government making the "employer" contribution. Income-related unemployment benefits are 80% of previous earnings for the first 200 days. From day 201 up to day 300 the benefit is 70% of previous earnings. Thereafter the benefit is 65% of previous earnings unless one is the parent of a child below the age of 18 for whom the benefit remains at a level of 70% of previous earnings. The unemployment benefits are disbursed up to a ceiling of SEK 680 per day and subject to a minimum payment of SEK 320 per day. Unemployment benefits can be paid for up to 600 days subject to certain conditions.

After the receipt of unemployment benefits for a prolonged maximum period of 600 days, the beneficiary is entitled to an activity guarantee that implied the receipt of a training allowance where the compensation is at the same level as the unemployment benefit and accrues pension rights. The activity guarantee and the subsequent training benefit are obtainable for an unlimited period until the age of 65. An individual who is unemployed would seldom opt to take out their old age pension instead of receiving a training allowance, as this would mean a lower pension.

Pension modelling results: Sweden



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	54.1	38.3	48.4	61.5	113.3	162.6
(% average gross earnings)						
Net relative pension level	57.2	42.2	51.8	64.1	109.4	142.6
(% net average earnings)						
Gross replacement rate	61.5	76.6	64.6	61.5	75.6	81.3
(% individual gross earnings)						
Net replacement rate	64.1	79.3	67.4	64.1	81.2	85.9
(% individual net earnings)						
Gross pension wealth	9.9	12.2	10.3	9.9	12.0	12.9
(multiple of individual gross earnings)	*11.3*	*14.0*	*11.8*	*11.3*	*13.7*	*14.7*
Net pension wealth	7.2	9.3	7.6	7.1	8.0	7.8
(multiple of individual gross earnings)	*8.2*	*10.6*	*8.7*	*8.1*	*9.1*	*8.9*

Switzerland

Switzerland: Pension system in 2006

The Swiss pension system has three main parts. The public scheme is earnings-related, but has a progressive formula. The other components are a system of mandatory occupational pensions and an income-tested supplementary benefit.

Key indicators

		Switzerland	OECD
Average	CHF	72 400	44 800
earnings	USD	57 800	35 800
Public pension spending	% of GDP	6.8	7.2
Life expectancy	At birth	81.7	78.9
	At age 65	85.3	83.4
Population over age 65	% of working-age population	25.9	23.8

Qualifying conditions

Pensionable age under the public scheme and mandatory occupational pensions is currently 65 for men and 64 for women. A full pension requires contributions for 44 years for men and 43 for women.

Benefit calculation

Earnings-related

The public pension is based on average lifetime earnings. If this figure is less than CHF 38 700, then the entitlement is CHF 9 546 plus 26% of average lifetime earnings. For lifetime earnings above the threshold, the entitlement is a flat CHF 13 416 plus 16% of average lifetime earnings.

There is a minimum pension of CHF 12 900 and a maximum pension of twice that level. These are equivalent to 18 and 36% of average earnings, respectively. The maximum benefit is reached when average lifetime earnings are CHF 77 400, equivalent to 107% of economy-wide average earnings.

Pensions in payment are indexed 50% to prices and 50% to nominal earnings.

Mandatory occupational

The system of mandatory occupational pensions was introduced in 1985. It is built around "defined credits" to an individual's pension account. These credits vary by sex and age:

Men and women of age (from 2005)	25-34	35-44	45-54	55-64/63
Women of age (1987-2004)	25-31	32-41	42-51	52-62/63
Credit (% of co-ordinated earnings)	7	10	15	18

The value of accumulated credits at retirement naturally depends on the required interest rate applied to earlier years' contributions. This was, for a long period until the end of 2002, 4%, but was cut to 3.25% in 2003 and to 2.25% in 2004. The interest rate was raised to 2.5% in 2005. If the interest rate is broadly equivalent to the growth rate of earnings, then a full career in the system will give a man at age 65 accumulated credits of 500% of earnings. However, higher (or lower) outcomes are possible if the interest rate exceeds (is less than) growth in earnings. The modelling assumes that the interest rate applied to the credits will be equivalent to earnings over the long term.

The system has a minimum annuity rate of 7.10% for men (65) and 7.2% for women (64) that is applied to this notional capital sum. For men, this gives a full career replacement rate of 500 × 7.1 = 35.5% (subject to the interest rate being equal to earnings growth). From 2005, the minimum annuity rate falls gradually from 7.10% eventually reaching 6.8% over a ten-year period.

The defined credits (and hence the replacement rate) apply only to "co-ordinated" earnings. This is pay between three-quarters of the maximum pension of the public scheme (CHF 19 350 for 2006) and three times the maximum pension of the public scheme (CHF 77 400 for 2006). These thresholds are equivalent to 27% and 107% of average earnings. The coordination deduction is ? of the maximum pension of public scheme (CHF 22 575 for 2006). Note that the ceiling for pensionable pay is the same in the public scheme and in the mandatory occupational pension sector. There is a minimum for co-ordinated earnings of one eighth of the maximum value. Credits accrue at this minimum level for people with co-ordinated earnings below this level.

Targeted

The amount of the annual benefit is the share of expenditure recognized that exceeds the income determinants. The expenditure on basic needs are provided by law and amounts to CHF 17 640 for single people, equivalent to 24% of average. The supplementary benefit is indexed in the same way as the public old age pensions, *i.e.* to a mixed index of 50% prices and 50% wages. There are discretionary cantonal additions for low-income pensioners; these are disregarded in the model.

Variant careers

Early retirement

Early retirement in the public scheme is possible two years before the standard retirement age, *i.e.* from age 63 for men and 62 for women as of 2005. In case of early retirement, the full value is reduced by 6.8% for each year of early claiming. This is equivalent to an actuarial adjustment, as operated in other countries, of 4.5% (since 1/44 = 2.3% of the adjustment reflects the additional year that the member has contributed).

For women born in 1947 or before, the reduction in pension benefits from their full value is 3.4% per year of early retirement.

Early retirement is permitted in occupational schemes. In practice, schemes may allow retirement up to five years before the normal age, although schemes can decide on their own policy. Generally, the statutory annuity rate is reduced from the 7.1% at age 65 (from the 7.2% at age 64 for women), by 0.2 percentage points per year of early retirement. (Note that this conversion rate will fall gradually to 6.8% over the ten years starting in 2005.) The 0.2 point reduction is equivalent to an actuarial adjustment, as conventionally measured, of 2.8-3.1% per year of early retirement (increasing with the extent of early retirement). Including also the loss of contributions and credits as a result of early retirement, the theoretical benefit is 8%-9.4% lower per year of early retirement. The loss increases the earlier the retirement is taken. (The range given is from age 61 to age 65.)

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Late retirement

Both public and occupational pensions can be deferred after normal pension age. Pensions are adjusted in the same way as for early retirement. The pension can be deferred for up to five years after the normal pension age. The pension is increased according to the following schedule:

Deferral	1 year	2 years	3 years	4 years	5 years
Adjustment	5.2%	10.8%	17.1%	24.0%	31.5%

It is also possible to claim the public pension at 65 and continue working.

Contributions are not levied on people working after age 65 if earnings are below CHF 16 800 per year. For earnings above that level, contributions are levied when people defer the pension or claim the pension while continuing their work but no additional pension entitlement can be earned.

In the occupational plans, the annuity rate is increased by 0.2 percentage points for each year that retirement is deferred according a recommendation of the Federal Social Insurance Office (pension funds decide freely on the percentage points). The authorities, in practice, allow deferral for up to five years.

In principle, it is possible to combine receipt of the occupational pension with continuing to work. In practice, these are mainly cases of people with incomplete careers or people who have retired early rather than late. Therefore, the modelling assumes that people defer their occupational pension if they continue to work after the normal pension age. People do not continue to contribute after 65 under the public pension scheme.

Childcare

Years of childcare (for children under age 16) are credited in the public scheme as if earnings had amounted to three times the minimum pension of the year in which the caring parent retires. For 2006, this was CHF 38 700, corresponding to 53% of economy-wide average earnings. If the caring parent is married during the caring period, the credits are split equally between the spouses.

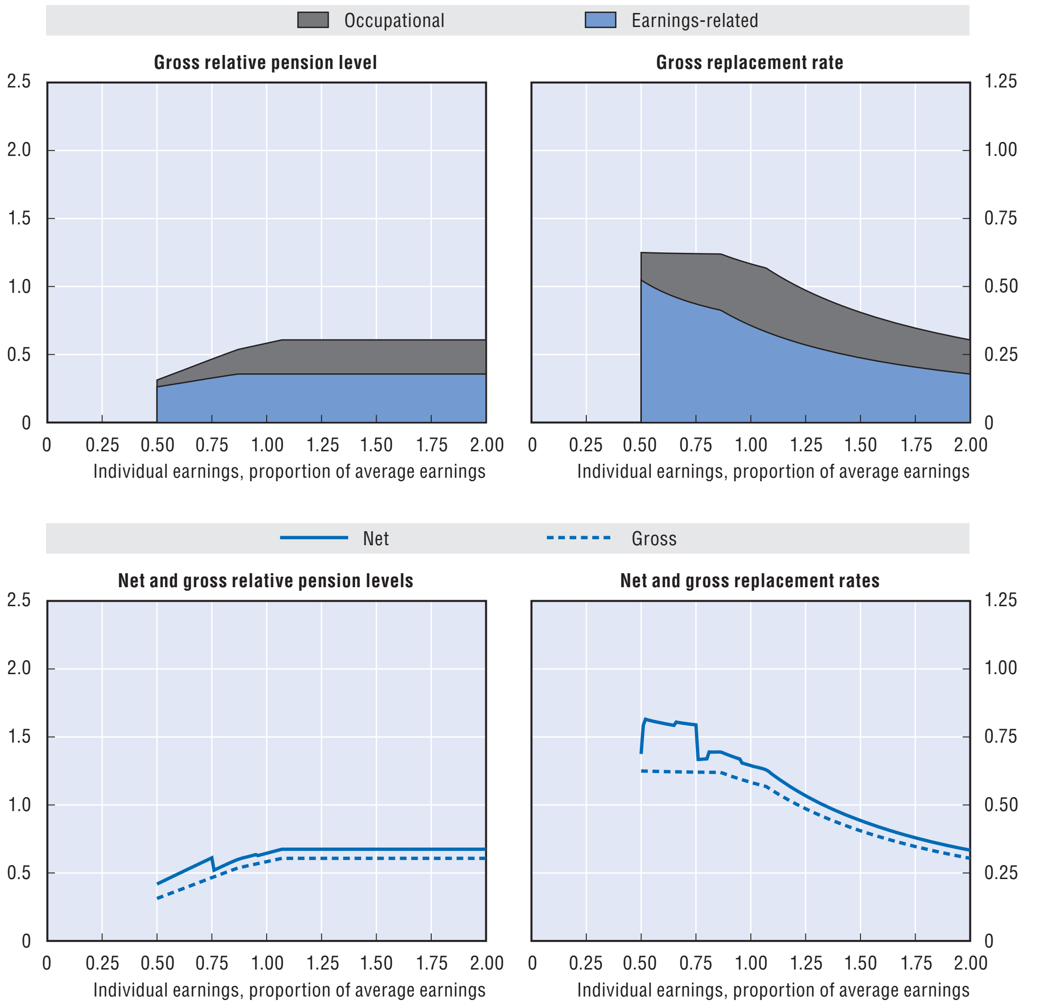
Credits for childcare are not required in occupational schemes.

Unemployment

Unemployment benefits are subject to social security contributions and so count towards the public pension just as if they were earnings. Unemployment insurance pays 80% of previous earnings. Persons with no child maintenance, who receive a full daily allowance of more than CHF 140 or who are not disabled receive 70% of the insured salary. The duration of unemployment insurance varies between 260 and 520 days. Once unemployment insurance is exhausted and a former worker is on social assistance, no contributions are payable. If income is very low, then municipal authorities often pay the minimum contribution.

There are no credits for unemployment periods in occupational schemes.

Pension modelling results: Switzerland



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	52.7	31.2	46.6	58.3	60.8	60.8
(% average gross earnings)	*53.2*	*31.4*	*47.0*	*59.0*	*61.5*	*61.5*
Net relative pension level	58.8	41.8	61.1	64.5	67.5	67.5
(% net average earnings)	*59.4*	*42.0*	*51.8*	*65.3*	*68.3*	*68.3*
Gross replacement rate	62.0	62.5	62.1	58.3	40.5	30.4
(% individual gross earnings)	*62.6*	*62.8*	*62.6*	*59.0*	*41.0*	*30.7*
Net replacement rate	69.5	68.8	79.4	64.5	44.3	33.4
(% individual net earnings)	*70.2*	*69.1*	*67.3*	*65.3*	*44.9*	*33.8*
Gross pension wealth	10.5	10.7	10.5	9.8	6.8	5.1
(multiple of individual gross earnings)	*12.8*	*13.1*	*12.9*	*12.0*	*8.3*	*6.2*
Net pension wealth	8.5	10.4	10.0	7.9	5.5	4.1
(multiple of individual gross earnings)	*10.4*	*12.7*	*10.3*	*9.6*	*6.7*	*5.0*

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Turkey

Turkey: Pension system in 2006

An earnings-related public scheme with an income-tested safety net and a flat-rate supplementary pension.

Key indicators

		Turkey	OECD
Average earnings	TRY	15 600	51 200
	USD	10 900	35 800
Public pension spending	% of GDP	7.8	7.2
Life expectancy	At birth	71.6	78.9
	At age 65	79.1	83.4
Population over age 65	% of working-age population	10.4	23.8

Qualifying conditions

Entrants into the system since September 1999 can draw a pension from age 60 (men) or 58 (women) with 7 000 days of contributions. This is equivalent to around 28 years of contributions for continuous employment. An alternative eligibility condition is 25 years of insurance coverage with 4 500 days of contributions.

The means-tested pension is payable only to those with no other social security rights who are disabled or those aged 65 or over.

Benefit calculation

Earnings-related

The pension under the new scheme is based on average lifetime earnings revalued in line with nominal GDP growth. The pension has a non-linear formula with years of coverage. The first ten years earn a pension of 35% of pay, with 2% per year extra for the next 15 years and 1.5 % per year thereafter.

There is a floor above which contributions are required. This had only one value during calendar 2006, TRY 531.

There is a ceiling to pensionable earnings; its value was TRY 3 451.50.

According to the law acted in 1999 pensions are monthly indexed by consumer price index. But since 2003 indexation of pensions in payment is determined once or twice a year, either by budget laws, other laws or by Board of Cabinet. For 2006 pensions are increased by 3% in January and 4.33% in July.

Minimum

There is a minimum pension, which in 2006 varied between TRY 463.1 and TRY 483.1.

Targeted

The means-tested pension is paid quarterly. For the first half of 2006 the pension was TRY 68 per month, for the second, pension was TRY 71 per month.

Variant careers

Early retirement

Workers in specific industries (*e.g.* mining) and people with disability can retire earlier but other workers cannot claim pensions before the eligibility ages.

Late retirement

It is possible to defer the pension beyond the normal pension age, but until 2006 the amount of pension benefit is not adjusted to the longer period of contributions. However from 2006, the extended contribution will be reflected.

Childcare

There is no credit for periods spent out of paid work caring for children.

Unemployment

There is no credit for periods of unemployment.

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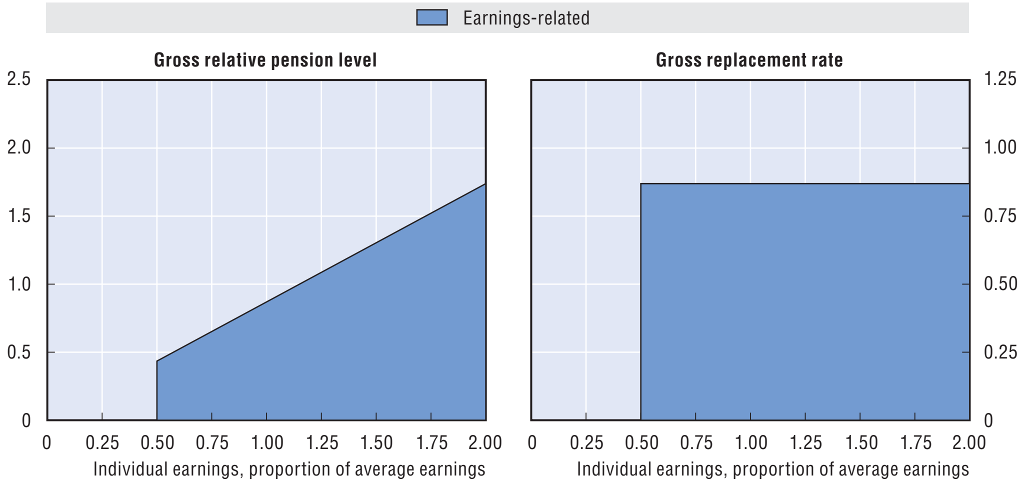
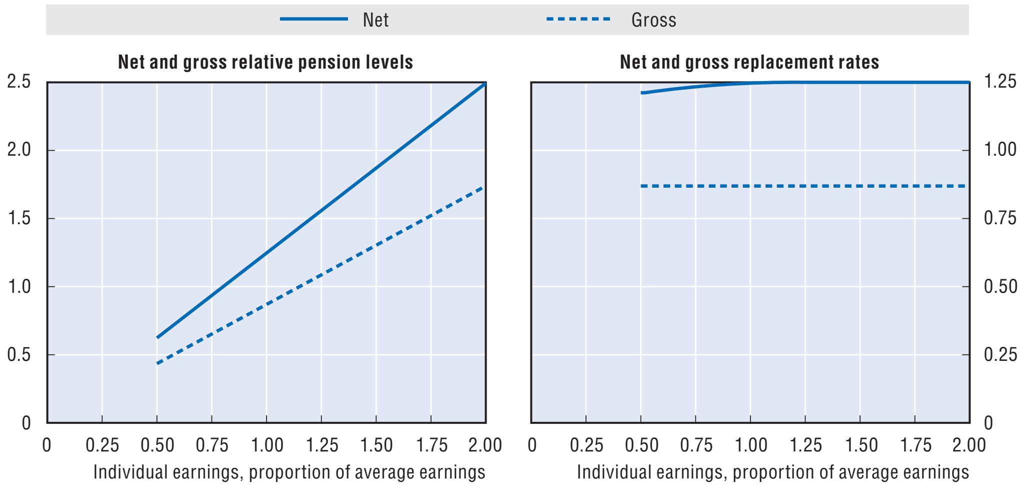
Pension modelling results: Turkey





Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	73.9	43.5	65.2	86.9	130.4	173.9
(% average gross earnings)						
Net relative pension level	106.0	62.3	93.5	124.7	187.0	249.4
(% net average earnings)						
Gross replacement rate	86.9	86.9	86.9	86.9	86.9	86.9
(% individual gross earnings)						
Net replacement rate	124.0	121.2	123.4	124.7	127.1	130.4
(% individual net earnings)						
Gross pension wealth	11.0	11.0	11.0	11.0	11.0	11.0
(multiple of individual gross earnings)	*12.9*	*12.9*	*12.9*	*12.9*	*12.9*	*12.9*
Net pension wealth	11.0	11.0	11.0	11.0	11.0	11.0
(multiple of individual gross earnings)	*12.9*	*12.9*	*12.9*	*12.9*	*12.9*	*12.9*

United Kingdom

United Kingdom: Pension system in 2006

The United Kingdom has a complex pension system, which mixes public and private provisions. The public scheme has two tiers, (a flat-rate basic pension and an earnings-related additional pension), which are complemented by a large voluntary private pension sector. Most employee contributors "contract out" of the state second tier into private pensions of different sorts. An income-related benefit (pension credit) targets extra spending on the poorest pensioners.

Key indicators

		United Kingdom	OECD
Average earnings	GBP	31 500	19 300
	USD	58 000	35 800
Public pension spending	% of GDP	5.7	7.2
Life expectancy	At birth	79.1	78.9
	At age 65	83.3	83.4
Population over age 65	% of working-age population	26.8	23.8

Qualifying conditions

State pension age, currently 60 for women born on or before 5 April 1950 and 65 for men, will gradually be equalised from 2010 reaching 65 in 2020. As a result of the Pensions Act 2007, state pension age will increase to 66 between 2024 and 2028; to 67 between 2034 and 2036 and 68 between 2044 and 2046. The eligibility age for the guarantee credit element of the pension credit is 60, and will increase in line with the women's state pension age. The new savings credit element of pension credit is only available from 65 for both men and women.

To qualify for the basic state pension, people need: *i)* to pay; or *ii)* have been treated as having paid social security contributions; or *iii)* have credits for around nine-tenths of their potential working lives (39 years for women with a state pension age of 60; 44 years for men and women with a state pension age of 65). A proportionally reduced state pension is available for people who do not meet the full condition, but only to a minimum of 25% (*i.e.*, 10 years for women with a state pension age of 60; 11 years for men and women with a state pension age of 65). As a result of the Pension Act 2007, the number of years of contributions or credits required for entitlement to a full basic state pension will be reduced to 30 with proportionally reduced state pensions available where a person has a minimum of one year's contribution or credits for people reaching state pension age on or after 6 April 2010.

Benefit calculation

Basic

The full basic state pension for a single person is GBP 84.25 per week in 2006/07, equivalent to nearly 14% of average earnings.

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Earnings-related

For earnings between the lower earnings limit (GBP 4 368 per year in 2006/07) and the low earnings threshold (GBP 12 500), the replacement rate is 40% of the difference. The lower earnings limit is worth nearly 14% of average earnings while the low earnings threshold is 40%. This also applies to people covered by credits. This is equivalent to treating people earning below the low earnings threshold as if they had earned at this level. Over the next range, the replacement rate is 10%, ending at GBP 28 800 in 2006/07. Between this threshold and the ceiling, the replacement rate is 20%. The ceiling is GBP 33 540 in 2006/07. The upper threshold is worth around 91% of average earnings and the ceiling is 106% of average earnings.

The benefit value is calculated on average lifetime salary, with earlier years' pay uprated in line with average economy-wide earnings. The benefit is then price-indexed after retirement.

As a result of the Pensions Act 2007, from 2010 the income bands will reduce to two. Between the lower earnings limit and the low earnings threshold, the replacement rate will be 40% of the difference. Between the lower earnings threshold and the ceiling, the replacement rate will be 10%. From a date to be set, Band 1 income will provide a flat-rate entitlement of GBP 1.60 a week for each qualifying year (in 2008/09 earnings terms). Furthermore, from April 2009 the cap on accruals will be frozen through the introduction of an upper accrual point at GBP 770 a week.

Targeted

The Pension Credit, introduced in 2003, is a tax free weekly benefit for people aged 60 or over who are living on low incomes and guarantees all pensioners an income above a certain level. The Pension Credit is an income-related benefit and is not based on National Insurance contributions. There are two elements to the Pension Credit, the guarantee credit and the savings credit. The guarantee credit ensures a minimum level of income by providing financial help for people aged 60 and over whose income is below the standard minimum guarantee amount. In 2006/07 this was GBP 114.05 for individuals and GBP 174.05 for couples (these amounts may be higher for people with severe disabilities, caring responsibilities or certain housing costs).

The savings credit is an extra amount for people aged 65 or over who have made modest provision for their retirement. It is designed to reduce the effective withdrawal rate of benefits from 100% under its predecessors to 40%. People, whose income (excluding any guarantee credit) is below their guarantee credit minimum guarantee and above the savings credit threshold, GBP 84.25 for individuals and GBP 134.75 for couples respectively in 2006/07, receive 60% of the difference between their income and the threshold up to a maximum of GBP 17.88 for individuals and GBP 23.58 for couples, respectively. For people with incomes above their guarantee credit minimum guarantee (that is they are not entitled to the guarantee credit), the maximum savings credit is reduced by 40% of their income over their guarantee level.

Voluntary private pensions

Some 47% of employees are members of an occupational pension scheme and around 19% have personal plans. Because some people have both plan types, overall coverage of voluntary private pensions is 59%. The defined-benefit plan modelled pays a pension of 1/80th of final salary for each year of service, equivalent to an accrual rate of 1.25%. When people change jobs, the value of the deferred occupational pension is indexed to price inflation.

However, most private-sector occupational plans have changed to defined-contribution provision, some for new members only and some for existing members. The government will also introduce a new national pension savings scheme. Using the same principles as New Zealand's KiwiSaver, this will have a default contribution rate of 8%, which is a little below the 9% average contribution rate to existing defined-contribution occupational schemes. The modelling assumes a contribution of 8% of earnings.

Variant careers

Early retirement

A state pension will not be paid before state pension age.

Late retirement

Until April 2005, deferral of the state pension was possible for up to five years after state pension age. This earned an increment of about 7.4% for each year. From April 2005, the time limit for deferral was removed and the increment increased to about 10.4% for each full year of deferral. Also, it is possible instead to take a taxable lump sum provided the deferral has been for a minimum of 12 consecutive months. The lump sum is made up of the state pension foregone during the deferral period, plus interest which is guaranteed to be at least 2 percentage points above the repo rate (the Bank of England base rate). The choice has to be made when the state pension is eventually claimed.

Childcare

Both tiers of the public pension scheme (basic state pension and state second pension) provide protection for periods of child care. This covers both people not in paid work and those working but earning below the lower earnings limit who therefore do not contribute to the system. For the basic state pension, this is called Home Responsibilities Protection (HRP), and covers years spent caring for at least one child under 16. HRP reduces the number of years required for a full pension so that, with sufficient HRP, only 20 years' work (including periods when national insurance contributions may be credited) is required to receive the full basic state pension. For the state second pension, years caring for a child under age six are credited; caring parents are deemed to have earnings at the low earnings threshold: GBP 12 500 per year in 2006/07.

As a result of the Pensions Act 2007, people attaining SPA (State Pension Age) after 2010 will able to build up entitlement to S2P (State Second Pension) if they are caring for children up to the age of 12.

Unemployment

Periods of unemployment on insurance or assistance benefits are credited for the basic state pension. There are no credits for periods on these benefits for the state second pension.

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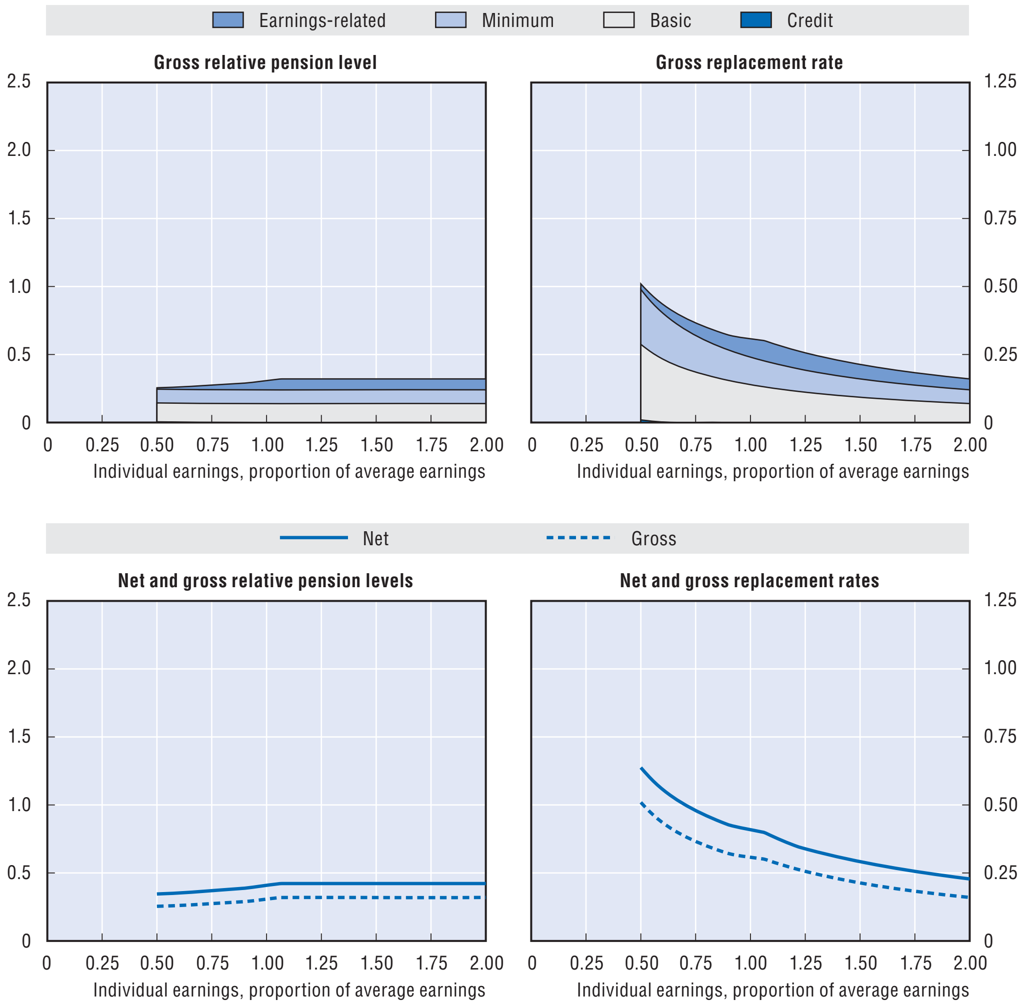
Pension modelling results: United Kingdom



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	28.4	25.5	27.5	30.8	32.0	32.0
(% average gross earnings)						
Net relative pension level	38.2	34.5	37.0	40.9	42.2	42.2
(% net average earnings)						
Gross replacement rate	33.5	51.0	36.6	30.8	21.3	16.0
(% individual gross earnings)						
Net replacement rate	44.3	63.8	48.0	40.9	29.2	22.8
(% individual net earnings)						
Gross pension wealth	4.5	6.8	4.9	4.1	2.9	2.1
(multiple of individual gross earnings)	*5.2*	*7.8*	*5.6*	*4.7*	*3.3*	*2.5*
Net pension wealth	4.4	6.8	4.8	4.0	2.8	2.1
(multiple of individual gross earnings)	*5.1*	*7.8*	*5.5*	*4.6*	*3.2*	*2.4*

United States

United States: Pension system in 2006

The publicly provided pension benefit, known as social security, has a progressive benefit formula. There is also a means-tested top-up payment available for low-income pensioners.

Key indicators

		United States	OECD
Average earnings	USD	39 400	35 800
	USD	39 400	35 800
Public pension spending	% of GDP	6.0	7.2
Life expectancy	At birth	77.8	78.9
	At age 65	83.6	83.4
Population over age 65	% of working-age population	20.8	23.8

Qualifying conditions

The pension age (called normal retirement age, or NRA) is 66 in 2006, and will later be increasing to 67 in steps. Eligibility for retirement benefits depends on the number of years in which contributions are made with a minimum requirement of ten years' contributions. Early retirement is possible from 62 with reduced benefits.

Benefit calculation

Earnings-related

The benefit formula is progressive. The first USD 656 a month of relevant earnings attracts a 90% replacement rate. The band of earnings between USD 656 and USD 3 955 a month is replaced at 32%. These thresholds are 20 and 121% of average earnings, respectively. A replacement rate of 15% applies between the latter threshold and the earnings ceiling. A 50% dependants' addition is available to married couples where secondary earners have built up a smaller entitlement and for a qualifying dependent child.

Earlier years' earnings are revalued up to the year in which the recipient reaches age 60 in line with growth in economy-wide average earnings. There is no adjustment of earnings for years after age 60. The basic benefit is computed for payment at age 62. Thereafter, the basic benefit is adjusted in line with prices. The benefit is based on the career average earnings for the 35 highest years of earnings (after revaluing) including years with zero earnings if needed to total 35 years.

The earnings ceiling for both contributions and benefits is USD 94 200 a year, corresponding to 239% of average earnings uprated annually in line with growth in economy-wide earnings.

Pensions in payment are adjusted in line with price increases.

Minimum

There is a minimum pension under social security. People earning less than a special minimum primary insurance amount are given a minimum pension that depends on their lifetime total years of coverage, varying between USD 33 for 11 years' coverage and USD 683 for 30 years. The threshold for this minimum pension was USD 10 485 in 2006, or 27% of average earnings. (The threshold is defined formally as 15% of the "old law" contribution and benefit base.) The minimum pension does not affect the modelling results because the earnings range affected is below that presented.

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Targeted

The United States provide a means-tested benefit for the elderly, known as supplemental security income.[1] Individuals without an eligible spouse over the age of 65 can be eligible for up to USD 7 236 a year depending on assets and other income. The benefit rate for cases where both members of a couple are eligible is USD 10 848 (33% higher than the rate for singles). These benefit rates are equivalent to around 18% and 28% of the national average wage, respectively. The benefit is indexed to price increases.

The asset tests are strict: individuals without an eligible spouse are limited to USD 2 000 worth of assets and eligible couples to USD 3 000, excluding personal belongings, a home, a car, funeral insurance and life insurance (the last two up to USD 1 500 in value). There is a small (USD 20 a month) "disregard" in calculating the entitlement. The benefit is then withdrawn at a 100% rate against income above this level.

The analysis is complicated by the fact that states can supplement the federally determined minimum. While 8 states pay only the federal minimum, 29 administer their own system, nine offer supplements that are operated solely by the federal Social Security Administration (SSA), and six offer supplements administered by both the state and SSA. The average supplemental payment in the 15 states with SSA administration is 29% of the maximum federal benefit for single pensioners and 50% for couples.[2] Note that the modelling does not include these additional payments.

Voluntary private pensions

Some 46% of employees are members of an occupational pension scheme and around 35% have personal plans. Because some people have both plan types, overall coverage of voluntary private pensions is 58%. Defined-contribution arrangements have become much more common. Evidence suggests that average contribution rates (employee plus employer) are around 9% of earnings.

A minority of workers continue to have defined-benefit occupational plans. Based on evidence from a national survey of such schemes, the modelling assumes an accrual rate of 1% of earnings for each year of service.

Variant careers

Early retirement

Early retirement is possible from 62, subject to an actuarial reduction. For each year of retirement before the normal age, the benefit is reduced by $6^2/_3$%. However, after three years, the reduction falls to 5%. This applies to retirees with a normal retirement age (NRA) of over 65. For retirees becoming eligible at age 62 in 2006, the normal retirement age is 66 years. This will increase gradually to reach 67 for people becoming eligible for retirement in 2022.

Late retirement

Initial receipt of the pension may be deferred until after NRA, and credit is given for deferment up to age 70. The actuarial increment for 2006 is 7.5% for each year deferred. It will increase to 8% in 2008.

It is also possible to combine work and pension receipt subject to an earnings test. For beneficiaries of age under their NRA, the pension is reduced by 50% of earnings in excess of USD 12 480. For workers who have reached their NRA, there is no benefit reduction based on earnings.

Childcare

There are no provisions for credits during periods of childcare (except for workers who become disabled at younger ages, who may drop years of child care from their benefit computation).

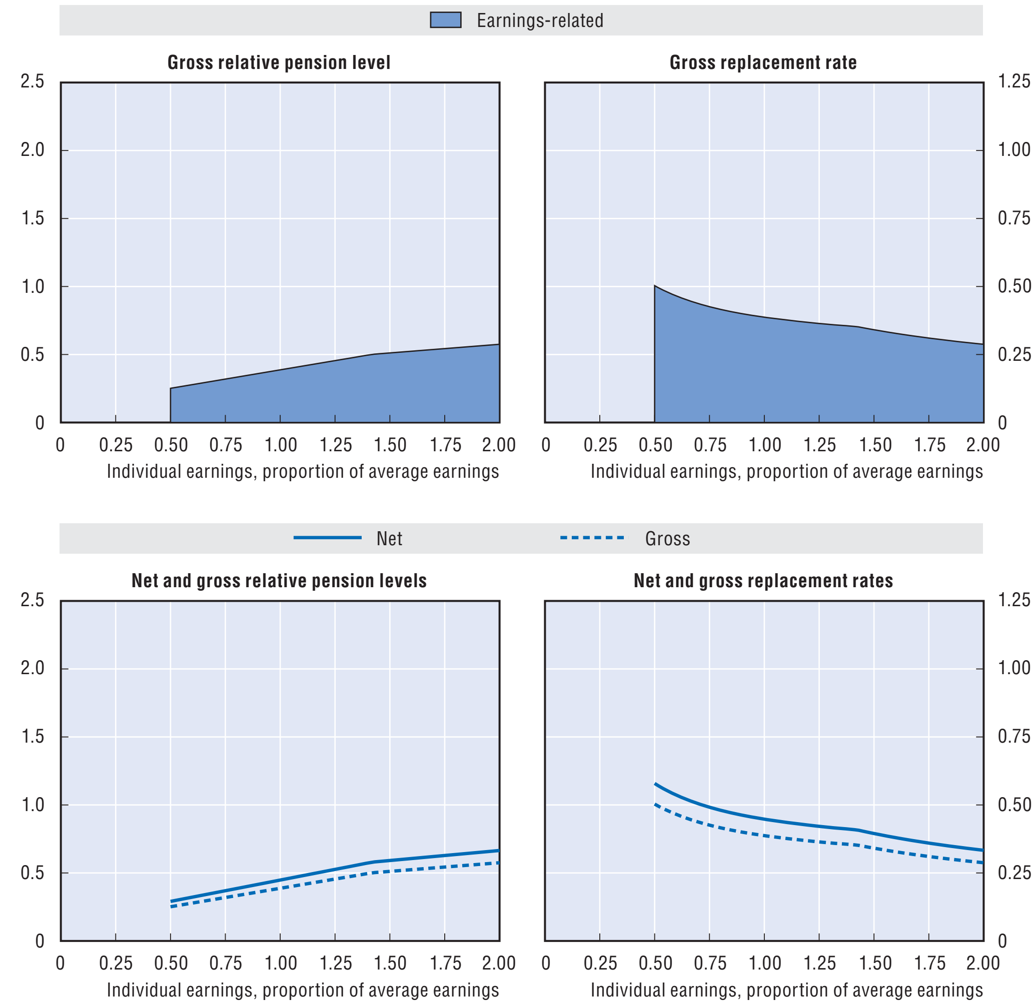
Unemployment

There are no provisions for credits during periods of unemployment. However, periods of unemployment may be omitted from the calculation of earnings for benefit purposes in many cases as only the highest 35 years of earnings are considered. Periods of disability are omitted from the 35 years of earnings considered.

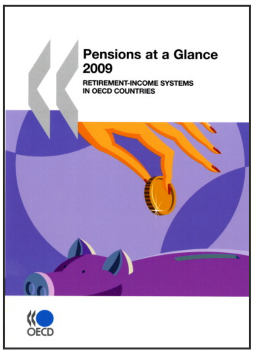
Notes

1. Supplemental Security Income benefits are also payable to eligible blind or disabled individuals.
2. Excludes those classified as blind or disabled.

Pension modelling results: United States



Men *Women* (where different)	Median earner	Individual earnings, multiple of average				
		0.5	0.75	1	1.5	2
Gross relative pension level	34.7	25.2	31.9	38.7	51.2	57.5
(% average gross earnings)						
Net relative pension level	40.1	29.1	36.9	44.8	59.2	66.5
(% net average earnings)						
Gross replacement rate	40.8	50.3	42.6	38.7	34.1	28.8
(% individual gross earnings)						
Net replacement rate	47.1	57.9	49.2	44.8	39.5	33.3
(% individual net earnings)						
Gross pension wealth	5.8	7.2	6.1	5.5	4.9	4.1
(multiple of individual gross earnings)	*6.8*	*8.3*	*7.1*	*6.4*	*5.7*	*4.8*
Net pension wealth	5.8	7.2	6.1	5.5	4.9	4.1
(multiple of individual gross earnings)	*6.8*	*8.3*	*7.1*	*6.4*	*5.7*	*4.8*



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