Key results

The second tier of the OECD's taxonomy of retirement-income provision comprises income-replacement pensions. The summary here shows the key parameters and rules of these schemes that determine the value of entitlements, including the long-term effect of pension reforms that have already been legislated.

Earnings-related schemes can be of three different types: defined benefit (DB), points or notional accounts (NDC). The ***accrual rate*** shows the rate at which benefit entitlements build up for each year of coverage. The accrual rate is expressed as a percentage of the earnings that are "covered" by the pension scheme.

For points systems, the effective accrual rate is calculated as the ratio of the cost of a pension point to the pension-point value. In notional-accounts schemes, the effective accrual rate is calculated in a similar way; it depends on the contribution rate, notional interest rate and annuity factors.

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

Among the seven cases where accrual rates vary with earnings, the public schemes of the Czech Republic, Portugal, Switzerland and the United States are "progressive". They pay higher replacement rates to lower earners. In the United Kingdom, accrual rates are U-shaped: highest for low earners, then smaller, then higher again. The occupational plans of France and Sweden are designed to offset the public scheme's redistribution, paying a higher replacement rate to high earners on their pay above the ceiling of the public plan. In Swiss occupational plans and Finland, accrual increases with age.

Accrual rates vary with service in two countries; in Luxembourg, increasing with a longer contribution history. Spain does the reverse: the highest accruals for the first few years of coverage and lower later on.

Earnings measures used to calculate benefits also differ. Some 20 OECD countries use lifetime earnings to calculate benefits and in Canada, the Czech Republic and the United States, the great majority of careers (30-35 years) is used. Final salaries are used to calculate benefits in Greece and Spain and public benefits in France are based on the best 25 years' earnings.

Closely linked with the earnings measure is ***valorisation***, 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 (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.

The most common practice is to revalue earlier years' pay with the growth of average earnings. Belgium, France 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.

The key parameter for defined-contribution (DC) plans is the proportion of earnings that must be paid into the individual account. The average ***contribution rate*** for the 11 countries shown, including quasi-mandatory DC occupational schemes in Denmark and Sweden, is 8.3%.

Most countries set a limit on the earnings used to calculate both contribution liabilities and pension benefits. The average ***ceiling*** on public pensions for 21 countries is 185% of average economy-wide earnings, excluding four countries with no ceiling on public pensions. Ceilings are typically higher for mandatory private pensions.

Indexation refers to the uprating of pensions in payment. Price indexation is most common, but six countries uprate benefits with a mix of inflation and wage growth. Some countries have progressive indexation, giving larger increases to low pensions.

Parameters and rules of income-replacement pensions

	Earnings-related schemes					DC schemes	Ceilings on pensionable earnings (% of ave. earnings)	
	Type	Accrual rate (%)	Earnings measure	Valorisation	Indexation	Contribution rate (%)	Public	Private
Australia	None					9.0		244
Austria	DB	1.78	40	w[1]	d		142	
Belgium	DB	1.33	L	p	p		118	
Canada	DB	0.63	b34	w	p [c]		104	
Chile	None					10.0		291
Czech Republic	DB	0.45 [w][2]	f30	w	33w/67p		None	
Denmark	None					10.8[3]		
Estonia	Points	1.0	L	w	50w/50p	6.0	None	None
Finland	DB	1.5 [a][4]	L	80w/20p	20w/80p		None	
France	DB/points	1.75 [w][5, 6]	b25/L	p/p	p/p		102/305[7]	
Germany	Points	1.00	L	w [c]	w [c]		154	
Greece	DB	2.57[5]	f5	w[8]	d		309[9]	
Hungary	DB	1.22	L	w	50w/50p	8.0	217	217
Iceland	DB	1.40	L	fr	p			None
Ireland	None							
Israel	None					15.0		100
Italy	NDC	1.75	L	GDP	p[10]		337	
Japan	DB	0.55	L	w	p		149	
Korea	DB	0.89	L	w	p		129	
Luxembourg	DB	1.85 [y][11]	L	w	w		195	
Mexico	None					6.5[12]		623
Netherlands	DB	1.75[13]	L[14]	w [c]	w [c]			None
New Zealand	None							
Norway	NDC	1.35	L	w	w-0.75	2.0	111	188
Poland	NDC	0.67	L	w[15]	p[15]	7.3	250	
Portugal	DB	2.25 [w][2]	L	25w/75p	p/GDP[16]		None	
Slovak Republic	Points	1.25	L	w	50w/50p	9.0	300	
Slovenia	DB	1.81	b18	w (d)	w		157	
Spain	DB	3.0 [y][17]	f15	p	p		159	
Sweden	NDC	1.21 [w]	L	w	w-1.6 [c]	2.5 + 4.5[18]	110	110/none[18]
Switzerland	DB	[w/a]	L	fr	50w/50p		104	104
Turkey	DB	2.00	L	p + 30%GDP	p		288	
United Kingdom	DB	0.89 [w][19]	L	w	p		119	
United States	DB	0.91 [w][2]	b35	w[20]	p		253	

Note: Parameters are for 2008 but include all legislated changes that take effect in the future: for example, some countries are extending the period of earnings covered for calculating benefits. Empty cells indicate that the parameter is not relevant.

[a] = Varies with age; b = Number of best years; [c] = Valorisation/indexation conditional on financial sustainability; d = Discretionary indexation; DB = Defined benefit; DC = Defined contribution; f = Number of final years; fr = Fixed rate valorisation; GDP = Growth of gross domestic product; L = Lifetime average; NDC = Notional accounts; p = Valorisation/indexation with prices; w = Valorisation/indexation with average earnings; [w] = Varies with earnings; [y] = Varies with years of service.

1. Austria: valorisation assumed to move to earnings as the averaging period for the earnings measure is extended.
2. Czech Republic, Portugal, United States: higher accrual rates on lower earnings, lower accruals on higher earnings.
3. Denmark: typical contribution rate for quasi-mandatory occupational plans.
4. Finland: higher accrual rates at older ages.
5. France and Greece: data shown combines two different programmes.
6. France: higher accrual rate on higher earnings under occupational plans.
7. France: the first ceiling relates to the national pension scheme, the second to the mandatory occupational plan modelled here (ARRCO).
8. Greece: valorisation in line with pension increases for public-sector workers.
9. Greece: effective ceiling calculated from maximum pension.
10. Italy: indexation is fully to prices for low pensions, 90% of prices or 75% of prices for higher pensions.
11. Luxembourg: higher accrual rate for longer contribution periods.
12. Mexico: additional contribution of 5.5% of minimum wage is shown previously as a basic pension.
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. Poland: valorisation to real wage bill growth but at least price inflation.
16. Portugal: indexation will be higher relative to prices for low pensions and *vice versa*. Indexation will be more generous the higher is GDP growth.
17. Spain: higher accrual rate on early years of service and lower on later years.
18. Sweden: the contribution rate is 2.5% for personal plans up to the ceiling for the public scheme. For quasi-mandatory occupational plans the contribution rates are 4.5% on a lower slice of earnings and 30% on an upper slice with no ceiling (in the largest scheme for private-sector workers).
19. United Kingdom: accrual rate highest for low earnings, then lower then higher again.
20. United States: earnings valorisation to age 60; no adjustment from 60 to 62; prices valorisation from 62 to 67.

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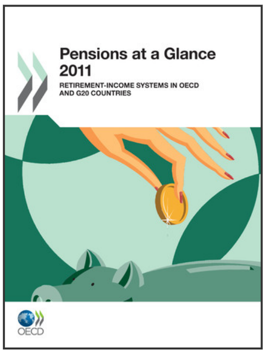

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