Key results

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

Generic earnings-related schemes are of four different types governed by different rules of benefit calculation. DB schemes specify a nominal accrual rate, expressed as a percentage of individual pensionable earnings, at which benefit entitlements build up for each year of coverage. The higher the contribution rate the higher the accrual rate that can be sustained by contributions. In points schemes, the pension benefit is equal to the number of points accumulated during the career multiplied by the point value. FDC (NDC) schemes apply an annuity divisor to turn (notional) accumulated capital in the individual account at retirement age into a monthly pension benefit. Table 4.3 presents future parameters and rules for benefit calculation that will apply to people who enter the labour market in 2018, according to the latest legislation.

Nominal accrual rates of at least 2% apply in Portugal, Spain and Turkey. Japan and Korea credit the lowest rates of about 0.5%. In half of DB schemes the accrual rate is constant. In the Czech Republic, Portugal, the public scheme in Switzerland and the United States, entitlements vary with the earnings level, granting higher accrual rates to lower earners. Accrual rates increase with a longer contribution history in Greece and Luxembourg while in Hungary, Slovenia and Spain accruals are higher for the first years of coverage. Moreover, in Slovenia, women receive a higher rate than men and in the Swiss occupational plan accrual rates increase with age as contribution rates do. In some countries, total accrual rates are limited by a ceiling or by a maximum number of years that generate accruals.

Earnings measures used to calculate benefits differ by country. The vast majority of OECD countries uses entire career earnings, with Portugal and the United States coming close by using the best 40 and 35 years, respectively. Only the main scheme in France and public pensions in Slovenia and Spain will be based on a comparatively small fraction of career earnings; the best 25, best 24 and final 25 years of earnings, respectively.

All schemes apply a ***valorisation rate*** to past earnings to take account of changes in "living standards" between the time pension rights accrued and the time they are claimed. The most commonly used rate is the growth of average earnings. Belgium, the main scheme in France, occupational DB schemes in the Netherlands and the system in Spain only revalue earnings with price inflation, thereby leading to a negative impact of real-wage growth on replacement rates and making the finances of the system (more) sensitive to real-wage growth (OECD, 2019[2]). Also Finland, Portugal and the United States revalue earlier years' earnings with a mix of price and wage inflation, and in Estonia and Turkey it is a mix of prices and, respectively, wage bill and GDP growth.

The interest rate applied to paid contributions in DC plans is the counterpart to valorisation rates in DB and points schemes. It is based on financial market returns in FDC schemes and on notional interest rates in NDC schemes. The latter are equal to the rate of GDP growth in Italy, wage bill growth in Latvia and a mix of the two in Poland. Norway and Sweden apply earnings growth. On top, Sweden redistributes accrued entitlements of deceased contributors to all other contributors in the system. One key parameter for DC plans is the ***contribution rate*** paid into individual accounts).

Most countries set a limit on the earnings used to calculate pension benefits. Pension schemes in nine countries do not have a ceiling. The highest ceilings apply in the occupational scheme in France and the Slovak Republic, at about 800% and 700% of average earnings, respectively. The lowest ceilings at 70-80% of average earnings are in Israel and Switzerland.

Indexation refers to the growth of pensions in payment. Price indexation is most common. However, eight countries uprate benefits with a mix of price inflation and wage growth, and four countries combine inflation and GDP or wage bill growth. Norway and Sweden index pensions based on wage growth minus fixed rates of 0.75% and 1.6%, respectively.

The ***effective accrual rate*** measures the rate at which benefit entitlements are effectively built for each year of coverage. It is thus closely connected to the replacement rates shown in Chapter 5. For DB schemes, it equals the nominal accrual rate corrected for the effects applying to pensionable earnings (thresholds, valorisation of past earnings, sustainability factors). In FDC and NDC schemes the effective accrual rate depends on contribution rates, rates of returns and annuity factors.

Based on current legislation, the highest future effective annual accrual rates are in Austria (1.78%) and Italy, Luxembourg, Portugal, Spain and Turkey (also larger than 1.6%). The lowest rates, below 0.2%, are in the FDC schemes of Norway and Sweden, reflecting low contribution rates. The effective accrual rate from mandatory schemes will equal 1% on average among OECD countries.

Further Reading

OECD (2019), *OECD Reviews of Pension Systems: Portugal*, OECD Reviews of Pension Systems, OECD Publishing, Paris, *https://dx.doi.org/10.1787/9789264313736-en*.

Table 4.3. **Future parameters and rules of mandatory earnings-related pensions, latest legislation**

At the normal retirement age of a full-career worker who entered the labour market at age 22 in 2018

	Type of scheme	DB schemes	DB, points or NDC schemes			FDC or NDC schemes	Ceiling for pensionable earnings (% of average earnings)	Effective accrual rate of a male full-career average earner (% of earnings)
		Nominal accrual rate (% of individual pensionable earnings)	Earnings measure	Valorisation rate	Indexation rate	Total contribution rate (%)		
Australia	FDC					10.2	252	0.69
Austria	DB	1.78	L	w	d		152	1.78
Belgium	DB	1.33	L	p	p		103	1.04
Canada	DB	0.83	L	w	p [c]		104	0.73
Chile	FDC					10	268	0.73
Czech Republic	DB	0.85 [w]	L	w	50%w + 50%p		375	0.85
Denmark	FDC (occ.)					12	None	0.97
Estonia	Points / FDC		L	w	80%wb + 20%p	6	None	0.21 / 0.56
Finland	DB	1.50	L	80%w + 20%p	20%w + 80%p		None	1.23
France	DB / points	1.16	B25 / L	p / w	p / p		101 / 796	1.01 / 0.35
Germany	Points		L	w	w - x		154	0.86
Greece	DB	0.92 [y]	L	w	50%w + 50%g		342	0.92
Hungary	DB	1.30 [y]	L	w	p		None	1.30
Iceland	DB	1.40	L	w	p		None	1.40
Ireland	None							
Israel	FDC					12.5	78	0.71
Italy	NDC		L	g	p	33	324	1.61
Japan	DB	0.55	L	w	p or w [a]		230	0.50
Korea	DB	0.50	L	w	p		117	0.50
Latvia	NDC / FDC		L	wb	p + 75%wb	14 / 6	463 / none	0.54 / 0.49
Lithuania	Points		L	w	wb		458	0.24
Luxembourg	DB	1.65 [y]	L	w	p, w [c]		202	1.65
Mexico	FDC					6.5	362	0.52
Netherlands	DB (occ.)	1.15	L	p [c]	p [c]		None	0.85
New Zealand	None							
Norway	NDC / FDC		L	w	w - 0.75%	18.1 / 2	114 / 193	0.88 / 0.13
Poland	NDC		L	wb, g	p, w [c]	19.5	264	0.68
Portugal	DB	2.22 [w]	B40	Min(25%w+75%p,p+0.5%)	p, g		None	1.62
Slovak Republic	Points		L	w	50%w + 50%p		656	1.18
Slovenia	DB	0.97 [f/m, y]	B24	w, d	w		203	0.97
Spain	DB	2.70 [y]	F25	p	0.25%, p + 0.5%		170	1.68
Sweden	NDC / FDC / FDC (occ.)		L	w	w - 1.6% [c]	14.9 / 2.3 / 4.5 [w]	111 / 111 / none	0.8 / 0.17 / 0.31
Switzerland	DB / DB (occ.)	0.64 [w] / 0.68 [a]	L / L	f / r	50%w+50%p / 0%		70 / 70	0.5 / 0.53
Turkey	DB	2.00	L	p + 30%g	p		389	1.69
United Kingdom	None							
United States	DB	1.24 [w]	B35	w, p	p		234	0.85

Note: Empty cells indicate that the parameter is not relevant. [a] = varies with age, [c] = valorisation/indexation conditional on financial sustainability, [f/m] = varies by gender, [w] = varies with earnings, [y] = varies with years of service, B = number of best years, F = number of final years, L = lifetime average, d = discretionary valorisation/indexation, f = fixed-rate, g = growth of gross domestic product; p = price inflation, w = growth of average earnings, wb = wage bill growth. Denmark: typical contribution rate for quasi-mandatory occupational plans. ATP pension only enters the last column. Germany: x depends on changes in both sustainability and contribution factors. Italy: indexation is to price inflation for low pensions and 75% of price inflation for high pensions. Japan: indexation is to earnings growth until age 67 and to price inflation after age 68. Luxembourg: indexation is to price inflation plus a share of real earnings growth, depending on the financial situation of the pension scheme. Poland: indexation is to price inflation + at least 20% of real average-earnings growth in the previous year. Portugal: indexation is higher relative to prices for low pensions and vice versa. Indexation rises with higher GDP growth. Switzerland: in the public scheme, ceiling applies to average earnings measure at retirement rather than annual earnings in the contribution years. United States: valorisation with earnings growth to age 60, no adjustment from 60 to 62, valorisation with price inflation from 62 to 67. Accrual rates applied to average earnings measure at retirement rather than annual earnings in the years of contribution. In some countries accrual stops after a certain number of contribution years or when a certain total accrual rate is reached. This is the case in Belgium (45 years), Canada (40 years), Portugal (40 years), Spain (100%), Turkey (90%) and the United States (35 years). In other countries a maximum pension or a late retirement age may stop accrual too.

Source: See "Country Profiles" available at *http://oe.cd/pag*.

StatLink https://doi.org/10.1787/888934041288