

Gross replacement rates: Public vs. Private, Mandatory vs. Voluntary schemes

Key results

Private pensions play a significant role in over one-third of OECD countries. For mandatory schemes, the OECD average for gross replacement rates of a full-career average earner from public schemes alone is 42.3%, compared with 50.7% with private pensions included and 55.3% when including voluntary schemes and assuming contributions for the full career. For the eight OECD countries where voluntary private pensions are widespread the average replacement rate is 53.2% for an average earner contributing for the whole career, while it is 54.2% when Israel and Mexico are also included compared with 37.0% when only mandatory schemes are considered. If the full-career average-wage earner only starts contributing to a voluntary scheme from age 45, the replacement rate is 42.5% on average among these eight countries.

Table 4.2 shows the interplay between mandatory public, mandatory private and voluntary pension schemes. All OECD countries have mandatory public schemes, which generate a replacement rate of 42% at the average-wage level. As shown in the previous indicator, the average replacement rate from mandatory schemes – combining public and private schemes – for a full-career average earner is equal to 51%: for the 18 OECD countries where the calculations of entitlements only cover mandatory public pensions, the average replacement rate for an average worker earner is 59%; for the 10 OECD countries with both public and mandatory private provision but no voluntary, the average replacement rate is 50%; and for the last 10 countries with significant voluntary pensions, the replacement rate from the mandatory component alone is 37%.

Mandatory private pensions

Mandatory private pensions are funded schemes that exist in 8 countries while they have near universal coverage (“quasi-mandatory”) in Denmark, the Netherlands, Sweden and the United Kingdom.

In Switzerland, private pensions are mainly defined benefit, whilst in the other countries they are defined contribution. Replacement rates from mandatory private schemes range from 5% in Norway and 10% in Costa Rica to 43% in both Denmark and Iceland and 46% in the Netherlands. In Sweden the contribution rate for the private pension increases from 4.5% below to 30% above the ceiling for the public scheme, hence the total replacement rate is higher for high earners than average earners.

Voluntary private pensions

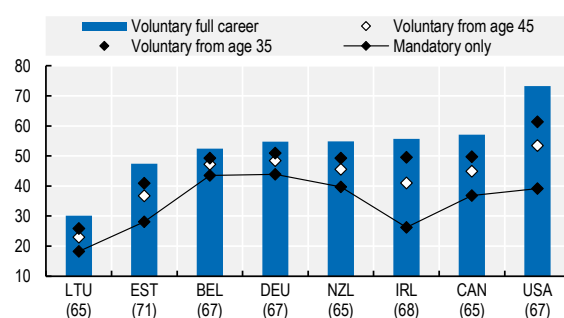
Voluntary private pensions are shown for eight countries where voluntary private pensions have broad coverage (either assets are above 25% of GDP or coverage is above 75%): Belgium, Canada, Estonia, Germany, Ireland, Lithuania, New Zealand and the United States. Voluntary private pensions include both voluntary occupational and voluntary personal plans. In Estonia the FDC scheme was previously mandatory, but since January 2021 it has become voluntary, with the possibility of re-joining 10 years after opting out. The rules that have been modelled are in the “Country Profiles” available at <http://oe.cd/paq>. In all eight countries a funded defined contribution plan is modelled. Data on actual contribution rates by earnings are not available for some countries, and so in these cases an average or typical rate is assumed across the earnings range. In addition, the

severance account in Israel and the housing account in Mexico have been added as if they are not utilised during the working career, they are then transferred to the pension accounts at retirement.

When voluntary private pensions are taken into account for the whole career in these ten countries (the eight listed above plus Israel and Mexico), the average total replacement rate is 54.2% for an average earner compared with 37.0% when only mandatory schemes are considered. The voluntary component has the largest impact on the replacement rate, around 30 and 35 percentage points, in Ireland and the United States, respectively.

The length of the contribution period clearly has an impact on the total replacement rate. The chart below compares the full-career full-contribution case with the full-career case but with contributions in the voluntary scheme from age 35 and 45 only, perhaps a more appropriate scenario. The schemes in Israel and Mexico are not considered as contributions are mandatory at all ages to severance and housing accounts, respectively.

Gross replacement rate including voluntary contributions from different ages, in percentage



StatLink <https://stat.link/1qv0ru>

Among these eight countries, only contributing from age 35 (45) reduces the gross replacement rate to 47% (43%) on average compared with the full-contribution case at 53%. Contributing to the voluntary scheme from age 35 in these countries generates the highest replacement rate in the United States, at 61%, which is above the OECD average for a full-career worker, at 54%, once these voluntary schemes are included.

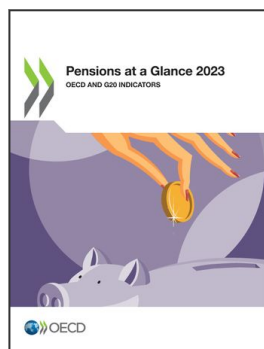
Table 4.2. Gross pension replacement rates from mandatory public, mandatory private and voluntary private pension schemes, in percentage

Percentage of individual earnings

	Mandatory Public			Mandatory private (DB & DC)			Total mandatory			Voluntary (DB & DC)			Total with voluntary		
	0.5	1	2	0.5	1	2	0.5	1	2	0.5	1	2	0.5	1	2
Australia	38.5	0.0	0.0	26.0	26.0	26.0	64.5	26.0	26.0						
Austria	74.1	74.1	55.9				74.1	74.1	55.9						
Belgium	67.7	43.5	31.4				67.7	43.5	31.4	3.5	8.9	23.3	71.2	52.4	54.7
Canada	46.0	36.8	18.4				46.0	36.8	18.4	20.2	20.2	20.2	66.2	57.0	38.6
Chile	23.7	11.9	3.4	25.1	25.2	25.3	48.8	37.1	28.7						
Colombia	99.2	74.8	74.8				99.2	74.8	74.8						
Costa Rica	55.6	54.4	50.6	9.7	9.7	9.7	65.3	64.1	60.4						
Czechia	78.1	47.4	32.1				78.1	47.4	32.1						
Denmark	73.6	30.2	10.1	42.9	42.9	42.9	116.6	73.1	53.1						
Estonia	48.6	28.1	17.8				48.6	28.1	17.8	22.3	22.3	22.3	66.6	47.4	37.9
Finland	58.4	58.4	58.4				58.4	58.4	58.4						
France	57.7	57.6	49.4				57.7	57.6	49.4						
Germany	47.8	43.9	33.7				47.8	43.9	33.7	10.9	10.9	10.9	58.6	54.7	44.6
Greece	94.2	80.8	74.1				94.2	80.8	74.1						
Hungary	54.9	52.4	51.2				54.9	52.4	51.2						
Iceland	22.5	0.0	0.0	43.1	43.1	43.1	65.6	43.1	43.1						
Ireland	52.4	26.2	13.1				52.4	26.2	13.1	29.5	29.5	29.5	81.9	55.7	42.6
Israel	19.0	9.5	4.8	33.6	28.5	14.3	52.6	38.0	19.0	16.1	13.7	6.8	68.7	51.7	25.9
Italy	76.1	76.1	76.1				76.1	76.1	76.1						
Japan	43.3	32.4	26.9				43.3	32.4	26.9						
Korea	47.6	31.2	18.8				48.6	31.6	19.4						
Latvia	55.0	39.8	39.8				55.0	39.8	39.8						
Lithuania	28.9	18.2	12.9				28.9	18.2	12.9	15.7	11.9	10.0	44.6	30.1	22.9
Luxembourg	86.7	74.8	68.8				86.7	74.8	68.8						
Mexico	55.2	15.2	4.9	18.2	40.3	40.3	73.5	55.5	45.2	14.5	14.5	14.5	73.5	64.7	59.7
Netherlands	58.2	29.1	14.6	29.0	45.6	53.8	87.3	74.7	68.4						
New Zealand	62.9	39.7	19.8				62.9	39.7	19.8	15.8	15.2	14.7	78.8	54.9	34.5
Norway	54.9	39.1	22.9	5.4	5.4	5.3	60.3	44.5	28.2						
Poland	30.3	29.3	28.7				30.3	29.3	28.7						
Portugal	75.7	73.9	71.3				75.7	73.9	71.3						
Slovak Republic	65.9	54.9	48.3				65.9	54.9	48.3						
Slovenia	62.1	42.1	41.3				62.1	42.1	41.3						
Spain	80.4	80.4	49.6				80.4	80.4	49.6						
Sweden	49.0	49.0	28.4	13.3	13.3	48.0	62.3	62.3	76.4						
Switzerland	32.2	21.2	10.9	20.0	18.7	9.4	52.2	39.9	20.3						
Türkiye	70.3	70.3	70.3				70.3	70.3	70.3						
United Kingdom	43.5	21.7	10.9	18.4	20.1	17.5	61.8	41.9	28.3						
United States	49.4	39.1	27.8				49.4	39.1	27.8	34.1	34.1	34.1	83.5	73.2	61.9
OECD-38	56.3	42.3	33.5				63.8	50.7	42.3				68.1	55.3	47.2
Argentina	109.5	78.7	63.3				109.5	78.7	63.3						
Brazil	88.4	88.4	82.7				88.4	88.4	82.7						
China	87.3	68.3	58.8				87.3	68.3	58.8						
India	23.4	23.4	0.0	15.5	15.5	22.4	38.9	38.9	22.4						
Indonesia	33.1	33.1	32.4	20.4	20.4	20.4	53.5	53.5	52.8						
Saudi Arabia	59.6	59.6	59.6				59.6	59.6	59.6						
South Africa	16.0	8.0	4.0				16.0	8.0	4.0	29.0	29.0	29.0	29.0	29.0	29.0
EU27	59.9	49.5	41.6				64.6	54.8	48.3				67.5	57.8	51.8

Note: DB=defined benefit; DC = defined contribution. *Low earners in Colombia, New Zealand and Slovenia are at 64%, 63% and 56% of average earnings, respectively, to account for the minimum wage level. Contribution rates for voluntary pensions in Belgium vary by earnings level, see country profile for more details. The OECD average refers to the average of all 38 OECD countries.

Source: OECD pension models.



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