Key results

The OECD average for net replacement rates of an average earner from public schemes alone is 49%, compared with 64% with mandatory private pensions included. When voluntary private pensions, under typical rules, are added, the average net replacement rate is 79% for an average earner.

The personal tax system plays an important role in old-age support. Pensioners often do not pay social security contributions and, as personal income taxes are progressive and pension entitlements are usually lower than earnings before retirement, the average tax rate on pension income is typically less than the tax rate on earned income. In addition, most income tax systems give preferential treatment either to pension incomes or to pensioners, by giving additional allowances or credits to older people. Therefore, net replacement rates are usually higher than gross replacement rates.

For the 13 OECD countries where the calculations cover only public pensions, the replacement rate for an average earner is 71% on average. For the 13 OECD countries with data for public and mandatory private provision, the average replacement rate is 68%. For all 34 OECD countries, including public, mandatory private and voluntary private pensions, the average replacement rate is 79%. Overall net replacement rates are on average 11 percentage-points higher than the corresponding gross replacement rate figures.

For the other major economies there is a wide variation between country and across earnings level. The exception to the latter is the Russian Federation which has identical net replacement rates across all the earnings ranges.

Mandatory private pensions

The first group of 13 countries has mandatory private pensions or private pensions that have near-universal coverage and so are described as "quasi-mandatory" (Denmark, the Netherlands and Sweden).

In Iceland, the Netherlands and Switzerland, private pensions are defined benefit while in other countries, they are defined contribution. Net replacement rates from mandatory private schemes for average earners range from 22% to 37% in six of the 13 countries. But they are significantly above this range in Australia, Chile, Denmark, Iceland, Israel and the Netherlands and much lower in Norway.

Between the combination of some countries having private pensions designed to cover earnings above the ceiling of the public scheme and the tax system in place no country has the same replacement rate across the earnings levels. This is the reason that replacement rates from private plans increase with earnings across the range in Australia, Chile, Mexico, the Netherlands, Norway and the Slovak Republic. It also explains why replacement rates from mandatory private schemes for workers on 150% of average earnings are more than double that of average workers in Sweden.

The pattern in Switzerland is complex. Again, low earners have a lower replacement rate to take account of public benefits. But the ceiling on earnings that must be covered by the occupational plans is relatively low.

Voluntary private pensions

Replacement rates are shown for nine countries where voluntary private pensions are widespread: covering between 40% and 65% of the workforce (see the indicator of "Coverage of private pensions" in Chapter 8). The only country with a comparable proportion of the workforce in voluntary private pensions is Japan, but information is not available on typical rules. It is assumed that workers with voluntary private pensions spend a full career in the scheme.

The rules that have been modelled are in the "Country profiles" in Chapter 9. In all nine countries, a defined-contribution plan is modelled.

In general, the defined-contribution schemes pay a constant replacement rate with earnings. (Data on actual contribution rates by earnings are not available for most countries, and so an average or typical rate is assumed across the earnings range.) However the difference in taxation rules means that the net replacement rate differs across the earnings range, but generally increases as earnings increase. Belgium is the exception due to ceilings on pensionable earnings that qualify for tax incentives. Germany also falls into this category but the ceiling is equal to the 150% earnings range.

4.10. Net pension replacement rates from public, mandatory private and voluntary private pension schemes

Percentage of individual earnings

	Public			Mandatory private			Voluntary DC			Total mandatory			Total with voluntary		
	0.5	1.0	1.5	0.5	1.0	1.5	0.5	1.0	1.5	0.5	1.0	1.5	0.5	1.0	1.5
OECD members															
Australia	57.7	17.5	0.9	42.7	50.1	53.5				100.5	67.7	54.3			
Austria	91.2	90.2	86.2							91.2	90.2	86.2			
Belgium	72.9	50.1	39.9				19.0	18.5	14.8	72.9	50.1	39.9	91.8	68.6	54.7
Canada	71.5	50.6	35.2				38.5	43.8	45.8	71.5	50.6	35.2	110.0	94.4	81.0
Chile	22.3	5.9	0.0	40.3	45.9	47.7				62.5	51.8	47.7			
Czech Republic	79.7	50.7	40.1				43.5	45.7	46.1	79.7	50.7	40.1	123.2	96.4	86.2
Denmark	66.2	30.1	18.9	51.2	47.3	48.5				117.5	77.4	67.4			
Estonia	49.4	32.7	26.7	30.3	29.7	28.8				79.7	62.4	55.5			
Finland	71.3	62.8	63.2							71.3	62.8	63.2			
France	75.9	71.4	60.9							75.9	71.4	60.9			
Germany	55.9	55.3	54.4				21.3	21.1	20.8	55.9	55.3	54.4	77.2	76.4	75.2
Greece	92.5	70.5	65.0							92.5	70.5	65.0			
Hungary	94.4	95.2	96.1							94.4	95.2	96.1			
Iceland	26.4	6.8	4.5	66.9	68.9	68.8				93.3	75.7	73.3			
Ireland	71.4	37.3	27.9				41.8	43.7	49.0	71.4	37.3	27.9	113.2	81.0	76.9
Israel	46.5	25.2	17.9	62.0	58.0	41.2				108.5	83.2	59.1			
Italy	78.0	78.2	77.9							78.0	78.2	77.9			
Japan	54.3	40.8	35.7							54.3	40.8	35.7			
Korea	64.8	45.2	34.2							64.8	45.2	34.2			
Luxembourg	87.1	69.4	66.8							87.1	69.4	66.8			
Mexico	31.1	4.2	2.9	25.0	27.3	28.4				56.2	31.5	31.3			
Netherlands	65.6	33.0	21.4	39.2	68.2	75.8				104.8	101.1	97.2			
New Zealand	83.0	43.5	30.6				14.5	15.2	16.0	83.0	43.5	30.6	97.5	58.7	46.6
Norway	71.5	52.0	39.5	6.8	7.7	8.3	10.2	12.9	19.0	78.3	59.7	47.8	88.5	72.6	66.8
Poland	30.4	29.9	29.7	30.2	29.6	29.5				60.6	59.5	59.1			
Portugal	77.7	67.8	68.4							77.7	67.8	68.4			
Slovak Republic	54.4	48.7	46.8	33.6	36.7	37.8				88.1	85.4	84.7			
Slovenia	80.8	59.0	57.0							80.8	59.0	57.0			
Spain	79.5	80.1	79.8							79.5	80.1	79.8			
Sweden	47.6	33.7	27.6	21.2	21.5	45.3				68.8	55.3	72.9			
Switzerland	60.2	43.4	28.5	18.2	31.3	20.6				78.4	74.7	49.1			
Turkey	103.9	93.6	97.2							103.9	93.6	97.2			
United Kingdom	61.7	38.0	27.2				38.6	40.2	41.7	61.7	38.0	27.2	100.3	78.1	68.9
United States	56.2	44.8	40.4				42.9	44.2	45.8	56.2	44.8	40.4	99.1	88.9	86.2
OECD34	**65.7**	**48.7**	**42.6**							**79.4**	**64.1**	**58.3**	**100.1**	**79.5**	**71.4**
Other major economies															
Argentina	134.6	105.6	98.4							134.6	105.6	98.4			
Brazil	60.2	63.5	70.3							60.2	63.5	70.3			
China	106.4	84.7	78.2							106.4	84.7	78.2			
India	85.9	64.1	58.2							85.9	64.1	58.2			
Indonesia				14.4	14.4	14.5				14.4	14.4	14.5			
Russian Federation	35.2	35.2	35.2	19.9	19.9	19.9				55.1	55.1	55.1			
Saudi Arabia	109.9	109.9	109.9							109.9	109.9	109.9			
South Africa	0.0	0.0	0.0				56.1	60.8	61.8	0.0	0.0	0.0	56.1	60.8	61.8
EU27	68.6	56.6	50.7							80.0	69.1	64.3			

DC = Defined contribution.

Source: OECD pension models.

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