

## GROSS PENSION REPLACEMENT RATES

### Key results

The future gross replacement rate shows the level of pension benefits in retirement from mandatory public and private pension schemes relative to earnings when working. For full-career workers with average earnings, the future gross replacement rate averages 53% for men and 52% for women in the 35 OECD countries, with substantial cross-country variation. At the bottom of the range, the United Kingdom offer future replacement rates of 22% at the average wage to people starting work at age 20 today. The Netherlands, at the top of the range, offers replacement rates of slightly less than 97%.

Most OECD countries aim to protect low-income workers (here defined as workers earning half of average worker earnings) from old-age poverty, which results in higher replacement rates for them than for average worker earners. Low-income workers would receive gross replacement rates averaging around 65%, compared with 53% for average-wage workers. Some countries, such as Ireland, pay relatively small benefits to average earners, but are closer to average for low-income workers. However, projected replacement rates in ten countries are the same for a full career at average and half-average pay: Austria, Finland, Germany, Hungary, Italy, Latvia, Poland, Spain, Sweden and Turkey.

At the top of the range, low earners in Denmark would receive a future replacement rate of 123%; retirement benefits are thus higher than their earnings when working. At the other end of the scale, Mexico offers gross replacement rates of 35% to low-income earners, thus implying a retirement income lower than 20% of average earnings after a full career. On average in the 35 OECD countries, the gross replacement rate at 1.5 times average earnings (here called “high earnings”) is 48%, somewhat below the 53% figure for average earners. Replacement rates for these high earners equal 97% in the Netherlands, while at the other end of the spectrum, the United Kingdom offers a replacement rate of around 15%.

All of the replacement rates are calculated for full-career workers from the age of 20, which means that career lengths differ between countries. Denmark has an estimated long-term retirement age of 74 years for those starting in 2016, whilst in Turkey it will be 59 for women and in both Luxembourg and Slovenia retirement will still be possible at age 60 for both men and women.

Gross pension replacement rates differ for women in eight countries (due to a lower pension eligibility age for women than for men, gender specific accrual rates or the use of sex specific mortality rates to compute annuities): Australia, Chile, Israel, Mexico, Poland, Slovenia, Switzerland and Turkey. Differences between the sexes are substantial in Australia, Chile, Israel and Poland, with replacement rates (i.e. annual benefits) for women being

between 7% and 27% lower than for men. In Slovenia, however, the replacement rates for women are 5% greater due to a higher accrual rate. This difference will be phased out for those entering the labour market from 2023. For the non-OECD countries there is a wide range in the projected replacement rates, with South Africa around 16% and India at 87% for average earners.

Gross pension replacement rates fall with age from 53% on average at the time of retirement to 47% at age of 80. This difference is due to the indexation of pension benefits in payment, which do not follow wages in many countries. Austria, France, Greece, Spain and Sweden have the biggest drop around 1113 percentage points between the retirement age and age 80. Countries where the indexation of pension benefits follows wages have the same replacement rate at age 80.

### Definition and measurement

The old-age pension replacement rate measures how effectively a pension system provides a retirement income to replace earnings, the main source of income before retirement. The gross replacement rate is defined as gross pension entitlement divided by gross pre-retirement earnings.

Often, the replacement rate is expressed as the ratio of the pension to final earnings (just before retirement). Under the baseline assumptions, workers earn the same percentage of average worker earnings throughout their career. Therefore, final earnings are equal to lifetime average earnings revalued in line with economy-wide earnings growth. Replacement rates expressed as a percentage of final earnings are thus identical to those expressed as a percentage of lifetime earnings. However, if people move up the earnings distribution as they get older, then their earnings just before retirement will be higher than they were on average over their lifetime as average earnings are lower than those just before retirement. Total pension entitlements, and therefore pension benefits, are therefore lower than if they had spent the whole career at the final wage.

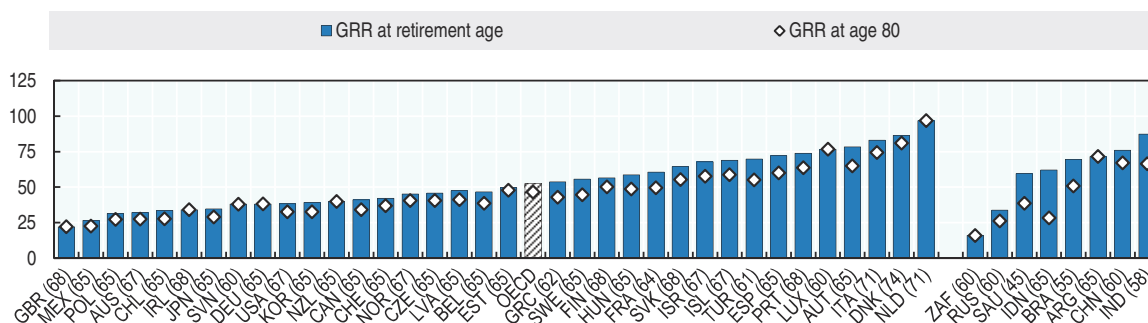
## 4.2. Gross pension replacement rates by earnings

		Individual earnings, multiple of mean for men (women where different)										
		Pension age				Pension age						
		0.5	1	1.5			0.5	1.0	1.5			
<b>OECD members</b>					<b>OECD members (cont.)</b>							
Australia	67	82.8 (80.0)	32.2 (29.4)	32.1 (29.3)	New Zealand	65	80.0	40.0	26.7			
Austria	65	78.4	78.4	78.4	Norway	67	63.6	45.1	36.5			
Belgium	65	47.7	46.7	36.4	Poland	65 (60)	31.6 (30.0)	31.6 (27.9)	31.6 (27.9)			
Canada	65	54.1	41.0	28.5	Portugal	68	75.5	74.0	72.6			
Chile	65	39.1 (36.9)	33.5 (30.3)	33.6 (30.4)	Slovak Republic	68	72.3	64.3	62.2			
Czech Republic	65	74.1	45.8	36.4	Slovenia	60	44.0 (46.3)	38.1 (40.1)	36.3 (38.2)			
Denmark	74	123.4	86.4	79.5	Spain	65	72.3	72.3	72.3			
Estonia	65	62.0	49.7	45.6	Sweden	65	55.8	55.8	64.5			
Finland	68	56.6	56.6	56.6	Switzerland	65 (64)	56.0 (55.4)	42.1 (41.8)	28.5 (28.2)			
France	64	60.5	60.5	54.8	Turkey	61 (59)	69.9 (67.0)	69.9 (67.0)	69.9 (67.0)			
Germany	65	38.2	38.2	38.2	United Kingdom	68	44.3	22.1	14.8			
Greece	62	67.4	53.7	49.2	United States	67	48.3	38.3	31.7			
Hungary	65	58.7	58.7	58.7	<b>OECD</b>	<b>65.8 (65.5)</b>	<b>64.6 (64.1)</b>	<b>52.9 (52.3)</b>	<b>48.4 (47.9)</b>			
Iceland	67	77.6	69.0	67.9	Argentina	65 (60)	81.7 (74.0)	71.6 (64.3)	68.2 (61.1)			
Ireland	68	68.2	34.1	22.7	Brazil	55 (50)	85.0	69.5 (52.9)	69.5 (52.9)			
Israel	67 (64)	99.4 (89.7)	67.8 (60.0)	45.2 (40.0)	China	60 (55)	96.0 (82.6)	76.0 (65.1)	69.4 (59.2)			
Italy	71	83.1	83.1	83.1	India	58	87.4 (83.1)	87.4 (83.1)	87.4 (83.1)			
Japan	65	47.8	34.6	30.2	Indonesia	65	62.1 (57.8)	62.1 (57.8)	62.1 (57.8)			
Korea	65	58.5	39.3	28.7	Russian Federation	60 (55)	46.1 (41.0)	33.7 (28.6)	29.1 (24.1)			
Latvia	65	47.5	47.5	47.5	Saudi Arabia	45	59.6	59.6	59.6			
Luxembourg	60	89.5	76.7	72.5	South Africa	60	32.1	16.0	10.7			
Mexico	65	34.7	26.4 (24.8)	25.1 (23.5)	EU28	65.9 (65.5)	69.6 (69.5)	58.3 (58.2)	54.5 (54.3)			
Netherlands	71	98.1	96.9	96.5								

Source: OECD pension models.

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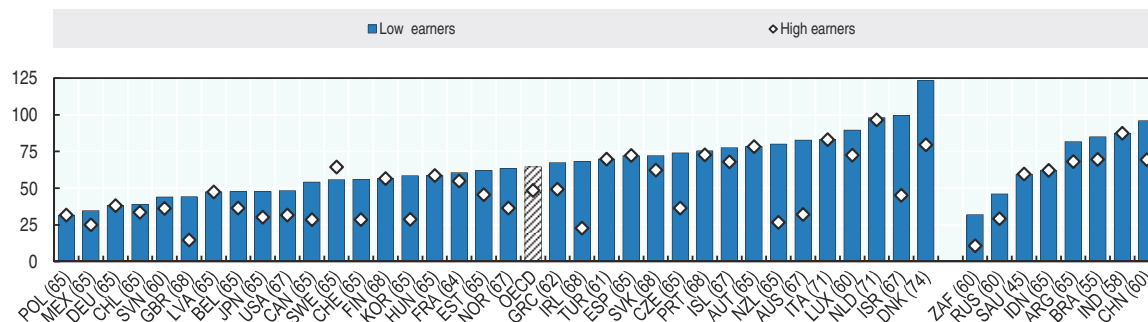
## 4.3. Gross pension replacement rates: Average earners at retirement age and age 80




Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888933633907>

## 4.4. Gross pension replacement rates: Low and high earners



Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888933633926>



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