

### Key results

The gross replacement rate shows the level of pensions in retirement relative to earnings when working. For workers with average earnings, the gross replacement rate averages 57% in the 34 OECD countries. But there is significant cross-country variation. At the bottom of the range, Ireland, Japan, Mexico and the United Kingdom offer future replacement rates of less than 35% to people starting work today. Iceland and Greece, at the top of the range, offer replacement rates of more than 95%. Other countries with high projected replacement rates (between 70% and 90%) are Austria, Denmark, Hungary, Luxembourg, the Netherlands and Spain.

Most OECD countries protect low-income workers from old-age poverty by providing higher replacement rates for them than for average earners. For example, workers earning only half the average receive replacement rates averaging more than 72%, compared with 57% for average earners. However, replacement rates in seven countries are the same at average and half-average pay: Austria, Germany, Greece, Hungary, Italy, Poland, the Slovak Republic and Spain.

At the top of the range, there are three countries that provide low earners with pensions higher than their earnings when working: Iceland (replacement rate of 145%), Denmark (121%) and Israel (100%). At the other end of the scale, Germany and Japan offer replacement rates of 42% and 48%, respectively. Some countries, such as Canada and New Zealand, pay relatively small benefits to average earners, but are towards the middle of the range for low-income workers.

On average in the 34 OECD countries, the gross replacement rate at 1.5 times average earnings (here called “high earnings”) is 52%, somewhat below the 57% figure for average earners. For high earners, country variations are again wide. Replacement rates exceed 80% in five countries: Greece, Iceland, Luxembourg, the Netherlands and Spain. At the other end of the spectrum, Ireland and New Zealand (which have flat-rate public pensions) and the United Kingdom offer replacement rates of less than 26%.

At median earnings – the level which half of workers lie above and half below – the average gross replacement for the 34 OECD countries is 60.6%. In general, it is little different from the gross replacement at average (mean) pay. (Median earnings are between 75% and 90% of the mean; see in Part II.5 the indicator on “Earnings: averages and distribution”.)

Gross pension replacement rates for women differ (due to a lower pension eligibility age for women than

for men) in five countries: Chile, Israel, Italy, Poland and Switzerland. Differences between the sexes are substantial in Chile, Italy and Poland, with replacement rates around one third smaller for women than they are for men. In Israel and Switzerland, replacement rates for women are also lower than they are for men, but much less than in three countries mentioned previously. The value for women is also lower in Australia and Mexico, but this is due to higher annuity rates rather than a difference in retirement age.

For the non-OECD countries there is a wide range in the replacement rate calculations, with South Africa and Indonesia below 15% and Saudi Arabia at 100% for average earners. The average for the EU27 is considerably higher than that of the OECD34 for average and high earners.

### 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). Here, however, pension benefits are shown as a share of individual lifetime average earnings (revalued in line with economy-wide earnings growth). Under the baseline assumptions, workers earn the same percentage of economy-wide average earnings throughout their career. In this case, lifetime average revalued earnings and individual final earnings are identical. 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 and replacement rates calculated on individual final earnings would be lower.

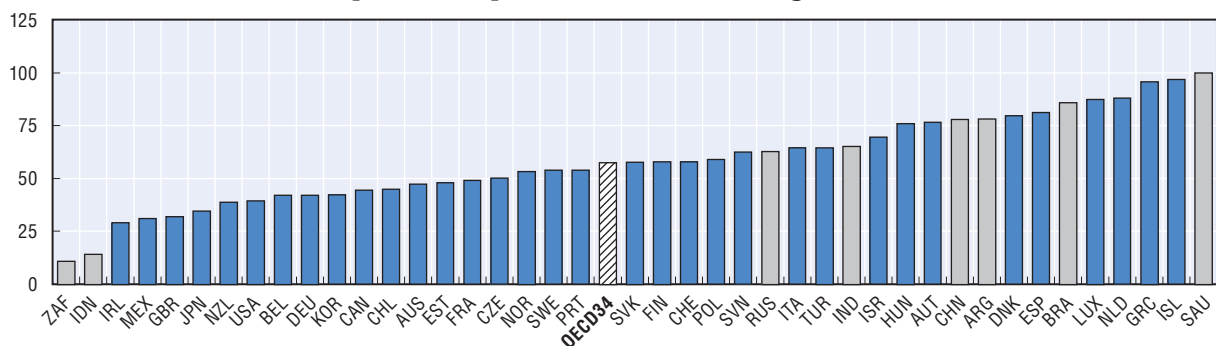
### Gross pension replacement rates by earnings

|                     | Individual earnings, multiple of mean for men<br>(women where different) |              |             |             | Individual earnings, multiple of mean for men<br>(women where different) |              |              |              |              |
|---------------------|--|--------------|-------------|-------------|--|--------------|--------------|--------------|--------------|
|                     | Median earner  | 0.5          | 1           | 1.5         | Median earner  | 0.5          | 1            | 1.5          |              |
| <b>OECD members</b> |  |              |             |             |  |              |              |              |              |
| Australia           | 52.6 (50.1)  | 73.3 (70.8)  | 47.3 (44.8) | 38.6 (36.1) | Norway   | 52.9         | 63.4         | 53.1         | 41.7         |
| Austria             | 76.6   | 76.6         | 76.6        | 72.3        | Poland   | 59.0 (43.2)  | 59.0 (45.3)  | 59.0 (43.2)  | 59.0 (43.2)  |
| Belgium             | 42.6   | 60.1         | 42.0        | 32.7        | Portugal   | 54.4         | 63.3         | 53.9         | 53.1         |
| Canada              | 48.5   | 76.6         | 44.4        | 29.6        | Slovak Republic  | 57.5         | 57.5         | 57.5         | 57.5         |
| Chile               | 48.4 (37.5)  | 60.0 (49.2)  | 44.9 (34)   | 41.8 (28.9) | Slovenia   | 62.4         | 64.3         | 62.4         | 62.4         |
| Czech Republic      | 57.3   | 80.2         | 50.2        | 37.4        | Spain  | 81.2         | 81.2         | 81.2         | 81.2         |
| Denmark             | 84.7   | 120.6        | 79.7        | 66.1        | Sweden   | 53.8         | 68.3         | 53.8         | 68.7         |
| Estonia             | 50.9   | 60.2         | 48.0        | 44.0        | Switzerland  | 59.3 (58.5)  | 65.2 (64.7)  | 57.9 (57.1)  | 40.9 (40.3)  |
| Finland             | 57.8   | 66.4         | 57.8        | 57.8        | Turkey   | 69.5         | 76.4         | 64.5         | 64.5         |
| France              | 49.1   | 55.9         | 49.1        | 41.3        | United Kingdom   | 37.0         | 53.8         | 31.9         | 22.6         |
| Germany             | 42.0   | 42.0         | 42.0        | 42.0        | United States  | 42.3         | 51.7         | 39.4         | 35.3         |
| Greece              | 95.7   | 95.7         | 95.7        | 95.7        | <b>OECD34</b>  | <b>60.6</b>  | <b>72.1</b>  | <b>57.3</b>  | <b>52.0</b>  |
| Hungary             | 75.8   | 75.8         | 75.8        | 75.8        | <b>Other major economies</b>   |              |              |              |              |
| Iceland             | 109.1  | 144.9        | 96.9        | 87.0        | Argentina  | 81.1 (73.8)  | 90.7 (83.4)  | 78.1 (70.8)  | 73.9 (66.6)  |
| Ireland             | 34.9   | 57.9         | 29.0        | 19.3        | Brazil   | 85.9         | 85.9         | 85.9         | 85.9         |
| Israel              | 85.3 (75)  | 100.1 (89.9) | 69.6 (61.2) | 46.4 (40.8) | China  | 82.5 (65.1)  | 97.9 (78.5)  | 77.9 (61.0)  | 71.2 (55.2)  |
| Italy               | 64.5 (50.6)  | 64.5 (50.6)  | 64.5 (50.6) | 64.5 (50.6) | India  | 72.4 (68.4)  | 95.2 (90.9)  | 65.2 (61.4)  | 55.0 (51.4)  |
| Japan               | 36.3   | 47.9         | 34.5        | 30.0        | Indonesia  | 14.1 (12.4)  | 14.1 (12.4)  | 14.1 (12.4)  | 14.1 (12.4)  |
| Korea               | 46.9   | 64.1         | 42.1        | 31.9        | Russian Federation   | 65.1 (57.9)  | 73.0 (65.9)  | 62.7 (55.5)  | 59.2 (52.1)  |
| Luxembourg          | 90.3   | 97.9         | 87.4        | 83.8        | Saudi Arabia   | 100.0 (87.5) | 100.0 (87.5) | 100.0 (87.5) | 100.0 (87.5) |
| Mexico              | 46.3 (46.3)  | 57.5 (57.5)  | 30.9 (28.7) | 29.6 (26.4) | South Africa   | 13.1         | 21.2         | 10.6         | 7.1          |
| Netherlands         | 89.1   | 93.0         | 88.1        | 86.5        | EU27   | 62.9 (61.0)  | 70.1 (68.2)  | 61.6 (59.7)  | 58.3 (56.4)  |
| New Zealand         | 47.8   | 77.5         | 38.7        | 25.8        |  |              |              |              |              |

Source: OECD pension models.

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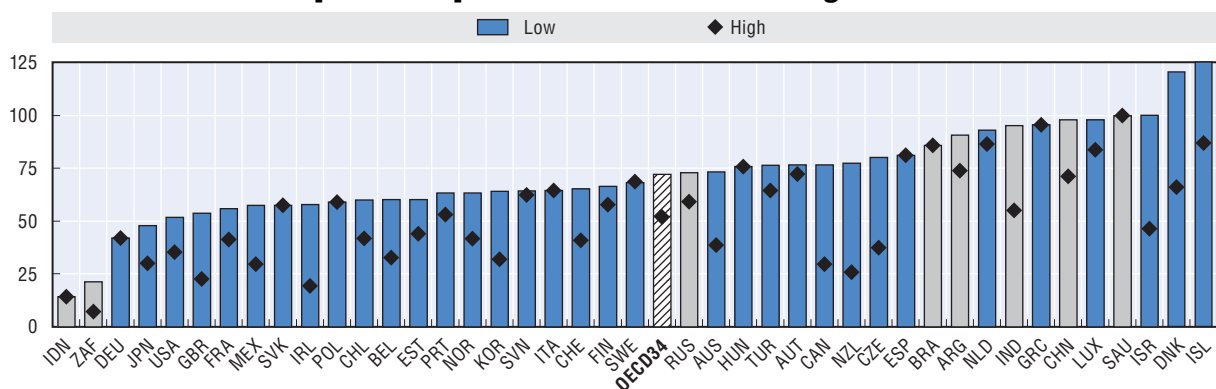
### Gross pension replacement rates: Average earners



Source: OECD pension models.

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



Source: OECD pension models.

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