### **Key results**

Private pensions play a large and growing role in providing for old age. This is illustrated with calculations of gross pension replacement rates that have been separated out between public and private sectors. The OECD average for replacement rates of an average earner from public schemes alone is 42%, compared with 57% with mandatory private pensions included. When voluntary private pensions, under typical rules, are added, the average replacement rate is 64% for an average earner.

For the 12 OECD countries where the calculations of mandatory entitlements cover only public pensions, the replacement rate for an average earner is 64% on average. For the 14 OECD countries with data for public and mandatory private provision, the average replacement rate is 62%. For all 34 OECD countries, including public, mandatory private and voluntary private pensions, the average replacement rate is again 64%.

This shows substitution between different scheme types. Australia, Denmark, Iceland and Israel have highly targeted public programmes, so very low public replacement rates for middle and high earners are topped up with mandatory private pensions. In Chile, Hungary, Mexico, Poland, the Slovak Republic and Sweden, the substitution was direct: reforms replaced part of public provision with mandatory private pensions. Canada, Ireland, the United Kingdom and the United States have long had relatively low public pensions and widespread voluntary provision.

Of the other major economies, three have only public pensions that are mandatory: Argentina, Brazil and Saudi Arabia. Three others, India, the Russian Federation and South Africa all have voluntary private schemes, with South Africa's public pension being eliminated for average earners and above, because of its means-tested component. Indonesia's system is entirely mandatory private with no public component.

#### Mandatory private pensions

The first group of 14 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. Replacement rates from mandatory private schemes for average earners range from 22% to 32% in seven of the 14 countries. But they are significantly above this

range in Denmark, Iceland, Israel and the Netherlands and much lower in Norway.

In seven countries, replacement rates are the same for workers earning between 50% and 150% of the economy-wide average. However, some countries have private pensions designed to cover earnings above the ceiling of the public scheme. This is the reason that replacement rates from private plans increase with earnings across the range in Chile, the Netherlands and Norway. It also explains why replacement rates for workers on 150% of average earnings are much higher 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 pension"). 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 Part III. 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.) 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 just above the 150% earnings range. In Norway, as with the mandatory defined-contribution plan, replacement rates increase with earnings because the private schemes are designed to offset some of the redistribution in public retirement benefits.

# Gross 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     | 1.5   | 0.5               | 1    | 1.5  | 0.5          | 1    | 1.5  | 0.5             | 1     | 1.5   | 0.5                  | 1    | 1.5  |
| OECD members          |        |       |       |                   |      |      |              |      |      |                 |       |       |                      |      |      |
| Australia             | 37.9   | 11.8  | 3.2   | 35.4              | 35.4 | 35.4 |              |      |      | 73.3            | 47.3  | 38.6  |                      |      |      |
| Austria               | 76.6   | 76.6  | 72.3  |                   |      |      |              |      |      | 76.6            | 76.6  | 72.3  |                      |      |      |
| Belgium               | 60.1   | 42.0  | 32.7  |                   |      |      | 15.6         | 15.6 | 12.3 | 60.1            | 42.0  | 32.7  | 75.7                 | 57.6 | 45.0 |
| Canada                | 61.2   | 38.9  | 25.9  |                   |      |      | 30.8         | 30.8 | 30.8 | 61.2            | 38.9  | 25.9  | 92.0                 | 69.7 | 56.7 |
| Chile                 | 18.8   | 3.2   | 0.0   | 41.3              | 41.7 | 41.8 |              |      |      | 60.0            | 44.9  | 41.8  |                      |      |      |
| Czech Republic        | 80.2   | 50.2  | 37.4  |                   |      |      | 11.3         | 11.3 | 11.3 | 80.2            | 50.2  | 37.4  | 91.5                 | 61.5 | 48.6 |
| Denmark               | 64.7   | 28.9  | 17.0  | 55.9              | 50.7 | 49.0 |              |      |      | 120.6           | 79.7  | 66.1  |                      |      |      |
| Estonia               | 37.7   | 25.5  | 21.5  | 22.5              | 22.5 | 22.5 |              |      |      | 60.2            | 48.0  | 44.0  |                      |      |      |
| Finland               | 66.4   | 57.8  | 57.8  |                   |      |      |              |      |      | 66.4            | 57.8  | 57.8  |                      |      |      |
| France                | 55.9   | 49.1  | 41.3  |                   |      |      |              |      |      | 55.9            | 49.1  | 41.3  |                      |      |      |
| Germany               | 42.0   | 42.0  | 42.0  |                   |      |      | 16.9         | 16.9 | 16.9 | 42.0            | 42.0  | 42.0  | 59.0                 | 59.0 | 59.0 |
| Greece                | 95.7   | 95.7  | 95.7  |                   |      |      |              |      |      | 95.7            | 95.7  | 95.7  |                      |      |      |
| Hungary               | 44.4   | 44.4  | 44.4  | 31.4              | 31.4 | 31.4 |              |      |      | 75.8            | 75.8  | 75.8  |                      |      |      |
| Iceland               | 63.0   | 15.0  | 5.1   | 81.9              | 81.9 | 81.9 |              |      |      | 144.9           | 96.9  | 87.0  |                      |      |      |
| Ireland               | 57.9   | 29.0  | 19.3  |                   |      |      | 37.6         | 37.6 | 37.6 | 57.9            | 29.0  | 19.3  | 95.5                 | 66.5 | 56.9 |
| Israel                | 38.9   | 19.4  | 13.0  | 61.3              | 50.2 | 33.4 |              |      |      | 100.1           | 69.6  | 46.4  |                      |      |      |
| Italy                 | 64.5   | 64.5  | 64.5  |                   |      |      |              |      |      | 64.5            | 64.5  | 64.5  |                      |      |      |
| Japan                 | 47.9   | 34.5  | 30.0  |                   |      |      |              |      |      | 47.9            | 34.5  | 30.0  |                      |      |      |
| Korea                 | 64.1   | 42.1  | 31.9  |                   |      |      |              |      |      | 64.1            | 42.1  | 31.9  |                      |      |      |
| Luxembourg            | 97.9   | 87.4  | 83.8  |                   |      |      |              |      |      | 97.9            | 87.4  | 83.8  |                      |      |      |
| Mexico                | 30.5   | 4.0   | 2.7   | 26.9              | 26.9 | 26.9 |              |      |      | 57.5            | 30.9  | 29.6  |                      |      |      |
| Netherlands           | 58.5   | 29.2  | 19.5  | 34.6              | 58.9 | 67.0 |              |      |      | 93.0            | 88.1  | 86.5  |                      |      |      |
| New Zealand           | 77.5   | 38.7  | 25.8  |                   |      |      | 14.6         | 14.6 | 14.6 | 77.5            | 38.7  | 25.8  | 92.1                 | 53.4 | 40.5 |
| Norway                | 57.7   | 46.1  | 34.2  | 5.7               | 7.0  | 7.5  | 8.6          | 12.0 | 17.1 | 63.4            | 53.1  | 41.7  | 72.0                 | 65.0 | 58.8 |
| Poland                | 28.7   | 28.7  | 28.7  | 30.2              | 30.2 | 30.2 |              |      |      | 59.0            | 59.0  | 59.0  |                      |      |      |
| Portugal              | 63.3   | 53.9  | 53.1  |                   |      |      |              |      |      | 63.3            | 53.9  | 53.1  |                      |      |      |
| Slovak Republic       | 26.0   | 26.0  | 26.0  | 31.6              | 31.6 | 31.6 |              |      |      | 57.5            | 57.5  | 57.5  |                      |      |      |
| Slovenia              | 64.3   | 62.4  | 62.4  |                   |      |      |              |      |      | 64.3            | 62.4  | 62.4  |                      |      |      |
| Spain                 | 81.2   | 81.2  | 81.2  |                   |      |      |              |      |      | 81.2            | 81.2  | 81.2  |                      |      |      |
| Sweden                | 45.6   | 31.1  | 22.8  | 22.7              | 22.7 | 45.9 |              |      |      | 68.3            | 53.8  | 68.7  |                      |      |      |
| Switzerland           | 52.3   | 34.5  | 23.7  | 12.8              | 23.4 | 17.1 |              |      |      | 65.2            | 57.9  | 40.9  |                      |      |      |
| Turkey                | 76.4   | 64.5  | 64.5  |                   |      |      |              |      |      | 76.4            | 64.5  | 64.5  |                      |      |      |
| United Kingdom        | 53.8   | 31.9  | 22.6  |                   |      |      | 36.7         | 36.7 | 36.7 | 53.8            | 31.9  | 22.6  | 90.5                 | 68.6 | 59.3 |
| United States         | 51.7   | 39.4  | 35.3  |                   |      |      | 38.8         | 38.8 | 38.8 | 51.7            | 39.4  | 35.3  | 90.5                 | 78.2 | 74.1 |
| OECD34                | 57.2   | 42.1  | 36.5  |                   |      |      |              |      |      | 71.7            | 57.2  | 51.9  | 84.3                 | 64.4 | 55.4 |
| Other major economies |        |       |       |                   |      |      |              |      |      |                 |       |       |                      |      |      |
| Argentina             | 90.7   | 78.1  | 73.9  |                   |      |      |              |      |      | 90.7            | 78.1  | 73.9  |                      |      |      |
| Brazil                | 85.9   | 85.9  | 85.9  |                   |      |      |              |      |      | 85.9            | 85.9  | 85.9  |                      |      |      |
| China                 | 97.9   | 77.9  | 71.2  |                   |      |      |              |      |      | 97.9            | 77.9  | 71.2  |                      |      |      |
| India                 | 95.2   | 65.2  | 55.0  |                   |      |      |              |      |      | 95.2            | 65.2  | 55.0  | 95.2                 | 65.2 | 55.0 |
| Indonesia             | 14.1   | 14.1  | 14.1  |                   |      |      |              |      |      | 14.1            | 14.1  | 14.1  |                      |      |      |
| Russian Federation    | 35.0   | 35.0  | 35.0  | 17.3              | 17.3 | 17.3 |              |      |      | 52.3            | 52.3  | 52.3  | 35.0                 | 35.0 | 35.0 |
| Saudi Arabia          | 100.0  | 100.0 | 100.0 |                   |      |      |              |      |      | 100.0           | 100.0 | 100.0 |                      |      |      |
| South Africa          | 15.1   | 0.0   | 0.0   |                   |      |      | 33.1         | 33.1 | 33.1 | 15.1            | 0.0   | 0.0   | 48.2                 | 33.1 | 33.1 |
| EU27                  | 58.3   | 49.0  | 44.6  |                   |      |      |              |      |      | 70.1            | 61.6  | 58.3  |                      |      |      |

DC = Defined contribution.

Source: OECD pension models.

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