Key results

The indicators so far have shown replacement rates, relative pension levels and pension wealth for people at different levels of earnings. By taking a weighted average of these indicators over the earnings range, the measures presented here show the average for the pension level at the time of retirement and pension wealth, the lifetime value of pension payments.

The first of these is designed to show the level of the average retirement income, taking account of the different treatment of workers with different incomes. The average pension level is 55.3% of economy-wide average earnings across the OECD34 countries.

The second aims to summarise the total cost of providing old-age incomes. Weighted average pension wealth is an average of 10.3 times annual economy-wide average earnings for men and 12.0 for women.

The weighted average relative pension level combines data on the distribution of earnings with calculations of pension entitlements. This aggregate measure is then expressed as a percentage of economy-wide average (mean) earnings. Replacement rates are generally higher for low earners and *vice versa*. But there are many more low earners than there are high earners.

The results are shown in the first and second columns of the table for men and women respectively. At the top of the range, the weighted average pension level in Iceland is above 100%, followed closely by the Netherlands, Luxembourg and Greece. In another three countries – Denmark, Hungary and Spain – the weighted average pension level is above 70% of the average earnings. At the other end of the scale, in ten OECD countries (Belgium, Chile, Germany, Ireland, Japan, Korea, Mexico, New Zealand, the United Kingdom and the United States) the weighted average pension level is less than 40% of average earnings

The same type of weighting procedure can also be applied to the pension wealth measure. Pension wealth is the most comprehensive measure of the scale of the pension promise made to today's workers, as it allows for differences between countries in pension ages, life expectancy and indexation policies. Weighted average pension wealth is expressed as a multiple of economy-wide average earnings.

The results are shown in the third and fourth columns of the table. Values well above the average for weighted average pension wealth, between 13.3 and 21.8 for men and 15.1 and 25.8 of average earnings for women, are found in the Denmark, Greece, Iceland, Luxembourg, the Netherlands and Spain. Hungary, Israel, Italy, Slovenia, Sweden and Switzerland are closely clustered with values of this indicator of around 10-12 times average earnings.

When converted to United States dollars (at market exchange rates) the pension promises in these twelve countries amount to USD 667 000 for men and USD 766 000 for women (fifth and sixth column of the table). These numbers represent the present value of the transfers that societies are promising on average to future retirees under the current pension system rules.

At the other end of the spectrum, in three countries (Japan, the United Kingdom and the United States) pension wealth is well below the average for OECD, at less than 6.3 times average earnings for men and 7.6 times average earnings for women. Pension wealth is also relatively low in countries with shorter life expectancy such as Poland.

For the non-OECD countries the pension promise in all the countries is well below the OECD34 average, with Brazil recording the highest figure of USD 198 000 for both men and women. This reflects the lower level of incomes.

Definition and measurement

The indicators build on the calculations of pension entitlements (pension levels and pension wealth) for people earning between 0.3 and 3 times the economy-wide average.

Each level of individual earnings is given a weight based on its importance in the distribution of earnings. The calculations use national data: see in Part II.5 the indicator of "Earnings: averages and distribution"). The earnings distribution is skewed in all countries. The mode (or peak) of the distribution and the median (the earnings level both below and above which half of employees are situated) are significantly less than the mean. Thus, there are many people with low earnings, and fewer with high earnings, so low earners are given a larger weight in the calculation of the indicator than high earners.

Weighted averages: Pension levels and pension wealth

Percentage of economy-wide average earnings

	Weighted average pension level		Weighted average pension wealth		Average pension wealth (USD)	
	Men	Women	Men	Women	Men	Women
OECD members						
Australia	47.4	44.7	9.5	10.4	479 000	524 000
Austria	67.9	67.9	9.8	10.7	557 000	608 000
Belgium	38.2	38.2	7.0	8.2	407 000	476 000
Canada	42.0	42.0	8.7	9.8	350 000	394 000
Chile	45.6	33.7	7.7	8.0	86 000	89 000
Czech Republic	47.5	47.5	9.0	10.9	145 000	175 000
Denmark	80.4	80.4	13.3	15.7	937 000	1 106 000
Estonia	47.2	47.2	7.9	10.1	114 000	146 000
Finland	59.6	59.6	9.7	11.6	529 000	632 000
France	44.4	44.4	9.3	10.5	444 000	501 000
Germany	39.3	39.3	7.7	9.3	466 000	563 000
Greece	81.8	81.8	15.1	17.4	528 000	609 000
Hungary	71.0	71.0	10.6	13.3	144 000	180 000
Iceland	100.4	100.4	19.4	21.8	897 000	1 008 000
Ireland	29.0	29.0	7.5	9.1	448 000	544 000
Israel	62.7	55.4	12.2	13.2	382 000	413 000
Italy	64.7	50.8	10.6	11.1	408 000	427 000
Japan	34.0	34.0	6.3	7.6	305 000	368 000
Korea	39.1	39.1	7.6	9.2	231 000	280 000
Luxembourg	82.7	82.7	21.8	25.3	1 542 000	1 789 000
Mexico	37.3	35.3	7.4	8.1	50 000	55 000
Netherlands	87.0	87.0	18.0	20.6	1 145 000	1 311 000
New Zealand	38.7	38.7	10.6	12.0	347 000	393 000
OECD members *(cont.)*						
Norway	48.3	48.3	9.4	11.1	732 000	865 000
Poland	56.2	42.1	8.5	9.5	119 000	133 000
Portugal	52.1	52.1	8.7	10.0	205 000	235 000
Slovak Republic	56.3	56.3	9.2	11.3	82 000	101 000
Slovenia	57.0	57.0	12.7	17.0	293 000	392 000
Spain	73.4	73.4	13.4	15.1	455 000	513 000
Sweden	64.3	64.3	10.4	11.7	556 000	625 000
Switzerland	49.6	49.0	10.4	11.9	715 000	818 000
Turkey	68.4	68.4	9.8	11.7	142 000	170 000
United Kingdom	30.3	30.3	5.4	6.4	332 000	394 000
United States	37.5	37.5	6.3	7.3	254 000	294 000
OECD34	**55.3**	**53.8**	**10.3**	**12.0**	**436 000**	**504 000**
Other major economies						
Argentina	76.6	65.5	12.0	15.3	128 000	164 000
Brazil	81.4	69.5	22.0	22.0	198 000	198 000
China	76.5	60.3	16.1	15.5	67 000	64 000
India	63.7	47.9	12.4	13.0	44 000	46 000
Indonesia	13.7	59.9	2.6	2.6	4 000	4 000
Russian Federation	61.5	12.2	9.5	12.1	79 000	101 000
Saudi Arabia	97.7	54.5	16.4	18.8	143 000	164 000
South Africa	10.6	85.5	1.9	2.3	26 000	32 000
EU27	58.7	54.7	10.5	11.9	380 000	428 000

Source: OECD pension models.

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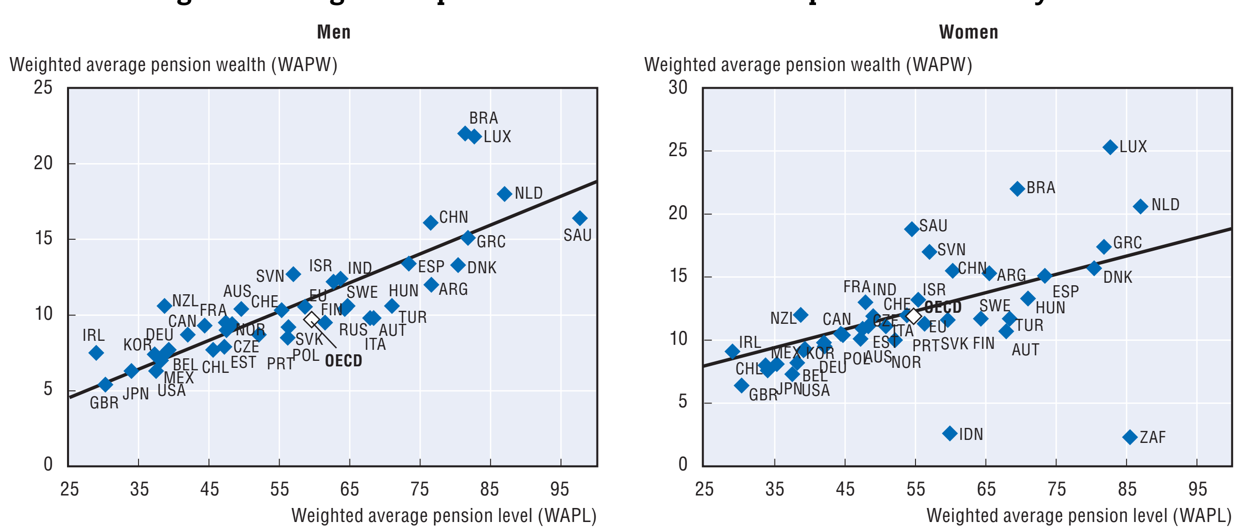
Weighted averages compared: Pension levels *versus* pension wealth by sex



Source: OECD pension models.

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Key results

The retirement-income package is divided into different components using the taxonomy from the indicator of the "Architecture of national pension systems" above. This framework divides pension systems into two mandatory tiers. The first is a redistributive part, designed to ensure pensioners achieve an absolute minimum standard of living. A savings part forms the second, with the aim of achieving a target income in retirement compared with earnings when working. This indicator, showing the division of national pension systems between these tiers and between public and private provision, again demonstrates substantial differences in national policies.

Starting with the first tier, it is important to note that the calculations cover full-career workers only. All of the first-tier programmes will be much more important for people with incomplete contribution histories. But it is hard to obtain information on the distribution of past contribution histories let alone predict them into the future.

There are basic schemes in 14 OECD countries (including Korea and Mexico, where other components of the system have the same effect). The value of these benefits does not depend on individual earnings or other pension entitlements. Mandatory pensions for full-career workers in Ireland and New Zealand are entirely from basic schemes. In Japan, Korea, the Netherlands and the United Kingdom, basic pensions contribute 41-62% of the total pension promise. They are also significant in Canada, Denmark, Estonia and Israel.

Minimum pensions are significant in 13 countries. In Belgium and the United Kingdom, minimum pension credits have a similar effect: benefits for workers with low earnings are calculated as if the worker had earned at a higher level. These credits form a very large part of overall benefits in the United Kingdom. Minimum pension are also significant in Mexico, Portugal, Sweden and Turkey.

All OECD countries have a safety-net for low-income pensioners. But in most of them, full-career workers, even those with low earnings, will not be eligible. There are nine exceptions. Australia is most striking because the whole of its first-tier provision is means-tested and this scheme makes up almost half of the total pension package. In Canada, Chile, Denmark and Iceland, they also play a very important role by providing between 17% and 23% of the pension promise, respectively.

The balance between first- and second-tier schemes in the retirement-income package is shown in the left-hand chart. The second tier accounts for 94% or more in half of OECD countries. In some – Austria, Italy, Poland, Spain and Turkey – this reflects high target replacement rates in the second tier. In others, such as Switzerland and the United States, the benefit formula of the public scheme is progressive: redistribution done by the first tier in other countries is carried out by second-tier plans. In the United Kingdom, most of the earnings-related plan goes into benefits from minimum credits.

Second-tier schemes

The second tier of mandatory benefits is divided in the table between public and private providers and between defined-contribution (DC) and defined-benefit (DB) or earnings-related provision. There are public, earnings-related schemes in 25 OECD countries. They provide almost all of benefits for full-career workers in nine: Austria, Finland, France, Germany, Greece, Italy, Slovenia, Spain and the United States.

In 14 OECD countries, private pensions are mandatory or quasi-mandatory. They are DB in Iceland, the Netherlands and Switzerland, but DC in most cases. In six countries – Australia, Denmark, Mexico, the Netherlands, Poland and the Slovak Republic – they account for 50-60% of the total, mandatory pension package. They are significantly more important in Chile, Iceland and Israel. The balance between public and private provision of mandatory benefits is shown in the right-hand chart. However, it is important to bear in mind that voluntary private pensions (not shown) are significant sources of income in many countries, such as Canada, Ireland, the United Kingdom and the United States.

Definition and measurement

The structure of the pension package is illustrated using the indicator of weighted average pension wealth presented above, divided into different components. The weights derive from earnings-distribution data.

Structure of the retirement-income package

Percentage contribution of mandatory components of the pension system to weighted average pension wealth

	First tier			Second tier				Total
	Resource-tested	Basic	Minimum	Public ER	Public DC	Private DB	Private DC	
OECD members								
Australia	40.6						59.4	100
Austria				100.0				100
Belgium			6.4	93.6				100
Canada	22.9	34.9		42.2				100
Chile	17.5						82.5	100
Czech Republic		18.9		81.1				100
Denmark	19.3	25.3					55.5	100
Estonia		32.2		26.7			41.1	100
Finland			2.3	97.7				100
France				100.0				100
Germany	3.7			96.3				100
Greece				100.0				100
Hungary				56.4			43.6	100
Iceland	22.3	10.1				67.6		100
Ireland		100.0						100
Israel		33.1					66.9	100
Italy				100.0				100
Japan		44.6		55.4				100
Korea		62.0		38.0				100
Luxembourg		15.7	0.1	84.3				100
Mexico		12.8	30.7				56.5	100
Netherlands		41.4				58.6		100
OECD members *(cont.)*								
New Zealand		100.0						100
Norway			3.7	85.4			10.9	100
Poland			1.3	49.0			49.7	100
Portugal			11.1	88.9				100
Slovak Republic			0.4	47.4			52.2	100
Slovenia	2.9		0.8	96.3				100
Spain			0.7	99.3				100
Sweden			5.6	48.0			46.4	100
Switzerland	0.2			69.3		30.5		100
Turkey			13.2	86.8				100
United Kingdom	0.3	48.2	40.8	10.8				100
United States				100.0				100
Other major economies								
Argentina		20.1		79.9				100
Brazil		100.0						100
China		55			45.0			100
India				41.1	58.9			100
Indonesia					100.0			100
Russian Federation		20.7		53.1			26.3	100
Saudi Arabia				100.0				100
South Africa		100.0						100

DB = Defined benefit; DC = Defined contribution; ER = Earnings related.

1. Belgium: includes both minimum pension and minimum credits.
2. Denmark: private DC plans include both quasi-mandatory occupational (49.0%) and the special pension (6.5%).
3. France: public pensions include both the state scheme (78.2%) and the complementary, occupational scheme (21.8%).
4. Greece: public pension is made up of the main (73.0%) and the supplementary components (27%).
5. Korea: basic component represents the part of the public pension based on average rather than individual earnings.
6. Luxembourg: basic pension also includes the end-of-the-year allowance.
7. Mexico: basic component calculated from the flat-rate government contribution to DC accounts of 5.5% the real minimum wage from 1997.
8. Sweden: private DC includes both DC schemes (12.6% and 33.8%).
9. United Kingdom: minimum pension relates to minimum credits in public, earnings-related scheme.

Source: OECD pension models.

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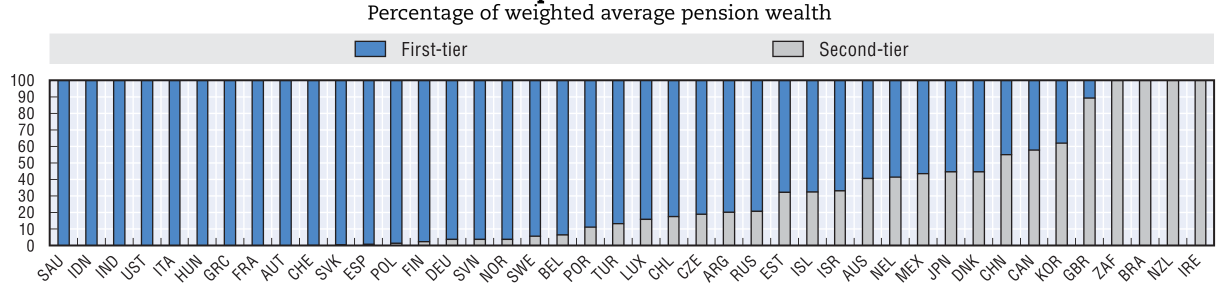
Balance between first-tier, redistributive programmes and mandatory, second-tier, income-replacement schemes

Percentage of weighted average pension wealth

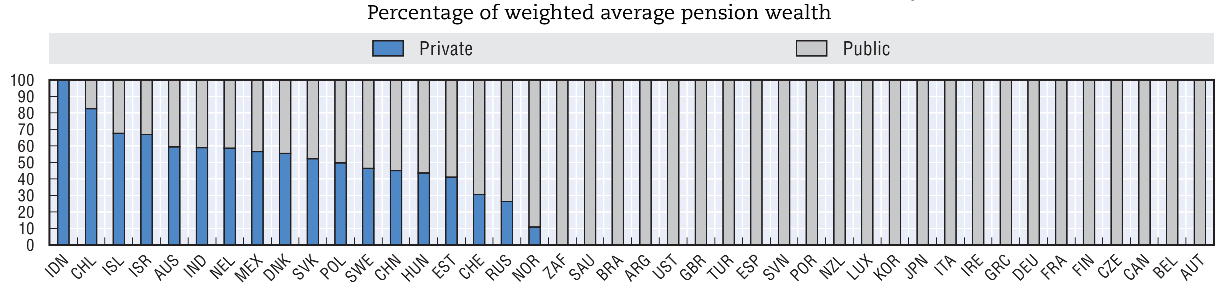


Source: OECD pension models.

StatLink http://dx.doi.org/10.1787/888932371006

Balance between public and private provision of mandatory pensions

Percentage of weighted average pension wealth



Source: OECD pension models.

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