

GROSS PENSION WEALTH

Key results

Pension wealth relative to individual earnings measures the total discounted value of the lifetime flow of all retirement incomes in mandatory pension schemes at retirement age. For average earners, pension wealth for men is 9.9 times and for women 10.9 times annual individual earnings on average in OECD countries. Gross pension wealth relative to annual individual earnings is higher for women because of their longer life expectancy. The main determinants of differences across countries are differences in the gross replacement rate, in the length of the retirement period measured by remaining life expectancy at the normal retirement age, and in indexation rules.

Replacement rates give an indication of the pension promise relative to individual earnings, but they are not comprehensive measures of cumulated pension payments; they look only at the benefit level relative to individual earnings at the point of retirement, or more generally at a given, later age. For a full picture, life expectancy, normal retirement age and indexation of pension benefits must also be taken into account. Together, these determine for how long the pension benefit is paid, and how its value evolves over time. Pension wealth – a measure of the stock of future discounted flows of pension benefits – takes account of these factors. It can be thought of as the lump-sum needed at the retirement age to buy an annuity giving the same flow of pension payments as that promised by mandatory retirement-income schemes.

In defined benefit systems there is often no or a weak link between the replacement rate and the expected duration of benefit withdrawal. However, in the long run, ensuring financial sustainability imposes a trade-off between the replacement rate and the duration of retirement. When retirement ages and pension benefits are held constant, pension wealth increases with longevity gains. In defined contribution systems there is a more direct link between the size of the benefit and the expected duration of benefit withdrawals. In these systems the pension wealth measure is equal to the accumulated assets and therefore independent of longevity increases as these automatically reduce the benefits.

Gross pension wealth at individual earnings equal to average worker earnings is highest in Luxembourg at 19.4 times annual individual earnings for men and 21.3 times for women. The lowest pension wealth for men is found in the United Kingdom and for women in Mexico at 4.4 and 4.7, respectively, due to low replacement rates.

Higher individual replacement rates mean that pension wealth relative to individual earnings tends to be higher for low earners than for average earners as well, at least as the estimations here abstract from differences in life expectancy across income levels. For men with individual earnings equal to half-average earnings, pension wealth is 12.1 times their earnings on average, compared with 9.9 times for average wage workers, and 13.4 and 10.9 times, respectively, for women. In the countries where pension wealth for low earners is highest (Australia, Israel, Luxembourg and New Zealand), its value is between 18 and

23 times individual earnings for men and slightly above at 19 to 25 times individual earnings for women.

Impact of life expectancy

In countries where the duration in retirement is shorter, such as Hungary, the Slovak Republic and Turkey, the individual pension wealth is smaller. The effect is the opposite in Switzerland and some of the Nordic countries, where life expectancy is high. Similarly, since women's life expectancy is longer than men's, pension wealth for women is higher in all countries that use unisex mortality tables or that have defined benefit systems. In addition, some countries still have lower retirement ages for women; this extends the payment period even further. Pension wealth is also affected by pension ages. A low retirement age in a defined benefit system such as in Luxembourg increases the pension wealth at a given level of benefit.

Impact of indexation

Pension wealth is affected by indexation rules at a given initial replacement rate level. Although most OECD countries now index pensions in payment to prices, there are exceptions: Germany, Ireland, Luxembourg and the United Kingdom, for example, link their, basic, defined benefit or point systems to average earnings. Since earnings tend to grow faster than prices pension wealth is higher with wage than price indexation, for a given level of replacement rate. If Luxembourg, for example, indexed to prices rather than wages, the pension wealth for an average male earner would decrease from 19.4 to 16.4 with unchanged initial benefit based on the OECD pension model.

For the non-OECD countries there is great variation with South Africa at only 4.7 and 5.8 times individual earnings for average earners for men and women compared with Brazil at 18.3 and 17.4 times individual earnings for men and women respectively.

Definition and measurement

The calculation of pension wealth uses a uniform real discount rate of 2%. Since the comparisons refer to prospective pension entitlements, the calculations use country-specific mortality rates by age and sex at the year of retirement. Pension wealth is expressed as a multiple of gross annual individual earnings.

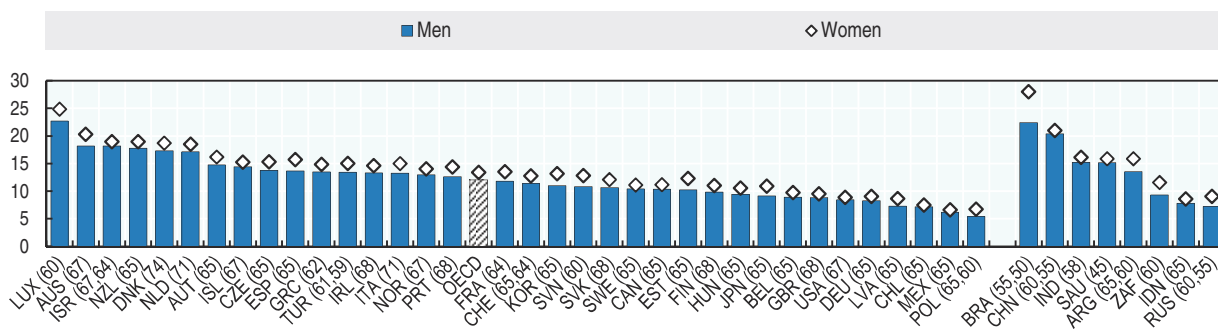
4.12. Gross pension wealth by earnings

	Individual earnings, multiple of mean						Individual earnings, multiple of mean											
	0.5			1.0			1.5			0.5			1.0			1.5		
OECD members	Men			Women			OECD members (cont.)						Men			Women		
Australia	18.2	11.2	9.0	20.3	12.3	9.6	New Zealand	17.8	8.9	5.9	19.0	9.5	6.3					
Austria	14.8	14.8	14.8	16.2	16.2	16.2	Norway	13.0	9.1	7.3	14.0	9.9	7.9					
Belgium	8.9	8.7	6.8	9.7	9.5	7.4	Poland	5.4	5.4	5.4	6.7	6.3	6.3					
Canada	10.4	7.9	5.5	11.2	8.5	5.9	Portugal	12.6	11.8	11.5	14.4	13.3	13.0					
Chile	7.2	6.1	6.1	7.5	6.1	6.1	Slovak Republic	10.6	9.5	9.2	12.1	10.8	10.4					
Czech Republic	13.8	8.5	6.8	15.3	9.5	7.5	Slovenia	10.8	9.4	8.9	12.8	11.1	10.6					
Denmark	17.3	11.9	10.9	18.7	12.9	11.8	Spain	13.6	13.6	13.6	15.7	15.7	15.7					
Estonia	10.2	8.2	7.5	12.3	9.9	9.1	Sweden	10.4	10.4	12.2	11.1	11.1	13.0					
Finland	9.8	9.8	9.8	11.1	11.1	11.1	Switzerland	11.4	8.5	5.8	12.8	9.6	6.5					
France	11.8	11.8	10.7	13.5	13.5	12.2	Turkey	13.4	13.4	13.4	15.0	15.0	15.0					
Germany	8.3	8.3	8.3	9.0	9.0	9.0	United Kingdom	8.9	4.4	3.0	9.5	4.8	3.2					
Greece	13.5	10.8	9.9	14.8	11.8	10.8	United States	8.4	6.7	5.5	8.9	7.0	5.8					
Hungary	9.4	9.4	9.4	10.6	10.6	10.6	OECD	12.1	9.9	9.0	13.4	10.9	9.9					
Iceland	14.4	12.6	12.4	15.3	13.3	13.1	Argentina	13.6	11.9	11.3	15.9	13.8	13.1					
Ireland	13.3	6.7	4.4	14.6	7.3	4.9	Brazil	22.4	18.3	18.3	28.0	17.4	17.4					
Israel	18.2	12.4	8.3	19.0	12.7	8.5	China	20.4	16.1	14.7	21.0	16.5	15.0					
Italy	13.3	13.3	13.3	15.0	15.0	15.0	India	15.2	15.2	15.2	16.1	16.1	16.1					
Japan	9.1	6.6	5.8	10.9	7.9	6.9	Indonesia	7.8	7.8	7.8	8.6	8.6	8.6					
Korea	11.0	7.4	5.4	13.2	8.8	6.4	Russian Federation	7.2	5.3	4.6	9.0	6.3	5.3					
Latvia	7.3	7.3	7.3	8.6	8.6	8.6	Saudi Arabia	15.2	15.2	15.2	15.9	15.9	15.9					
Luxembourg	22.7	19.4	18.4	24.8	21.3	20.1	South Africa	9.3	4.7	3.1	11.6	5.8	3.9					
Mexico	6.2	4.7	4.5	6.6	4.7	4.5	EU28	12.6	10.5	9.8	14.0	11.7	10.9					
Netherlands	17.1	16.9	16.8	18.5	18.3	18.2												


Source: OECD pension models.

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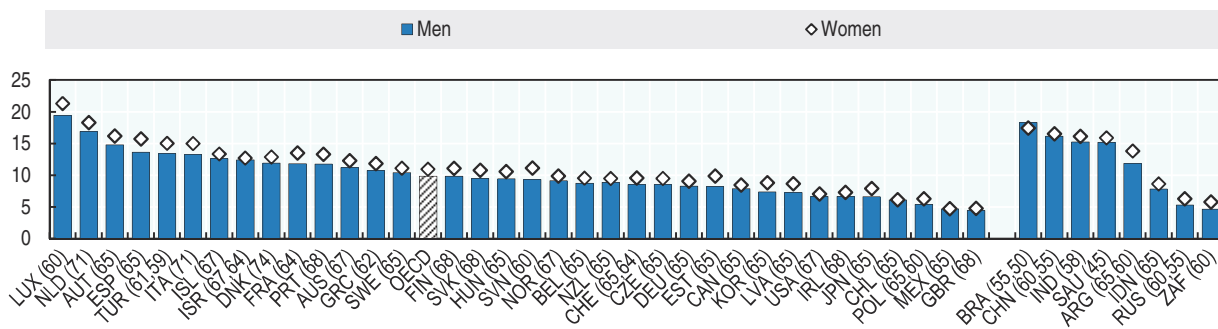
4.13. Gross pension wealth for lower earners by gender




Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888933634097>

4.14. Gross pension wealth for average earners by gender



Source: OECD pension models.

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