#### **Key Results**

The future gross replacement rate shown in Table 5.1 for the average-wage worker assumes that this worker earns the average wage all along her or his career from age 22 in 2018 (baseline case). The indicator here compares those results with an average earner that entered the labour market in 2018 at age 20, the default scenario used in previous editions of the publication. Such a variation in entry age has a small impact on replacement rates, with the average gross replacement rate decreasing from 50.4% to 49.0% when moving the entry age from 20 to 22 years due to the impact of lower entitlements in many countries.

All the analysis in previous editions of this publication have covered those entering the labour market at age 20 and then working a full career until the country-specific retirement age. For this and subsequent editions the new base case is defined with a career entry age of 22. To show the impact of this deferral of labour market entry by 2 years the gross replacement rates for average earners have also been calculated with entry at age 20 and are presented in Table 5.2. As both cases assume labour market entry in 2018, they refer to two different birth cohorts: 1998 (entry at age 20) and 1996 (at age 22).

The expansion of higher education justifies this shift in the baseline scenario. Between 2000 and 2015, the OECDwide average share of women aged 25 to 64 with high education (levels 5-8 of the 2011 International Standard Classification for Education, ISCED) rose from 21% to 38%. Among men, the increase was from 22% to 32% (OECD, 2017). The average entry age into the labour market has increased over time and is currently above 20 in most if not all OECD countries: data from the latest EU Pension Adequacy Report (European Commission, 2018) show that entry age in the EU is on average 22.8 years and is above 20 in all EU countries (except Denmark where it equals 19.7 years). Education at a Glance publishes an indicator of "Expected years in education and at work between ages 15 and 29" in the module "Transition from school to work". On average across OECD countries, people completed their education at age 22.1 in 2016, which is very close to the average of the 22 EU countries that are OECD Members (22.3).

Changing the entry age for this edition leads to a decrease in the gross replacement rate for average earners of 1.4 percentage points from 50.4% to 49.0%. However the impact varies by country because of the specific design of pension systems. Intuitively one would assume that starting the career two years later would just mean that there are two fewer years of contributions, as is the case for the 30 OECD countries that have the same retirement age for entry at age 20 and entry at age 22 for men (29 countries for women). Yet the impact of two missing years of contributions is not mechanical depending on the exact links between contributions and benefits from all

components. Among these 30 countries, the scale of the fall varies from a high of 4.6 percentage points in Turkey and 3.6 percentage points in Austria to actually increasing by 0.1 percentage point in Canada. In Canada, the full earningsrelated pension is achieved after 40 years of contributions so there is no impact of the change; the basic pension is indexed to prices and as the 1996 birth cohort will retire in 2061, i.e. two years earlier than the 1998 cohort, its level relative to wages will be higher as real wages are assumed to grow by 1.25% per year.

Replacement rates in Ireland, New Zealand, Portugal, Spain and the United Kingdom are identical. The maximum replacement rate is obtained in Portugal and Spain after only 40 and 38.5 years, respectively. In Ireland, New Zealand and the United Kingdom there are only basic pensions as the mandatory component and both are indexed to earnings growth, thereby maintaining their value relative to earnings irrespective of the entry age for those with full careers.

In Belgium, France, Germany, Luxembourg and Slovenia the replacement rates are also identical for entry at age 22 and at age 20 as the retirement age for all these four countries also increases by two years given the rules to get a full pension. In both Denmark and Hungary the retirement age changes though only for women in Hungary. In Denmark the age increases by one year for the 1998 cohort (which enters at age 20) because of links to life expectancy, whilst in Hungary the retirement age decreases by two years as women can retire with a full pension after 40 years of contribution.

#### **Further Reading**

European Commission (2018), "Pension Adequacy Report 2018; Current and future income adequacy in old age in the EU", Vol. Publications Office of the European Union, Luxembourg, https://ec.europa.eu/social/main.jsp? catId=738&langId=en&pubId=8084&furtherPubs=yes.

OECD (2017), Education at a Glance 2017: OECD Indicators, OECD Publishing, Paris, https://dx.doi.org/10.1787/eag-2017en.

		Average earnings for men (women where different)									
	Entry at age 22 (base case)				Entry at age 20 (old base case)				Difference in pension age	Difference in replacement rates	
	Pension age		Replacement rate		Pension age		Replacement rate				
Australia	67		30.9	(28.1)	67		32.8	(29.8)		-1.9	(-1.7)
Austria	65		76.5		65		80.1	. ,		-3.6	. ,
Belgium	67		46.8		65		46.8		2.0	0.0	
Canada	65		39.0		65		38.9			0.1	
Chile	65		31.2	(28.8)	65		33.3	(30.7)		-2.1	(-1.9)
Czech Republic	65		45.9		65		47.6			-1.7	
Denmark	74		74.4		75		77.7		-1.0	-3.3	
Estonia	71		47.1		71		49.4			-2.4	
Finland	68		56.5		68		58.8			-2.3	
France	66		60.1		64		60.1		2.0	0.0	
Germany	67		38.7		65		38.7		2.0	0.0	
Greece	62		49.9		62		53.0			-3.1	
Hungary	65	(62)	56.1	(52.2)	65	(60)	58.7	(54.8)	(2.0)	-2.6	(-2.6)
Iceland	67	. ,	66.1		67	. ,	68.8	. ,		-2.7	. ,
Ireland	68		27.0		68		27.0			0.0	
Israel	67	(62)	50.1	(41.8)	67	(62)	52.2	(43.7)		-2.1	(-1.9)
Italy	71	. ,	79.5	( )	71	( )	82.7	. ,		-3.2	, ,
Japan	65		32.0		65		33.4			-1.4	
Korea	65		37.3		65		39.3			-2.0	
Latvia	65		44.6		65		47.4			-2.8	
Lithuania	65		23.6		65		24.5			-0.9	
Luxembourg	62		78.8		60		78.8		2.0	0.0	
Mexico	65		25.7	(24.0)	65		28.2	(26.4)		-2.6	(-2.4)
Netherlands	71		70.9	( - )	71		72.2			-1.2	( )
New Zealand	65		39.7		65		39.7			0.0	
Norway	67		45.4		67		47.6			-2.1	
Poland	65	(60)	29.4	(22.5)	65	(60)	30.7	(23.4)		-1.3	(-0.9)
Portugal	68	()	74.4	( - )	68	( )	74.4	( - )		0.1	
Slovak Republic	64		49.6		64		52.0			-2.4	
Slovenia	62		38.8	(40.7)	60		38.8	(40.7)	2.0	0.0	
Spain	65		72.3	()	65		72.3	()		0.0	
Sweden	65		54.1		65		56.2			-2.1	
Switzerland	65	(64)	42.4	(41.3)	65	(64)	42.9	(41.8)		-0.5	(-0.5)
Turkey	62	(60)	67.4	(64.3)	62	(60)	72.0	(68.9)		-4.6	(-4.6)
United Kingdom	68	(00)	21.7	(0.110)	68	(00)	21.7	(00.0)		0.0	(
United States	67		39.4		67		39.4			0.0	
OECD	66.1	(65.7)	49.0	(48.2)	65.9	(65.4)	50.4	(49.6)		-1.5	(-1.4)
Argentina	65	(60)	71.2	(64.4)	65	(60)	74.0	(67.1)		-2.7	(-2.7)
Brazil	57	(52)	58.9	(46.1)	57	(52)	62.5	(48.8)		-3.6	(-2.7)
China	60	(55)	71.6	(60.8)	60	(55)	76.0	(65.1)		-4.4	(-4.3)
India	58	(00)	83.4	(80.4)	58	(00)	86.3	(83.0)		-2.9	(-2.6)
Indonesia	65		55.3	(53.0)	65		57.9	(55.5)		-2.6	(-2.5)
Russian Federation	64	(59)	49.6	(45.2)	63	(58)	50.5	(46.1)		-0.9	(-0.9)
Saudi Arabia	47	(00)	59.6	(10.2)	45	(50)	59.6	(10.1)		0.0	( 0.0)
South Africa	60		17.2		60		17.2			0.0	
EU28	66.3	(65.9)	52.0	(51.7)	66.0	(65.5)	53.4	(53.0)		-1.3	(-1.3)
	00.0	(00.0)	52.0	(01.7)	00.0	(00.0)	50.4	(00.0)		1.0	(1.0)

### Table 5.2. Difference in gross pension replacement rates for average earners by entry age

Source: OECD pension models.

StatLink and https://doi.org/10.1787/888934041459



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