

ANNEX *List of pension schemes used for the theoretical replacement rates*

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions						
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment	
				2019	2059	Legislated/ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
BE	Public pensions	Yes – employees private sector	Mixed	16.36 ¹	16.36	Leg.	Cf. WGA		CPI+.5% (+1% for minimum pensions)	
	Occupational pensions	Yes	Contri- butions	4.25	4.25	Ad-hoc	Cf. contributions and assumed return-on- investment		Constant prices	
	Private pensions	No								
BG	Public pensions: Earnings-related PAYG, DB, administrated by National Social Security Institute	Yes	Mixed	19.8% for persons born before 1960 (EE – 8.78%; ER – 11.02%); 14.8% for persons born after 1959 (EE – 6.58%; ER – 8.22%)	19.8% for persons born before 1960 (EE – 8.78%; ER – 11.02%); 14.8% for persons born after 1959 (EE – 6.58%; ER – 8.22%)	Leg.	No valorisation of pensionable earnings. Instead, in the pension formula an individual coefficient is applied which is the ratio of an individual’s average insurable income and the national average insurable income	Leg.	50% CPI + 50% wages	Leg.
	Earnings-related, funded tier of statutory scheme, DC – Universal Pension Funds (UPF)	Yes	Contri- butions	5% for persons born after 1959 (EE – 2.2%; ER – 2.8%)	5% for persons born after 1959 (EE – 2.2%; ER – 2.8%)	Leg.				

¹ Indicative; this is the sum of the former rates of social contributions for the branch pensions for the employee (7.5%) and employers (8.86%), now supplanted by “global financing of social security”.

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Legislated/ad-hoc	Assumptions used for TRR projections	Leg./ad-hoc	Assumptions used for TRR projections	Leg./ad-hoc
					Assumptions used for TRR projections	Legislated/ad-hoc						
EL	Public Main Pensions (DB)	Yes	Contributions ²	20% (13.33% employer & 6.67% employee)	20% (13.33% employer & 6.67% employee)	Leg.	Up to 2024 by CPI, from 2025 onwards by wages.	Leg.	min (50% GDP growth +50% CPI, CPI) Actually CPI is applied	Leg.		
	Public Auxiliary Pensions (Pro Rata DB & NDC)	Yes	Contributions	Up to 5/2016:6% (3.0% employer & 3.0% employee) 6/2016-12/2019:6.92% on average (3.46% employer & 3.46% employee)	From 1/1/2019-31/5/2019 7% (3.5% employer & 3.5% employee), 1/6/2019-31/5/2022 6.5% (3.25% employer & 3.25% employee), 1/6/2022 onwards 6% (3.0% employer & 3.0% employee)	Leg.	DB component: CPI NDC component: based on contributions paid adjusted with GDP growth.	Leg ³ .	min(wages-discount rate, CPI) Actually CPI is applied	Leg.		
	Occupational Pensions	No										
	Private Pensions	No										
ES	Public pensions (General Regime)	Yes	Contributions	Not relevant, since it is DB. To obtain net TRR, an employee contribution of 6.35% is considered	Same as for 2019	Leg.	CPI indexation up to two years before retirement. Indexed according to ISG assumptions	Leg.	CPI indexation for earnings. Indexed according to ISG AWG assumptions (2% from 2015 2024)	Ad-hoc ⁴		
	Occupational pensions	No										

² National pension is financed by state budget.

³ Similar to legislated

⁴ According to the law 23/2013, the indexation system changed in January 2014. Previously the CPI indexation was used; now a new Pensions Adjustment Index (IRP) is applied, which is calculated according to different factors: number of contributory pensions, the variation of the average pension amount and the balance between revenues and expenses of the social security system. The index value will be in a range with a minimum of 0.25% and a maximum of the CPI +0.50%. This new IRP has been applicable since 2014.

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Legislated/ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
					Assumptions used for TRR projections	Legislated/ ad-hoc						
	Private pensions	No										
FR	Public pensions: Private sector pensions scheme (CNAV)	Yes	Taxes / Contributions	Employers: 8.55% up to the SCC, plus 1.90% on the full wage; Employees: 6.90% up to the SSC, plus 0.40% on the full wage	2017 data. Constant contribution rate	Ad-hoc	Prices	Leg.	Prices	Leg.		
	Occupational pensions⁵:	Yes	Contributions	Two instalments ⁶	2019 data. Constant contribution rate	Ad-hoc	Prices	Leg.	Prices	Leg.		
	Private pensions	No										
HR	Public pensions	Yes	Contributions and general budget	Employer: none; Employee: 20% – if not participating in the 2nd pillar; 15% – if participating in the 2nd pillar	Employer: none; Employee: 20% – if not participating in the 2nd pillar; 15% – if participating in the 2nd pillar	Leg.	30% CPI and 70% wage growth	Leg.	30% CPI and 70% wage growth	Leg.		
	Occupational pensions	No										
	Private pensions (Mandatory fully funded DC scheme)	Yes	Contributions	Employees: 5%	Employees: 5%	Leg.	Market rate of return	Leg.	100% CPI	Leg.		
IT	Public pensions: - DB (old scheme)	Yes	Contributions	33% in total Employers: 23.81%;	33% in total Employers: 23.81%;	Leg.	2% of lifetime average earnings	Leg.	Inflation	Leg.		

⁵ Complementary pension scheme (in 2019 the 2 schemes have been merged into one called Agirc-Arrco).

⁶ The social contributions base is now divided into 2 installments according to salaries: - Up to 1 SCC (3 428€ per month : 4,72% for the employers and 3,15% for the employees - From 1 to 8 SCC (3 248€ to 27 424€ per month : 12,95 % for the employers and 8,64% for the employees.

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
					Assumptions used for TRR projections	Legislated/ ad-hoc						
	- NDC (new scheme)			Employees: 9.19%	Employees: 9.19%			Average annual nominal GDP growth rate in current prices from the last 5 years				
	Occupational pensions	No										
	Private pensions	No										
CY	Public pensions: Social Insurance Scheme	Yes	Contri- butions	16.6 ⁷	20.6	Leg.	Wage index	Leg.	Wage indexation for basic part and CPI indexation for supplementary part	Leg.		
	Occupational pensions	No										
	Private pensions	No										
LV	Public pensions: NDC	Yes	Contri- butions	14%	14%	Leg.	Contribution wage sum index	Leg.	From 2017, CPI + 50% contribution wage sum growth, subject to ceiling ⁸	Leg.		

⁷ The contribution percentage is equally distributed to employer and employee. In addition to the contribution rate of 16.6% for 2019 and 20.6% for 2059, there is a general government contribution of 4.9% and 6.1% for 2019 and 2059, respectively.

⁸ No indexation from 01.01.2009 until 31.12.2012. Indexation in 2013 was applied to pensions not exceeding 200 LVL, although for politically repressed persons the pensions were indexed regardless of the amount. In 2014-2016, CPI + 25% of contribution wage sum growth. Ceiling on the indexed part of pension = 285 EUR in 2014. Starting from 2015, the ceiling is set to 50% of previous year's average national contribution wage. From 2014 no ceiling applies to persons with the highest disability category, politically repressed persons and for liquidators of the Chernobyl nuclear disaster.

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Legislated/ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
					Assumptions used for TRR projections	Legislated/ ad-hoc						
	Mandatory DC funded scheme	Yes	Contributions	6%	6%	Leg.	Market rate of return	Leg.	See note ⁹	Leg.		
	Occupational pensions	No										
	Private pensions	No										
LT	Public pensions (Social insurance pensions)	Yes	Contributions	Employers – 0% Employees – 8.72%	Employers – 0% Employees – 8.72%	Leg.	Wage growth	Leg.	Wage sum growth (7-year average)	Leg.		
	Occupational pensions	No										
	Private pensions (Quasi-mandatory private scheme)	Yes	Contributions	Employees – 3%; State – 1.5% of country’s average wage	Employees – 3%; State – 1.5% of country’s average wage	Leg.	Market rate of return	Ad- hoc	Not indexed	Ad- hoc		
LU	Public pensions: General and public pension scheme	Yes	Taxes and contribu- tions	24% (including tax- funding of 1/3 of contributions)	24%	Leg.	100% prices and 100% wages	Leg.	100% prices and 100% wages	Leg / Ad- Hoc.		
	Occupational pensions	No										
	Private pensions	No										
HU	Public pensions: PAYG DB (mandatory social	Yes	Contributions	Employers: 12.99%; Employees: 10% (the contribution rate of	Employees: 10% (the contribution rate of the employers doesn’t affect TRR)	Leg.	Valorisation set in legislation every March, based on net average monthly salary	Leg.	Indexation is set in legislation ¹⁰	Leg.		

⁹ In case the pension capital of the Mandatory DC funded scheme is added to the pension capital of the NDC scheme and thus one pension is granted, this pension shall be indexed in the general order: from 2017, CPI + 50% contribution wage sum growth, subject to ceiling.

¹⁰ From 2012, pensions have been adjusted annually to projected consumer prices.

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Legislated/ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
					Assumptions used for TRR projections	Legislated/ ad-hoc						
	insurance pension scheme)			the employers doesn't affect TRR)								
	DC private pension system ¹¹	No										
	Occupational pensions	No										
	Private pensions	No										
MT	Public pensions: Two-thirds pension scheme	Yes	Contri- butions	Employee – 10%; Employer – 10%; state – 10%, subject to ceiling	Same as in year 2016	Leg.	Inflation	Leg.	70% inflation and 30% wage growth	Leg.		
	Occupational pensions	No										
	Private pensions	No										
NL	Public pensions	Yes	Taxes and contri- butions	Below SPA 17,9% of taxable income, with a cap of € 6158/year					Inflation	Ad- hoc		
	Occupational pensions	Yes	more ¹²	Employee 7.5%, employer 10%					Inflation	Ad- hoc		
	Private pensions	Collective – yes	Tax exemp- tion and contri- butions	Unknown						Inflation	Ad- hoc	
		Private pensions										

¹¹ From October 2010, mandatory payment of the employees' contributions into the pension funds ceased, the whole contribution flows to the Pension Insurance Fund.

¹² Tax exemption, contributions and returns on investment

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Legislated/ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
					Assumptions used for TRR projections	Legislated/ ad-hoc						
		individual -no										
AT	Public pensions	Yes	Contri- butions	22.8% (Employer – 12.55%; Employee – 10.25%)	22.8% (Employer – 12.55%; Employee – 10.25%)	Leg.	1.30% (assumption in line with the Ageing Report, EPC)		2.00%	Leg.		
	Occupational pensions	No										
	Private pensions	No										
PL	Public pensions	Yes	Contri- butions to old-age pension insurance (19.52%) are financed in equal parts (9.76%) by employee and employer , subject to ceiling	19.52%	19.52%	Leg.	Mixed	Leg.	CPI + 20% real wage growth	Leg.		
	National Scheme:			-	-		-					
	ZUS			12.22%	12.22%		Annual nominal gross written premiums growth					
	Sub-account			4.50%	7.30%		Average annual GDP growth rate in current prices from the last 5 years					
	Founded Scheme (OPF)			2.80%	-		Real (market) interest rate					
	Occupational pensions	No										
	Private pensions	No										
PT	Public pensions	Yes	Contri- butions	34.75% (23.75% employers; 11% employees)	34.75% (23.75% employers; 11% employees)	Leg.	Reference earnings are projected according to labour productivity growth and adjusted according to the CPI	Leg.	According to the pension value regarding IAS, CPI and GDP growth	Leg.		

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions								
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment			
				2019	2059		Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
					Assumptions used for TRR projections	Legislated/ ad-hoc						
	Occupational pensions	No										
	Private pensions	No										
RO	Public pensions	Yes	Contri- butions	Employees: 25% (including 3.75% for Pillar 2) Exemption: between January 2019 and December 2028: 21.25% for construction sector employees (no contribution to Pillar 2). Employer: the contribution rate varies with the working conditions: Normal 0% Difficult 4% Special 8%	Employees: 25% (including 3.75% for Pillar 2) Exemption: between January 2019 and December 2028: 21.25% for construction sector employees (no contribution to Pillar 2). Employer: the contribution rate varies with the working conditions: Normal 0% Difficult 4% Special 8%	Leg. (Law 263/2010)				see ¹³		

¹³ a) Starting on 1/1/2012, the pension point value will be annually indexed at 100% of inflation rate plus 50% of real increase of the average gross wage of the previous year. If one of these is negative, only the positive value will be considered. b) Starting in 2021, the pension point value will be annually indexed with 100% inflation rate plus 45% of the real increase of the average gross wage of the previous year. The percentage attached to the real increase in the average gross wage will be gradually reduced by 5% each year; starting in 2030, the pension point value will be indexed annually by 100% inflation rate

Member State	Pension schemes (Country specific)	Covered by TRR	Funding source	Scheme-specific assumptions						
				Contribution rates			Valorisation of pensionable earnings		Indexation of pensions in payment	
				2019	2059	Legislated/ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc	Assumptions used for TRR projections	Leg./ ad-hoc
	Occupational pensions	No								
	Private pensions	No								
SI	Public pensions	Yes	Contributions	8.85% employer; 15.50% employee	8.85% employer; 15.50% employee	Leg.	Wage indexation ¹⁴	Leg.	60% wages and 40% consumer price index	Leg.
	Occupational pensions	No								
	Private pensions	No								
SK	Public pensions (Mandatory PAYG, earnings- related scheme)	Yes	Mixed (contributions + state budget)	28.75%	28.75%	Leg.	Wage growth	Leg.	Generally consumer price index see note ¹⁵	Leg.
	Occupational pensions	No								
	Private pensions (Voluntary fully funded, DC scheme)	No								
FI	Public pensions: Earnings-related pension	Yes	Contributions	Average contribution 24.4%. Employee's share 6.25% aged under 53 and 8.65% aged 53 and over	Average contribution 24.04%. Employee's share 6.25% aged under 53 and 8.65% aged 53 and over.	Leg.	Wage coefficient (20% price, 80% wage)	Leg.	Earnings-related pension index (80% price, 20% wage)	Leg.

¹⁴ Noteworthy changes in the TRR (2013 vs 2010) due to pension reform ZPIZ-2 and austerity measures: Valorisation of the past earnings is linked to the growth in average wages (100%), and in 2013 the rule of indexation changed from 100% wage indexation to the indexation 60% of growth in wages and 40% of growth in CPI. Austerity measures: indexation of pensions was frozen until the end of 2015.

¹⁵ Hybrid indexation rules applied in the period from 2018 to 2021 – fixed amount from 2 p.p. or CPI for households of pensioners (the more advantageous of these will be used for individual pension). From 2022 and thereafter 100% CPI for households of pensioners.

