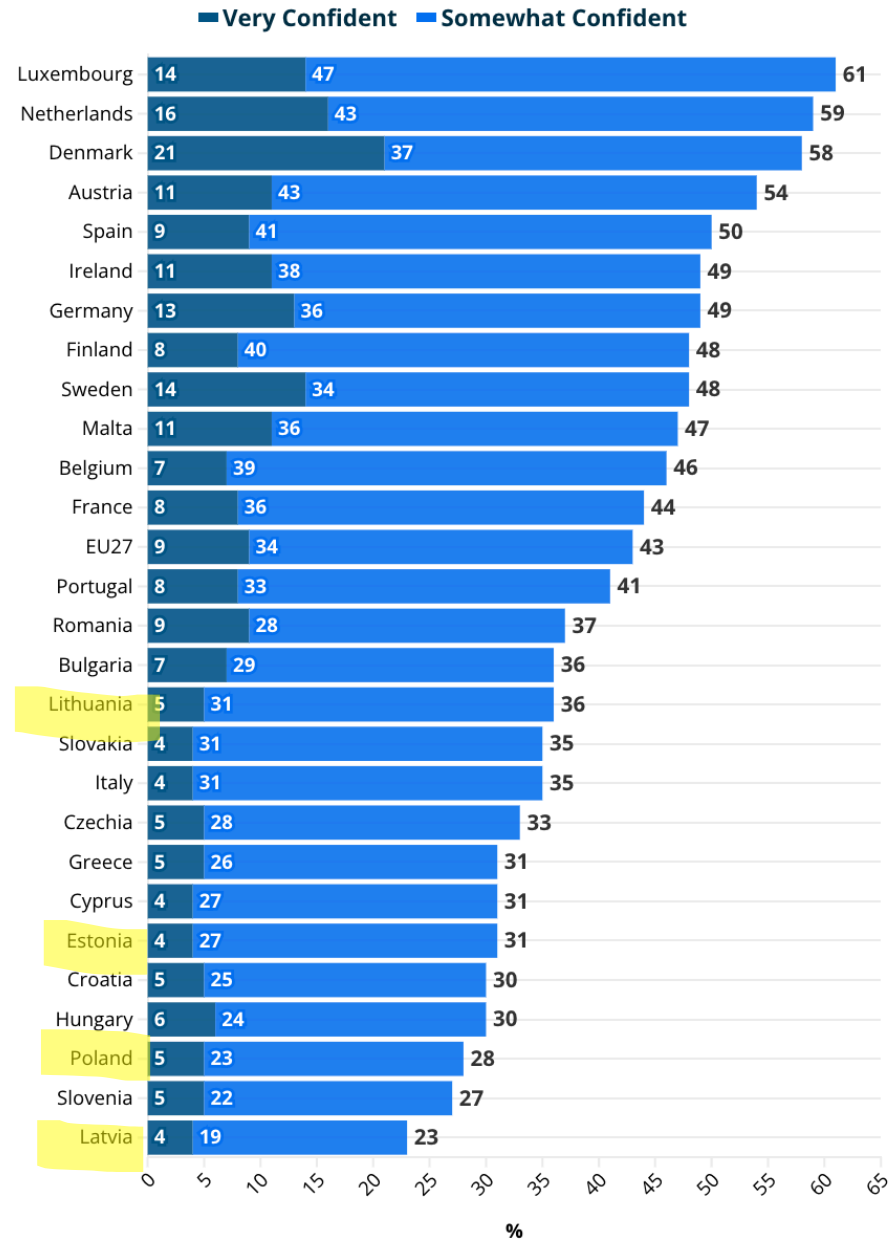


Old-age pension systems in the Baltic States and Poland

Olga Rajevska
Riga Stradiņš University

5 December 2024, Reykjavik

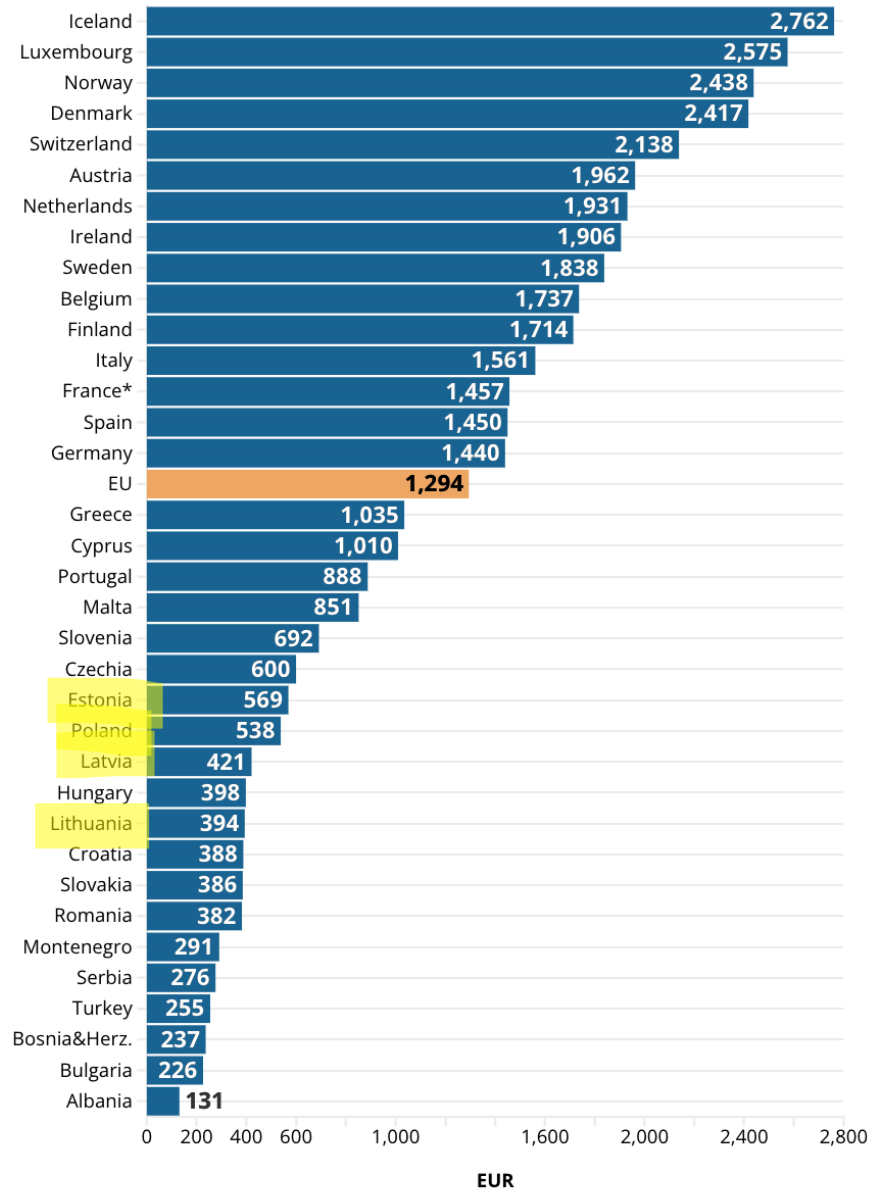
Financial confidence to live comfortably in retirement (2023)



Source: EIOPA's Eurobarometer (July 2023) • (Overall, how confident are you that you will have enough money to live comfortably throughout your retirement years?)

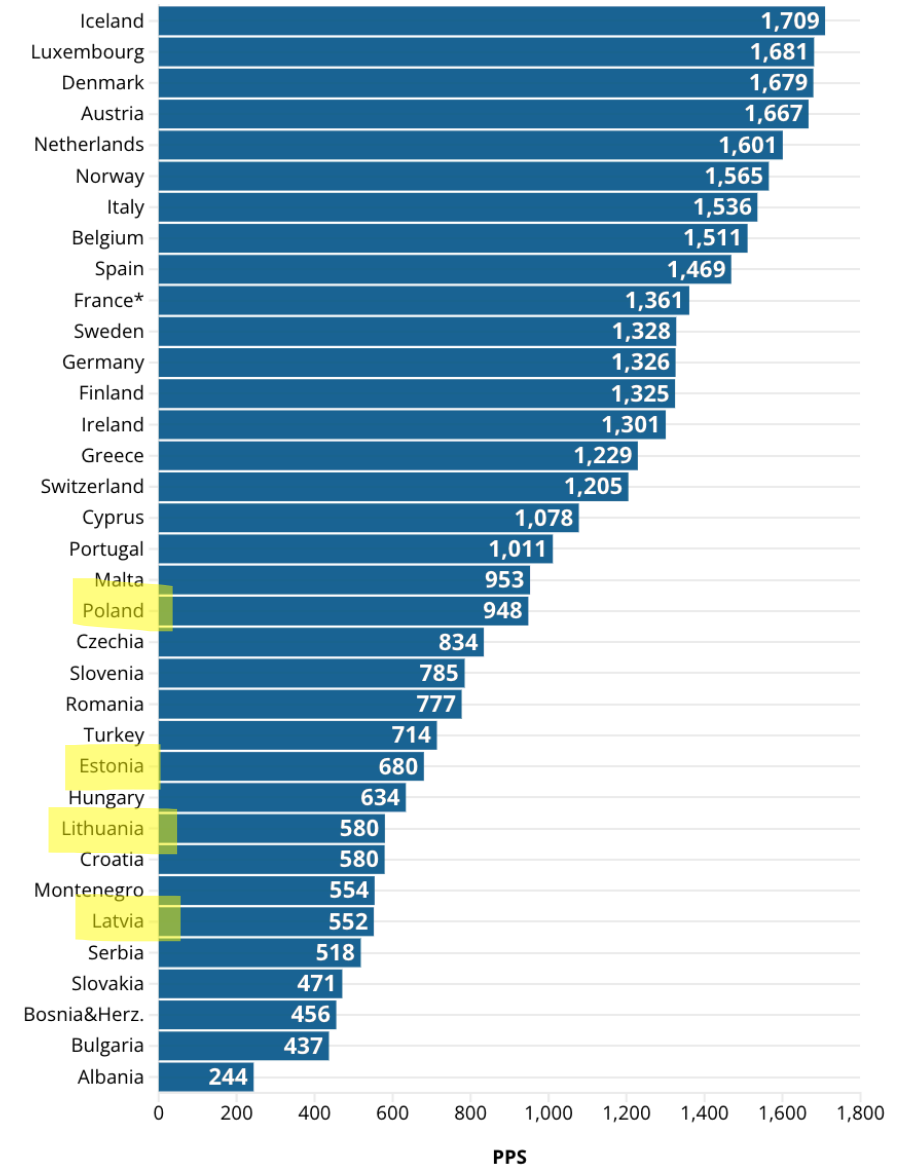
Average pension expenditure per beneficiary (2021)

Monthly Annual



Average pension expenditure per beneficiary in PPS* (2021)

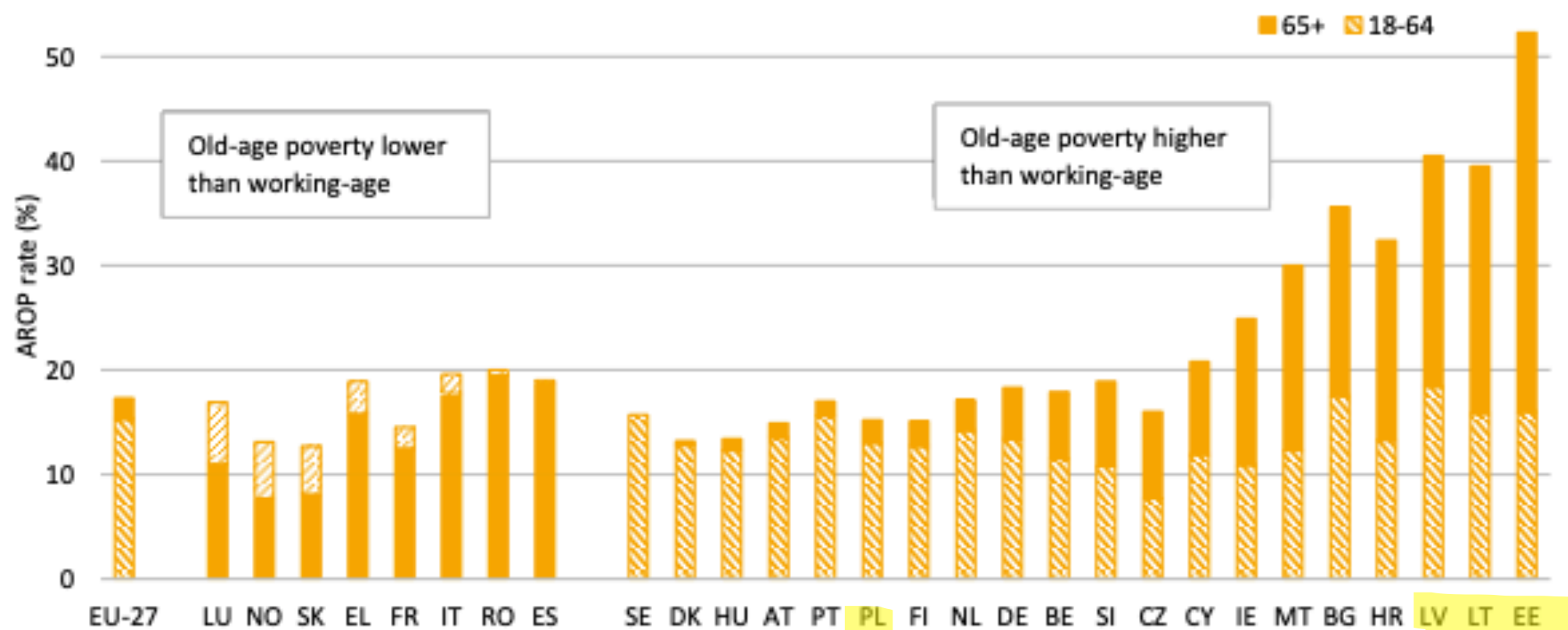
Annual Monthly



Source: Eurostat • (Gross for old-age pensions. France 2018)

Source: Eurostat • (*Purchasing power standards. Gross for old-age pensions. France 2018)

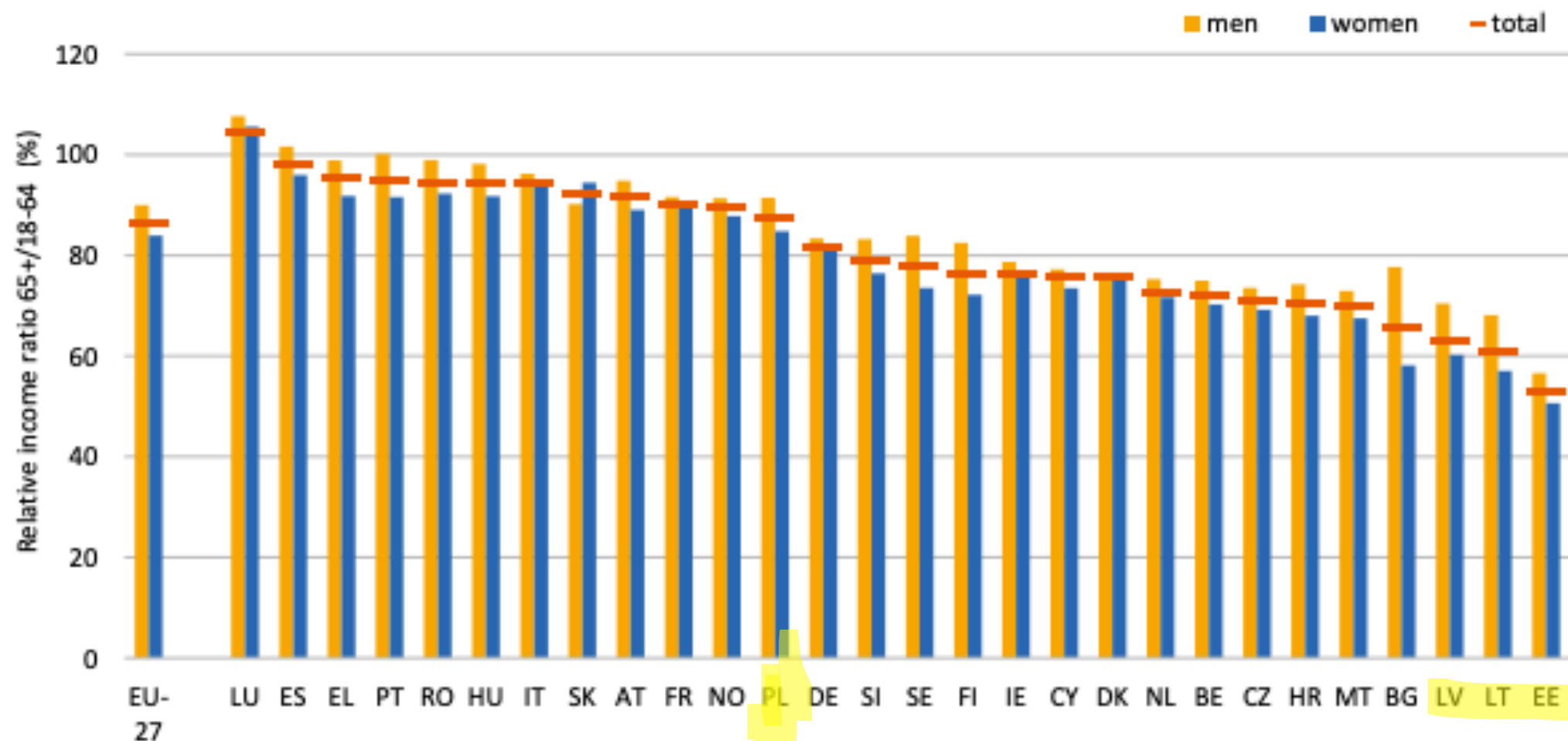
Figure 7: At-risk-of-poverty (AROP) rate by age group, 2022, EU-27 Member States and Norway



Notes: Values are the same for both age groups for SE, and virtually the same for ES. Last updated 2 February 2024.

Source: Eurostat ([ilc_li02](#)).

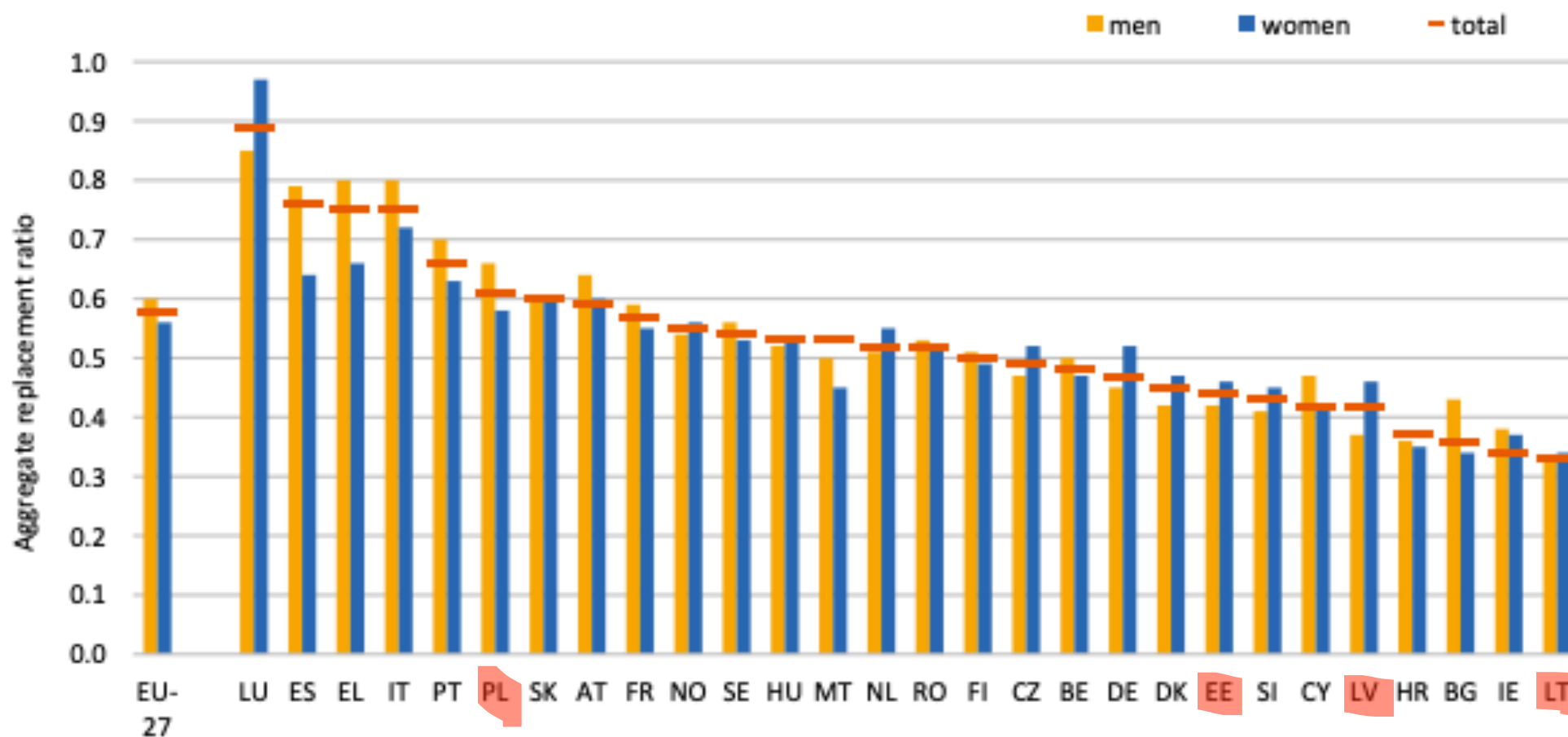
Figure 14: Relative income ratio 65+/18-64, %, women and men, 2022, EU-27 Member States and Norway



Notes: Breaks in series affect 2022 data in FR and LU. Ranked by decreasing total ratio. Last updated 2 February 2024.

Source: Eurostat ([ilc_di03](#)).

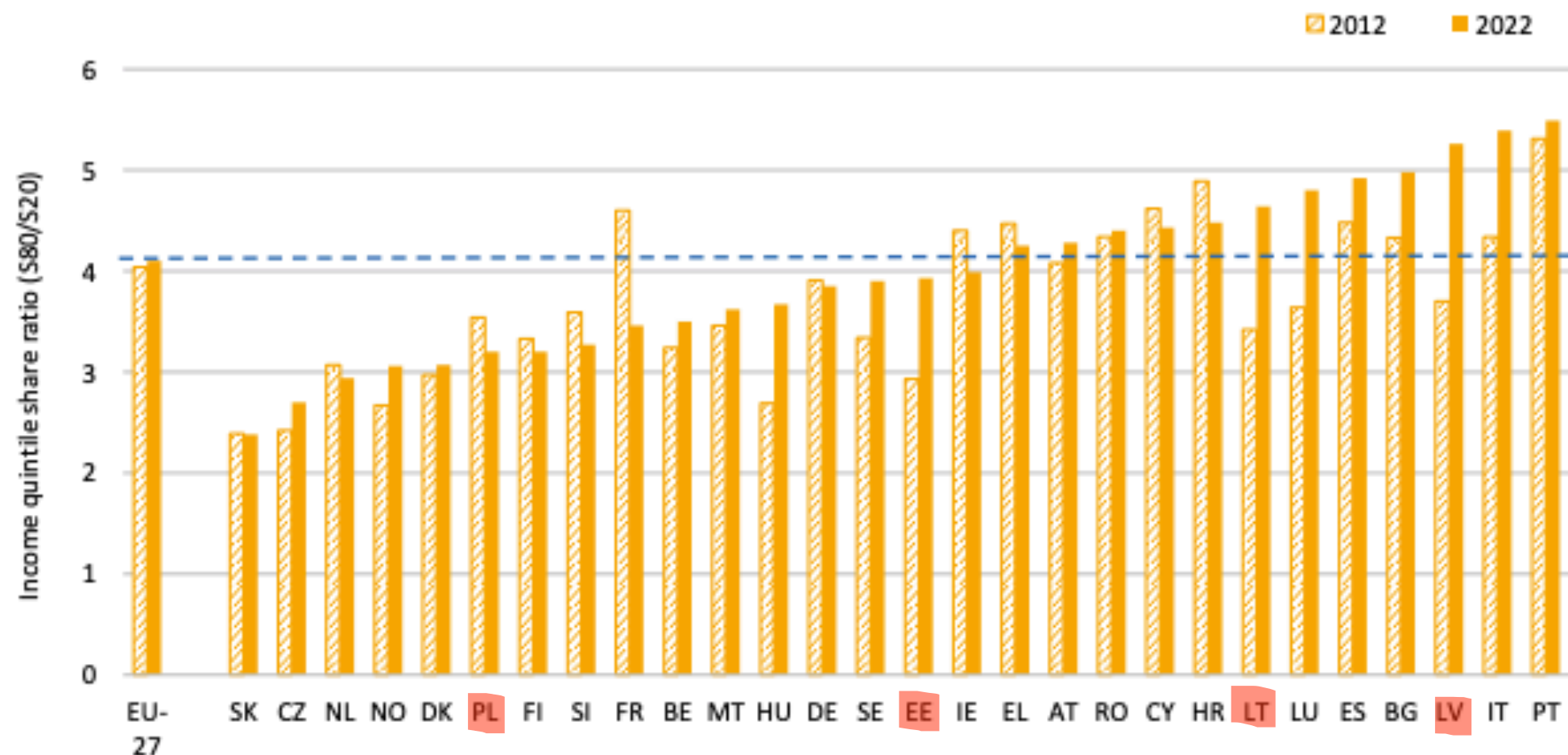
Figure 18: Aggregate replacement ratio (ARR) for pensions (excluding other social benefits), women and men, 2022, EU-27 Member States and Norway



Notes: Breaks in series affect underlying 2022 data in FR and LU. Last updated 2 February 2024.

Source: EU-SILC Survey, Eurostat ([ilc_pnp3](#)).

Figure 20: Income quintile share ratio (S80/S20) for disposable income, age 65+, 2012-2022, EU-27 Member States and Norway



Notes: Breaks in series affect underlying data in 2014 for EE, 2016 for BG, LU and NL, 2019 for BE, 2020 for EU-27, DK, DE, IE, FR and LU, 2021 for LU and NO, and 2022 for FR and LU. Last updated 2 February 2024.

Source: Eurostat ([ilc_di11](#)).

UNIVERSITY OF LATVIA
 FACULTY OF ECONOMICS AND MANAGEMENT
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 DEMOGRAPHY AND SOCIO-ECONOMIC STATISTICS



**ADEQUACY AND EQUITY OF PENSIONS AS A FUNCTION
 OF PENSION SYSTEM INSTITUTIONAL DESIGN: A CASE
 OF THE BALTIC STATES**

**PENSIJU ADEKVĀTUMS UN TAISNĪGUMS KĀ PENSIJU SISTĒMAS
 INSTITUCIONĀLĀ DIZAINA FUNKCIJAS: BALTIJAS VALSTU
 GADĪJUMS**

DOCTORAL THESIS

Author: **Olga Rajevska**

Advisor: prof. Dr.oec. Biruta Sloka

RIGA 2016

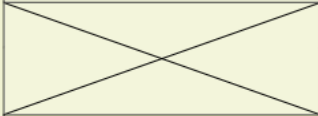
	Latvia	Estonia	Lithuania
0 pillar	NON-CONTRIBUTORY PENSIONS		
	Social security benefit	National pension	Social assistance pension
	<ul style="list-style-type: none"> amount eligibility indexation 		
I pillar	PAY-AS-YOU-GO SCHEMES		
	NON-CONTRIBUTORY COMPONENT		
			Basic pension
			<ul style="list-style-type: none"> bonus for length of service
	INSURANCE COMPONENT		
	NDC	Pension Points system	
<ul style="list-style-type: none"> balancing mechanism denominator (G-value) notional capital valorisation 	<ul style="list-style-type: none"> denominator point monetary value 		
PRE-REFORM SERVICE RECORD COMPONENT			
<ul style="list-style-type: none"> initial capital 	<ul style="list-style-type: none"> rules for conversion of pre-reform record into pension points 		
	<ul style="list-style-type: none"> contribution rates early / deferred retirement eligibility indexation minimum amount treatment of non-productive periods 		
II pillar	FULLY FUNDED PRIVATE PENSION FUNDS		
	<ul style="list-style-type: none"> administrative costs allowed investment strategies contribution rates eligibility pay-out options succession 		
III pillar	VOLUNTARY PRIVATE PENSION FUNDS + PENSION INSURANCE		
	<ul style="list-style-type: none"> eligibility investment strategies tax incentives 		

Figure 2.1. Elements of institutional design in pension systems of the Baltic States

Source: author's compilation of national pension legislative acts

Periodisation (Baltics)

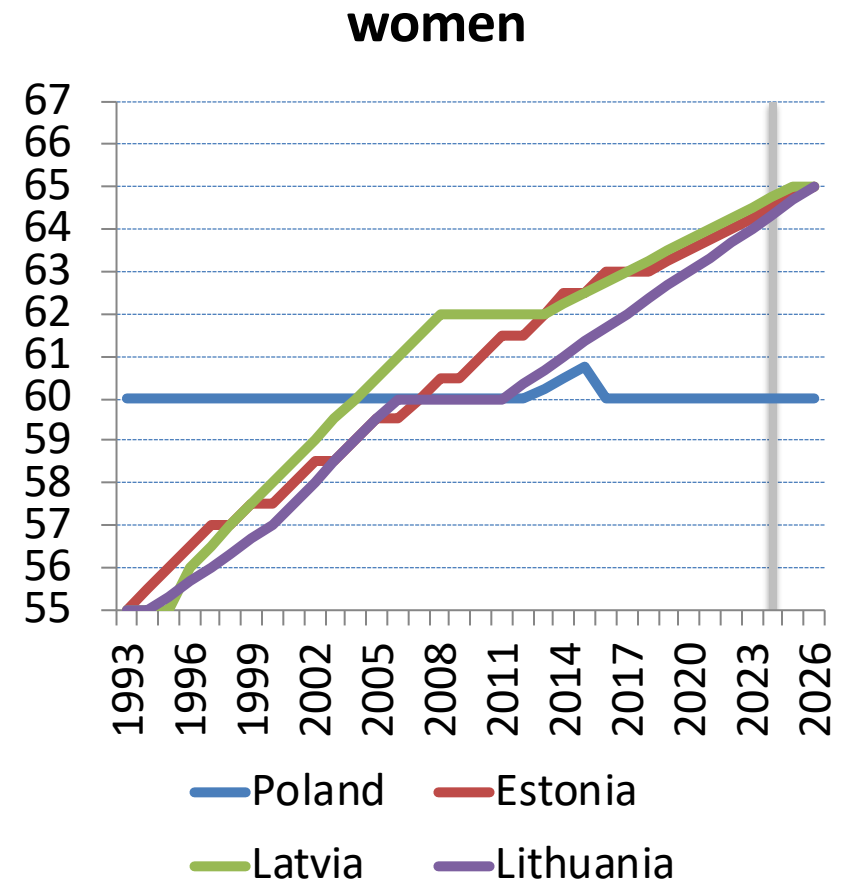
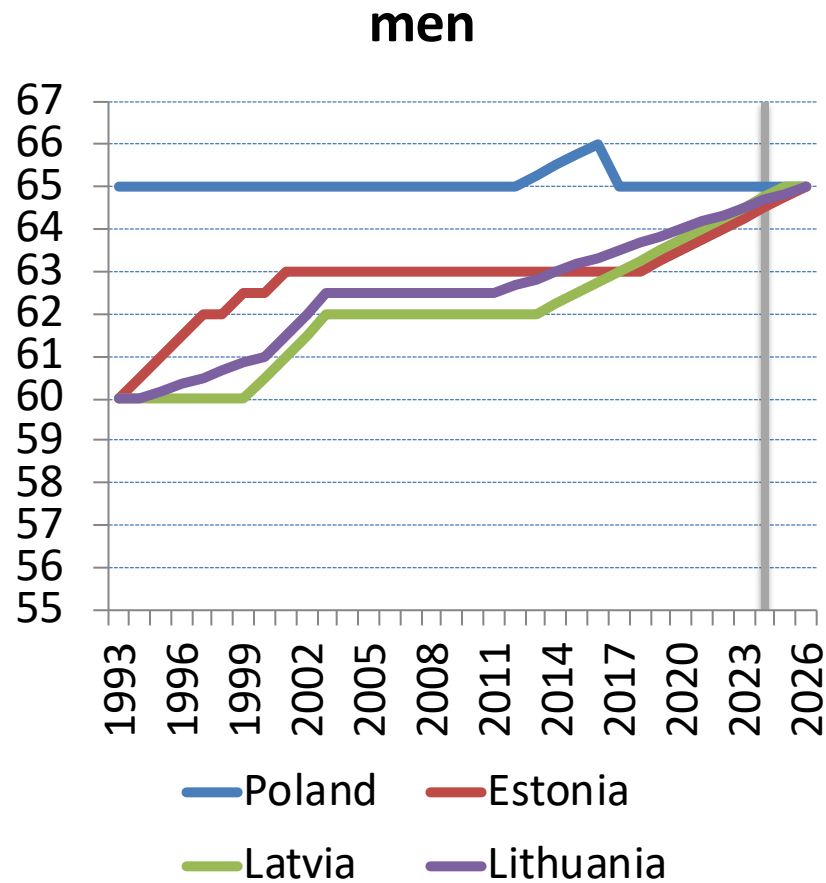
- 1989-1994 - dismantling of the Soviet past
- 1995-1998 - implementation of social insurance PAYG defined-contribution schemes, increase of pensionable age
- 1999-2004 - implementation of three-pillar systems with FDC schemes
- 2005-2008 - incremental parametric reforms
- 2008-2012 - austerity and retrenchment , 2nd wave of the increase of pensionable age
- 2013-2017 - recovery and further parametric reforms
- 2018-2021 – substantial structural reforms in EE and LT, parametric reforms in LV

The pension systems of the three countries are becoming increasingly divergent

Soviet pension system

- almost 100% coverage, including rural residents
- low pensionable age
 - 55 for women and 60 for men
- privileged retirement rules for certain occupational groups
- defined-benefit pension formula
- relatively high replacement rate
 - (from 100 % for low-income earners down to 50 % for higher-income earners)
- centralised financing from Moscow from the general state budget

Statutory pensionable age



Periodisation (Poland)

Separate pension scheme for farmers!

- Early 1990s – parametric changes to the existing system of social insurance (DB)
 - administrative modernisation
 - improvement of contribution collection
 - consistency in indexation rules (CPI)
- 1997-1999 – implementation of a three-pillar system with NDC and FDC schemes
 - aged 50+ in 1999 fully remained in the previous scheme (DB)
 - aged 30-49 in 1999 optional participation in pillar II
 - aged younger than 30 – mandatory participation in pillar II
- 2000-2008 – incremental parametric reforms, old formula still in force
- 2011-2013 – scaling down pillar II
- 2019-2023 – more substantial reforms
 - elimination of pillar II
 - overhaul of pillar III (autoenrollment into occupational pension plans, subsidised by state budget)
 - strengthening solidarity and redistribution elements in pillar I (new indexation rules, 13th and 14th pension)

Pension formula (pillar I)

Estonia (since 1999) and **Lithuania** (since 1995) –

basic pension + pension points (PP) system

$$\text{Pension} = P_{\text{basic}} + \sum PP \times \text{one-point value}$$

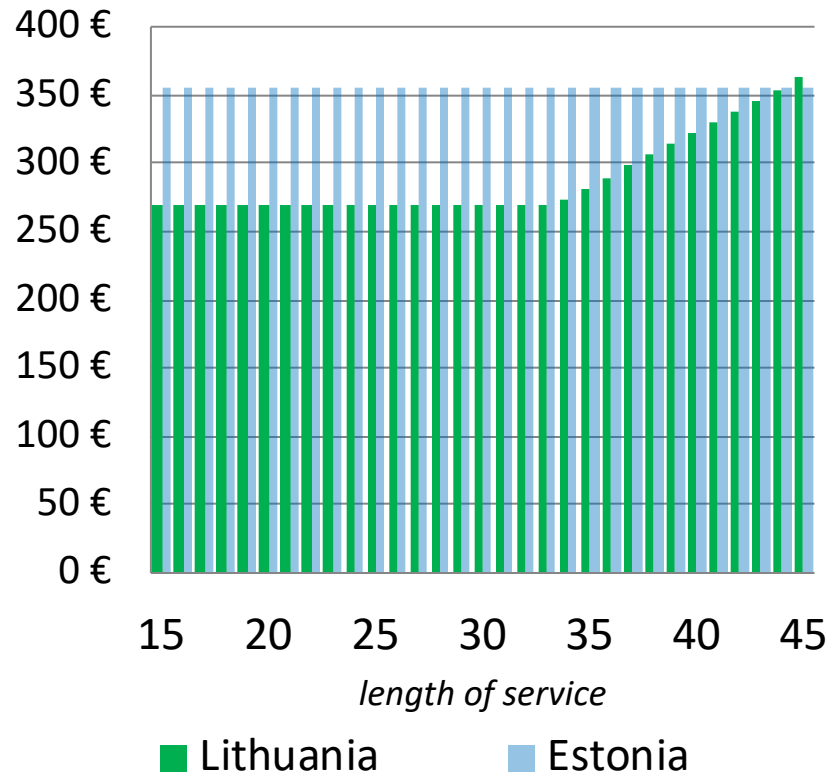
Latvia (since 1996) and **Poland** (since 1999 / 2009*) –

notional defined contribution system (*NDC*)

$$\text{Pension} = \frac{\text{notional capital}}{\text{life expectancy at retirement}}$$

Pillar I in Estonia and Lithuania

Basic pension
(as of December 2024)



Pension Points system

$$PP = \frac{wage}{average\ insured\ wage}$$

One PP value (as of December 2024)

Estonia - **€9.51**

Lithuania - **€6.38**

Pension points in Estonia from 2021

$$PP = \frac{1}{2} \frac{\textit{wage}}{\textit{average insured wage}} + \frac{1}{2} \frac{\textit{service time}}{\textit{1 year}}$$

Examples:

	Old formula	New formula
Average wage, full year	1	1
50% of the average wage, full year	0.5	0.75
200% of the average wage, full year	2	1.5
200% of the average wage, 6 months	1	0.75

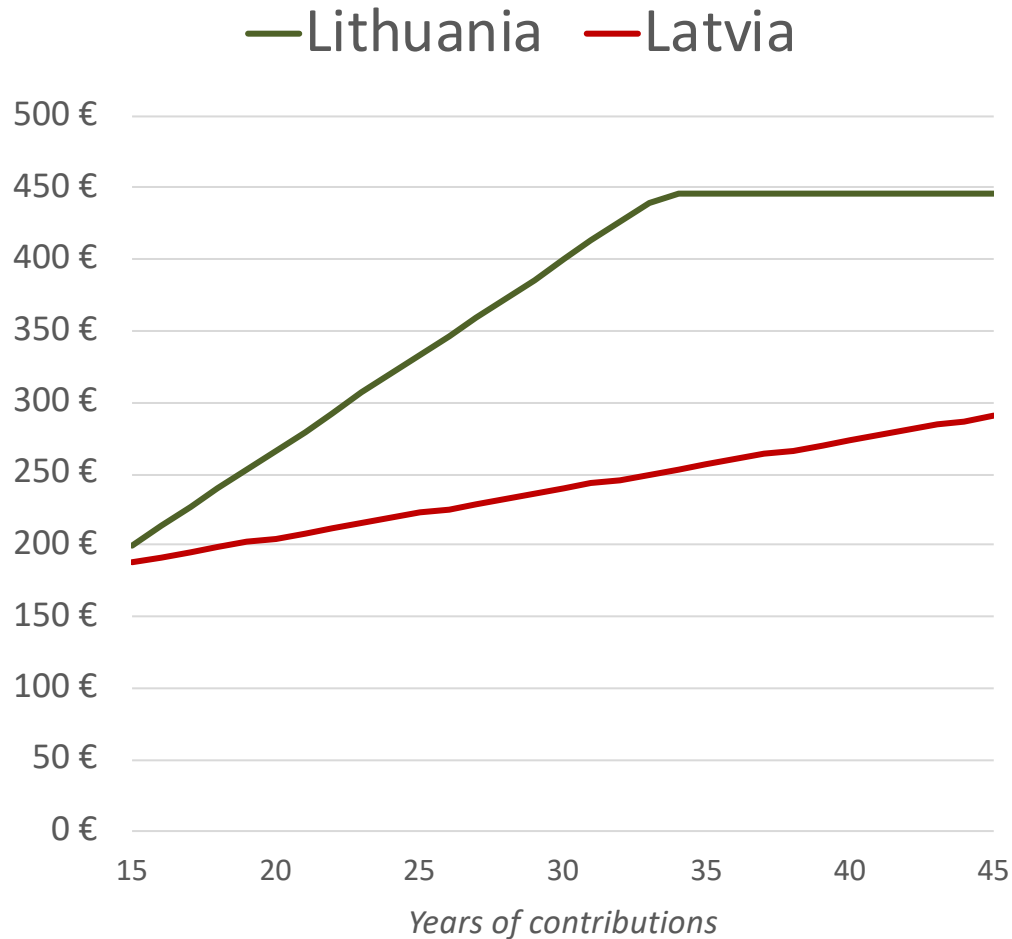
I pillar in NDC (Latvia and Poland)

$$\frac{K_0 + \sum K_i V_i}{G \times 12}$$

- K_0 – initial capital (for pre-reform period)
- K_i – is the sum of contributions paid in year i ,
- V_i – is the valorisation index for the year i ,
- G - is the average life expectancy at retirement age

Minimum pension

(per month, as of December 2024)



Estonia – €372

Poland – €415

if the insurance record is at least
20 years (w) / 25 years (m)

Maximum pension (statutory schemes)

- **Estonia** – no ceiling on pension, no ceiling on contributions
- **Latvia** – no ceiling on pension, ceiling on contributions (annual lumpsum, ca. 400% of average wage)
- **Lithuania** – no ceiling on pension, no ceiling on contributions, but max 5 pension points per year
- **Poland** – no ceiling on pension, ceiling on contributions (250% of average wage)

Balancing mechanisms

Indexation of pensions in payment

- ✓ Lithuania – based on changes in covered wage bill and GDP
additional indexation when poverty rate becomes too high
- ✓ Poland, Estonia and Latvia – based on changes in covered wage bill + inflation

Indexation of pensions in accumulation (valorization)

- ✓ Latvia
 - increase in covered wage bill
- ✓ Poland
 - NDC1 – inflation + increase in wage bill
 - NDC2 – 5-year average GDP growth

Pension expenditure automatically adjusts downwards when the working-age population falls

Mandatory private pension funds (pillar II)

Latvia:

- in operation since 2001
- in 2023 covered almost 100% of economically active population

Estonia:

- in operation since 2001
- from 2021 – voluntary with autoenrollment
- in 2020 covered 95% of working age population, by the end of 2023 32% of participants opted out

Lithuania:

- in operation since 2004 (voluntary)
- from 2019 – autoenrollment)
- In 2023 covered 60% of employees

Poland:

- in operation since 2003
- made voluntary in 2015
- In 2023 – less than 20% make contributions

Payout stage

Normally – insurance contract with annuities

- Latvia – accumulated capital can be appended to the I pillar notional pension capital
 - Estonia and Lithuania: if the accumulated capital is smaller than a certain “floor limit” – it can be withdrawn in lump sum or received as periodic benefit payments
-
- Poland – starting from 10 years before retirement, the accumulated capital is gradually transferred to I pillar NDC account

Contribution rates in pillar I and II (2024)

	Employer	Employee	State bonus	Total	Pillar I (pp)	Pillar II (pp)	Note
Latvia	16.55%	7.36%	-	23.91%	14	6	3.91 pp – to pillar I ‘pool’
Lithuania	8.72%	≥ 3% *	1.5% *	8.72% +	8.72	≈ 4.5*	* - optional
Estonia	20%	2% / 4% / 6% *		20% +	1) 20	-	* - optional
					2) 16*	6/8/10*	
Poland	9.76%	9.76%		19.52%	1) 12.22 + 7.3	-	
					2) 12.22 + 4.38	2.92	

Voluntary pension savings (pillar III)

Latvia:

- in 2023 covered ca. 40% of economically active population, but only half of them made contributions
- 84% of all contributions are made by individuals, 16% - by employers

Estonia:

- in 2023 covered ca. 20% of working age population
- employers make voluntary contributions for 0.4% of all employed

Lithuania:

- In 2023 covered 6.6% of employees

Poland:

- In 2023 covered 17.2% of employees in occupational schemes and 5.6% in individual schemes

Growing complexity of pension system in Poland

A person may have

- 2 or 3 sub-accounts in the NDC scheme: initial capital (for work before 1999), NDC-1 and NDC-2 (former pillar II)

Optional:

- OFE account (former mandatory funded scheme pillar II)
- PPE (1999) or PPK (2019) account(s) - funded occupational pensions
- IKE (2004)/ IKZE (2012) / OIPE (2023) account(s) – individual voluntary pensions

The voluntary pension schemes are generally offered in several forms:

- a contract with an asset management company (investment fund);
- a contract with a life insurance company (group unit-linked life insurance);
- an employee pension fund run by the employer;
- an account in a brokerage house;
- a bank account (savings account), or
- a voluntary pension fund.

Yearly real returns of private pension products

no guarantees of non-negative returns!!

Pillar II

EE (2003 – 2023) -0.24%

LV (2003 – 2023) -0.87%

LT (2004 – 2023) +0.73%

Pillar III

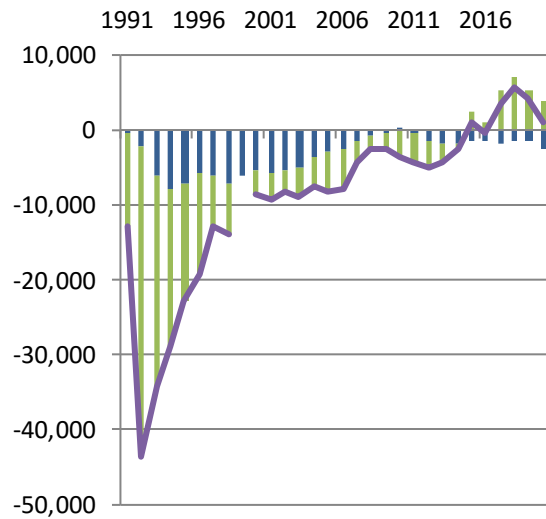
EE (2003 – 2023) +0.96%

LV (2011 – 2023) -0.78%

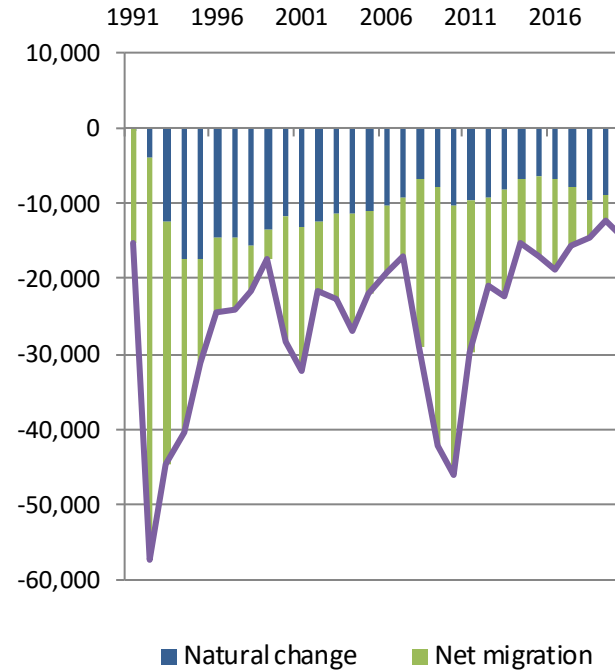
LT (2004 – 2023) -0.06%

Population loss 1991-2020

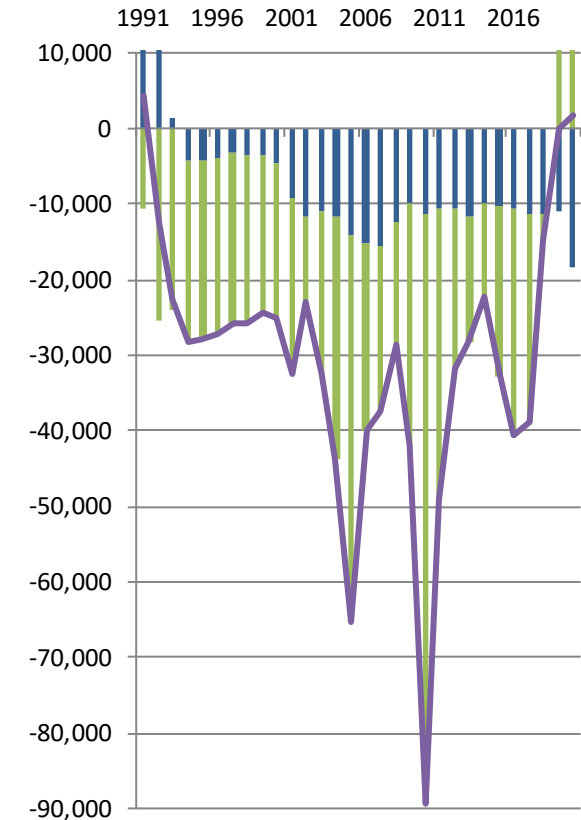
Estonia



Latvia



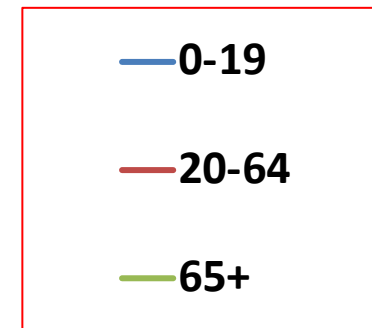
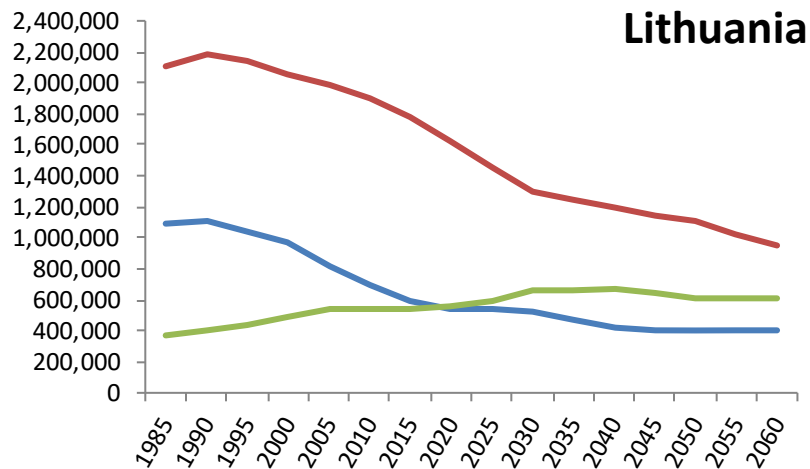
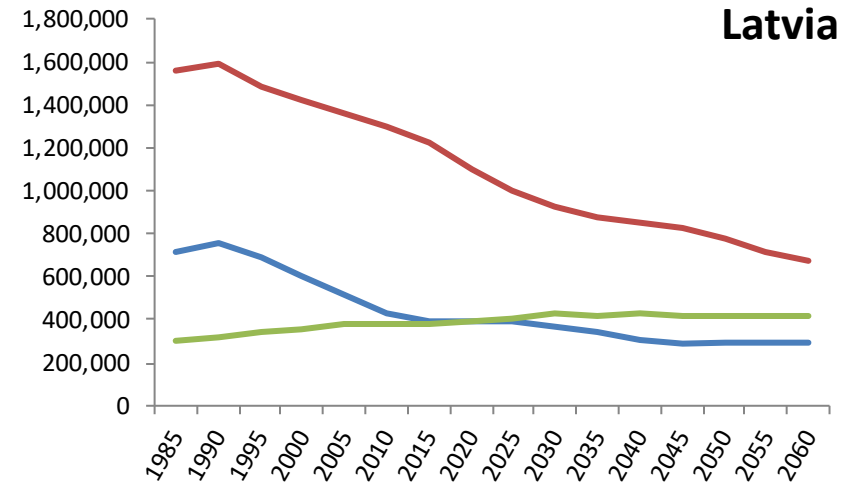
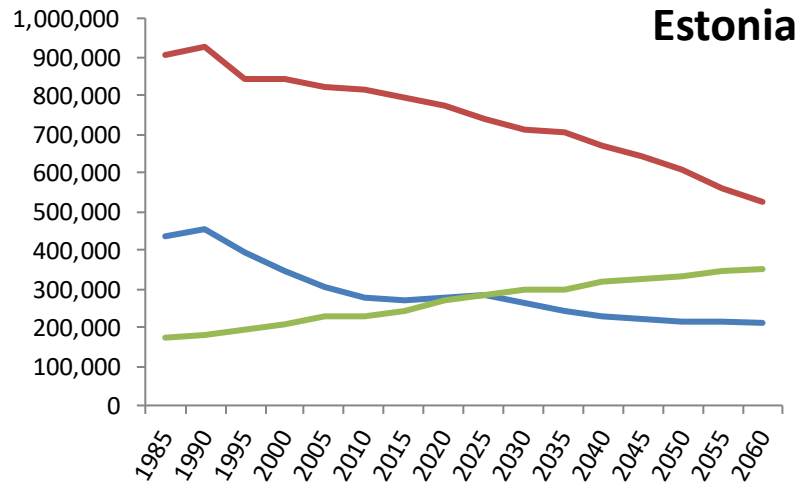
Lithuania



<u>1991-2020</u>	
Estonia	-15%
Latvia	-28%
Lithuania	-25%

Source: Eurostat

Total population by broad age group



Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects: The 2019 Revision (Medium variant), custom data acquired via website

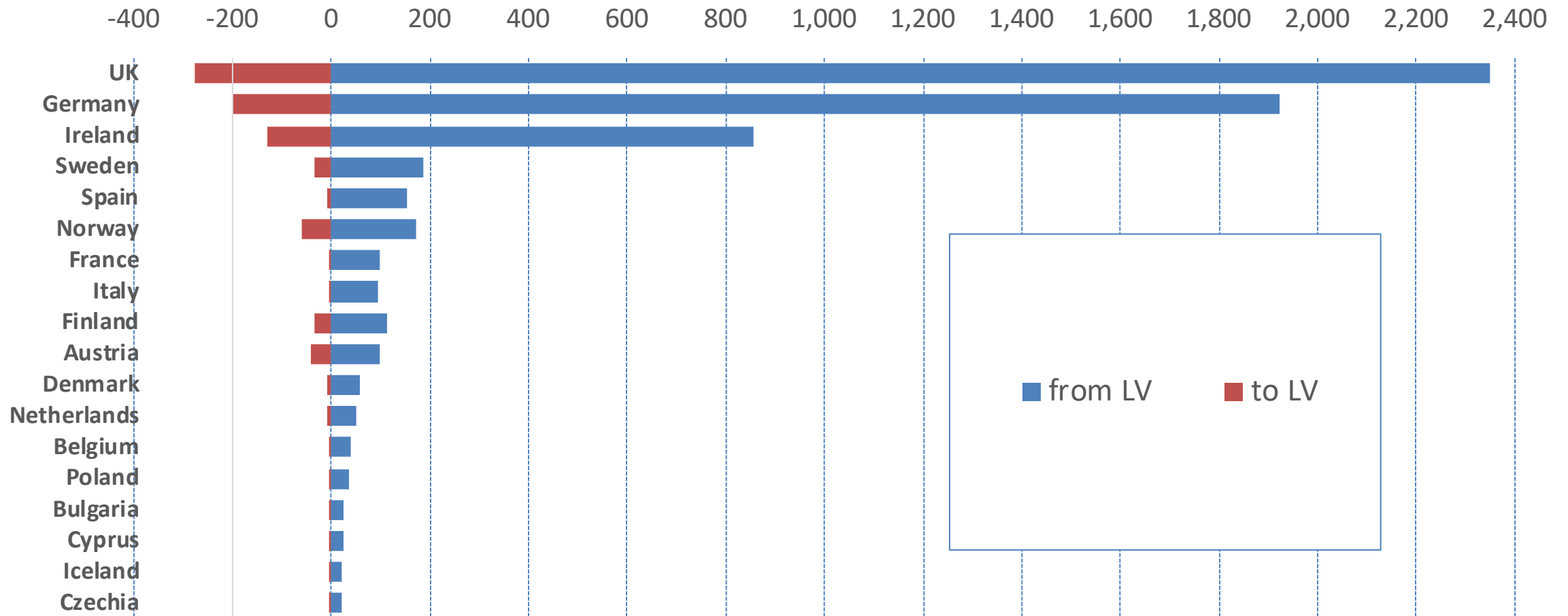
Population projections

- <https://www.populationpyramid.net/>
- <https://population.un.org/wpp/Graphs/Probabilistic/MGR/CNMR/616>

Portability of pensions within EU / EEZ

- Since 1958 statutory pensions are being aggregated for workers moving across the Member States;
- While the coordination of statutory first pillar schemes, (through Regulations 883/2004 and 987/2009) is relatively efficient, supplementary, mainly private, occupational pensions are (almost) excluded.

Pensions paid to Latvian nationals from / to EU & EEZ countries (except EE and LT), 10/2024



Payments for healthcare services for pensioners living abroad

Portable Document (PD) S1:

The PD S1 allows a person to register for healthcare if s/he resides in an EU country, the UK, Iceland, Liechtenstein, Norway or Switzerland but is insured in a different one of these countries

- 2021
 - Latvia paid to other EU/EEZ €4.219 mln (of them 82% for pensioners)
 - Latvia received from other EU/EEZ €0.300 mln
- 2022
 - Latvia paid to other EU/EEZ €6.668 mln
 - Latvia received from other EU/EEZ €0.468 mln

Table 26 - Total number of PDs S1 issued and received, pensioners (+ pension claimant) and their family members, stock (still in circulation), 2022

	Issued				Received			
	Pensioner	Family members	Total	Column %	Pensioner	Family members	Total	Column %
BE*	67 324	23 495	90 819	17.8 %	48 621	6 205	54 826	9.9 %
BG	10 564	77	10 641	2.1 %	3 929	618	4 547	0.8 %
CZ ^(e)	3 313	29	3 342	0.7 %	4 219	163	4 382	0.8 %
DK ^(e)	2 881	406	3 287	0.6 %	361	22	383	0.1 %
DE ^(e)	64 074	4 910	68 984	13.5 %	54 087	5 211	59 298	10.7 %
EE	487	54	541	0.1 %	702	34	736	0.1 %
IE	347	84	431	0.1 %	1 767	149	1 916	0.3 %
EL ^(e)	1 231	204	1 435	0.3 %	9 345	1 471	10 816	2.0 %
ES	2 930	692	3 622	0.7 %	163 671	20 568	184 239	33.4 %
FR	1 115	101	1 216	0.2 %	92 878	9 973	102 851	18.6 %
HR	1 504	88	1 592	0.3 %	19 485	1 866	21 351	3.9 %
IT*	7 215	925	8 140	1.6 %	13 698	638	14 336	2.6 %
CY*	359	74	433	0.1 %	12 209	2 092	14 301	2.6 %
LV	1 003	<5	1 007	0.2 %	186	6	192	0.0 %
LT	1 008	9	1 017	0.2 %	515	50	565	0.1 %
LU	21 829	2 795	24 624	4.8 %	3 145	258	3 403	0.6 %
HU	2 530	11	2 541	0.5 %	16 485	1 099	17 584	3.2 %
MT	29	0	29	0.0 %	3 556	1 067	4 623	0.8 %
NL	59 447	6 033	65 480	12.8 %	4 967	538	5 505	1.0 %
AT	8 706	972	9 678	1.9 %	17 550	883	18 433	3.3 %
PL	8 705	136	8 841	1.7 %	4 466	431	4 897	0.9 %
PT	2 050	73	2 123	0.4 %	173	12	185	0.0 %
RO	28 612	156	28 768	5.6 %	1 964	202	2 166	0.4 %
SI	4 216	703	4 919	1.0 %	3 709	81	3 790	0.7 %
SK	4 194	42	4 236	0.8 %	4 233	31	4 264	0.8 %
FI	3 510	143	3 653	0.7 %	514	21	535	0.1 %
SE	11 801	1 381	13 182	2.6 %	2 044	218	2 262	0.4 %
IS*	222	61	283	0.1 %	26	<5	29	0.0 %
LI	23	7	30	0.0 %	<5	0	<5	0.0 %
NO ^(e)	2 567	426	2 993	0.6 %	312	13	325	0.1 %
CH	13 064	1 572	14 636	2.9 %	5 607	0	5 607	1.0 %
UK	112 686	16 365	129 051	25.2 %	3 796	193	3 989	0.7 %
Total	449 546	62 028	511 574	100.0 %	498 221	54 116	552 337	100.0 %

Project “Retirement plans and expectations of Eastern European immigrants in Iceland”

<https://ej.uz/2024ANKETA>

Thank you!

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