



## ACTUARIAL ASSOCIATION OF EUROPE

# Actuarial perspectives on COVID19 epidemics: Short and long term consequences of COVID19 pandemics on social security systems of EU member states

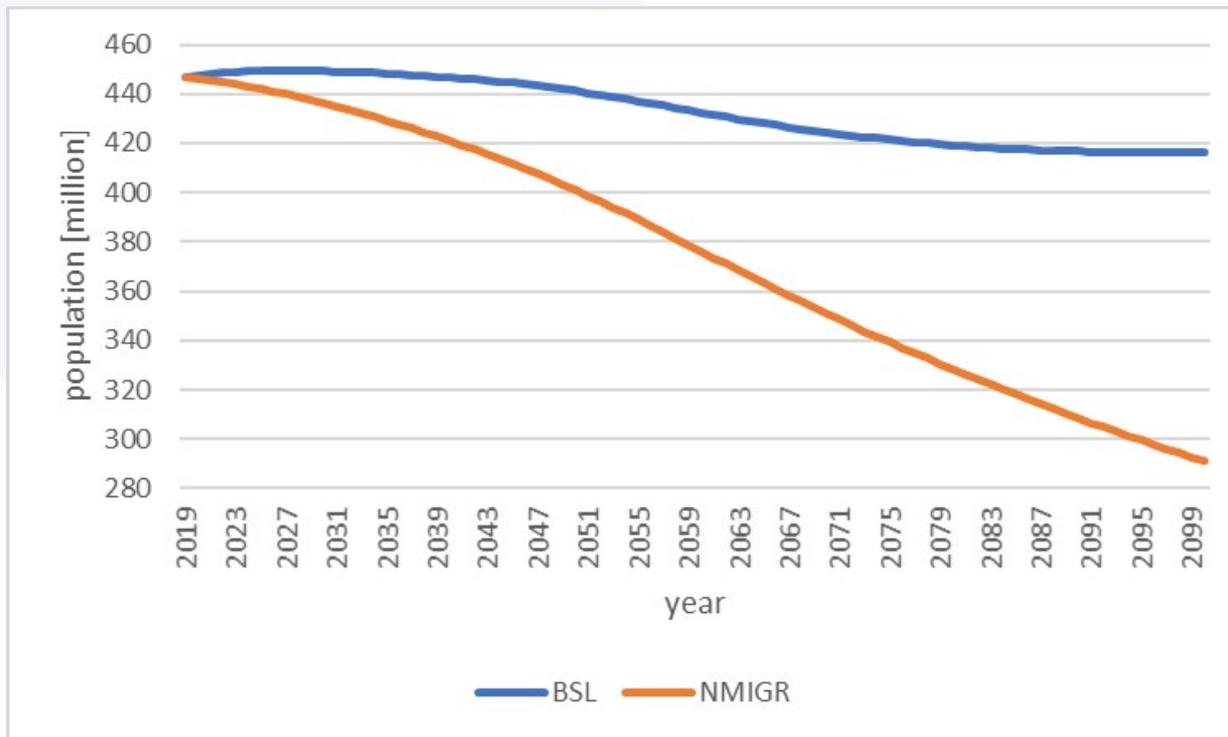
Speaker: Prof. ddr. David Bogataj, Chair of the AAE Mortality Task

# Population projections

The population projections which are used as the basis for Ageing Report 2021 are the EUROPOP2019 projections prepared by Eurostat and published in April 2020

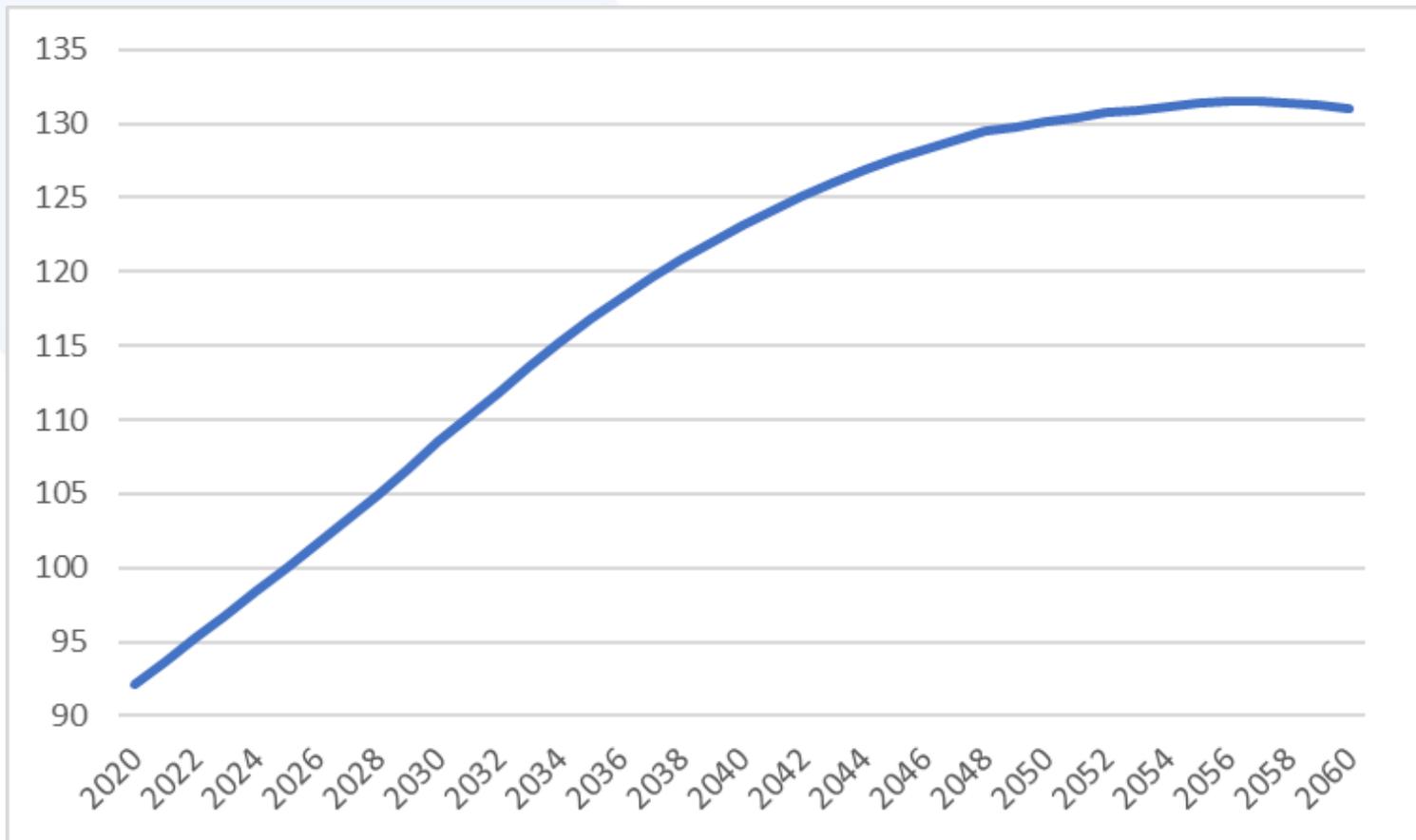
The latest population projections released by Eurostat, provide a main scenario and four variants for population developments from 2020 to 2100 across 27 EU Member States, as well as Norway. These projections were produced using data for 1 January 2019 as a starting point and therefore exclude impact of COVID - 19.

# European population projections 2019 for period 2020-2100 (source EUROSTAT)

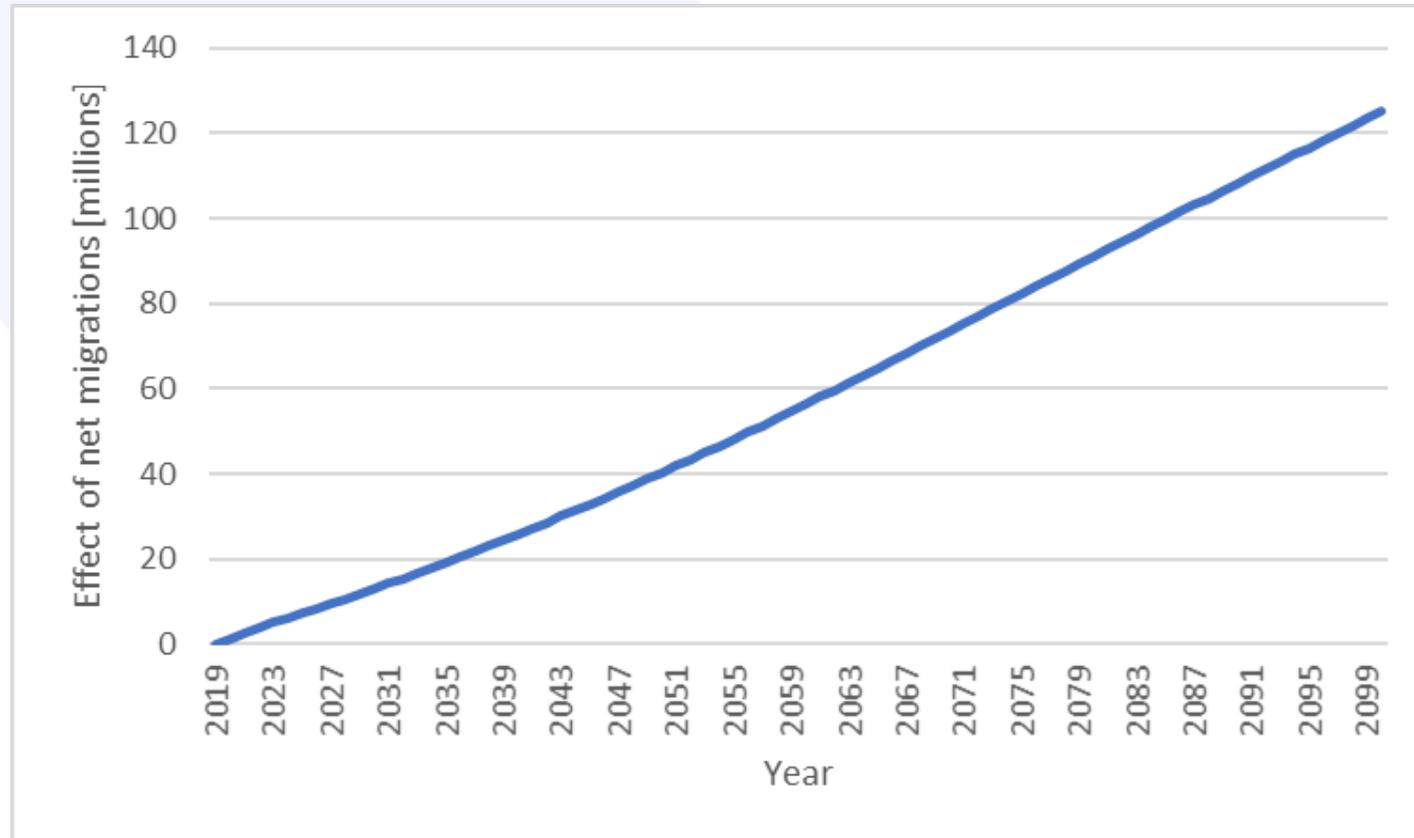


# European population projections

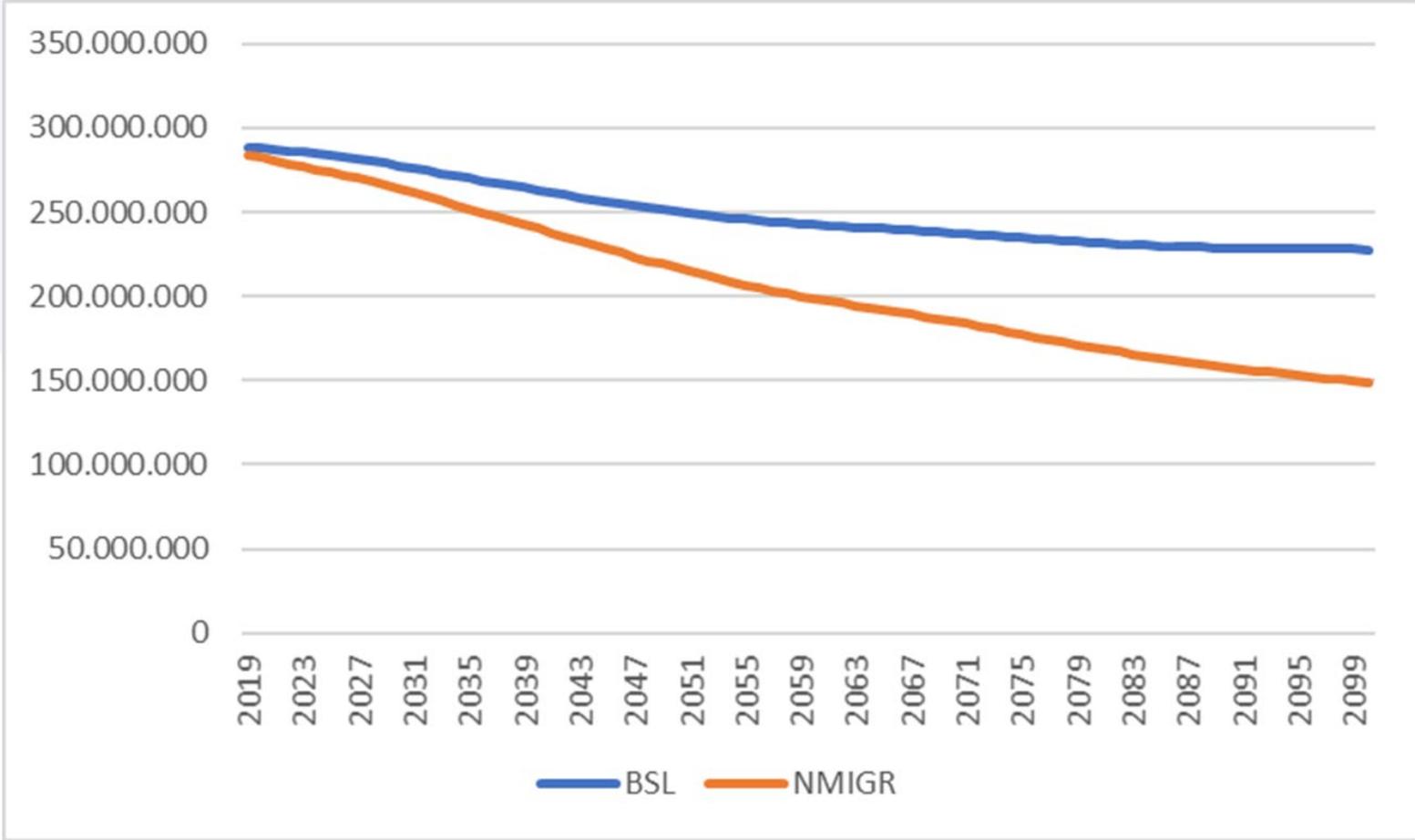
## EUROPOP2019 for population 65+ for period 2020-2100 (source EUROSTAT)



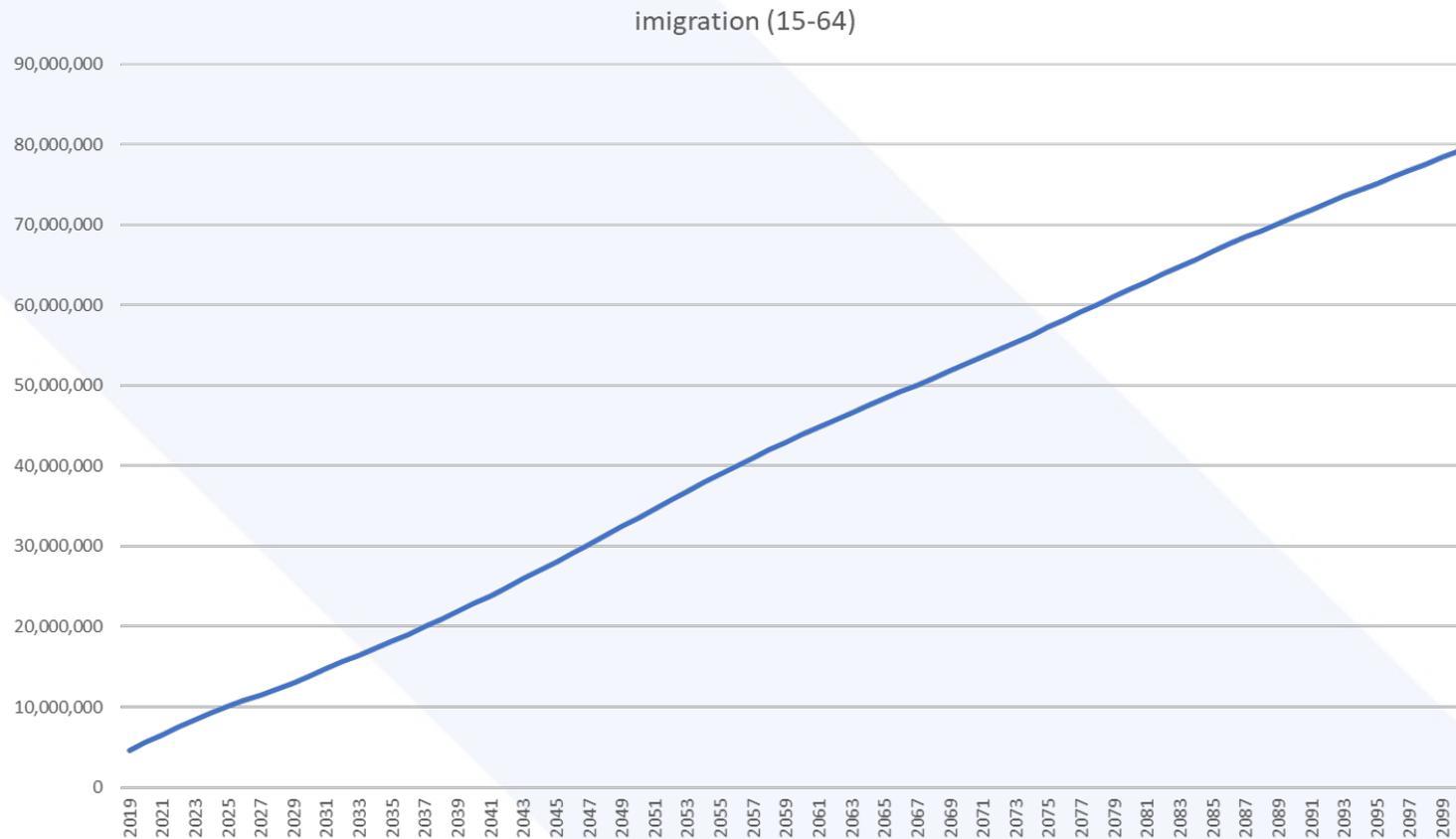
# Effect of net migrations on population projections of EU Member States for period 2020-2100



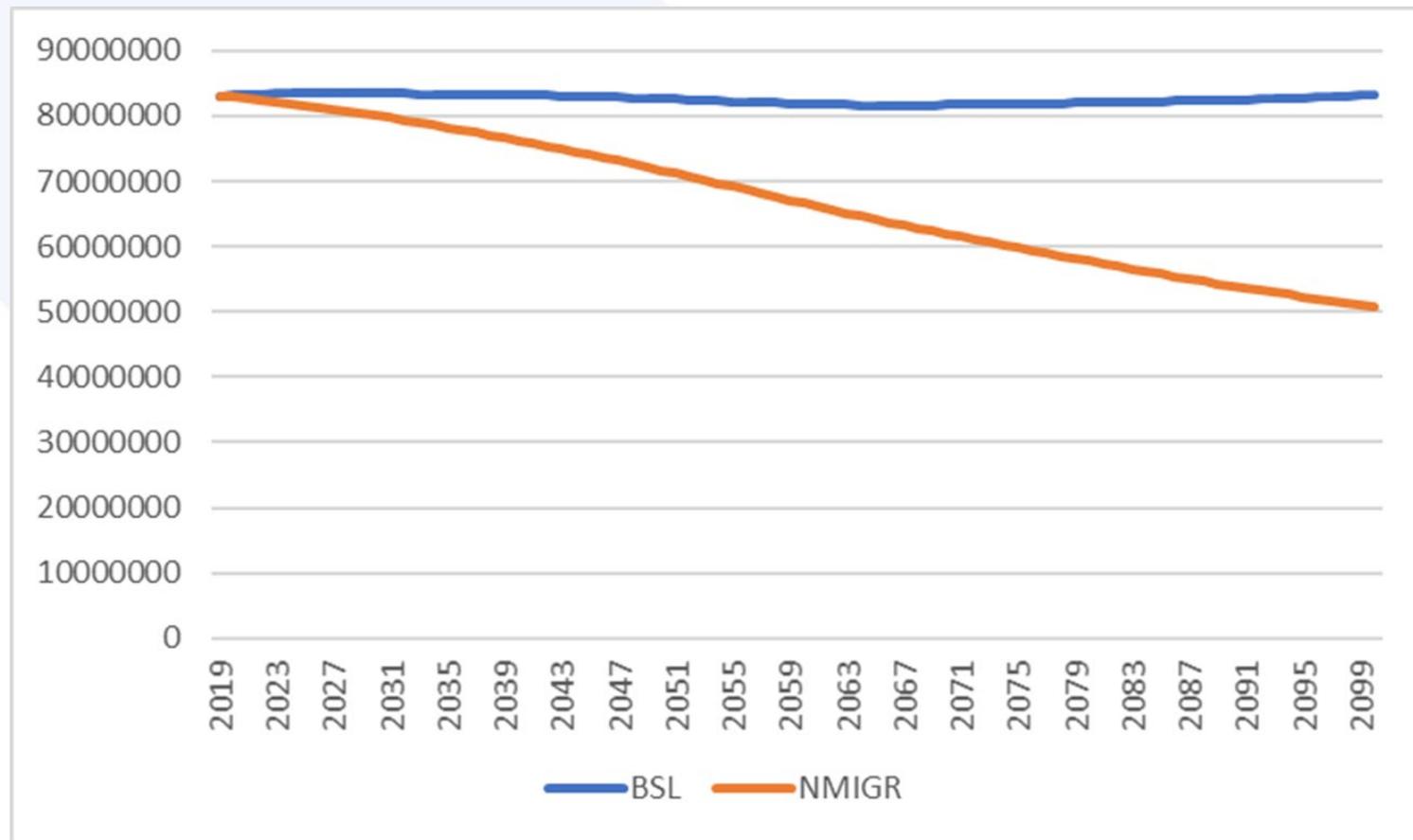
# Population projections of EU 27 working age (15-64) population projections 2019-2100



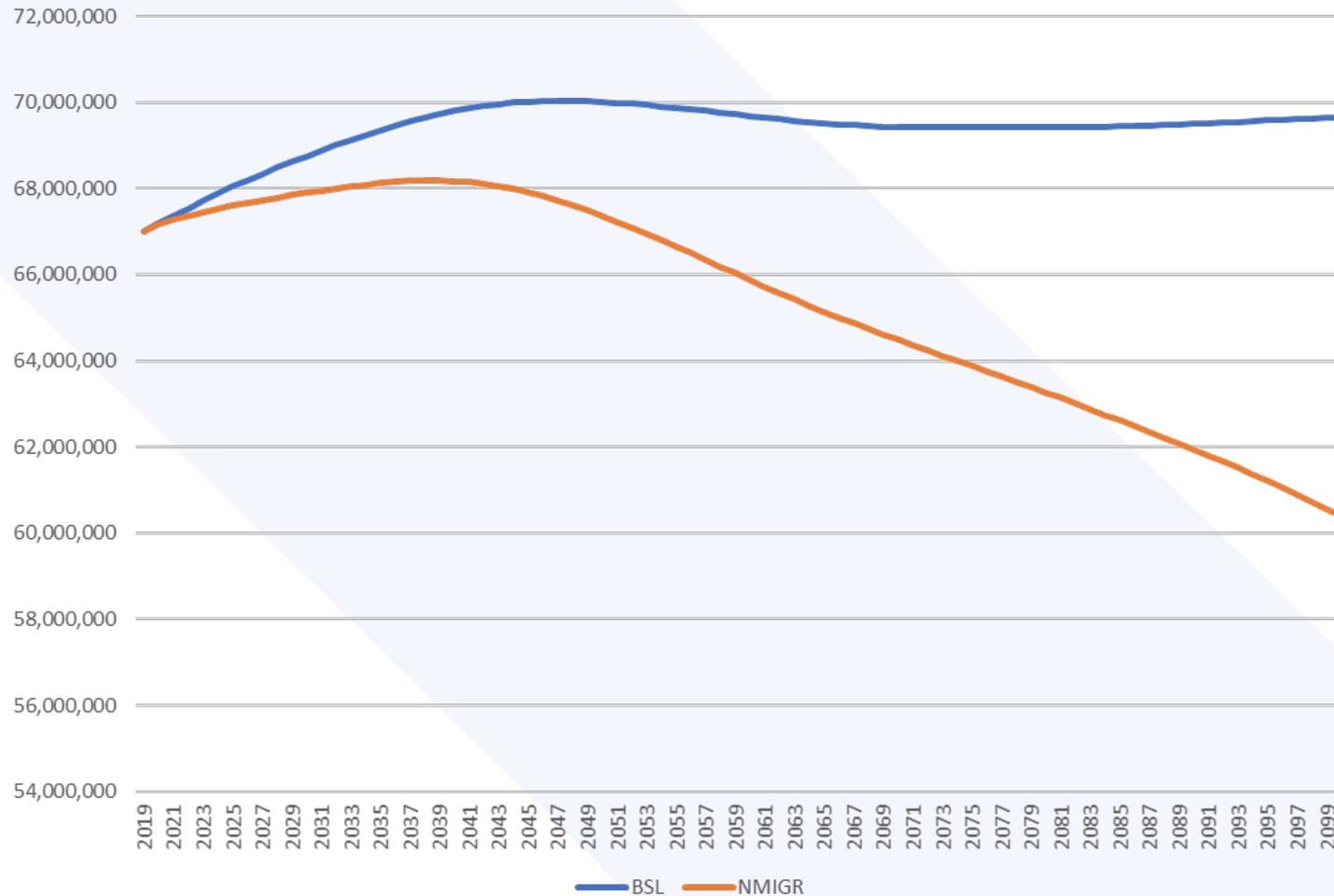
# EU 27 working age (15-64) migrant population (net migration) (EUROSTAT EUROPOP2019 population projections 2019-2100)



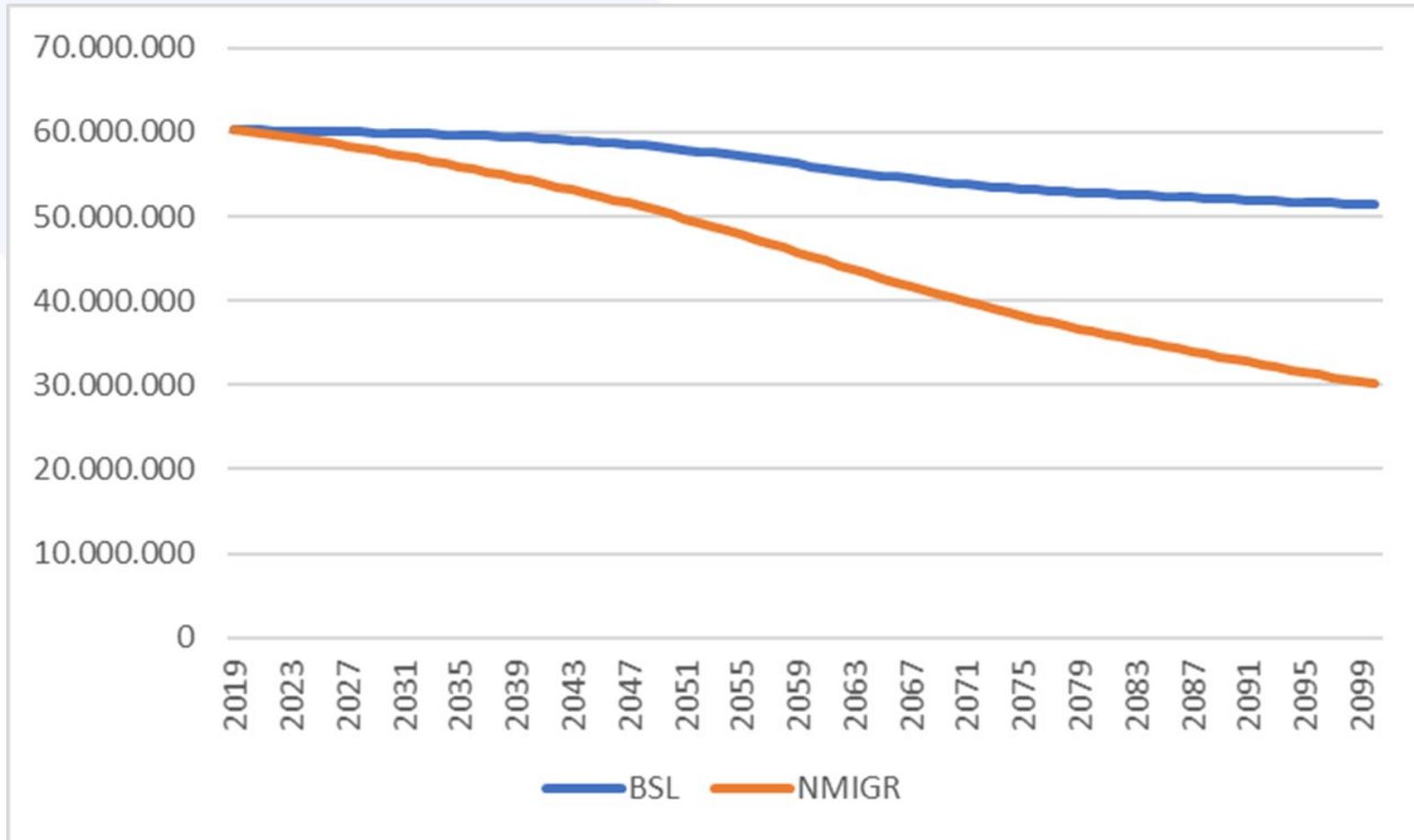
# Germany population projections 2019 for period 2020-2100 (source EUROSTAT)



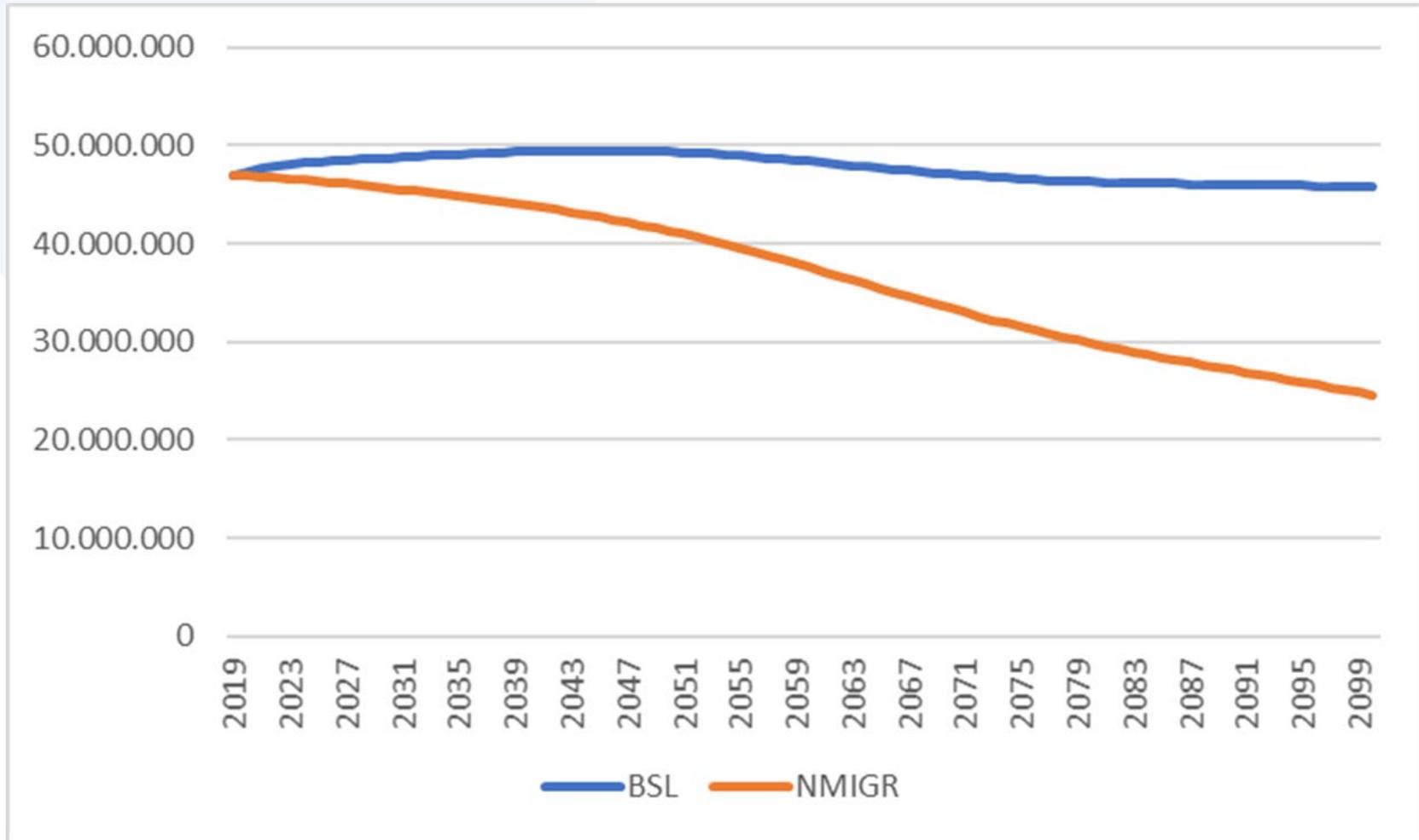
# France: population projections 2019 for period 2020-2100 (source EUROSTAT)



# Italy: population projections 2019 for period 2020-2100 (source EUROSTAT)



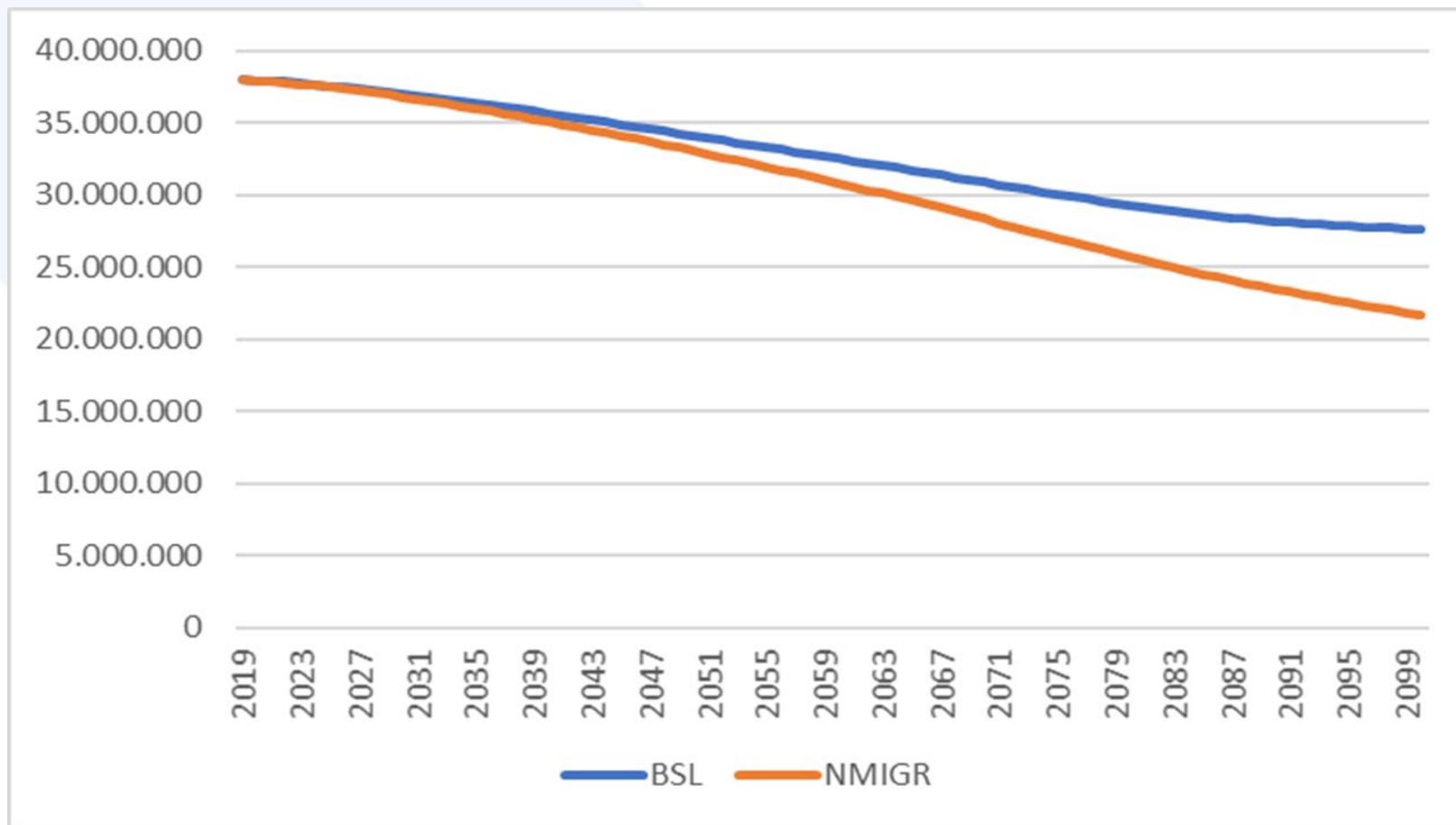
# Spain: population projections 2019 for period 2020-2100 (source EUROSTAT)



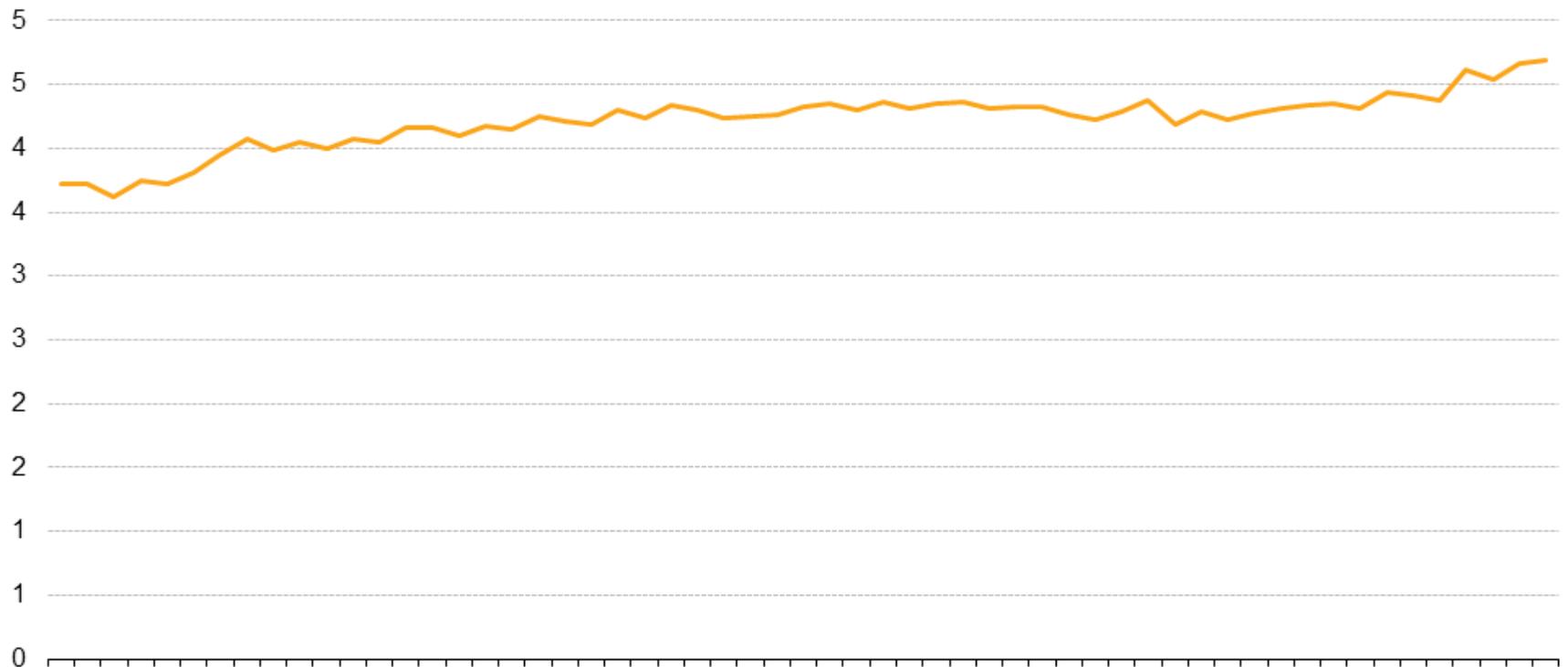
# Poland: population projections

## EUROPOP2019 for period 2019-2100

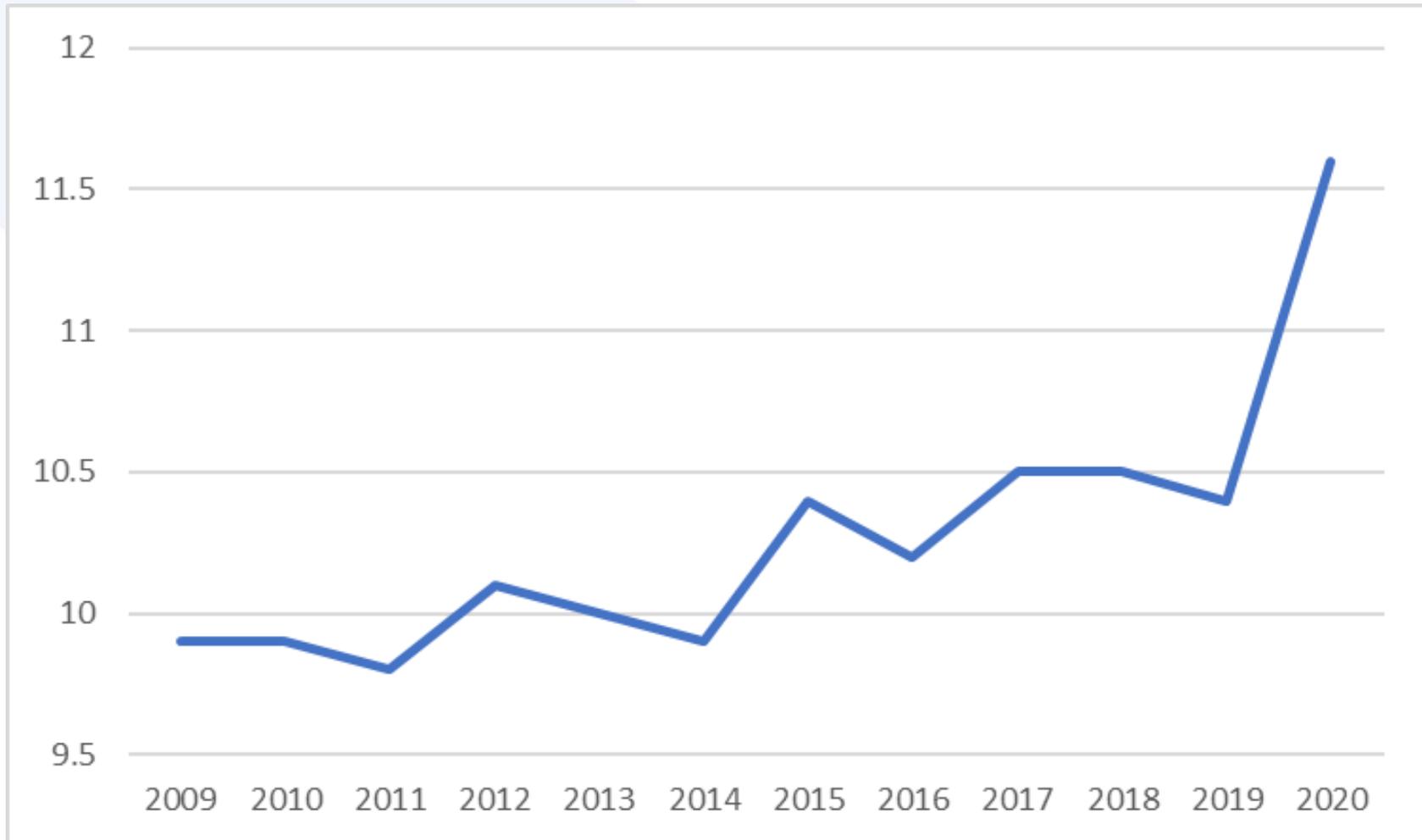
(source: EUROSTAT)



## Number of deaths, EU-27, 1962-2018 (million)



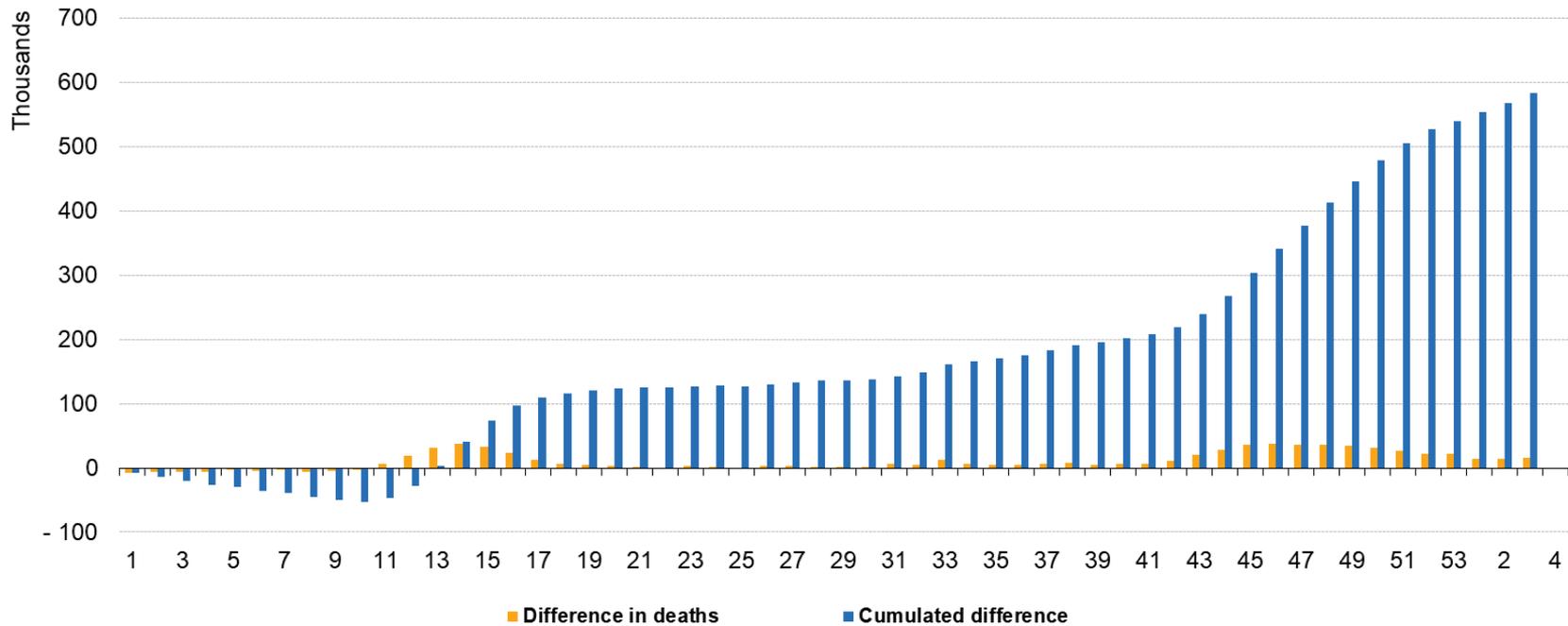
# Mortality rate per 1000 inhabitants for EU 27 for period 2009-2020



## Excess mortality

- Excess mortality refers to the **number of deaths from all causes measured during a crisis, above what could be observed under 'normal' conditions.**
- **The excess mortality indicator**, part of the **European Statistical Recovery Dashboard**, highlights the magnitude of the health crisis by providing a comprehensive comparison of additional deaths among the European countries and allows for further analysis of its causes.,
- This approach gives a **general measure of the impact of the crisis on the mortality rate** because it **includes all deaths regardless of their cause.**

## Weekly deaths in EU and EFTA countries, 2020-2021 (differences with 2016-19 average)

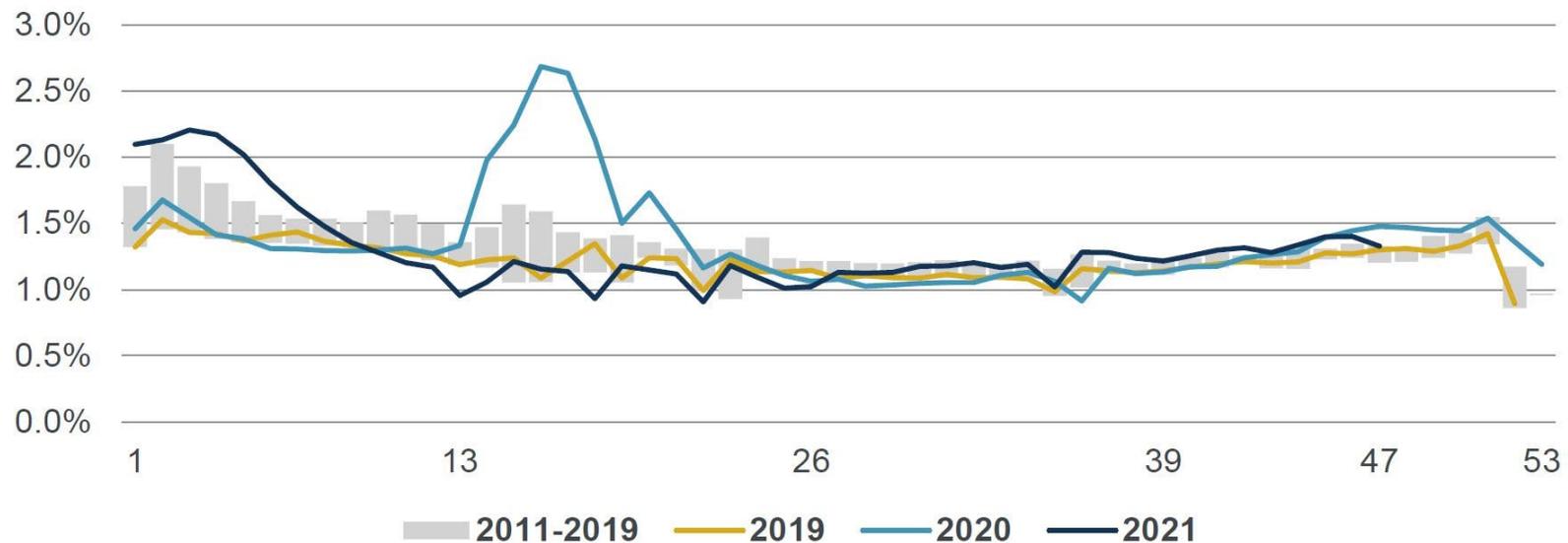


Country coverage: 26 EU Member States (Ireland missing), and EFTA countries.

Source: Eurostat (online data code: *demo\_r\_mwk\_ts*)

# Weekly standardised mortality rates in England and Wales for 2011 to 2021

Chart 1: Weekly standardised mortality rates in England & Wales for 2011 to 2021



## NUMBER OF DEATHS

- **At the beginning of March 2020, the number of deaths rose rapidly in some Member States.**
- **In some parts of the European Union, the difference compared with previous years was exceptionally high, while some other areas were less severely affected.**
- **In total, among the European Union and EFTA countries for which data are available, in 2020 there were around 540 000 more deaths than the average during the same period from 2016 to 2019**

# ADDITIONAL DEATHS IN THE EU AND EFTA COUNTRIES

- There were **600 000 additional deaths in the EU and EFTA countries from January 2020 to end of January 2021**, against the average number of deaths in the period 2016-2019.

## NUMBER OF DEATHS

- In the most exposed period of the first wave, from mid-March to mid-May 2020, i.e. weeks 11 to 21, there were more than 175 000 additional deaths,
- while during the second bigger increase between October and December (weeks 41 to the end of 2020) more than 340 000 additional deaths were registered.
- While in the first wave some countries and regions were severely hit and others were less affected, the second wave (still active in January 2021) affected a larger territory overall.

## Two spikes in additional deaths

During the first critical period, mid-March to end of May 2020, there were more than 175 000 additional deaths;



data from October to the end of January 2021 highlight a second larger spike of almost 400 000 additional deaths.

## two peaks in April and November

In 2020, excess mortality was high above the average in the European Union, **especially in spring and autumn, reaching two peaks in April (+25.1% ) and November (+40.7%).**

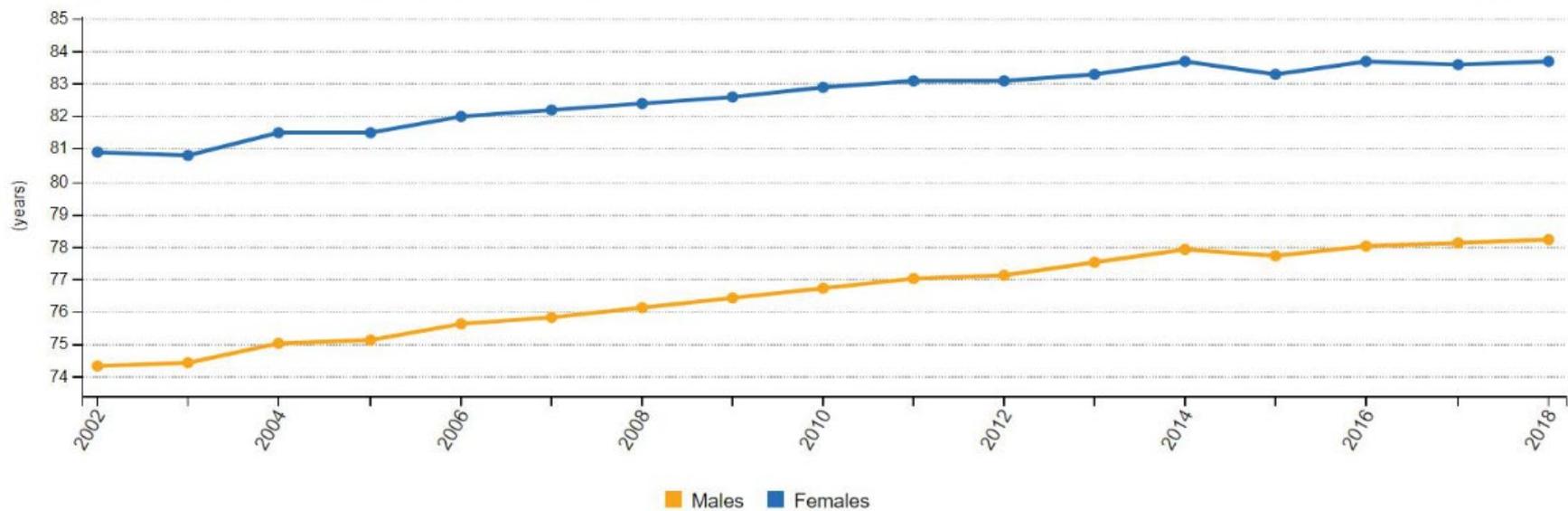
## UK

- By **26 June 2020**, the UK had the highest cumulative excess mortality rate in Europe;
- the cumulative excess mortality rate for the UK was **7.2%** above the five-year average by **18 December 2020**.

## AUTUMN AND EARLY WINTER MONTHS (SECOND SPIKE)

- During the autumn and early winter months **central and eastern European countries had the highest levels of excess mortality** in Europe; western European countries still experienced some excess mortality but at lower levels than those experienced in the spring.

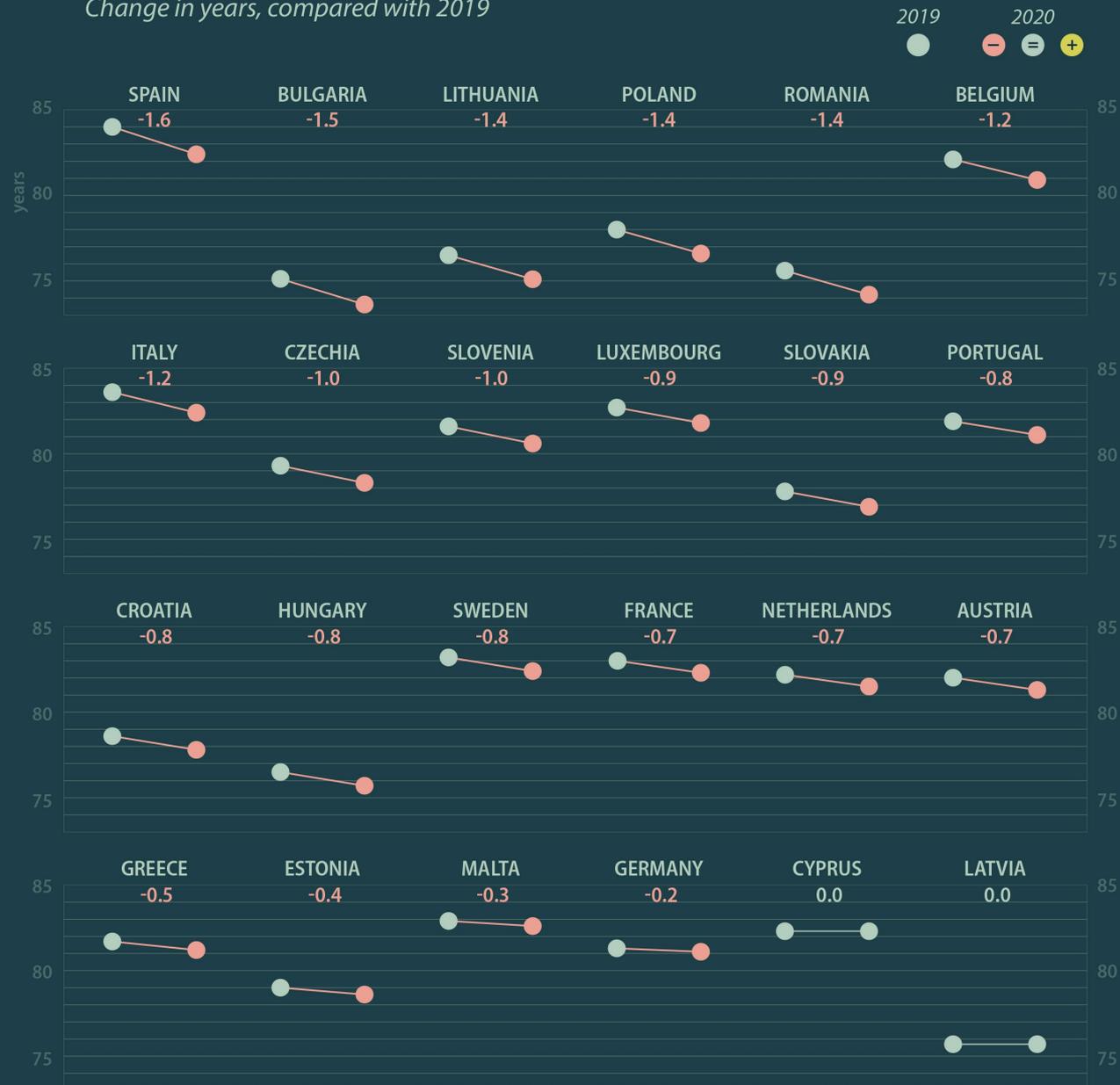
## Life expectancy at birth, EU-27, 2002-2018



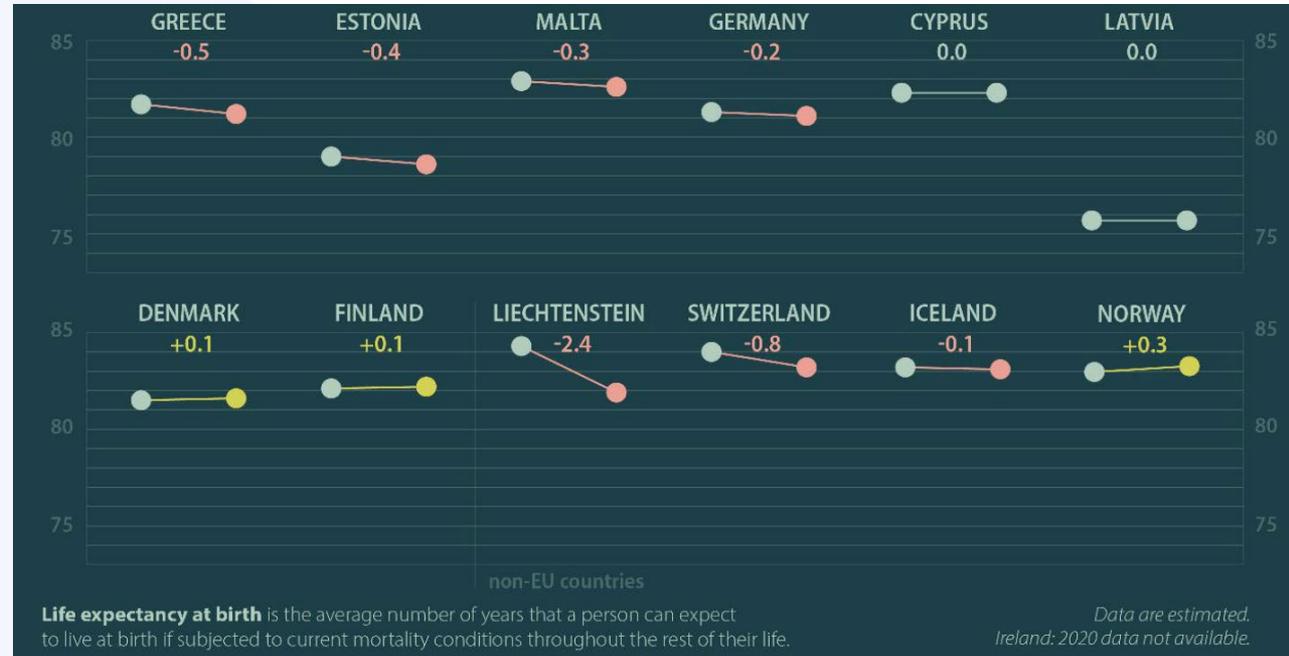
# Decrease in life expectancy in selected EU member states

## How did life expectancy change in 2020?

Change in years, compared with 2019



# Decrease in life expectancy in selected EU member states

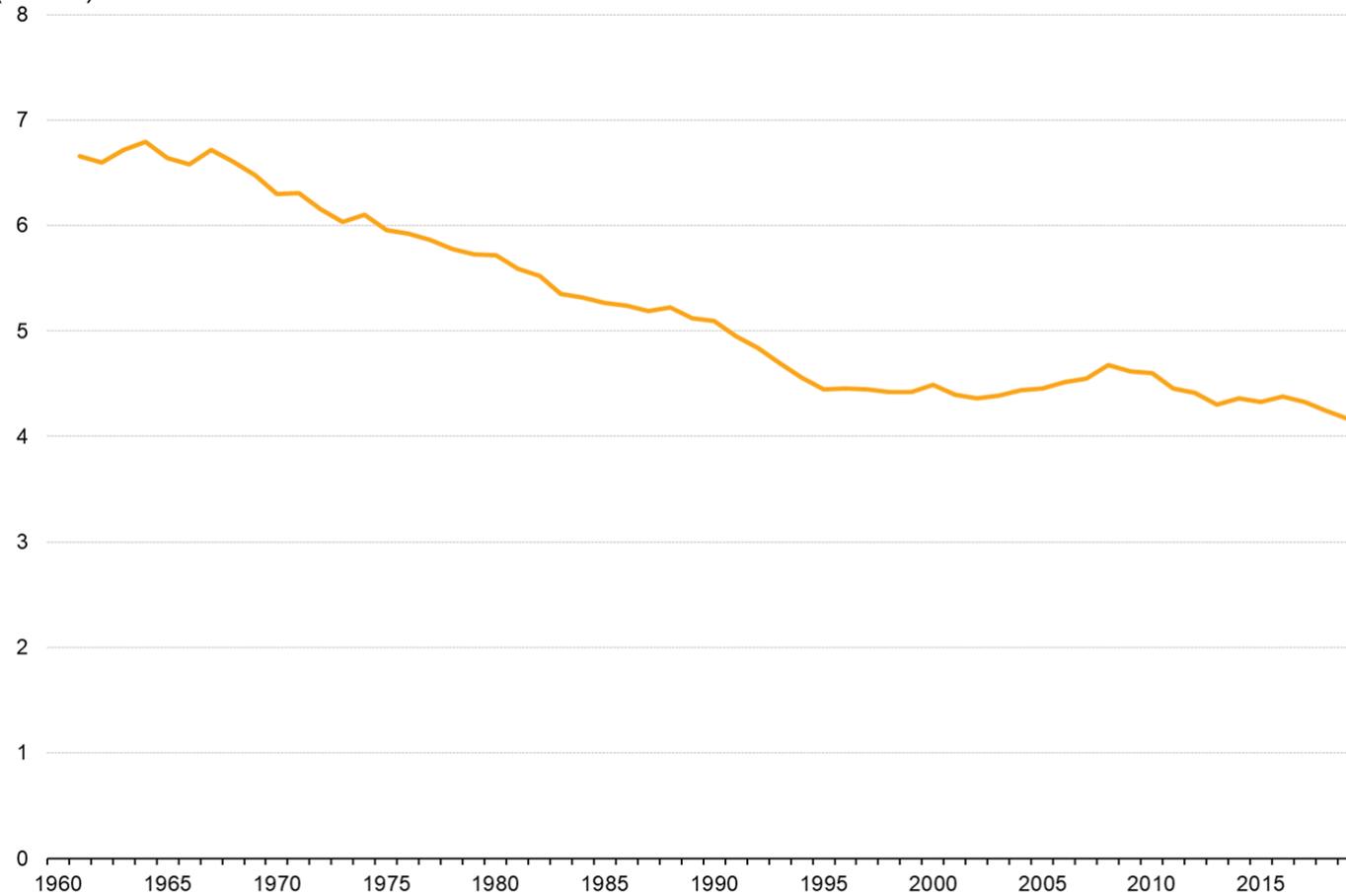


## Long-term consequences

**No long-term consequences on mortality rate are expected from COVID 19 epidemics.**

## Number of live births, EU, 1961–2019

(million)



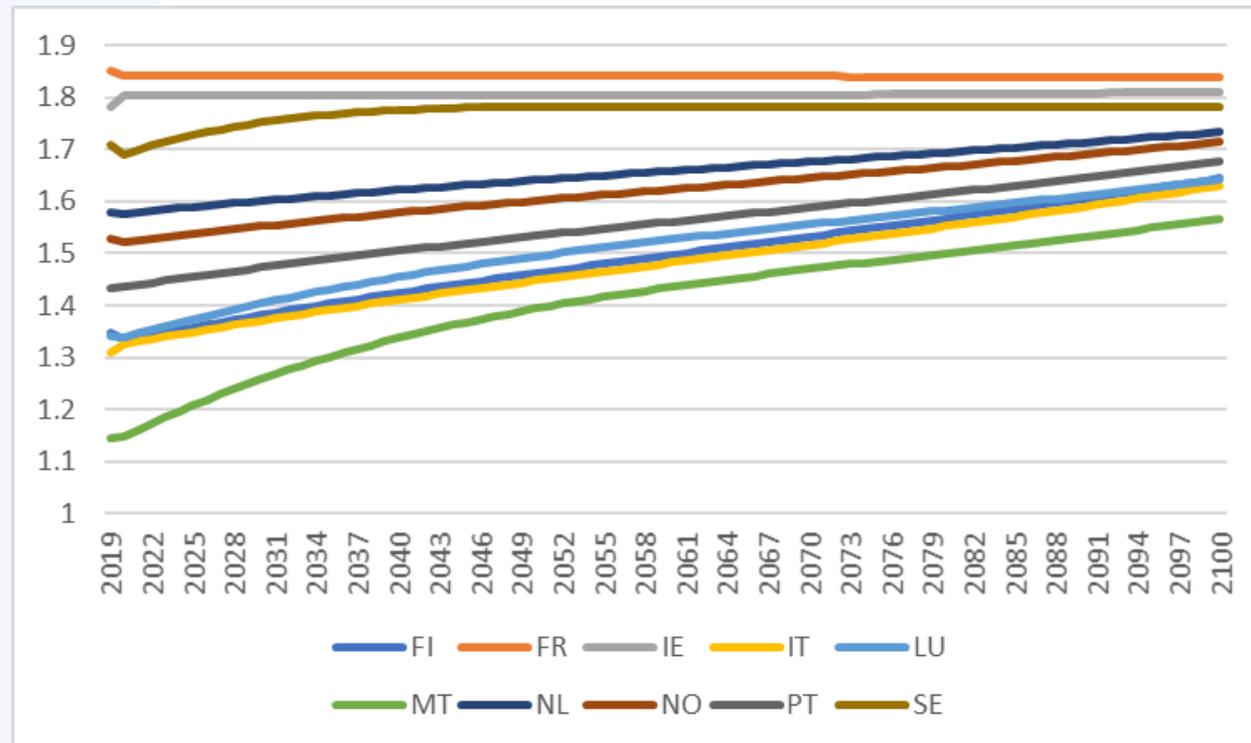
Note: Excluding French overseas departments before 1998. Including Mayotte from 2014.

Source: Eurostat (online data code: demo\_gind)

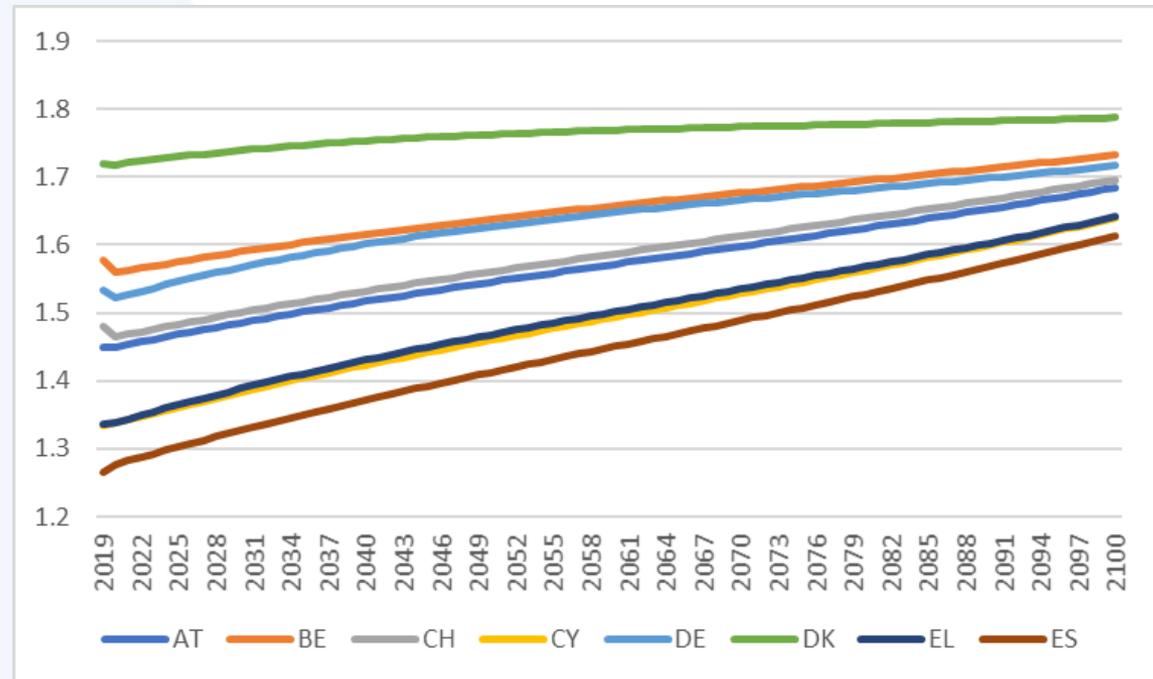
## Development of a range of indicators concerning the number of births and fertility across the European Union (EU)

Fertility rates steadily declined from the mid-1960s through to the turn of the century in the EU Member States. However, at the beginning of the 2000s, the total fertility rate in the EU displayed signs of rising again. This development stopped in 2010 and a subsequent decline was observed through to a relative low in 2013, followed by a slight increase up to 2016 and another decrease since. In 2019, the total fertility rate in the EU was 1.53 live births per woman (as compared to 1.54 in 2018).

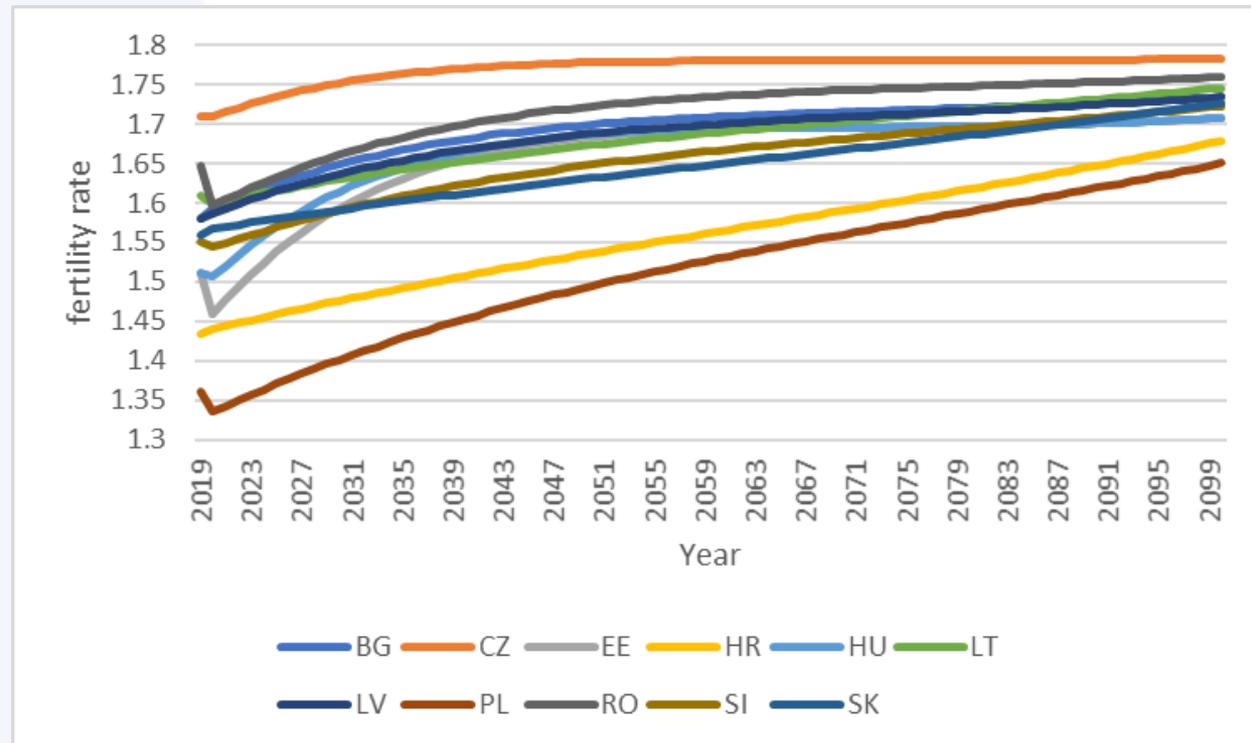
# Baseline fertility rate assumptions for selected EU and EFTA Member States for period 2020-2100



# Baseline fertility rate assumptions for selected EU and EFTA Member



# Baseline fertility rate assumptions for selected new EU Member States



# Research findings regarding fertility

**Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020)**

**The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom**

Descriptive Finding

DEMOGRAPHIC RESEARCH, VOLUME 43, ARTICLE 47, PAGES 1399–1412

PUBLISHED 1 DECEMBER 2020

<https://www.demographic-research.org/Volumes/Vol43/47/>

DOI: 10.4054/DemRes.2020.43.47

**Table 1: Sample distribution of fertility plans and some country- and regional-level indicators of COVID-19, young people and female employment conditions, and fertility**

	Italy	Germany	France	Spain	UK
<b>Data from <i>Rapporto giovani</i>:</b>					
<b>Original sample size</b>	2,000	1,000	1,000	1,000	1,000
% not planning to have a child (January 2020)	73.4	78.6	72.5	78.4	76.4
<b>Sample size of those planning to have a child (January 2020)</b>	532	214	275	216	236
% Still planning <sup>1</sup>	25.6	30.7	32.0	21.2	23.0
% Postponers <sup>1</sup>	37.9	55.1	50.7	49.6	57.8
% Abandoners <sup>1</sup>	36.5	14.2	17.3	29.2	19.2

...ppi, Bruno Arpino, Alessandro Ros

**Contextual data:**

**Number of COVID-19 cases in mid-April 2020 (1,000 inhabitants)**

in the country	2.7	1.6	2.0	3.9	1.5
in the regions with the highest number of cases <sup>2</sup>	4.6	2.2	3.2	7.3	1.9

**% of NEET<sup>3</sup> (15–24) in 2019<sup>4</sup>**

in the country	18.0	5.7	10.6	12.1	11.5
in the regions with a higher number of cases	11.8	5.2	11.1	8.6	13.1

**Female employment rate (25–34) 2019<sup>5</sup>**

in the country	50.2	73.0	62.9	58.4	71.5
in the regions with a higher number of cases	68.4	78.2	74.2	76.7	76.4

**Mean age at birth 2018<sup>5</sup>**

in the country	32.0	31.1	30.6	32.2	30.6
in the regions with a higher number of cases	32.0	31.2	30.5	32.8	30.4

**Mean age at first birth 2018<sup>5</sup> (in the country)**

	31.2	29.7	28.7	31.0	29.0
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**Total Fertility Rate 2018<sup>5</sup>**

in the country	1.29	1.57	1.88	1.26	1.68
in the regions with a higher number of cases	1.40	1.55	1.74	1.29	1.64

**Francesca Luppi, Bruno Arpino, Alessandro Rosina  
(2020)**

**The impact of COVID-19 on fertility plans in Italy,  
Germany, France, Spain, and the United Kingdom**

- **Fertility plans have not changed in the same way across age groups.**
- **A common trend across the countries is the increasing proportion with age of those ‘still planning’;**
- **i.e., the proportion is higher among individuals aged 25–29 and 30–34 than among their younger counterparts (18–24).**

## RESEARCH RESULTS

- Research show that fertility plans have been negatively revised in all countries, but not in the same way. In Germany and France fertility plans changed moderately, with many people still planning or postponing their decision to have a child.
- In Italy, however, the proportion of abandoners is much higher than in the other countries, and the proportion of those deciding to postpone their plans is lower.

Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020)

**The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom**

Moreover, across countries the demographic characteristics of individuals appear to be associated with fertility plans in different ways. In Italy, abandoners are common among individuals younger than 30 and those without a tertiary education. In Germany, abandoners are slightly more prevalent in the regions most affected by COVID-19.

In the United Kingdom, the individuals that most frequently abandoned their fertility plans are those who expect the crisis to have a dramatic negative effect on their future income. Finally, in France and Spain we do not observe a clear pattern of revision of fertility plans.

Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020)

## The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom

- Historically, **economic and health crises have never been preferred periods for a couple to decide to have a baby** (e.g., Marteleto et al. 2020; Trinitapoli and Yeatman 2011; Sobotka, Skirbekk, and Philipov 2011; Vrachnis et al. 2014).

**Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020)**

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- **Regarding health crises, the evidence shows that during and after major epidemics fertility declines strongly** (Stone 2020; see e.g., Chandra and Yu 2015a, 2015b; Chandra et al. 2018 for the Spanish flu, and Marteleto et al. 2020 for the Zika epidemic).

**Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020)**

## **The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom**

- **As for economic crises, an overall economic downturn and the loss of jobs create a climate of great uncertainty, which depresses family projects (Adsera 2011; Goldstein et al. 2013; Matysiak, Vignoli, and Sobotka 2018; Vignoli et al. 2020).**

**Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020)  
The impact of COVID-19 on fertility plans in Italy,  
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- Therefore, although **the COVID-19 crisis has very special features compared with previous crises, we may expect similar demographic outcomes** (see Aassve et al. 2020 for a recent discussion of possible post-pandemic fertility trajectories according to countries' income level).

## Francesca Luppi, Bruno Arpino, Alessandro Rosina (2020) The impact of COVID-19 on fertility plans in Italy, Germany, France, Spain, and the United Kingdom

These results suggest that **different mechanisms are at work**, possibly due to the different:

- **economic,**
- **demographic, and**
- **policy**

**pre-crisis background and post-crisis prospects.**

- Low-fertility contexts in particular appear to be more at risk of a fertility loss due to the crisis

## Poland

Poland's population has slowly decreased in the past 20 years mostly due to the emigration of young people seeking better opportunities.

# Poland

According state agency Statistics Poland data in December 2020 for 11 months of 2020,

- number of deaths was the **highest since World War II** and the **number of births the lowest in 15 years.**

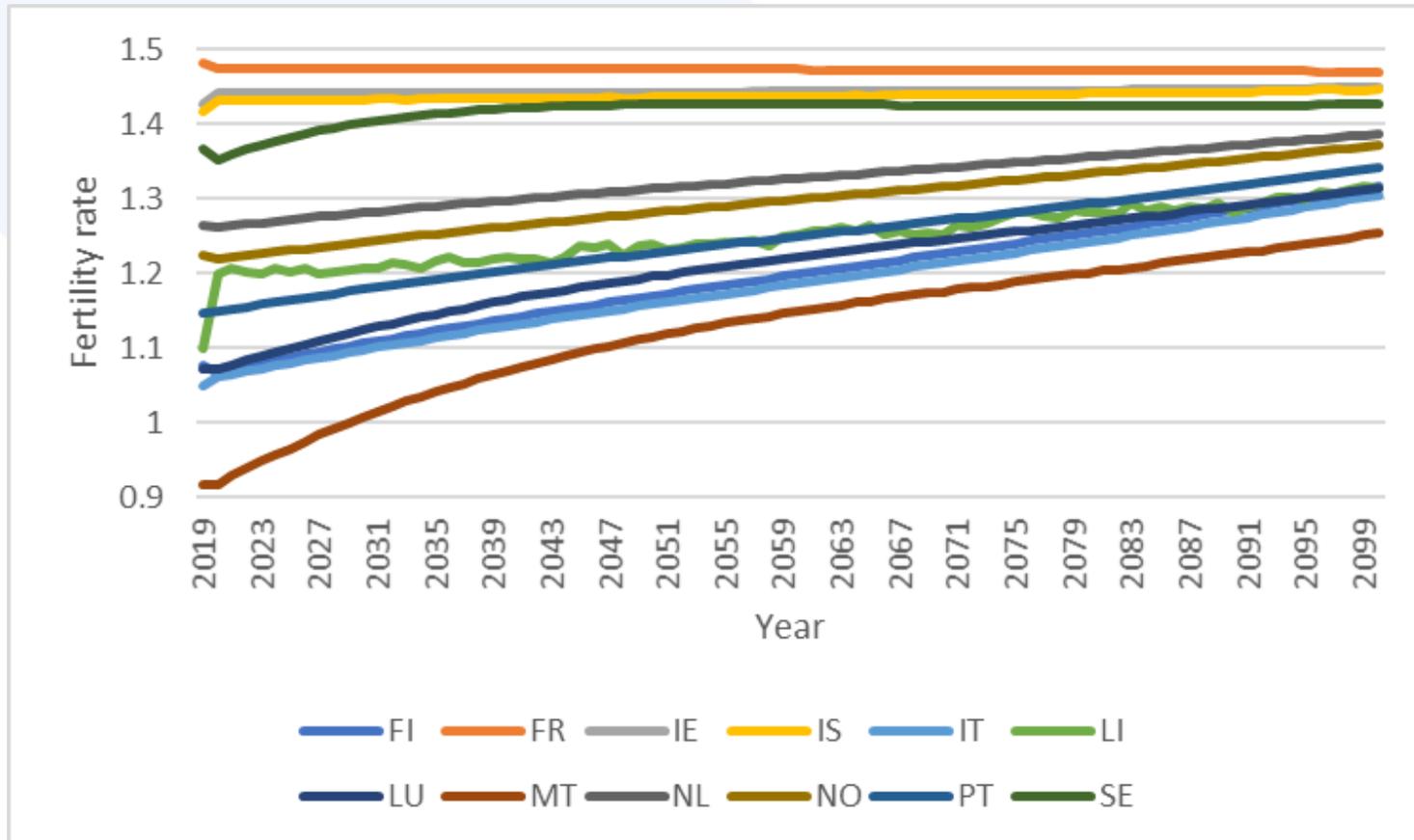
# Poland

- Poland, a nation with a **population of more than 38 million**,
- registered **357,400 births in 2020**, the lowest number since 2005,
  - and some **486,200 deaths from various causes**, the highest number registered since the war.
  - The overall **data in 2020** showed **a population loss of some 129,000 people**, compared **with a decline** of some **36,400** the 2019.

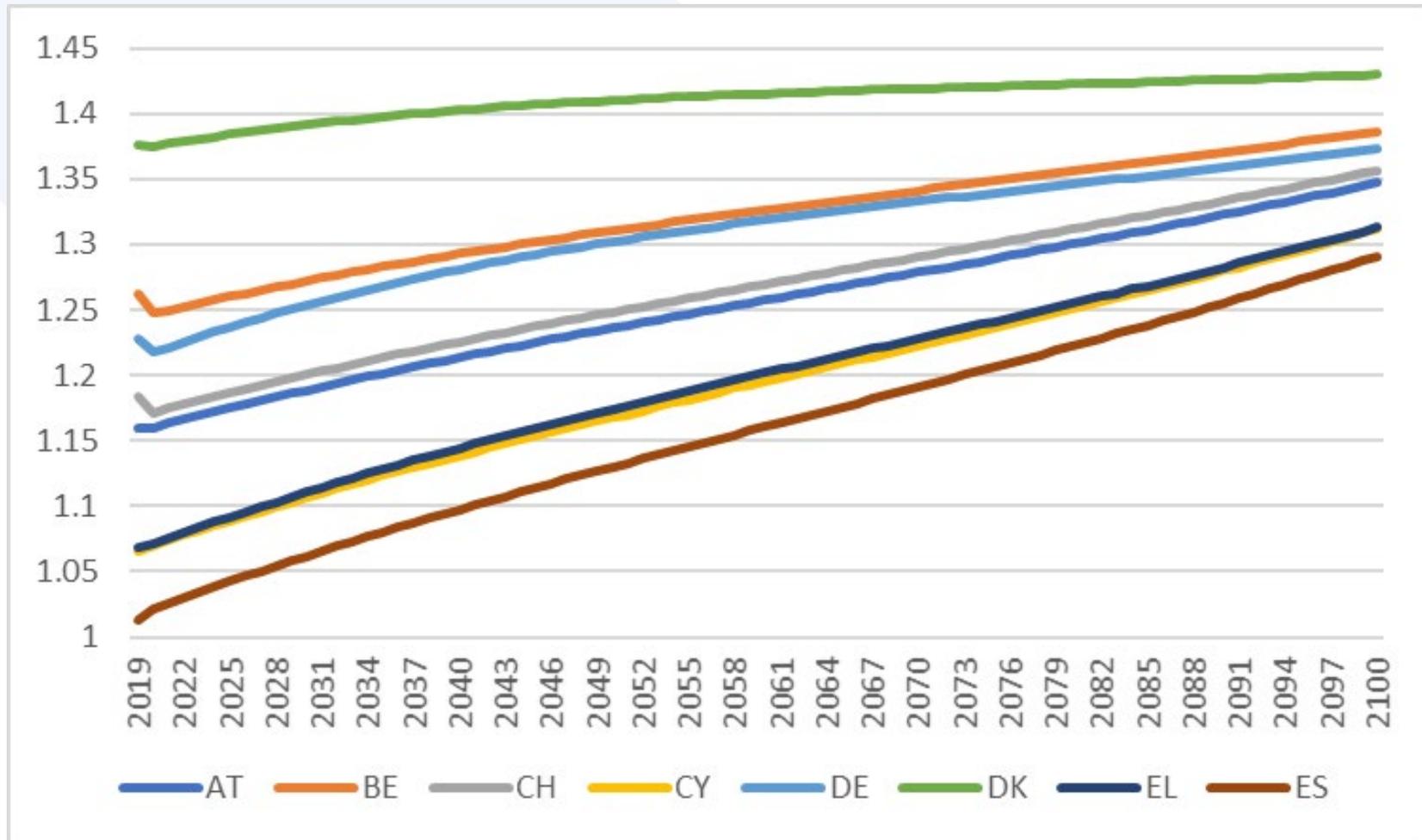
## Poland

Minister of Family and Social Policy Marlena Malag ascribed the high death rate to the pandemic and said it would take a long time for the current government programme of family benefits intended to boost the birthrate to reverse the negative trend.

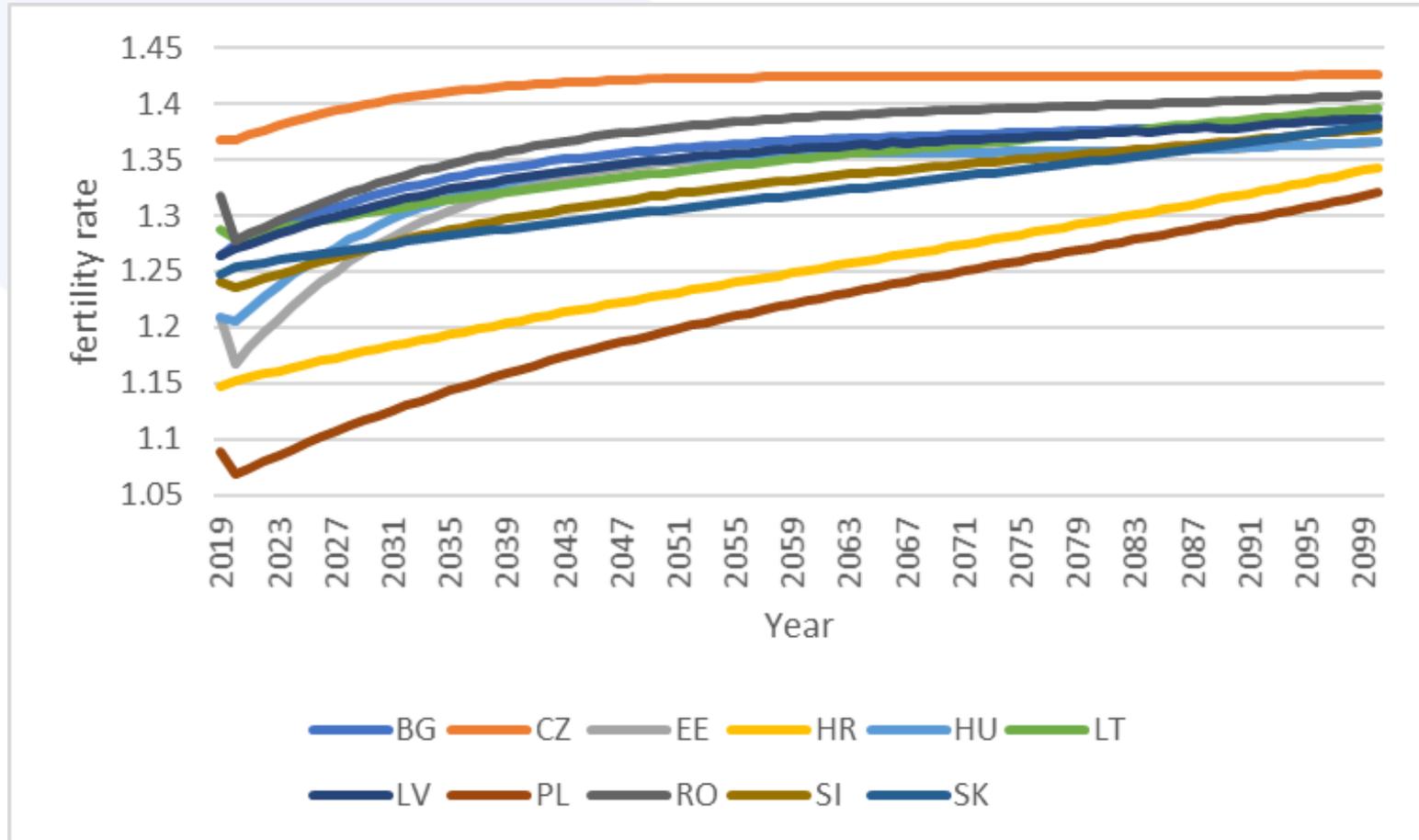
# Low fertility rate assumptions for selected EU and EFTA Member states for period 2019-2100



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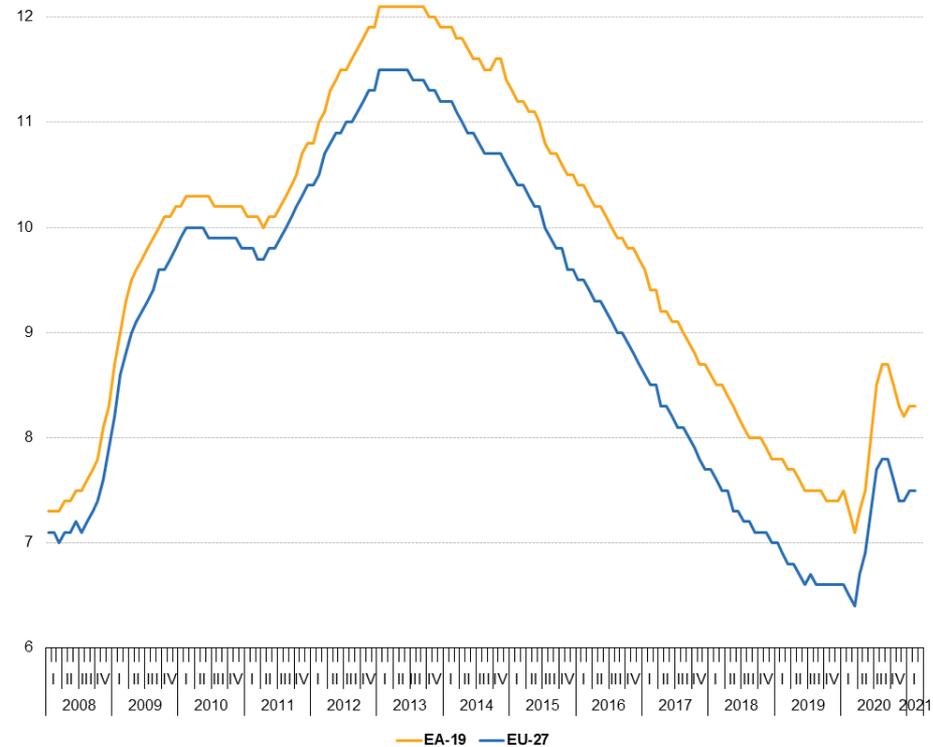
# Low fertility rate assumptions for selected new EU



# The approximate calculation of the decrease in the economic situation of households (worse off) and its impact to the demographic prognosis model

# Unemployment rates EU-27 and EA-19

Unemployment rates EU-27, EA-19, seasonally adjusted, January 2008 - February 2021



Source: Eurostat (online data code: une\_rt\_m)

# Unemployment rate in EU 27

**EU-27 unemployment at 7.5 % in February 2021.**

**Euro area unemployment at 8.3%**

- A recent report of Eurostat, the statistical office of the European Union, shows that the **unemployment rate remained relatively stable between September and December 2020**,
- Unemployment rate rose from **6.5%** to **7.5%** over the course of the year.
- **Eurostat estimates that 16 million men and women were unemployed in December 2020 – up by 2 million compared to 2019.**
- **More than 3 million are under 25 years old, of whom 2.6 million are in the euro area.**

## Household Consumptions

In the second quarter of 2020, the EU household saving rate recorded its highest year-over-year increase since the time series began at +10.8 percentage points (pp).

The main reason behind this was a marked 17.3% year-on-year decline in household final consumption expenditure. This drop in household final consumption expenditure was in stark contrast with the decrease of 1.8% in the last quarter and recent increases in excess of 2%.

# Unemployment

- Eurostat estimates that 15.953 million men and women in the EU,
- **of whom 13.571 million in the euro area, were unemployed in February 2021.**
- **Compared with January 2021, the number of persons unemployed increased by 34 000 in the EU and by 48 000 in the euro area.**
- Compared with February 2020, unemployment rose by 1.922 million in the EU and **by 1.507 million in the euro area.**

# Unemployment rate - challenges

- These figures are **based on the definition of unemployment issued by the International Labour Organization, which counts as unemployed those without a job who have been actively seeking work in the last four weeks and are available to start work within the next two weeks.**
- However, the **governmental measures adopted to limit the spread of Covid-19 affected the number of individuals falling within the definition of unemployed according to the ILO definition.**
- Many unemployed who had registered in unemployment agencies **were no longer actively looking for a job** or no longer available for work, for instance, if they had to take care of their children. **It is therefore likely that this report only reflects the ‘tip of the iceberg’.**

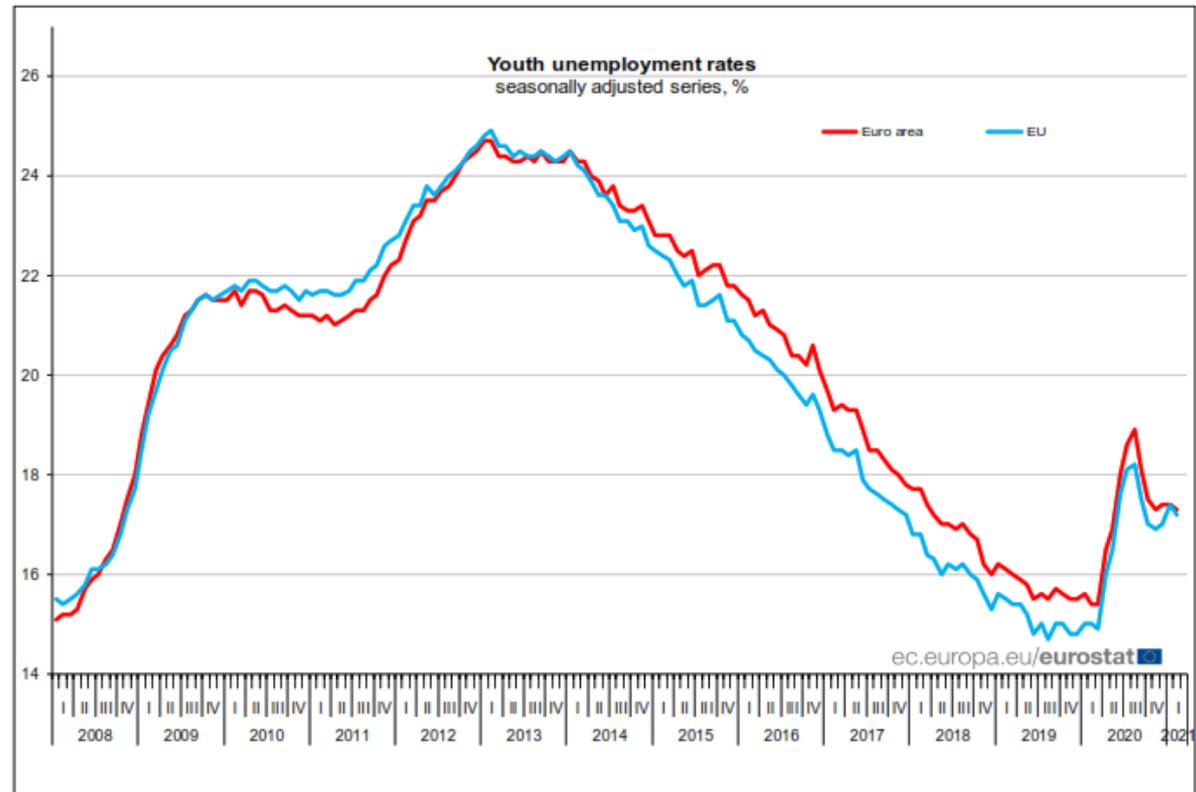
## Unemployment rate - challenges

To fully capture the unprecedented labour market situation triggered by the outbreak, **the European Union Labour Force Survey (LFS) offers additional indicators**, namely the share of underemployed part-time workers, persons seeking work but not immediately available, and persons available to work but not seeking

## European Union Labour Force Survey (LFS)

- European Union Labour Force Survey (LFS) show that the **unmet demand for paid labour represented 14.6% of the extended EU27 labour force during the second quarter of 2020, up by 1.2% compared to the first quarter of 2020.**
- **This has been the highest quarter-on-quarter increase since the beginning of the time series in early 2008.**
- In line with Eurostat findings, latest available LFS figures points towards a settling of the trend rather than a recovery, with a slight decline of 0.1% for the third quarter 2020.

# Youth unemployment in EU in period 2008-2021



# Youth unemployment (under 25)

- In February 2021, 2.967 million young persons (under 25) were unemployed in the EU,
- of whom 2.394 million were in the euro area.
- In February 2021, the youth unemployment rate was 17.2% in the EU and
- 17.3% in the euro area, compared with 17.4% in both areas in the previous month.
- Compared with January 2021, youth unemployment decreased by 34 000 in the EU and by 9 000 in the euro area. Compared with February 2020, youth unemployment increased by 230 000 in the EU and by 177 000 in the euro area.

## Unemployment by gender

- In February 2021, the unemployment rate for women was **7.9%** in the EU, stable compared with January 2021.
- The unemployment rate for men was **7.1%** in February 2021, also stable compared with January 2021.
- In the euro area, the unemployment rate for women increased from **8.7%** in January 2021 to **8.8%** in February 2021 and
- The unemployment rate for men remained stable at **7.9%**.

## Seasonally adjusted unemployment, totals

	Rates (%)					Number of persons (in thousands)				
	Feb 20	Nov 20	Dec 20	Jan 21	Feb 21	Feb 20	Nov 20	Dec 20	Jan 21	Feb 21
<b>Euro area</b>	7.3	8.3	8.2	8.3	<b>8.3</b>	12 064	13 471	13 411	13 523	<b>13 571</b>
<b>EU</b>	6.5	7.4	7.4	7.5	<b>7.5</b>	14 031	15 777	15 772	15 919	<b>15 953</b>
<b>Belgium</b>	5.0	5.8	5.7	5.6	<b>5.7</b>	257	293	286	287	<b>292</b>
<b>Bulgaria</b>	4.1	5.3	5.3	5.5	<b>5.3</b>	136	175	177	182	<b>176</b>
<b>Czechia</b>	1.8	2.9	3.1	3.3	<b>3.2</b>	97	158	164	178	<b>173</b>
<b>Denmark</b>	5.0	5.9	6.1	6.1	<b>6.1</b>	150	179	183	182	<b>184</b>
<b>Germany</b>	3.6	4.6	4.6	4.6	<b>4.5</b>	1 580	2 012	2 016	2 015	<b>2 009</b>
<b>Estonia</b>	5.0	7.3	6.7	7.1	<b>7.2</b>	35	51	47	50	<b>50</b>
<b>Ireland</b>	5.0	6.0	5.8	5.8	<b>5.8</b>	125	147	141	142	<b>141</b>
<b>Greece</b>	16.4*	16.2	15.8	:	:	771*	751	726	:	:
<b>Spain</b>	13.6	16.1	16.2	16.0	<b>16.1</b>	3 138	3 708	3 741	3 716	<b>3 731</b>
<b>France</b>	7.7	8.1	7.8	7.9	<b>8.0</b>	2 298	2 378	2 284	2 350	<b>2 387</b>
<b>Croatia</b>	5.9	7.7	7.7	7.2	<b>7.1</b>	105	137	137	127	<b>125</b>
<b>Italy</b>	9.8	9.7	9.8	10.3	<b>10.2</b>	2 497	2 394	2 435	2 527	<b>2 518</b>

Unemployment data (Source: EUROSTAT)

<b>Cyprus</b>	6.1	7.7	7.3	6.8	<b>6.8</b>	27	35	33	31	<b>31</b>
<b>Latvia</b>	7.2	8.1	8.2	8.5	<b>8.7</b>	71	78	79	82	<b>83</b>
<b>Lithuania</b>	6.7	9.2	9.2	9.6	<b>9.6</b>	99	137	137	143	<b>143</b>
<b>Luxembourg</b>	5.7	6.6	6.7	6.8	<b>6.7</b>	18	21	21	21	<b>21</b>
<b>Hungary</b>	3.5	4.0	4.1	4.9	<b>4.5</b>	167	192	200	237	<b>214</b>
<b>Malta</b>	3.5	4.4	4.4	4.4	<b>4.4</b>	10	12	12	12	<b>12</b>
<b>Netherlands</b>	2.9	4.0	3.9	3.6	<b>3.6</b>	274	378	368	337	<b>340</b>
<b>Austria</b>	4.5	5.5	5.8	5.7	<b>5.7</b>	206	253	265	260	<b>260</b>
<b>Poland</b>	3.0	3.2	3.2	3.1	<b>3.1</b>	512	546	542	531	<b>540</b>
<b>Portugal</b>	6.5	7.2	6.9	6.9	<b>6.9</b>	331	365	347	345	<b>344</b>
<b>Romania</b>	4.2	5.1	5.2	5.6	<b>5.7</b>	381	459	468	474	<b>478</b>
<b>Slovenia</b>	4.2	5.3	5.2	5.1	<b>4.9</b>	44	55	54	52	<b>51</b>
<b>Slovakia</b>	6.0	6.9	6.9	7.2	<b>7.3</b>	165	189	188	196	<b>200</b>
<b>Finland</b>	6.8*	8.1	8.1	:	:	189*	224	224	:	:
<b>Sweden</b>	7.2	8.8	8.7	8.9	<b>8.8</b>	397	487	485	484	<b>484</b>
<b>Iceland</b>	5.0	7.1	7.0	6.9	<b>6.8</b>	10	14	14	14	<b>14</b>
<b>Norway</b>	4.0**	5.0	:	:	:	113**	143	:	:	:
<b>Switzerland</b>	4.4	5.2	5.2	:	:	214	261	258	:	:
<b>United States</b>	3.5	6.7	6.7	6.3	<b>6.2</b>	5 781	10 813	10 769	10 230	<b>10 046</b>

: Data not available

\* December 2019

\*\* November 2019

Source datasets: une\_rt\_m (rates) and une\_rt\_m (in 1 000 persons)

[ec.europa.eu/eurostat](http://ec.europa.eu/eurostat) 

ment data (Source EUROSTAT)

### Seasonally adjusted youth (under 25s) unemployment

	Rates (%)					Number of persons (in thousands)				
	Feb 20	Nov 20	Dec 20	Jan 21	Feb 21	Feb 20	Nov 20	Dec 20	Jan 21	Feb 21
<b>Euro area</b>	15.4	17.3	17.4	17.4	<b>17.3</b>	2 217	2 388	2 381	2 403	<b>2 394</b>
<b>EU</b>	15.0	16.9	17.0	17.4	<b>17.2</b>	2 737	2 929	2 936	3 001	<b>2 967</b>
<b>Belgium</b>	11.9	16.4	16.4	:	:	47	56	56	:	:
<b>Bulgaria</b>	12.5	13.8	13.8	16.6	<b>16.3</b>	16	20	21	24	<b>23</b>
<b>Czechia</b>	5.5	9.0	10.5	10.9	<b>9.3</b>	15	23	28	29	<b>24</b>
<b>Denmark</b>	10.2	12.2	11.6	11.3	<b>11.1</b>	44	52	48	47	<b>45</b>
<b>Germany</b>	5.7	6.5	6.4	6.3	<b>6.1</b>	248	277	272	266	<b>258</b>
<b>Estonia</b>	7.9	23.7	18.3	17.2	<b>16.8</b>	4	11	8	8	<b>7</b>
<b>Ireland</b>	12.3	16.5	15.5	15.6	<b>15.1</b>	38	45	41	43	<b>40</b>
<b>Greece</b>	34.3	33.5	34.2	:	:	77	74	73	:	:
<b>Spain</b>	31.5	40.0	40.7	39.9	<b>39.6</b>	489	578	596	588	<b>585</b>
<b>France</b>	18.7	18.4	18.1	18.5	<b>19.2</b>	535	512	497	516	<b>542</b>
<b>Croatia</b>	17.4	21.0	21.0	:	:	24	30	30	:	:
<b>Italy</b>	29.0	30.7	31.0	32.7	<b>31.6</b>	439	423	413	446	<b>424</b>

Employment data (Source EUROSTAT)

<b>Italy</b>	29.0	30.7	31.0	32.7	<b>31.6</b>	439	423	413	446	<b>424</b>
<b>Cyprus</b>	13.4	20.1	20.1	:	:	5	8	8	:	:
<b>Latvia</b>	14.3	13.1	14.0	15.5	<b>15.9</b>	9	7	8	9	<b>9</b>
<b>Lithuania</b>	16.1	18.4	17.7	18.2	<b>17.5</b>	17	19	19	20	<b>19</b>
<b>Luxembourg</b>	17.6	22.3	23.1	22.0	<b>21.4</b>	4	5	5	5	<b>5</b>
<b>Hungary</b>	9.5	12.7	10.9	15.4	<b>13.6</b>	31	38	34	49	<b>41</b>
<b>Malta</b>	10.8	10.9	11.5	10.7	<b>10.0</b>	3	3	3	3	<b>3</b>
<b>Netherlands</b>	6.3	9.4	9.5	9.1	<b>9.4</b>	94	138	139	133	<b>137</b>
<b>Austria</b>	10.3	10.2	11.0	9.7	<b>9.6</b>	53	53	57	50	<b>49</b>
<b>Poland</b>	9.6	13.6	13.8	14.2	<b>14.8</b>	116	146	149	153	<b>159</b>
<b>Portugal</b>	18.7	22.9	23.5	23.0	<b>21.6</b>	69	74	74	72	<b>69</b>
<b>Romania</b>	18.2	16.0	16.0	:	:	115	100	100	:	:
<b>Slovenia</b>	10.5	14.8	14.8	:	:	7	9	9	:	:
<b>Slovakia</b>	16.4	20.3	20.4	20.7	<b>20.6</b>	27	31	32	32	<b>33</b>
<b>Finland</b>	19.2	21.5	21.6	:	:	62	67	68	:	:
<b>Sweden</b>	20.5	24.4	23.9	23.8	<b>23.6</b>	129	144	142	140	<b>139</b>
<b>Iceland</b>	11.4	12.7	12.9	13.2	<b>13.4</b>	3	4	4	4	<b>4</b>
<b>Norway</b>	10.1	11.5	:	:	:	38	42	:	:	:
<b>Switzerland</b>	8.4	8.2	8.2	:	:	49	48	48	:	:

: Data not available

Belgium, Croatia, Cyprus, Romania and Slovenia: quarterly data

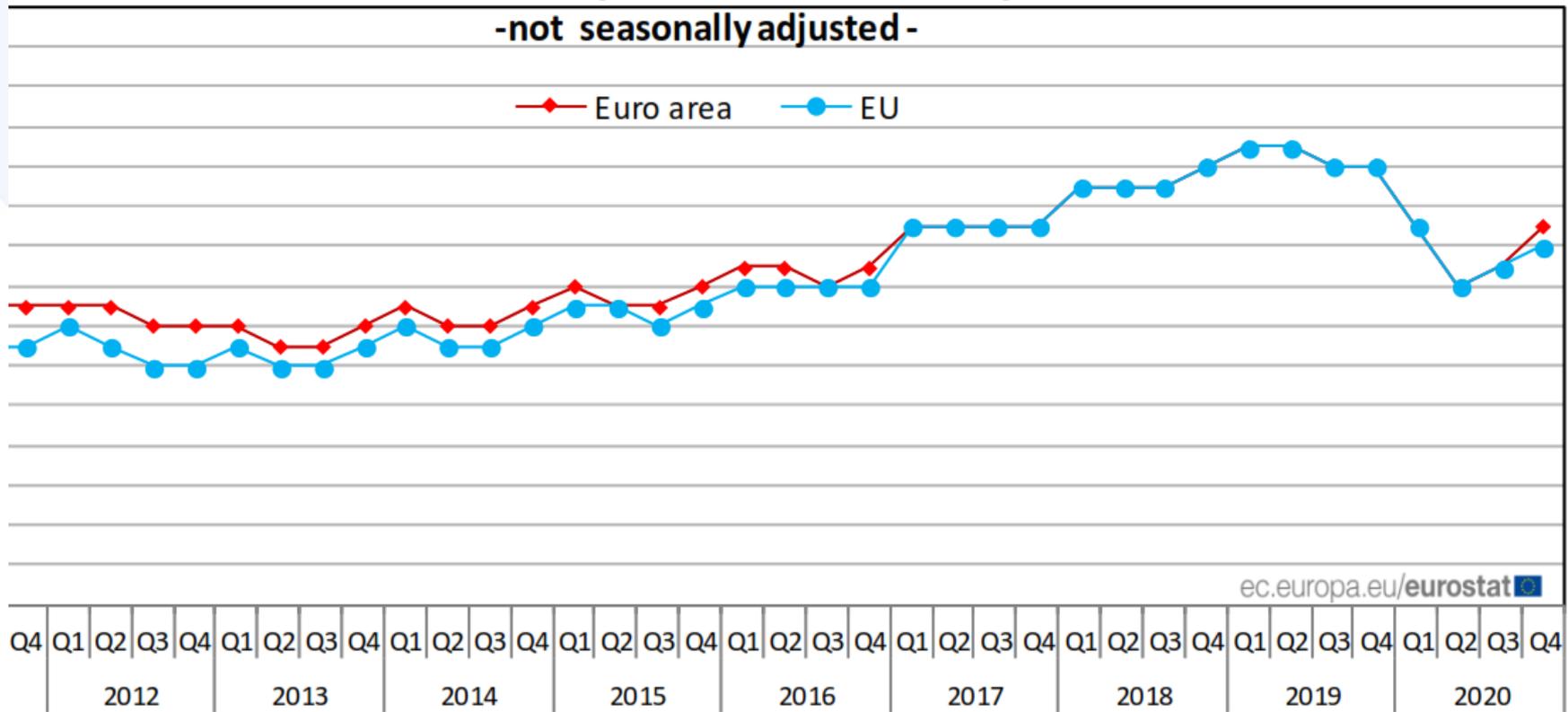
Source datasets: [une\\_rt\\_m](#) (rates) and [une\\_rt\\_m](#) (in 1 000 persons)

[ec.europa.eu/eurostat](http://ec.europa.eu/eurostat) 

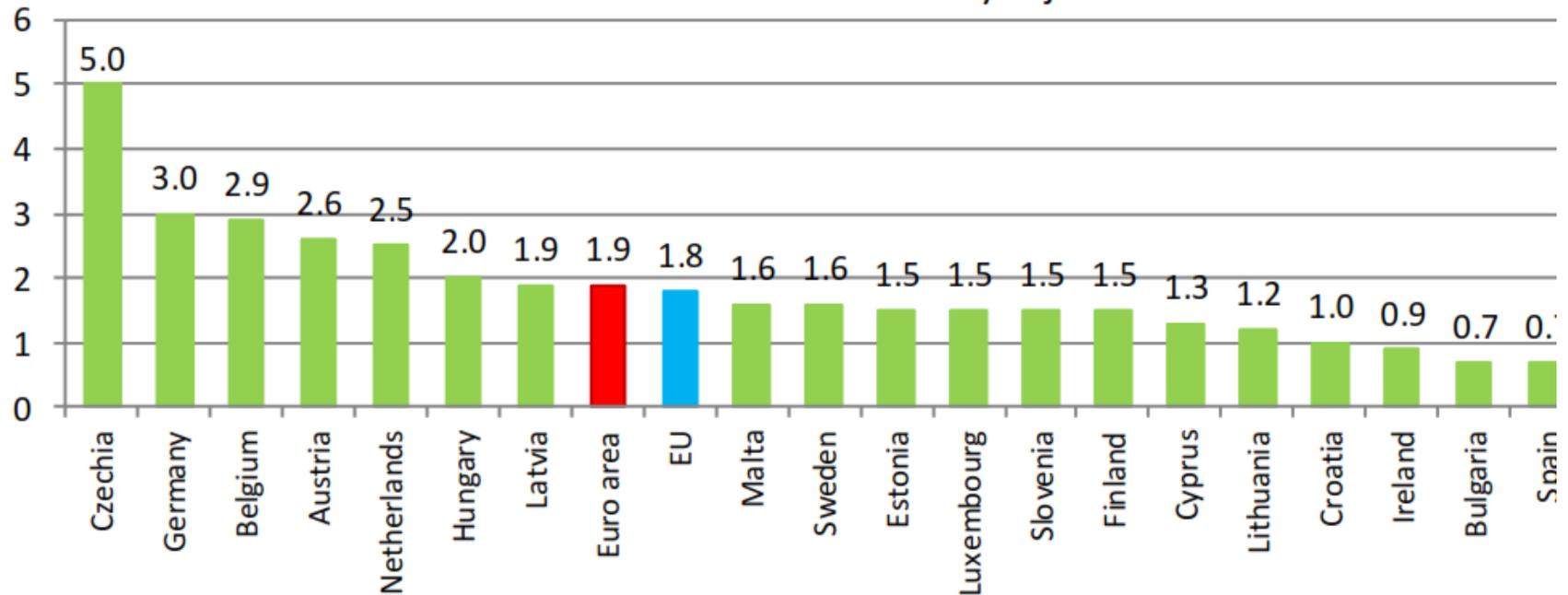
Employment data (Source EUROSTAT)

## Job vacancy rates, whole economy -not seasonally adjusted-

—◆— Euro area    —●— EU

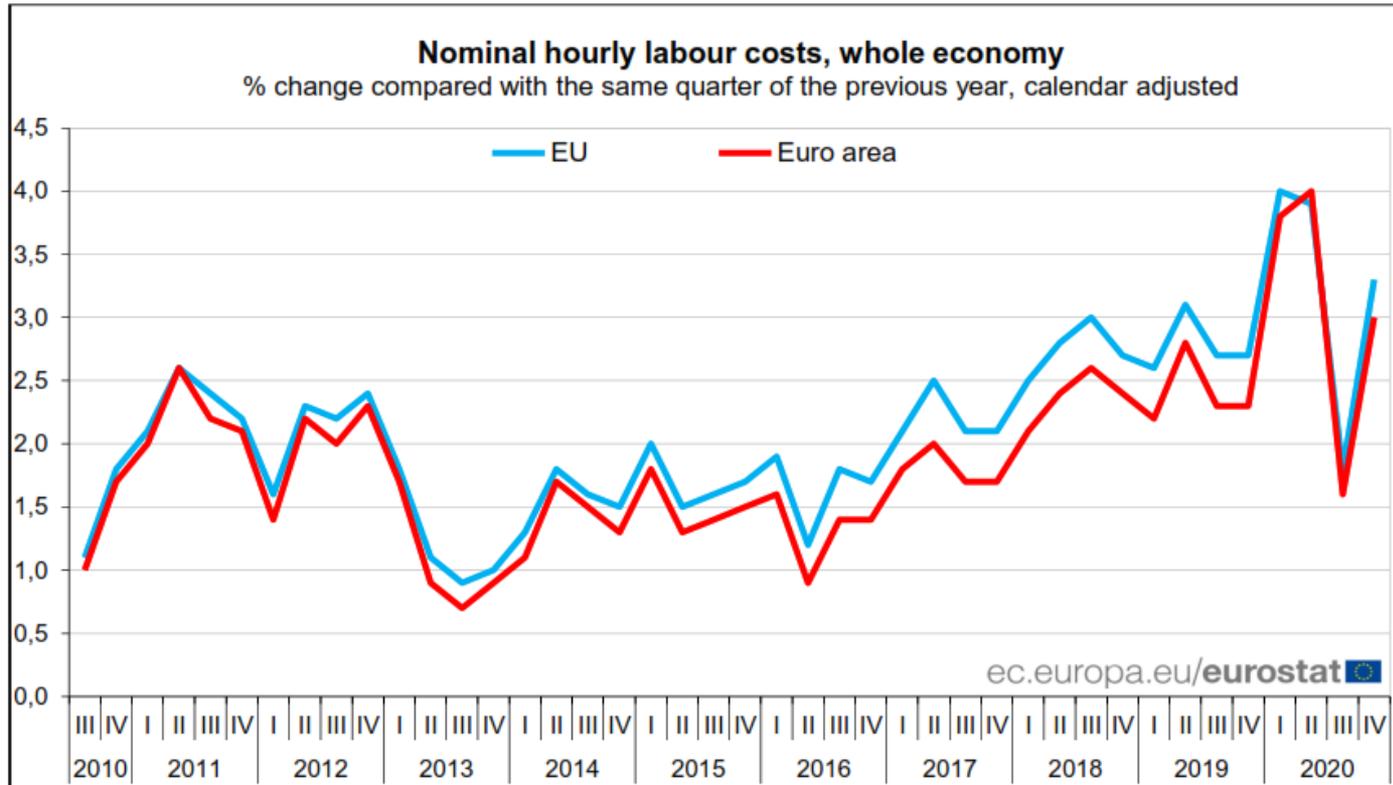


### Job vacancy rates, whole economy, fourth quarter of 2020 - not seasonally adjusted -



Denmark, France and Italy: not shown, as data are not strictly comparable.

\*Greece: Data from 2020Q3.



Nominal hourly labour costs, whole economy

STAT



## COVID impact on income

- The total employment income at EU level **decreased by -4.8% in 2020**, with the largest decreases due to absences and reduced hours.

**COVID impact on income: wage compensation schemes mitigated the income loss to about -2% at EU level in 2020.**

# Inequalities of COVID impact on labour and income in the EU

**Inequalities of COVID impact on labour and income in the EU:**  
**low income workers more likely to lose their job or to be on layoffs.**

Workers most hit by the COVID crisis:

- **young,**
  - **low skilled,**
  - **workers in accommodation and food sectors**
- are often overrepresented in the low income group.

# Risk of temporary lay off/reduced hours and losing job in the EU in Q2 2020

## by income\* from work

*(measured as probability from 0 to 1)*



## Annual growth in labour costs

Annual growth in labour costs in EU at 3.0%

Annual growth in labour costs in euro area at 3.3%

## Annual growth in labour costs in EURO area: Breakdown by economic activity

- In the fourth quarter of 2020 compared with the same quarter of the previous year, hourly labour costs in the euro area rose by:
  - +4.0% in the (mainly) non-business economy and
  - +2.6% in the business economy:
    - +2.2% in industry,
    - +3.2% in construction and
    - +2.6% in services.

## Annual growth in labour costs in EU: Breakdown by economic activity

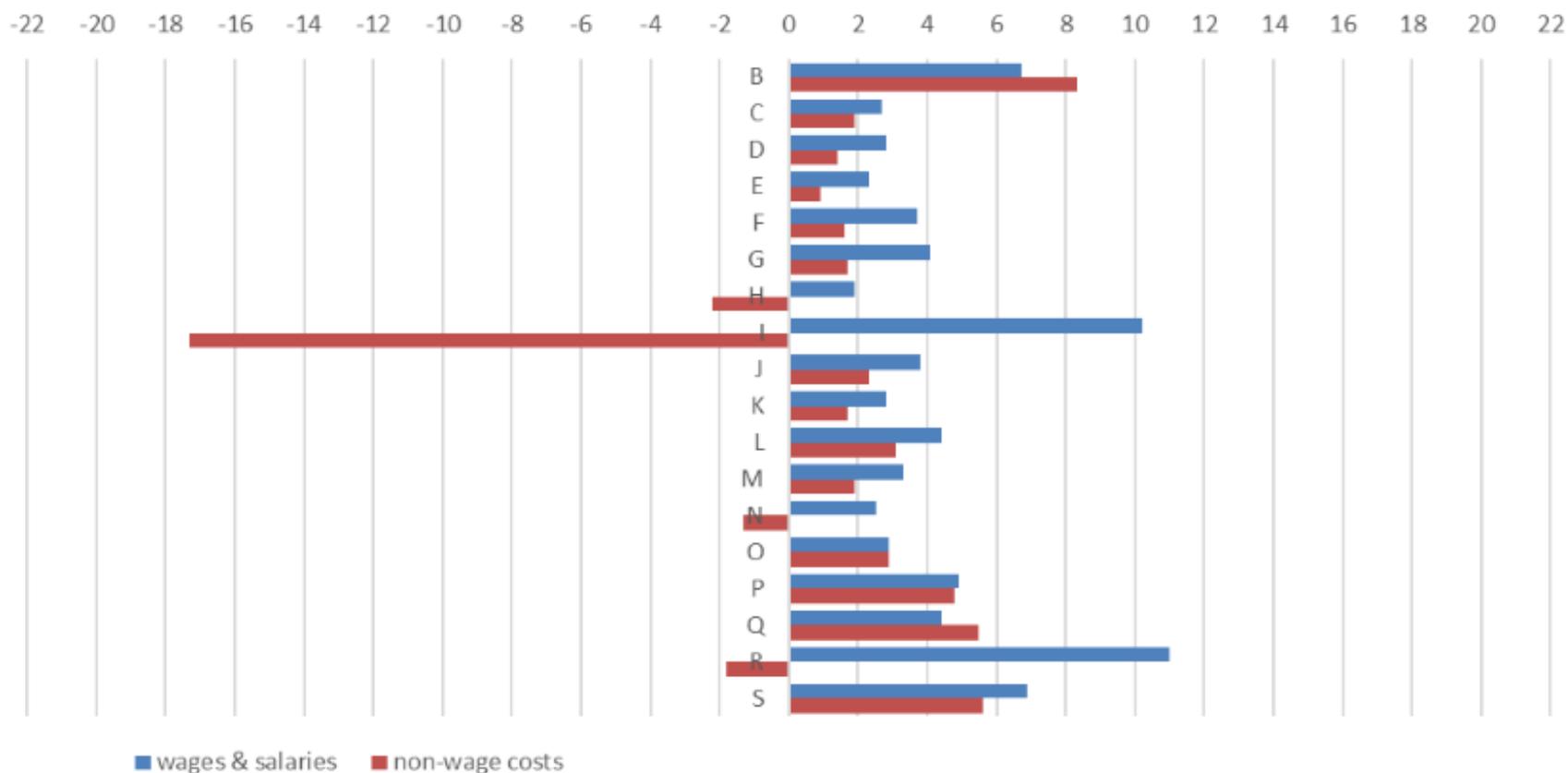
In the EU, hourly labour cost grew by :

- +4.4% in the (mainly) non-business economy and
- +2.8% in the business economy:
  - +2.6% in industry,
  - +3.2% in construction and
  - +2.8% in services.

# Nominal hourly labour cost of wage and non-wage component

Source: EUROSTAT

**Nominal hourly labour costs of wage and non-wage component by NACE sections, EU**  
% change compared with the same quarter of the previous year, calendar adjusted  
**Q4 2020**



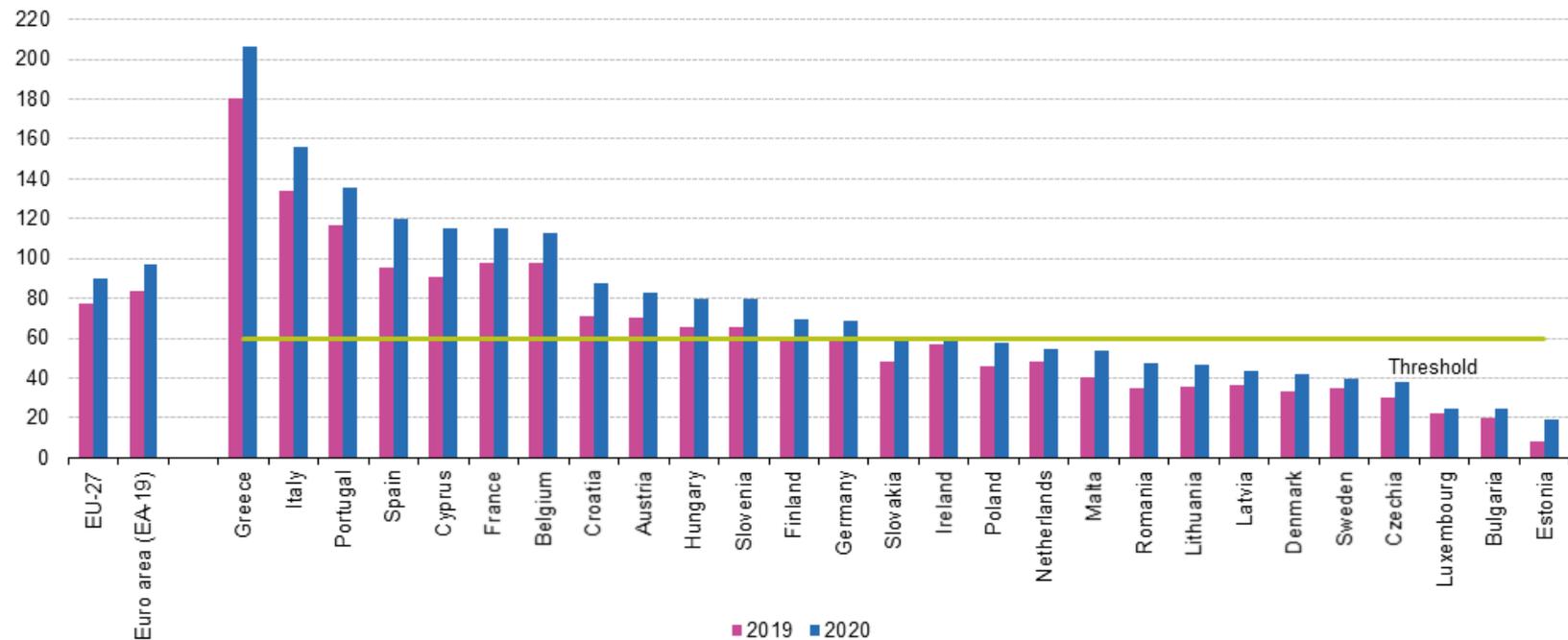
(NACE Rev. 2 Sections B to J)

	Q4 2019			Q1 2020			Q2 2020			Q3 2020			Q4 2020		
	TOTAL	WAGES	OTHER	TOTAL	WAGES	OTHER	TOTAL	WAGES	OTHER	TOTAL	WAGES	OTHER	TOTAL	WAGES	OTHER
Euro area	2.3	2.4	1.9	3.8	3.9	3.3	4.0	4.9	1.1	1.6	2.2	-0.3	3.0	3.5	1.5
EU	2.7	2.8	2.2	4.0	4.1	3.4	3.9	5.0	0.4	1.8	2.4	0.0	3.3	3.7	1.8
Belgium	1.6	2.1	0.3	1.6	1.6	1.7	2.0	2.0	2.0	1.4	1.4	1.4	1.1	1.1	1.2
Bulgaria	11.6	11.4	12.6	10.0	10.0	10.1	10.0	9.8	10.9	3.6	3.5	4.1	10.0	10.0	10.1
Czechia	8.1	7.8	8.9	6.5	6.5	6.4	7.1	10.6	-2.8	6.1	6.6	4.6	9.8	11.8	4.0
Denmark	1.8	1.7	2.0	2.3	2.4	2.2	1.8	4.1	-12.3	1.8	1.7	2.2	1.8	1.7	2.9
Germany	3.0	2.9	3.2	4.4	4.7	3.5	3.9	3.8	4.4	1.7	1.7	1.7	3.5	3.2	5.0
Estonia	6.7	6.7	6.8	4.3	4.3	4.2	1.9	3.1	-1.4	1.3	1.2	1.9	1.2	1.1	1.5
Ireland	3.9	3.2	9.3	3.0	2.6	5.7	-4.6	3.5	-63.8	-2.9	2.1	-39.4	-4.8	3.8	-64.6
Greece	4.1	4.0	4.4	1.6	2.5	-1.0	3.3	5.3	-2.9	1.4	2.2	-1.2	:	:	:
Spain	2.9	2.4	4.6	3.8	3.8	3.9	8.5	6.5	14.5	2.6	2.7	2.2	3.4	2.6	5.8
France	1.0	1.4	-0.2	1.4	1.6	0.8	3.3	4.6	0.1	2.0	2.7	0.3	2.8	3.5	1.2
Croatia	3.0	3.4	0.7	-0.1	0.8	-4.8	0.6	1.4	-4.0	-0.6	0.3	-5.8	-1.1	-0.2	-6.3
Italy	1.3	1.1	1.6	5.1	4.9	5.4	7.6	7.7	7.5	1.0	0.9	1.4	1.4	2.1	-0.4
Cyprus	5.3	3.3	16.1	3.2	1.9	10.0	-12.8	-13.3	-10.7	-2.8	0.2	-16.7	3.2	2.3	7.2
Latvia	7.7	8.3	5.8	6.2	7.5	1.4	4.4	4.9	2.6	4.6	4.2	6.0	7.1	7.5	5.7
Lithuania	4.8	:	:	9.1	9.3	4.5	12.4	13.5	-8.1	4.9	8.8	-67.3	4.6	10.7	-107.6
Luxembourg	1.1	1.1	1.1	0.5	0.4	2.0	-0.6	-1.4	6.8	2.0	1.9	3.0	0.9	0.9	1.1
Hungary	9.9	11.0	4.2	8.4	9.5	3.0	12.2	13.8	4.2	5.5	6.4	0.7	8.3	9.4	2.0
Malta	1.3	1.7	-3.3	1.1	3.4	-25.5	-3.3	8.5	-139.6	-5.4	2.5	-95.1	-3.7	4.4	-97.6
Netherlands	3.2	2.7	5.0	4.4	4.6	3.6	-1.8	7.6	-39.8	-0.1	4.5	-16.6	1.4	5.2	-13.0
Austria	2.0	2.2	1.2	7.8	7.1	10.0	4.7	1.5	15.3	0.2	-0.7	3.2	11.6	10.8	14.4
Poland	5.9	5.9	5.9	9.0	9.0	8.9	5.5	5.5	5.4	4.7	4.8	4.6	7.3	7.3	7.2
Portugal	0.7	0.7	0.8	7.6	7.5	7.8	14.2	16.5	4.9	5.8	6.1	4.6	6.6	6.5	7.1
Romania	12.2	12.1	14.0	8.1	8.0	10.0	5.5	5.4	8.4	5.7	5.7	5.3	8.7	8.7	9.1
Slovenia	6.7	6.5	8.5	5.7	6.1	3.4	8.8	11.3	-6.0	1.8	1.9	1.0	3.5	3.3	4.3
Slovakia	7.9	7.8	8.1	9.8	9.9	9.6	7.0	12.1	-8.0	6.0	7.6	1.3	7.3	9.6	0.7
Finland	1.7	2.2	-0.9	0.4	0.6	-0.4	1.6	2.6	-3.1	1.2	2.6	-5.3	-0.5	0.9	-6.7
Sweden	2.8	2.8	2.7	3.1	3.0	3.4	-2.2	2.2	-11.4	1.5	1.7	1.1	2.3	2.1	2.5
Norway	3.1	3.1	2.9	3.0	3.1	2.7	2.7	3.1	0.3	2.3	2.3	2.1	1.9	1.9	1.7
Iceland	4.1	4.2	3.8	4.2	4.2	4.2	6.2	6.2	6.2	5.8	5.8	5.7	6.0	5.9	6.3

Latest available data are subject to revision. In particular for the latest countries, when more complete data become available.

# General government debt 2019 and 2020 (% of GDP)

**General government debt, 2019 and 2020 (1)**  
 (General government consolidated gross debt, % of GDP)



(1) Data extracted on 20.10.2021  
 Source: Eurostat (gov\_10dd\_edpt1)

# Recovery plan for Europe

- The largest stimulus package ever
- The EU's long-term budget, coupled with NextGenerationEU, the temporary instrument designed to boost the recovery, will be the largest stimulus package ever financed through the EU budget. **A total of €1.8 trillion will help rebuild a post-COVID-19 Europe.** It will be a greener, more digital and more resilient Europe.
- The new long-term budget will increase flexibility mechanisms to guarantee it has the capacity to address unforeseen needs. It is a budget fit not only for today's realities but also for tomorrow's uncertainties.
- The last step of the adoption of the next long-term EU budget was reached on 17 December 2020.

# Recovery and Resilience Facility Investing in a green, digital and resilient EU

## Investing in a green, digital and resilient EU



- **Legal commitments:** by 31 December 2023
- **Payments:** by 31 December 2026

## Recovery and Resilience Facility: grants

Total grants: €312.5 billion

**€218.75**  
BILLION

### GRANT ALLOCATION KEY

- unemployment 2015-2019
- inverse GDP per capita
- population share

2021 - 2022



2023

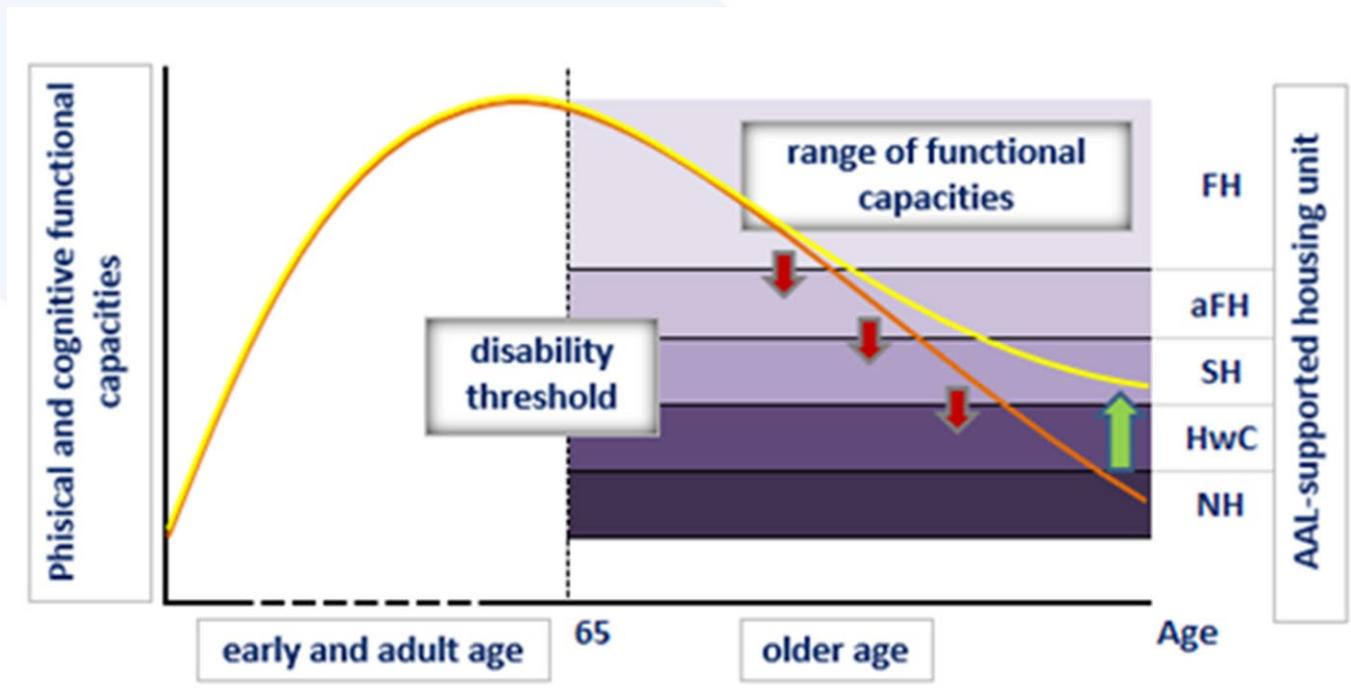


**€93.75**  
BILLION

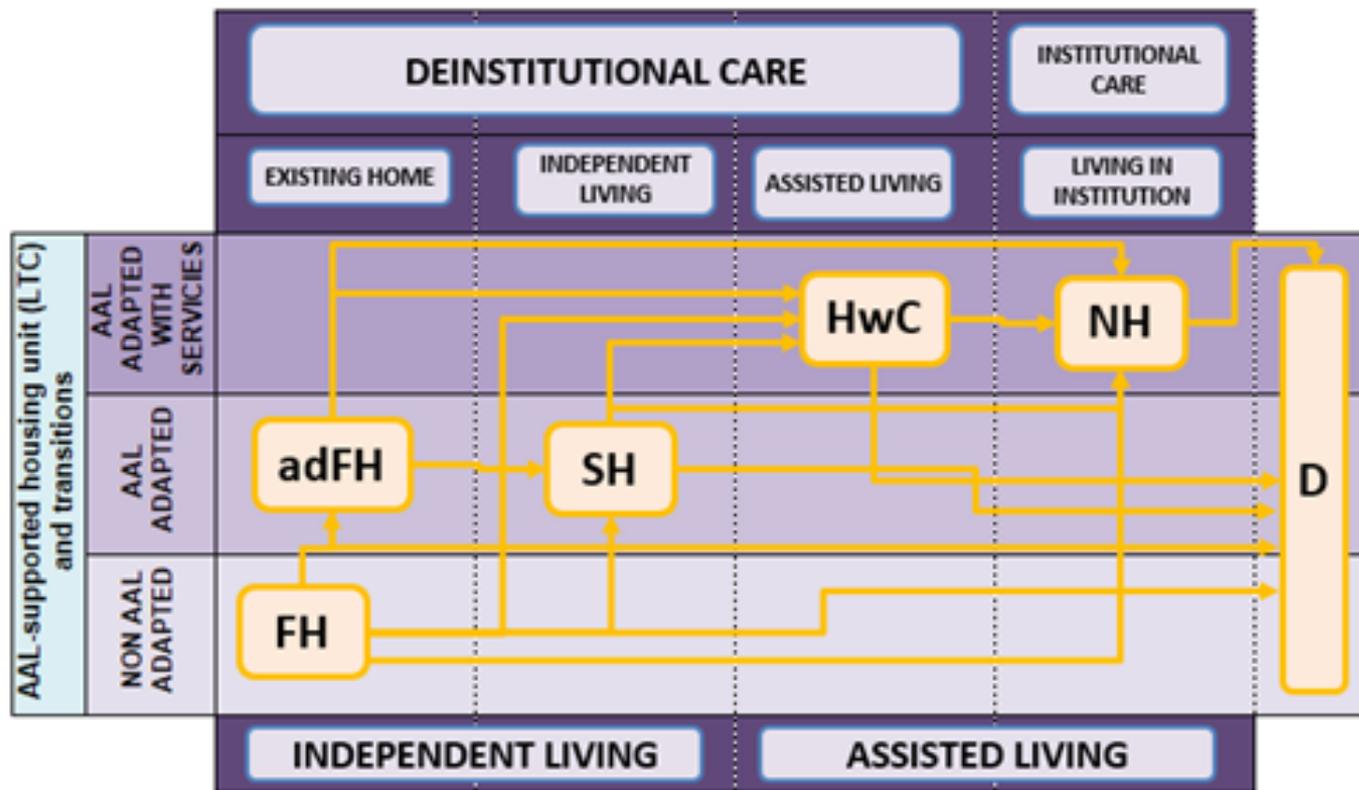
### GRANT ALLOCATION KEY

- drop in real GDP over 2020
- overall drop in real GDP 2020-2021
- inverse GDP per capita
- population share

# Further research - Dynamics of functional capacities in life-cycle



# Further research - Dynamics of functional capacities in life-cycle





# Thank you for attention!

[dbogataj@actuary.si](mailto:dbogataj@actuary.si)

# ACTUARIAL ASSOCIATION OF EUROPE

Actuarial House

1 Place du Samedi

1000 Brussels

Belgium

[www.actuary.eu](http://www.actuary.eu)

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