



European
Commission

ISSN 2443-8014 (online)

2024 Ageing Report

Economic & Budgetary
Projections for the EU
Member States (2022-2070)

INSTITUTIONAL PAPER 279 | APRIL 2024

EUROPEAN ECONOMY



*Economic and
Financial Affairs*

European Economy Institutional Papers are important reports analysing the economic situation and economic developments prepared by the European Commission's Directorate-General for Economic and Financial Affairs, which serve to underpin economic policy-making by the European Commission, the Council of the European Union and the European Parliament.

DISCLAIMER

The views expressed in unofficial documents do not necessarily represent the views of the European Commission.

LEGAL NOTICE

Neither the European Commission nor any person acting on behalf of the European Commission is responsible for the use that might be made of the information contained in this publication.

This paper exists in English only and can be downloaded from https://economy-finance.ec.europa.eu/ecfin-publications_en.

Luxembourg: Publications Office of the European Union, 2024

PDF ISBN 978-92-68-13780-2 ISSN 2443-8014 doi:10.2765/022983 KC-BC-24-006-EN-N

© European Union, 2024

Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39). For any use or reproduction of material that is not under the EU copyright, permission must be sought directly from the copyright holders.

CREDIT

Cover photography: © Reporters.be/CHROMORANGE

European Commission
Directorate-General for Economic and Financial Affairs

2024 Ageing Report

Economic and budgetary projections for the EU Member States
(2022-2070)

ACKNOWLEDGEMENTS

This report was prepared as part of the mandate the Economic and Financial Affairs Council gave to the Economic Policy Committee (EPC) in 2021 to update and further deepen its triannual projections of age-related expenditure based on new population projections by Eurostat. The work to fulfil this mandate is performed within the EPC's Ageing Working Group (AWG).

The 2024 Ageing Report provides long-term projections for public expenditure on pensions, healthcare, long-term care and education in the European Union up to 2070, based on a [common set of assumptions and methodologies](#). The Ageing Report has been published every three years since 2006.

This report is presented by the EPC and the European Commission (Directorate-General for Economic and Financial Affairs - DG ECFIN) after discussion and agreement in the AWG. DG ECFIN provided the analysis and calculations underpinning the report. Eurostat prepared the demographic projections.

The report was prepared under the supervision of Massimo Suardi (Director in DG ECFIN), Andrea Oliveira (Chair of the EPC), Pieter de Jonge (Chair of the AWG) and Stéphanie Pamies (Head of Unit in DG ECFIN). It was written by Santiago Calvo Ramos, Ben Deboeck, Nicola Gagliardi, Boriana Goranova and Frederic Opitz, in collaboration with the Members of the AWG (see list below). Secretarial support was provided by Laura Crapanzano.

The review of Member States' pension projections was performed by Ben Deboeck, Miklos Erdei, Nicola Gagliardi, Philipp Mohl, Eloïse Orseau and Adja Awa Sissoko.

The EPC and DG ECFIN would like to thank all those concerned.

Comments can be sent to:

DG ECFIN - Unit C2: ecfin-secretariat-c2@ec.europa.eu.

Secretariat of the Economic Policy Committee: epc-secretariat@ec.europa.eu.

MEMBERS OF THE AGEING WORKING GROUP

CHAIRMAN

Pieter **de JONGE** Ministry of the Interior, the Netherlands

BELGIUM

Nicole **FASQUELLE** Federal Planning Bureau

Vesna **STAVREVSKA** Federal Planning Bureau

BULGARIA

Kaloyan **KOLEV** Ministry of Finance

Penka **TANEVA** National Social Security Institute

CZECHIA

Zbynek **STORK** Ministry of Finance

Jindrich **MARVAL** Ministry of Finance

DENMARK

Sebastian **HONORÉ** Ministry of Finance

Thor Askov **JENSEN** Ministry of Finance

GERMANY

Philipp **DYBOWSKI** Federal Ministry of Finance

Daniel **KEMPTNER** Federal Ministry of Labour and Social Affairs

ESTONIA

Risto **KAARNA** Ministry of Finance

Tõnu **LILLELAID** Ministry of Finance

IRELAND

Colm **ROCHE** Department of Finance

Ciara **O'CONNOR** Department of Finance

GREECE

Eirini **ANDRIOPOULOU**

Ministry of Finance

Angeliki **ZOULAKI**

National Actuarial Authority

SPAIN

Álvaro **MEDINA GUTIÉRREZ**

Ministry of Economic Affairs and Digital Transformation

Aurora **GONZÁLEZ URIEL**

Ministry of Finance

FRANCE

Vieu **LIN**

Ministry of Economy and Finance

Pierre **DE SAINT JULIEN**

Ministry of Economy and Finance

CROATIA

Josipa **MESTROVIĆ SPOLJAR**

Croatian Health Insurance Fund

Alen **BUČIĆ**

Croatian Pension Insurance Institute

ITALY

Chiara **RUBINO**

Ministry of Economy and Finance

Riccardo **CONTI**

Sogei S.p.a.

CYPRUS

Maria **MATSI**

Ministry of Finance

Maria **NICOLAOU CHRISTOU**

Ministry of Labour and Social Insurance

LATVIA

Jūlija **BURĢE**

Ministry of Finance

Sandra **STABINA**

Ministry of Welfare

LITHUANIA

Mantas **BUREIKA**

Ministry of Finance

Matas **VINKUS**

Ministry of Social Security and Labour

LUXEMBOURG

Gabriel **GOMES**

STATEC

Kevin **EVERARD**

General Inspectorate of Social Security

HUNGARY

Péter **MÉSZÁROS**

Ministry of Finance

Renáta **NÉMETH-SZŰCS**

Hungarian State Treasury

MALTA

Wayne **APAP**

Ministry for Finance and Employment

Anna **BONNICI**

Ministry for Finance and Employment

THE NETHERLANDS

Joris **VAN TOOR**

CPB Netherlands Bureau for Economic Policy

Jessica **DE VLIENER**

Ministry of Finance

AUSTRIA

Susanna **SANDRUSCHITZ-FLOH**

Ministry of Finance

Armin **HEINRICH**

Ministry of Finance

POLAND

Joanna **STACHURA**

Ministry of Finance

Paweł **STRZELECKI**

National Bank of Poland

PORTUGAL

Conceicao **NUNES**

Ministry of Finance

Rita **FIGUEIRAS**

Ministry of Labour, Solidarity and Social Security

ROMANIA

Ioana **GAVRIL**

Ministry of Finance

Tamara **NAE**

Ministry of Finance

SLOVENIA

Ana **MILANEZ**

Ministry of Finance

Lejla **FAJIĆ**

Institute of Macroeconomic Analysis and Development

SLOVAKIA

Marian **ŠALING**

Ministry of Finance

Peter **MARTIŠKA**

Ministry of Finance

FINLAND

Olli **PALMEN** Ministry of Finance

Seppo **ORJASNIEMI** Ministry of Finance

SWEDEN

Linnéa **PRYTZ** Ministry of Finance

Jonas **NORLIN** Ministry of Finance

OBSERVERS

ICELAND

Tinna **FINNBOGADÓTTIR** Embassy of Iceland in Brussels

NORWAY

Yngvar **DYVI** Ministry of Finance

SWITZERLAND

Carsten **COLOMBIER** Federal Department of Finance

Thomas **BRÄNDLE** Federal Department of Finance

ECB

Edmund **MOSHAMMER** DG Economics – Fiscal Policies Division

EUROSTAT

Jarko **PASANEN** ESTAT F1

Hannah **KIIVER** ESTAT F1

EPC SECRETARIAT

Fabian **LENGERT** EFC-EPC 01

EUROPEAN COMMISSION

Stéphanie **PAMIES** ECFIN C2

Ben **DEBOECK** ECFIN C2

CONTENTS

Executive Summary	1
1. 2024 Ageing Report: mandate, general principles and process	1
2. The economic and budgetary impact of population ageing	3
Part I: Long-term projections of age-related expenditure	17
1. Pensions	18
1.1. Introduction	18
1.2. Typology of public pension schemes	18
1.3. Coverage of the pension projections	20
1.4. Main features of pension systems in the EU	20
1.5. Pension expenditure projections	27
1.6. Drivers of pension expenditure	39
1.7. Disaggregation of new pensions	49
1.8. Sensitivity tests and alternative scenarios	52
1.9. Comparison with the 2021 Ageing Report	59
2. Health care	66
2.1. Introduction	66
2.2. Determinants of health care expenditure	66
2.3. Short overview of the projection methodology	80
2.4. Projection results	87
2.5. Comparison with the 2021 Ageing Report	99
2.6. Conclusions	102
3. Long-term care	103
3.1. Introduction	103
3.2. Determinants of long-term care expenditure	106
3.3. Overview of the projection methodology	111
3.4. Projection results	117
3.5. Comparison with the 2021 Ageing Report	125
3.6. Conclusions	128
4. Education	131
4.1. Introduction	131
4.2. General characteristics of national education systems	132
4.3. Projection results	134
4.4. Comparison with the 2021 Ageing Report	139
5. Total cost of ageing	141
5.1. Introduction	141
5.2. Projection results	141
5.3. Comparison with the 2021 Ageing Report	148

Annexes	151
AI. Overview of pension systems	151
AII. Input data used to project health care expenditure	155
AIII. Input data used to project long-term care expenditure	158
AIV. Input data used to project education expenditure	163
Part II: Statistical Annex – Cross-country tables	167
Part III: Statistical Annex – Country tables	245
1. Belgium	246
2. Bulgaria	249
3. Czechia	252
4. Denmark	255
5. Germany	258
6. Estonia	261
7. Ireland	264
8. Greece	267
9. Spain	270
10. France	273
11. Croatia	276
12. Italy	279
13. Cyprus	282
14. Latvia	285
15. Lithuania	288
16. Luxembourg	291
17. Hungary	294
18. Malta	297
19. The Netherlands	300
20. Austria	303
21. Poland	306
22. Portugal	309
23. Romania	312
24. Slovenia	315
25. Slovakia	318
26. Finland	321
27. Sweden	324
28. Norway	327
29. Euro area	330
30. European Union	333
Part IV: Resources	337
References	338

EXECUTIVE SUMMARY

1. 2024 AGEING REPORT: MANDATE, GENERAL PRINCIPLES AND PROCESS

To assess the long-term sustainability of public finances in the EU Member States, the ECOFIN Council mandated the Economic Policy Committee (EPC) to update its comprehensive long-term budgetary projections by the summer of 2024. ⁽¹⁾ The update of the Ageing Report, a joint report by the EPC and the European Commission (DG ECFIN), should be based on new population projections by Eurostat. The report is prepared by the EPC's Ageing Working Group (AWG). It was first published in 2006 and has been updated every three years since then.

The Ageing Report is a unique exercise in that it provides detailed economic and budgetary projections for the EU Member States and Norway up to 2070 based on common assumptions and methodologies. The report provides a vast set of comparable and internally consistent information for 28 countries. These give insight into the timing of population ageing, its economic implications and the associated budgetary challenges. Such pressures are already manifest in many countries and are expected to accelerate as large cohorts of baby boomers retire, life expectancy continues to rise and fertility rates remain low from a historical point of view.

Being a joint EPC-Commission product, the Ageing Report provides a shared assessment between the Member States and the Commission on how ageing costs might develop in the future, considering the latest information and legislated reforms. The projections are therefore a cornerstone of various surveillance processes at the EU level. They inform the coordination of economic policies, in particular under the European Semester, the implementation of the Recovery and Resilience Facility, the annual assessment of the sustainability of public finances and fiscal surveillance under the Stability and Growth Pact.

Overview of the projection exercise

The preparation of the triennial update of the report includes two phases. In a first phase, the Commission and the Member States in the AWG agree on the underlying assumptions and projection methodologies (see Graph 1), which are subsequently endorsed by the EPC. These assumptions and methodologies were published in November 2023 in a separate volume. ⁽²⁾ In a second phase, the age-related spending projections are prepared, the results of which are presented in this report and in the accompanying pension fiches for each country.

The underlying assumptions and projection methodologies, agreed jointly with the Member States, cover all key drivers of ageing costs. The EUROPOP2023 population projections by Eurostat serve as a starting point of the exercise. In addition, based on common methodologies, macroeconomic assumptions are prepared for each country. These cover economic growth and its drivers, namely changes in labour productivity (total factor productivity and capital deepening) and in the labour force (participation, employment and unemployment rates), as well as interest rates and inflation. The statistical annexes at the end of this report provide a country-by-country overview of the demographic and macroeconomic projections.

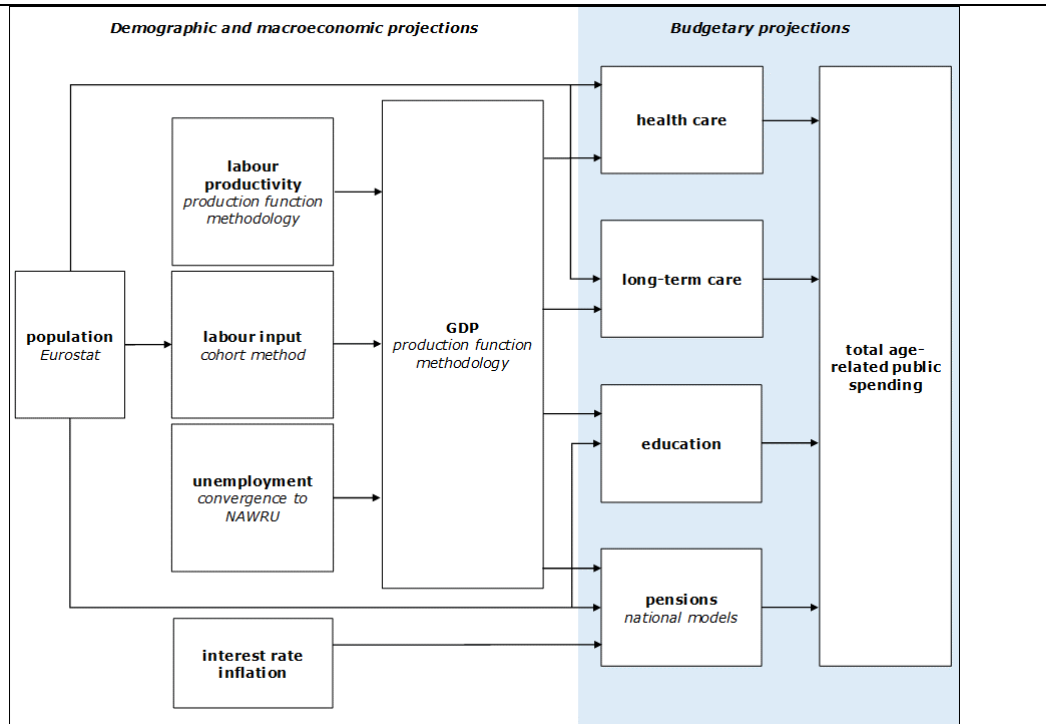
The budgetary projections cover four items: public spending on pensions, health care, long-term care and education. They are the subject of this report. For pensions, Member States prepared

⁽¹⁾ See [Council Conclusions \(2021\)](#).

⁽²⁾ See Commission and EPC (2023), '[2024 Ageing Report: Underlying assumptions and projection methodologies](#)', European Economy, Institutional Paper 257.

projections based on national models, which were the subject of an in-depth peer review by the Commission and the AWG. This approach allows capturing the specificity of each country’s public pension system, while ensuring cross-country consistency since the projections are based on shared assumptions and methodologies. Based on common models, the Commission prepared the health care, long-term care and education projections, which were discussed and agreed within the AWG. All budgetary projections were endorsed by the EPC in January 2024.

Graph 1: Overview of the Ageing Report projection exercise



Source: European Commission, EPC.

The Ageing Report’s baseline projections are based on a general ‘no-policy-change’ assumption, reflecting legislated measures.⁽³⁾ They illustrate what the future is likely to look like if current policies remain unchanged. Nonetheless, projecting economic and budgetary developments over a period of years involves a considerable degree of uncertainty as the results are strongly influenced by the underlying assumptions. For this reason, a series of sensitivity tests and alternative scenarios is conducted around the baseline to assess the responsiveness of the projections to changes in the main demographic and economic parameters. In addition to the tests covering demographic and macroeconomic variables, specific policy scenarios apply for each expenditure item.

This report is structured in three parts. Part I presents the long-term budgetary projections for pensions, health care, long-term care and education. It concludes with the total cost of ageing, bringing together the four expenditure items from the previous chapters. Each chapter presents the baseline figures, the impact of the sensitivity tests and alternative scenarios, and revisions compared to the 2021 Ageing Report. Parts II and III contain statistical annexes with, respectively, cross-country tables and country fiches. They give an overview of the main assumptions and macroeconomic projections, as well as projection results for the four items by country and at the aggregate EU and euro area level.

⁽³⁾ With a general cut-off date of 1 December 2023.

2. THE ECONOMIC AND BUDGETARY IMPACT OF POPULATION AGEING

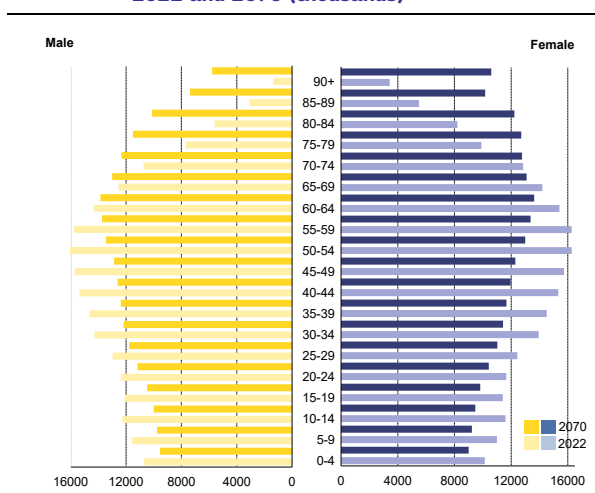
2.1. Demographic and macroeconomic developments ⁽⁴⁾

The EU population is projected to start falling in the coming years while the number of older people rises, especially relative to the number of people at working age

The EU population is expected to rise from 449 million people in 2022 to a peak of 453 million people in 2026, before falling to 432 million in 2070. This is a decline by 4% compared to 2022. This general trend at EU level encompasses heterogeneous developments at country level. For instance, in 13 Member States, the population is projected to increase between 2022 and 2070 (see Table 3).

At the same time, a strong upward shift in the age distribution is expected in all Member States. As shown in Graph 2 for the EU as a whole, the size of the older age groups would grow, while the younger age brackets would shrink. The few countries where the working-age population (people aged 20 to 64) is projected to increase would see an even greater increase in the population aged 65 or more.

Graph 2: **EU – Population by age group and sex, 2022 and 2070 (thousands)**



Source: European Commission, EPC.

As a result, the old-age dependency ratio will rise sharply in all Member States over the coming decades (see Table 3). The old-age dependency ratio is the ratio of the old-age population to the working-age population. This ratio gives an idea about the relative shift between potential retirees and potential workers and thus of how an ageing population alters the balance between beneficiaries and contributors. From about 29% in 2010 in the EU, it rose to 36% in 2022 and would rise further to 59% in 2070, with most of the increase expected already by 2045. Put differently, the EU would go from having nearly thirty people aged 20 to 64 for every ten people aged over 65 years in 2022, to having less than twenty people by 2045.

Projected changes in the size and age profile of the population are determined by assumptions regarding fertility rates, mortality rates and migration. The *total fertility rate* in the EU is projected to slightly rise from 1.50 live births per woman in 2022 to 1.62 by 2070, staying below the natural replacement rate of 2.10 in all countries (see Table 3). Average *life expectancy* at birth is expected to increase from 78.4 in 2022 to 86.1 in 2070 for men and from 84.0 in 2022 to 90.4 in 2070 for women, with a continued convergence between sexes. *Net migration* is projected to be positive in nearly all countries, at an annual average of 0.3% of the EU population in 2022-2070. Countries' long-term immigration and emigration rates are based on a partial convergence to past trends for the EU as a whole.

⁽⁴⁾ The underlying demographic and macroeconomic assumptions for the 2024 Ageing Report are discussed in Commission and EPC (2023), [2024 Ageing Report: Underlying assumptions and projection methodologies](#), European Economy, Institutional Paper 257. For Romania, the macroeconomic assumptions were updated to account for the pension reforms adopted in November 2023. The budgetary projections in this report incorporate these reforms.

Labour force participation is projected to rise, driven by older workers and women, but not sufficiently to compensate for the decline in the working-age population

The participation rate of the EU working-age population is projected to increase by around 3 pps. The economic implications of the demographic projections depend on how many people take part in the labour market and for how long. The Ageing Report's labour force projections follow a cohort approach that captures the current situation in each country and the future effects of legislated pension reforms. The participation rate of people aged 20-64 is projected to increase from 79.4% in 2022 to 82.7% by 2070 and from 65.4% to 75.5% for people aged 55-64 (see Table 4). The upward trend reflects the combined effect of pension reforms on the exit behaviour of older age groups and the progressive increase in female labour market participation given the higher labour market attachment of younger female cohorts.

Still, in most countries, higher participation would be insufficient to offset the projected decline in the working-age population. As a result, the number of people in the labour force is projected to decrease by 12% (25 million people) between 2022 and 2070 in the EU or 0.3% annually. In several Member States, the labour force would shrink by more than a quarter by 2070.

Employment rates are also projected to increase, though total hours worked would decline because of population ageing

Employment in the EU is projected to rise from around 75% of the working-age population in 2022 to around 79% in 2070 (see Table 4). Employment is determined by the population, participation and unemployment projections. The latter are based on estimates of structural unemployment. The unemployment rate for the 20-64 age group would fall from 5.9% in 2022 to 5.1% in 2070. The 4 pps increase in the EU employment rate between 2022 and 2070 includes a nearly 6 pps increase for women and about 2 pps for men. The employment rate of people aged 55-64 is expected to rise by 10 pps on average.

While a higher share of the population is expected to be employed, a shrinking working-age population means that the total number of hours worked would nevertheless fall. The average projected decline in hours worked between 2022 and 2070 amounts to 9% in the EU. As a result, the *economic* old-age dependency ratio (inactive people above the age of 65 relative to employed people aged 20-64) would rise from 46% in 2022 to 70% in 2070 (see Table 3). This means that for every ten inactive people above 65, there will be 14 employed people in 2070, down from 22 in 2022 and 16 in 2045. The projected increase in the *economic* old-age dependency ratio is relatively smaller than the one for the *demographic* old-age dependency ratio because of the increase in participation and employment rates.

Amid a decline in hours worked, labour productivity would become the sole driver of GDP growth

Real GDP is projected to grow by 1.3% on average in the EU in 2022-2070 (see Table 4). On the one hand, the contribution of labour to GDP growth is expected to turn negative as of the late 2020s, *decreasing* by 0.2% per year on average in 2022-2070. This decline results from a lower share of working-age people in an already shrinking total population, with a higher employment rate somewhat offsetting the decline. On the other hand, labour productivity is assumed to *grow* by 1.4% per year on average over the projection period, of which 0.9 pps comes from total factor productivity (TFP) and 0.5 pps from capital deepening.

In the updated projections, TFP growth converges to 0.8% in the long term in all countries. Member States with GDP per capita below the EU average are assumed to experience faster TFP growth in the first part of the projection period, in line with past trends. A similar catching-up

mechanism applies to the capital deepening projections. The TFP convergence growth rate of 0.8% compares to 1% in the 2021 Ageing Report. Despite this downward revision, the assumptions still imply an acceleration in productivity growth in the medium term for many Member States, considering that TFP growth has fallen back to historically low levels in recent years.

2.2. Long-term budgetary projections

The budgetary projections for pensions, health care, long-term care and education consist of a baseline and a range of sensitivity tests. Under the baseline, total ageing costs are rising in most Member States, often substantially. Most of this budgetary burden will materialise over the next two decades, when demographic ageing advances the fastest. A series of sensitivity tests is conducted around the baseline to account for the uncertainty surrounding long-term projections. They illustrate the extent to which the projections respond to changes in the main underlying assumptions. In addition, scenarios are run to show the impact specific policy changes would have on the baseline projection. These sensitivity tests and alternative scenarios point to considerable additional risks, including for countries with more favourable baseline projections.

Baseline projection results

In the baseline, the total cost of ageing (pension, health care, long-term care and education expenditure) is set to increase in the EU. Ageing costs amounted to 24.4% of GDP in 2022 including 11.4% for pensions, 6.9% for health care, 4.4% for education and 1.7% for long-term care. They are projected to rise by 1.2 pps over the projection period, to 25.6% of GDP in 2070. The bulk of this increase is expected by the mid-point of the projections in 2045, with ageing costs continuing to rise slightly on average in the EU thereafter (see Tables 1 and 5).

Table 1: **Change in cost of ageing 2022-2070: baseline projection (%/pps of GDP)**

	age-related expenditure 2022	change in 2022-2070 due to:				total	age-related expenditure 2070
		pensions	health care	long-term care	education		
LU	17.2	8.3	1.2	1.6	-0.4	10.7	27.9
MT	16.9	4.4	2.1	2.3	-0.1	8.6	25.6
SK	19.0	2.8	1.6	1.4	0.3	6.1	25.0
SI	22.1	3.8	0.8	1.0	-0.3	5.4	27.5
HU	16.0	4.3	0.5	0.4	0.1	5.2	21.3
BE	26.8	3.5	0.6	1.7	-0.8	5.1	31.9
ES	23.9	3.6	1.2	0.9	-0.6	5.1	29.0
NO	30.1	1.7	1.2	3.5	-1.4	5.0	35.1
IE	12.0	2.8	1.5	1.4	-0.7	4.9	16.9
LT	14.8	3.2	0.8	0.9	-0.3	4.6	19.4
CY	20.9	3.6	0.8	0.1	-0.5	4.1	25.0
CZ	20.6	1.7	0.2	1.4	0.3	3.7	24.3
NL	21.0	2.0	0.7	1.9	-1.0	3.5	24.5
FI	26.4	1.4	0.6	1.8	-1.1	2.7	29.0
AT	27.7	0.4	1.1	1.5	-0.4	2.6	30.2
DE	24.3	1.2	0.1	0.5	0.2	2.0	26.4
PL	19.1	-0.2	1.1	0.9	0.1	1.9	21.0
DK	24.4	-1.4	0.4	3.3	-0.9	1.4	25.8
SE	23.6	-0.2	0.4	1.3	-0.6	0.8	24.5
BG	18.2	0.1	0.2	0.2	0.1	0.6	18.8
RO	15.8	-0.9	0.7	0.4	0.0	0.2	16.0
EE	16.8	-0.7	0.6	0.7	-0.6	0.0	16.9
HR	18.8	-0.2	0.7	0.1	-0.7	-0.2	18.7
PT	23.3	-1.8	1.0	0.4	-0.1	-0.5	22.8
FR	29.9	-0.9	0.3	0.7	-0.9	-0.7	29.2
LV	17.2	-1.7	-0.3	0.3	-0.2	-1.9	15.4
IT	27.3	-1.9	0.1	0.5	-0.8	-2.0	25.3
EL	23.4	-2.5	0.6	0.0	-0.5	-2.4	21.0
EU	24.4	0.4	0.4	0.8	-0.5	1.2	25.6

Countries are ranked by projected increase in total ageing costs in 2022-2070.

Source: European Commission, EPC.

The projections vary considerably across Member States, for both the time profile and the projected change in spending.

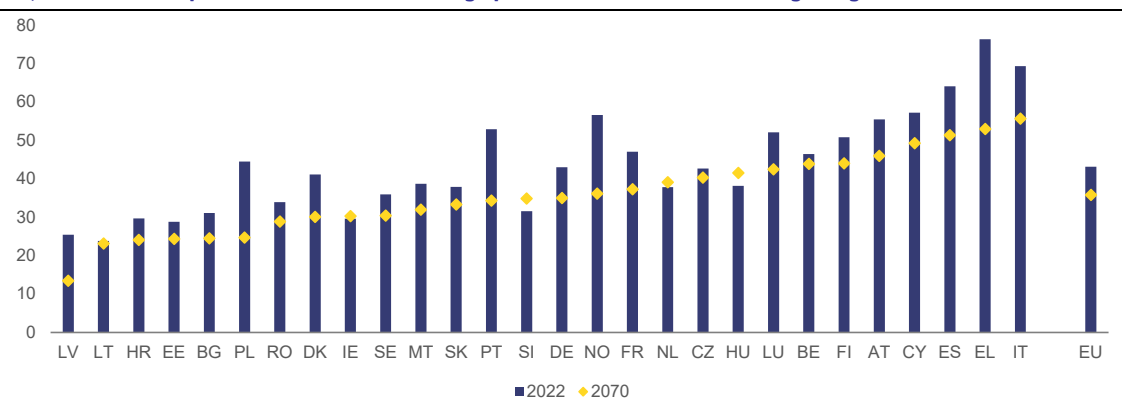
- *A fall in total age-related expenditure* is projected in six Member States: Greece, Italy, Latvia, France, Portugal and Croatia. In Estonia, ageing costs would be unchanged in 2070 from 2022. For all of them, a fall in the pension expenditure-to-GDP ratio is projected by 2070, with a generally smaller decline in education expenditure. Yet, for Italy, Portugal, Croatia and Estonia, ageing costs are expected to increase initially, falling only in a second phase of the projection period. For Greece, Latvia and France, the decline in overall ageing costs runs throughout the projection period, with a large part expected to materialise already in the next few decades.
- *Age-related expenditure is expected to rise moderately* (by up to 3 pps of GDP) in eight Member States: Romania, Bulgaria, Sweden, Denmark, Poland, Germany, Austria and Finland. For most of these countries, the projected decrease in education expenditure, and sometimes pension expenditure, compensates for the spending increase for the other items. Changes for the different items are limited among these countries. Moreover, in Romania, Bulgaria and Poland, age-related expenditure as a percentage of GDP is currently well below the EU average.
- *A substantial increase in ageing costs is projected* in the remaining thirteen countries: the Netherlands, Czechia, Cyprus, Lithuania, Ireland, Norway, Spain, Belgium, Hungary, Slovenia, Slovakia, Malta and Luxembourg. The impact of rising pension spending in these countries is compounded by higher health care and long-term care expenditure.

Looking at the different components, spending on care rises universally but it is pension expenditure that drives the overall change in ageing costs by 2070. 16 Member States and Norway would see pension spending increase over the projection period, while a small decrease is expected in 11 Member States. Spending on health care and long-term care is projected to go up for all countries – with a minor exception for health care in Latvia.⁽⁵⁾ The upward trend in 2022-2045 extends into 2045-2070, in contrast with pension expenditure for which a trend reversal takes place for many countries (see Table 5). Given the size of the change in pension expenditure and these trend reversals, pension spending drives the overall change in ageing costs between 2022 and 2070. Education expenditure is projected to decline slightly for most countries.

When a decline in pension expenditure is projected, this often reflects the impact of pension reforms and indexation rules on benefit ratios. The benefit ratio gives an indication of pension income adequacy. It expresses the average pension benefit in terms of the average wage. Thus, if new pension benefits are lower than pensions in payment or if indexation is below average wage growth, the pension benefit ratio declines because pension income falls relative to labour income. The baseline projection, conducted at unchanged policy, results in a decline in the benefit ratio in nearly all countries, going from 43% on average in the EU in 2022 to 36% in 2070 (see Graph 3). As a result, and all else being equal, the pension expenditure-to-GDP ratio would decrease by around 3 pps on average over the same period, mitigating the spending pressures stemming from population ageing, as captured through the dependency ratio. A strong decline in pension adequacy might be politically untenable, underscoring upward risks to the baseline projections through, for example, higher indexation than implied by current legislation. At the same time, the projections assume that minimum pensions follow wage growth over time and the build-up of rights under private schemes are projected to mitigate the decline in pension adequacy in the public scheme.

⁽⁵⁾ The decline in health care spending for Latvia between 2022 and 2070 is due to high temporary spending because of COVID-19 in 2022. When comparing 2023 and 2070, spending increases.

Graph 3: Public pension benefit ratio (average pension benefit as % of average wage)



Countries are ranked by benefit ratio level in 2070. The benefit ratio is computed on gross public pension expenditure.

Source: European Commission, EPC.

Risk analysis around the baseline

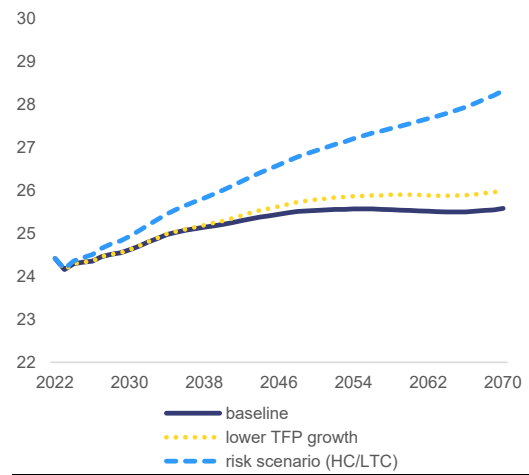
Given that the expenditure projections cover a long timespan, they come with a considerable degree of uncertainty. For this reason, a set of sensitivity tests and alternative scenarios is conducted around the baseline. They measure the sensitivity of the baseline spending projections to a change in the main underlying assumptions (demographic, macroeconomic and non-demographic cost drivers) or a change in the no-policy-change assumption applied in the baseline. Two of them deserve particular attention:

- **Lower TFP growth:** the baseline assumes total factor productivity (TFP) growth, a major component of labour productivity, to steadily increase. Since this implies a reversal of the trend decline seen in many countries in the last few decades, there is considerable risk that TFP growth fails to pick up. For this reason, the projections include a sensitivity test under which TFP growth converges to 0.6% instead of the 0.8% in the baseline. Less dynamic productivity growth would lower economic growth amid persistent population ageing: potential GDP growth would be 1.1% on average in 2022-2070 in the EU, compared with 1.3% in the baseline.
- **Risk scenario for health care and long-term care:** non-demographic factors may exert upward pressure on costs in the health care and long-term care systems. To gauge the impact such developments may have, an alternative scenario assumes a partial continuation of recently observed upward trends in health care expenditure, notably due to technological progress. For long-term care, the scenario assumes an upward convergence of coverage and costs profiles towards EU averages. ⁽⁶⁾

⁽⁶⁾ The scenario maintains the baseline assumption that half of the future gain in life expectancy is spent in good health. This considerably mitigates the demographic effects of ageing and can only be achieved if health systems contribute to healthy ageing, mostly through health promotion and prevention.

Lower-than-assumed TFP growth would further increase age-related expenditure for countries with the lowest prospects for productivity growth. In this case, spending would rise to 26% of GDP on average in the EU by 2070, 0.4 pps above the baseline level (see Graph 4). The difference with the baseline stems predominantly from pension expenditure. The impact amounts to around 1 pp of GDP for Belgium and Spain (see Tables 2 and 7), which use prices to uprate accrued rights and to index benefits. Countries that have been experiencing more robust productivity growth and that are expected to see this trend continue, reflecting convergence with other Member States, would be less affected. The same holds for countries that apply full wage indexation in the pension projections since real wage growth is assumed to develop in line with productivity growth so that the impacts on pension spending and on GDP are similar.

Graph 4: **EU – Total age-related expenditure: baseline, lower TFP growth and risk scenario (% of GDP)**



Source: European Commission, EPC.

The non-demographic risk scenario for health care and long-term care results in considerably higher ageing costs. By 2070, spending would rise to 28.3% of GDP on average in the EU, 2.7 pps above the baseline level (see Graph 4). Under this scenario, total age-related spending would rise in nearly all countries by 2070 ⁽⁷⁾ (see Tables 2 and 8). As a result of the convergence assumption for long-term care, the impact of the scenario is particularly high for Portugal, Lithuania, Estonia, Cyprus, Poland, Slovakia, Malta, Greece, Romania and Hungary.

Table 2: **Cost of ageing (change 2022-2070) – baseline, lower TFP growth and risk scenario (pps of GDP*)**

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	NO	EU
baseline projection	5.1	0.6	3.7	1.4	2.0	0.0	4.9	-2.4	5.1	-0.7	-0.2	-2.0	4.1	-1.9	4.6	10.7	5.2	8.6	3.5	2.6	1.9	-0.5	0.2	5.4	6.1	2.7	0.8	5.0	1.2
lower TFP growth	1.1	0.2	0.3	0.7	0.1	0.1	0.0	0.7	1.0	0.7	0.2	0.6	0.4	0.1	0.4	0.7	0.5	0.5	0.0	0.1	0.3	0.8	0.4	0.2	0.4	0.5	0.0	0.2	0.4
risk scenario (HC/LTC)	2.9	3.3	2.5	1.3	1.7	6.2	1.7	4.1	3.5	3.0	2.5	1.8	4.6	3.5	8.6	1.9	4.0	4.3	2.6	2.4	4.4	8.9	4.0	3.6	4.3	2.9	2.7	2.0	2.7

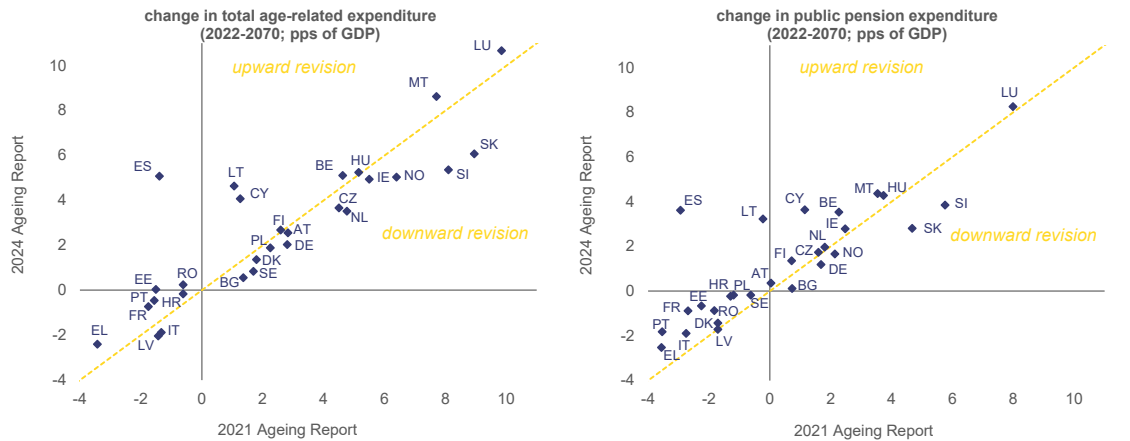
*Figures for the lower TFP growth test and the risk scenario are deviations from the baseline.

Source: European Commission, EPC.

Comparison with the 2021 Ageing Report projections

Compared with the 2021 Ageing Report, lower increases in care spending and a larger decrease in education spending compensate for a higher expected rise in pension spending. The expected rise in total ageing costs of 1.2 pps of GDP in 2022-2070 is 0.1 pp higher than what was projected in the previous report over the same period for the EU. This reflects an upward revision for pensions of 1 pp, while the changes were revised downward for health care (-0.4 pps), long-term care (-0.2 pps) and education (-0.4 pps) (see Table 6). The pattern of an upward revision for pensions and a downward revision for the other items applies to most Member States. In half of them, the projected change in ageing-related expenditure in 2022-2070 is higher than in the 2021 Ageing Report (see Graph 5). The biggest upward revisions are for Spain (+6.5 pps of GDP), Lithuania (+3.6 pps) and Cyprus (+2.8 pps). Downward revisions are the largest for Slovakia (-2.9 pps) and Slovenia (-2.7 pps).

⁽⁷⁾ With the exception of Italy (-0.2 pps of GDP), which would nevertheless have an increase in the first half of the projection period under the risk scenario by 2070.

Graph 5: **Cost of ageing and pension expenditure: 2024 vs 2021 Ageing Report**

Countries left (right) of the 45-degree line saw an upward (downward) revision in the expenditure projections.

Source: European Commission, EPC.

The revisions in total age-related spending are driven by the revisions in the pension projections. With the exception of Bulgaria, actual pension expenditure in terms of GDP turned out to be lower in 2022 than projected in the 2021 Ageing Report given that (i) the economic impact of COVID-19 was milder than anticipated and (ii) high inflation resulted in a substantial increase in nominal GDP in 2022, while indexation of benefits occurs with a lag. Despite the lower starting point, the change in pension spending over the period 2022-2070 was revised upward for all but five countries (see Graph 5). For most countries, the updated demographic and macroeconomic assumptions result in an upward revision. The expenditure-increasing impact is the largest for Lithuania (+3.2 pps of GDP), Cyprus and France (+2 pps for both). For Slovenia, a change in the assumed exit behaviour reduces the pension expenditure projection by 1.2 pps of GDP by 2070 given that, on the basis of current data for younger cohorts, future generations will not have the required contributory period to retire early. Policy measures adopted since the previous report are a second source of revisions. Over the projection period, new policy measures lower the projected change in pension expenditure substantially in Bulgaria (-2.3 pps of GDP) and Slovakia (-1.5 pps), while increasing spending in Spain (+4.6 pps of GDP), Romania (+2.2 pps), Lithuania (+0.6 pps) and Belgium (+0.5 pps).⁽⁸⁾

⁽⁸⁾ The projections for Belgium do not include the measures adopted by Parliament on 4 April 2024.

Table 3: Demographic indicators

	Total population (million)			Old-age dependency ratio (%) ⁽¹⁾			Economic dependency ratio (%) ⁽²⁾			Fertility rate (live births/woman)	Life expectancy at birth (y)						Net migration ('000)				
	2022	2070	change (%)	2022	2070	change (pps)	2022	2070	change (pps)		Males			Females			2022	2070	average 2022-70 ⁽³⁾		
											2022	2070	change 2022-70	2022	2070	change 2022-70					
BE	11.7	12.7	9%	33.7	53.0	19.2	45.4	66.9	21.5	1.53	1.64	1.59	79.5	86.4	6.9	84.6	90.5	5.9	116	29	0.3%
BG	6.9	5.3	-23%	36.6	60.3	23.6	45.1	75.5	30.3	1.56	1.69	1.65	70.5	82.8	12.3	77.7	87.7	10.0	160	16	0.2%
CZ	10.7	10.6	-2%	34.9	51.5	16.6	40.2	62.7	22.5	1.72	1.75	1.74	75.9	84.8	8.9	81.9	89.2	7.3	471	25	0.3%
DK	5.9	6.2	5%	35.4	56.5	21.1	40.3	56.6	16.3	1.68	1.73	1.71	79.9	86.4	6.5	83.6	90.1	6.5	55	13	0.2%
DE	83.9	84.2	0%	37.4	55.0	17.6	42.9	62.9	20.0	1.53	1.63	1.58	79.0	86.0	7.0	83.8	90.0	6.2	1631	236	0.4%
EE	1.4	1.3	-3%	34.9	57.3	22.4	35.9	58.5	22.6	1.57	1.73	1.69	74.3	84.1	9.8	83.0	89.8	6.8	45	4	0.3%
IE	5.1	6.1	19%	25.7	55.6	29.8	30.4	63.8	33.3	1.60	1.69	1.65	80.8	86.9	6.1	84.6	90.6	6.0	93	12	0.3%
EL	10.4	7.8	-25%	39.0	66.0	27.0	56.2	80.9	24.7	1.41	1.55	1.48	78.8	86.5	7.7	84.2	90.4	6.2	22	20	0.1%
ES	47.7	47.7	0%	33.3	64.5	31.2	46.3	77.8	31.5	1.19	1.42	1.31	80.8	87.1	6.3	86.5	91.5	5.0	677	194	0.5%
FR	68.0	69.7	2%	38.2	57.8	19.7	49.7	70.2	20.5	1.82	1.79	1.80	79.7	86.7	7.0	85.9	91.3	5.4	275	99	0.1%
HR	3.9	3.0	-22%	38.9	62.2	23.3	53.9	78.5	24.6	1.49	1.59	1.54	74.9	84.2	9.3	81.2	88.9	7.7	14	10	0.2%
IT	59.0	53.3	-10%	40.8	65.5	24.7	60.0	79.9	20.0	1.24	1.45	1.35	81.1	87.1	6.0	85.5	91.0	5.5	348	240	0.4%
CY	0.9	1.0	9%	26.7	55.5	28.8	31.1	62.4	31.3	1.37	1.51	1.44	80.5	86.8	6.3	84.6	90.3	5.7	18	2	0.2%
LV	1.9	1.3	-33%	36.0	61.0	25.0	41.0	75.5	34.5	1.53	1.70	1.64	70.3	82.5	12.2	79.8	88.4	8.6	33	2	-0.1%
LT	2.8	2.0	-29%	33.1	72.4	39.3	37.2	86.6	49.4	1.44	1.65	1.56	70.8	82.8	12.0	80.5	88.9	8.4	82	6	0.1%
LU	0.7	1.0	49%	23.1	55.4	32.3	30.0	73.1	43.0	1.38	1.56	1.48	80.7	86.9	6.2	85.0	90.8	5.8	15	4	0.7%
HU	9.7	9.0	-7%	34.5	54.3	19.8	40.4	62.0	21.5	1.62	1.72	1.69	72.5	83.6	11.1	79.3	88.5	9.2	48	26	0.3%
MT	0.5	0.8	54%	30.5	65.4	34.9	35.2	75.5	40.3	1.15	1.49	1.36	80.9	87.0	6.1	84.6	90.8	6.2	11	4	1.0%
NL	17.7	18.7	6%	34.3	56.3	22.0	37.3	55.9	18.6	1.53	1.63	1.59	80.3	86.7	6.4	83.6	90.0	6.4	235	42	0.3%
AT	9.0	9.5	6%	32.0	57.0	25.0	39.5	67.4	27.9	1.44	1.57	1.51	79.5	86.3	6.8	84.2	90.2	6.0	104	35	0.4%
PL	38.1	31.8	-16%	31.9	63.7	31.9	39.0	80.0	41.0	1.39	1.61	1.53	73.2	84.1	10.9	81.3	89.5	8.2	1001	69	0.2%
PT	10.4	9.0	-14%	40.7	67.8	27.0	48.6	75.8	27.2	1.41	1.55	1.48	79.6	86.9	7.3	85.0	90.4	5.4	82	39	0.3%
RO	19.0	15.0	-21%	33.5	55.8	22.3	47.9	78.8	30.9	1.81	1.77	1.79	70.9	83.3	12.4	78.6	88.5	9.9	79	28	0.0%
SI	2.1	2.0	-5%	36.1	57.5	21.5	44.1	69.7	25.6	1.59	1.69	1.65	78.5	86.0	7.5	84.4	90.5	6.1	15	6	0.3%
SK	5.5	4.8	-12%	28.5	59.7	31.2	35.4	69.7	34.3	1.60	1.66	1.63	73.4	84.1	10.7	80.4	89.1	8.7	96	8	0.1%
FI	5.6	5.2	-6%	41.2	62.4	21.3	48.4	70.1	21.7	1.39	1.53	1.47	79.0	86.1	7.1	84.1	90.4	6.3	77	13	0.3%
SE	10.5	12.9	23%	36.0	50.4	14.4	39.1	52.9	13.7	1.68	1.76	1.74	81.5	87.0	5.5	85.4	90.7	5.3	99	32	0.4%
NO	5.4	6.5	20%	31.2	54.4	23.2	33.8	60.7	26.9	1.47	1.60	1.54	82.1	87.3	5.2	85.1	90.7	5.6	36	26	0.4%
EA	348.2	341.1	-2%	36.9	59.6	22.7	47.1	70.0	22.9	1.48	1.60	1.54	79.6	86.5	6.9	84.8	90.7	5.8	3990	1002	0.3%
EU	449.1	431.9	-4%	36.1	59.1	23.0	45.7	69.9	24.2	1.50	1.62	1.57	78.4	86.1	7.7	84.0	90.4	6.4	5902	1212	0.3%

(1) (population 65+) / (population 20-64y).

(2) (inactive population 65+) / (employment 20-64y).

(3) Net migration as % of total population in the previous year.

Source: European Commission, EPC.

Table 4: **Macroeconomic indicators**

	Employment rate (%)									Participation rate (%)									Unemployment rate (%)									Average real GDP growth (2022-2070)	Labour productivity (GDP per hour worked)				Labour input (hours worked)					Real GDP per capita growth
	(20-64y)			(55-64y)			(20-64y)			(55-64y)			(20-64y)			TFP	Capital deepening	change in:	Population	Employment rate	Working-age population share	Average hours worked																
	2022	2070	change (pps)	2022	2070	change (pps)	2022	2070	change (pps)	2022	2070	change (pps)	2022	2070	change (pps)								5=6+7+8+9	6	7	8	9		10=1-6									
BE	72.1	75.8	3.7	56.9	67.8	10.9	76.1	80.3	4.1	59.1	70.6	11.5	5.3	5.6	0.3	1.3	1.1	0.7	0.4	0.2	0.2	0.1	-0.1	0.0	1.1													
BG	75.8	76.6	0.8	68.5	70.5	2.0	79.1	80.5	1.3	71.0	73.5	2.5	4.2	4.9	0.6	1.4	2.2	1.4	0.8	-0.7	-0.5	0.1	-0.3	0.0	2.0													
CZ	81.3	79.4	-1.9	73.2	73.2	0.0	83.1	81.5	-1.6	74.7	75.0	0.3	2.2	2.6	0.5	1.5	1.7	1.1	0.6	-0.2	0.0	0.0	-0.2	0.0	1.5													
DK	80.2	84.8	4.6	73.3	84.3	11.0	83.6	88.0	4.4	75.5	86.6	11.1	4.1	3.6	-0.5	1.3	1.3	0.8	0.5	0.1	0.1	0.1	-0.2	0.0	1.2													
DE	80.7	81.9	1.2	73.3	75.2	2.0	83.3	85.2	1.9	75.3	77.9	2.6	3.1	3.8	0.8	1.1	1.3	0.8	0.4	-0.1	0.0	0.0	-0.2	0.0	1.1													
EE	81.8	86.1	4.3	73.4	85.0	11.6	86.5	91.7	5.1	77.1	89.7	12.6	5.4	6.0	0.6	1.6	1.6	1.0	0.6	0.0	0.0	0.2	-0.2	0.0	1.6													
IE	78.2	81.3	3.1	66.7	71.6	4.9	81.6	85.8	4.3	69.0	74.8	5.8	4.2	5.3	1.2	2.1	1.8	1.4	0.4	0.3	0.4	0.0	-0.1	0.0	1.7													
EL	66.1	74.7	8.6	52.2	74.5	22.3	75.4	79.9	4.5	57.4	78.2	20.8	12.4	6.5	-5.8	1.1	1.6	1.1	0.5	-0.6	-0.6	0.3	-0.3	0.0	1.7													
ES	69.6	76.4	6.8	57.6	72.9	15.2	79.6	81.6	2.0	65.4	77.5	12.1	12.6	6.4	-6.2	1.2	1.3	0.8	-0.1	0.0	0.1	-0.2	0.0	1.2														
FR	74.0	79.0	5.0	56.9	71.9	14.9	79.6	84.3	4.7	60.4	75.9	15.5	7.0	6.3	-0.7	1.1	1.0	0.7	0.4	0.1	0.1	0.2	-0.2	0.0	1.1													
HR	70.0	76.1	6.1	50.4	62.3	11.9	74.9	81.2	6.2	53.0	65.4	12.4	6.6	6.3	-0.3	1.5	1.9	1.2	0.7	-0.4	-0.6	0.3	-0.2	0.0	2.0													
IT	64.8	71.3	6.5	55.1	73.3	18.2	70.4	76.3	5.8	57.9	76.3	18.4	8.0	6.4	-1.5	1.1	1.2	0.8	0.4	-0.1	-0.2	0.3	-0.2	0.0	1.3													
CY	77.5	80.8	3.3	64.6	72.5	7.9	83.2	86.1	3.0	68.0	76.1	8.1	6.8	6.2	-0.6	1.6	1.5	0.9	0.6	0.1	0.2	0.1	-0.2	0.0	1.4													
LV	77.0	78.0	1.0	69.5	70.6	1.1	82.7	83.3	0.6	73.7	74.6	0.9	6.9	6.5	-0.5	1.1	2.1	1.3	0.8	-1.0	-0.8	0.1	-0.2	0.0	1.9													
LT	79.1	79.8	0.8	70.1	70.3	0.1	84.2	85.4	1.2	75.3	75.7	0.4	6.1	6.5	0.4	1.1	2.1	1.2	0.9	-1.0	-0.7	-0.1	-0.3	0.0	1.7													
LU	74.5	74.5	0.0	46.3	50.2	4.0	77.6	78.4	0.8	48.4	53.3	4.9	4.0	5.0	1.0	1.8	0.9	0.6	0.3	0.8	0.9	0.1	-0.2	0.0	0.9													
HU	80.3	83.6	3.3	65.9	75.5	9.6	83.2	86.6	3.4	68.0	77.8	9.8	3.5	3.5	-0.1	1.7	2.0	1.3	0.8	-0.3	-0.2	0.1	-0.2	-0.1	1.9													
MT	81.0	83.5	2.5	54.3	70.0	15.7	83.3	87.0	3.8	55.3	71.8	16.5	2.7	4.0	1.3	2.1	1.6	1.0	0.6	0.5	0.9	0.0	-0.3	-0.1	1.2													
NL	82.9	87.7	4.8	73.1	81.6	8.4	85.4	90.4	5.0	75.3	84.2	8.9	2.9	3.0	0.1	1.3	1.1	0.7	0.4	0.2	0.1	0.2	-0.2	0.0	1.2													
AT	77.3	81.4	4.2	56.5	67.1	10.7	80.9	85.1	4.1	58.6	69.4	10.7	4.5	4.3	-0.2	1.3	1.2	0.8	0.4	0.0	0.1	0.1	-0.2	0.0	1.1													
PL	76.9	76.9	0.1	56.8	60.7	3.9	79.1	79.3	0.2	57.8	61.9	4.1	2.9	3.0	0.1	1.5	2.2	1.4	0.8	-0.7	-0.3	0.0	-0.3	0.0	1.8													
PT	77.6	80.7	3.1	65.8	76.4	10.6	82.5	86.1	3.6	69.3	80.6	11.3	5.9	6.2	0.3	1.2	1.7	1.1	0.5	-0.4	-0.3	0.1	-0.3	0.0	1.5													
RO	68.3	68.8	0.5	46.8	58.7	11.8	72.1	73.1	1.0	48.6	61.0	12.4	5.2	5.8	0.6	1.7	2.4	1.4	1.0	-0.7	-0.5	0.0	-0.2	0.0	2.2													
SI	78.3	80.6	2.3	55.1	72.4	17.3	81.4	85.4	4.0	57.3	76.6	19.4	3.9	5.7	1.8	1.6	1.7	1.2	0.6	-0.1	-0.1	0.2	-0.2	0.0	1.7													
SK	76.8	79.7	2.9	64.0	79.2	15.2	81.7	84.8	3.1	67.1	82.8	15.7	6.0	6.0	0.1	1.4	2.0	1.2	0.7	-0.5	-0.3	0.1	-0.3	0.0	1.7													
FI	78.3	80.3	2.0	71.5	77.2	5.8	83.7	85.6	1.9	77.0	83.1	6.0	6.4	6.2	-0.2	1.1	1.3	0.8	0.5	-0.2	-0.1	0.1	-0.2	0.0	1.2													
SE	82.3	84.2	1.9	77.8	82.4	4.6	87.8	89.1	1.3	82.2	86.5	4.3	6.3	5.5	-0.8	1.6	1.2	0.8	0.4	0.4	0.4	0.1	-0.1	0.0	1.2													
NO	80.8	82.0	1.3	74.5	72.1	-2.4	83.0	84.5	1.5	75.5	73.2	-2.3	2.7	3.0	0.3	1.5	1.2	0.8	0.4	0.3	0.4	0.1	-0.1	0.0	1.1													
EA	74.1	78.6	4.6	62.5	73.5	11.0	79.3	83.1	3.8	65.9	76.9	11.0	6.6	5.4	-1.2	1.2	1.3	0.9	0.4	-0.1	0.0	0.1	-0.2	0.0	1.2													
EU	74.7	78.5	3.8	62.3	72.3	10.0	79.4	82.7	3.3	65.4	75.5	10.1	5.9	5.1	-0.9	1.3	1.4	0.9	0.5	-0.2	-0.1	0.1	-0.2	0.0	1.3													

GDP growth is potential growth, which coincides with actual growth as of 2027 in the projections.

Source: European Commission, EPC.

Table 5: **Baseline – expenditure projections**

2024 Ageing Report - baseline: age-related expenditure (%/pps of GDP)																
	pensions			health care			long-term care			education			total			
	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	
BE	12.7	1.9	3.5	6.1	0.4	0.6	2.3	0.9	1.7	5.6	-0.8	-0.8	26.8	2.4	5.1	BE
BG	9.5	-0.1	0.1	4.5	0.4	0.2	0.5	0.1	0.2	3.7	-0.1	0.1	18.2	0.3	0.6	BG
CZ	8.7	1.3	1.7	6.4	0.1	0.2	1.5	0.7	1.4	4.1	0.1	0.3	20.6	2.2	3.7	CZ
DK	8.3	0.0	-1.4	7.4	0.1	0.4	3.0	2.0	3.3	5.8	-0.5	-0.9	24.4	1.6	1.4	DK
DE	10.2	0.8	1.2	8.0	0.0	0.1	1.9	0.5	0.5	4.3	0.2	0.2	24.3	1.5	2.0	DE
EE	7.4	0.1	-0.7	5.1	0.4	0.6	0.4	0.4	0.7	3.9	-0.6	-0.6	16.8	0.3	0.0	EE
IE	3.8	1.7	2.8	4.1	0.8	1.5	1.2	0.6	1.4	2.8	-0.6	-0.7	12.0	2.4	4.9	IE
EL	14.5	-0.5	-2.5	5.4	0.6	0.6	0.1	0.0	0.0	3.4	-0.4	-0.5	23.4	-0.4	-2.4	EL
ES	13.1	3.8	3.6	5.9	1.0	1.2	0.8	0.4	0.9	4.1	-0.7	-0.6	23.9	4.5	5.1	ES
FR	14.4	-0.5	-0.9	8.8	0.1	0.3	1.9	0.4	0.7	4.8	-0.7	-0.9	29.9	-0.7	-0.7	FR
HR	9.0	0.3	-0.2	5.8	0.4	0.7	0.5	0.1	0.1	3.4	-0.7	-0.7	18.8	0.1	-0.2	HR
IT	15.6	0.9	-1.9	6.3	0.1	0.1	1.6	0.3	0.5	3.8	-0.6	-0.8	27.3	0.7	-2.0	IT
CY	8.2	2.7	3.6	7.5	0.5	0.8	0.2	0.1	0.1	5.0	-0.4	-0.5	20.9	2.8	4.1	CY
LV	7.2	-0.8	-1.7	6.0	-0.3	-0.3	0.5	0.2	0.3	3.6	-0.4	-0.2	17.2	-1.4	-1.9	LV
LT	6.4	3.1	3.2	4.3	0.5	0.8	1.0	0.4	0.9	3.0	-0.4	-0.3	14.8	3.7	4.6	LT
LU	9.2	2.6	8.3	3.9	0.7	1.2	1.1	0.5	1.6	3.0	-0.4	-0.4	17.2	3.4	10.7	LU
HU	7.7	2.4	4.3	4.3	0.4	0.5	0.5	0.2	0.4	3.5	0.0	0.1	16.0	3.0	5.2	HU
MT	6.2	-0.5	4.4	5.1	0.5	2.1	1.2	0.6	2.3	4.5	-0.7	-0.1	16.9	-0.2	8.6	MT
NL	6.5	1.4	2.0	5.7	0.5	0.7	3.8	1.2	1.9	4.9	-0.7	-1.0	21.0	2.3	3.5	NL
AT	13.7	0.5	0.4	7.8	0.8	1.1	1.6	0.8	1.5	4.6	-0.5	-0.4	27.7	1.6	2.6	AT
PL	10.2	0.4	-0.2	4.4	0.7	1.1	0.5	0.4	0.9	3.9	-0.2	0.1	19.1	1.2	1.9	PL
PT	12.2	2.9	-1.8	6.2	0.7	1.0	0.5	0.3	0.4	4.4	0.0	-0.1	23.3	4.0	-0.5	PT
RO	8.5	2.1	-0.9	4.4	0.6	0.7	0.3	0.2	0.4	2.5	0.0	0.0	15.8	2.9	0.2	RO
SI	9.8	3.0	3.8	7.0	0.7	0.8	1.0	0.6	1.0	4.3	-0.4	-0.3	22.1	3.8	5.4	SI
SK	8.5	2.7	2.8	5.7	1.3	1.6	1.0	0.7	1.4	3.7	0.1	0.3	19.0	4.9	6.1	SK
FI	12.8	-0.4	1.4	6.2	0.4	0.6	2.1	1.1	1.8	5.3	-0.9	-1.1	26.4	0.1	2.7	FI
SE	7.4	-0.4	-0.2	7.3	0.1	0.4	3.2	0.6	1.3	5.8	-0.5	-0.6	23.6	-0.3	0.8	SE
NO	10.8	1.2	1.7	7.7	0.8	1.2	4.0	1.8	3.5	7.5	-1.2	-1.4	30.1	2.5	5.0	NO
EA	11.9	0.9	0.6	7.1	0.2	0.4	1.8	0.5	0.8	4.3	-0.4	-0.5	25.1	1.2	1.4	EA
EU	11.4	0.7	0.4	6.9	0.2	0.4	1.7	0.5	0.8	4.4	-0.4	-0.5	24.4	1.0	1.2	EU

Source: European Commission, EPC.

Table 6: Revisions compared to 2021 Ageing Report

	2024 Ageing Report vs 2021 Ageing Report - baseline: difference (pps of GDP)															
	pensions			health care			long-term care			education			total			
	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	
BE	-0.2	-0.3	1.3	0.4	-0.1	0.0	0.0	-0.2	-0.3	0.2	-0.4	-0.5	0.5	-1.0	0.5	BE
BG	0.5	-0.1	-0.6	-0.1	0.0	0.0	0.2	0.0	0.0	0.8	-0.2	-0.2	1.4	-0.3	-0.8	BG
CZ	-0.6	-0.1	0.1	0.6	-0.7	-0.6	-0.1	-0.1	-0.2	0.5	-0.1	-0.2	0.4	-1.0	-0.8	CZ
DK	-0.7	1.2	0.3	0.6	-0.4	-0.3	-0.7	-0.2	0.1	0.2	-0.3	-0.5	-0.7	0.3	-0.4	DK
DE	-0.6	-0.6	-0.5	0.6	-0.4	-0.3	0.3	0.2	0.3	0.3	-0.2	-0.3	0.6	-0.9	-0.8	DE
EE	-0.3	1.5	1.6	0.1	-0.2	-0.2	0.0	0.3	0.4	-0.1	-0.2	-0.3	-0.3	1.4	1.5	EE
IE	-1.3	-0.4	0.3	0.0	0.0	0.1	-0.1	-0.3	-0.4	-0.5	-0.5	-0.5	-1.9	-1.2	-0.6	IE
EL	-1.0	1.2	1.0	0.9	-0.1	-0.2	0.0	0.0	0.0	0.2	0.2	0.1	0.1	1.3	1.0	EL
ES	-0.1	3.8	6.6	0.1	-0.2	-0.1	0.0	0.0	0.2	0.5	-0.2	-0.2	0.6	3.5	6.5	ES
FR	-0.8	0.1	1.8	0.0	-0.5	-0.4	-0.1	0.0	0.0	0.4	-0.3	-0.4	-0.5	-0.7	1.0	FR
HR	-1.7	0.9	1.1	-0.1	-0.1	0.0	0.1	0.0	0.0	-1.3	-0.4	-0.6	-3.0	0.4	0.5	HR
IT	-0.8	-0.1	0.9	0.0	-0.7	-0.6	-0.1	-0.3	-0.4	0.4	-0.3	-0.5	-0.5	-1.4	-0.6	IT
CY	-1.5	2.1	2.5	4.6	0.3	0.5	-0.2	-0.1	-0.1	0.0	0.0	-0.1	2.9	2.4	2.8	CY
LV	-0.5	0.5	0.0	1.2	-0.7	-0.5	0.0	0.0	0.1	-0.1	-0.2	-0.2	0.7	-0.3	-0.6	LV
LT	-1.3	2.6	3.5	0.1	0.0	0.2	0.0	0.0	0.2	0.1	-0.3	-0.3	-1.1	2.3	3.6	LT
LU	-0.8	-1.3	0.3	0.2	0.1	0.3	0.1	0.0	0.1	0.2	0.2	0.2	-0.3	-1.0	0.8	LU
HU	-0.9	0.3	0.5	-0.6	-0.2	-0.3	0.0	-0.1	-0.3	0.2	0.1	0.1	-1.4	0.1	0.1	HU
MT	-1.2	-0.4	0.8	-0.3	-0.7	-0.5	-0.1	-0.1	0.6	0.3	-0.1	0.0	-1.2	-1.3	0.9	MT
NL	-0.8	-0.3	0.2	0.0	-0.1	0.0	0.0	-0.6	-0.6	0.3	-0.6	-0.8	-0.6	-1.7	-1.2	NL
AT	-0.6	-0.1	0.3	0.8	-0.1	0.0	-0.3	-0.2	-0.2	0.1	-0.3	-0.4	0.0	-0.7	-0.3	AT
PL	-1.4	1.5	1.0	-1.2	-0.5	-0.8	-0.3	-0.3	-0.7	0.2	0.0	0.1	-2.8	0.6	-0.4	PL
PT	-0.8	2.3	1.7	0.4	-0.5	-0.5	0.0	0.1	0.0	0.4	-0.1	-0.2	0.0	1.7	1.1	PT
RO	-5.2	1.1	1.0	0.4	-0.1	-0.2	0.0	0.0	0.0	0.0	0.2	0.1	-4.8	1.2	0.9	RO
SI	-0.4	-1.6	-1.9	0.7	-0.3	-0.3	-0.1	-0.1	-0.2	0.4	-0.3	-0.4	0.7	-2.3	-2.7	SI
SK	-1.0	-0.2	-1.9	-0.6	0.0	-0.3	0.0	-0.2	-0.6	0.4	-0.1	-0.2	-1.2	-0.5	-2.9	SK
FI	-0.9	0.6	0.6	0.0	-0.2	-0.1	-0.1	-0.2	-0.1	0.1	-0.2	-0.3	-0.9	0.1	0.1	FI
SE	-0.8	0.8	0.5	0.1	-0.4	-0.3	-0.4	-0.3	-0.7	0.0	-0.1	-0.2	-1.1	0.1	-0.8	SE
NO	-0.6	0.0	-0.5	0.5	0.1	0.2	-0.2	-0.2	-0.3	0.4	-0.7	-0.8	0.1	-0.8	-1.4	NO
EA	-0.8	0.2	1.2	0.2	-0.4	-0.3	0.0	0.0	0.0	0.3	-0.3	-0.4	-0.2	-0.5	0.5	EA
EU	-0.9	0.3	1.0	0.1	-0.4	-0.4	0.0	-0.1	-0.2	0.3	-0.3	-0.4	-0.5	-0.5	0.1	EU

Source: European Commission, EPC.

Table 7: Lower productivity growth – expenditure projections

2024 Ageing Report - lower TFP growth: age-related expenditure (%/pps of GDP)																
	pensions			health care			long-term care			education			total			
	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	
BE	12.7	2.2	4.6	6.1	0.4	0.6	2.3	0.9	1.7	5.6	-0.8	-0.8	26.8	2.7	6.2	BE
BG	9.5	0.0	0.4	4.5	0.4	0.2	0.5	0.1	0.2	3.7	-0.1	0.1	18.2	0.4	0.8	BG
CZ	8.7	1.5	2.1	6.4	0.0	0.2	1.5	0.7	1.4	4.1	0.1	0.3	20.6	2.4	4.0	CZ
DK	8.3	0.2	-0.7	7.4	0.1	0.4	3.0	2.0	3.3	5.8	-0.5	-0.9	24.4	1.8	2.1	DK
DE	10.2	0.8	1.2	8.0	0.0	0.1	1.9	0.5	0.6	4.3	0.2	0.2	24.3	1.5	2.1	DE
EE	7.4	0.2	-0.5	5.1	0.4	0.5	0.4	0.4	0.7	3.9	-0.6	-0.6	16.8	0.4	0.2	EE
IE	3.8	1.7	2.9	4.1	0.8	1.4	1.2	0.6	1.4	2.8	-0.6	-0.7	12.0	2.4	5.0	IE
EL	14.5	-0.2	-1.8	5.4	0.5	0.5	0.1	0.0	0.0	3.4	-0.4	-0.5	23.4	-0.1	-1.7	EL
ES	13.1	4.2	4.6	5.9	1.0	1.2	0.8	0.4	0.9	4.1	-0.7	-0.6	23.9	4.9	6.1	ES
FR	14.4	-0.3	-0.2	8.8	0.1	0.3	1.9	0.5	0.7	4.8	-0.7	-0.9	29.9	-0.4	0.0	FR
HR	9.0	0.4	0.0	5.8	0.4	0.6	0.5	0.1	0.1	3.4	-0.7	-0.7	18.8	0.1	0.0	HR
IT	15.6	1.3	-1.3	6.3	0.1	0.1	1.6	0.3	0.5	3.8	-0.6	-0.8	27.3	1.1	-1.4	IT
CY	8.2	2.8	4.1	7.5	0.5	0.8	0.2	0.1	0.1	5.0	-0.4	-0.5	20.9	3.0	4.5	CY
LV	7.2	-0.7	-1.6	6.0	-0.3	-0.3	0.5	0.2	0.3	3.6	-0.4	-0.2	17.2	-1.2	-1.8	LV
LT	6.4	3.1	3.7	4.3	0.5	0.8	1.0	0.4	0.9	3.0	-0.4	-0.3	14.8	3.7	5.1	LT
LU	9.2	2.8	9.0	3.9	0.7	1.2	1.1	0.5	1.6	3.0	-0.4	-0.4	17.2	3.6	11.4	LU
HU	7.7	2.6	4.8	4.3	0.4	0.5	0.5	0.2	0.4	3.5	0.0	0.1	16.0	3.2	5.8	HU
MT	6.2	-0.5	4.9	5.1	0.4	2.1	1.2	0.6	2.3	4.5	-0.7	-0.1	16.9	-0.1	9.1	MT
NL	6.5	1.4	2.0	5.7	0.5	0.7	3.8	1.2	1.9	4.9	-0.7	-1.0	21.0	2.3	3.5	NL
AT	13.7	0.7	0.5	7.8	0.8	1.1	1.6	0.8	1.5	4.6	-0.5	-0.4	27.7	1.8	2.7	AT
PL	10.2	0.5	0.2	4.4	0.7	1.1	0.5	0.4	0.9	3.9	-0.2	0.1	19.1	1.4	2.2	PL
PT	12.2	3.3	-1.0	6.2	0.7	1.0	0.5	0.3	0.4	4.4	0.0	-0.1	23.3	4.3	0.3	PT
RO	8.5	2.4	-0.5	4.4	0.6	0.7	0.3	0.2	0.4	2.5	0.0	0.0	15.8	3.2	0.6	RO
SI	9.8	3.1	4.1	7.0	0.7	0.8	1.0	0.6	1.0	4.3	-0.4	-0.3	22.1	4.0	5.6	SI
SK	8.5	2.9	3.2	5.7	1.3	1.5	1.0	0.7	1.4	3.7	0.1	0.3	19.0	5.0	6.4	SK
FI	12.8	-0.2	1.9	6.2	0.4	0.6	2.1	1.1	1.8	5.3	-0.9	-1.1	26.4	0.3	3.2	FI
SE	7.4	-0.4	-0.1	7.3	0.0	0.4	3.2	0.6	1.3	5.8	-0.5	-0.6	23.6	-0.3	0.8	SE
NO	10.8	1.3	1.9	7.7	0.7	1.2	4.0	1.8	3.5	7.5	-1.2	-1.4	30.1	2.6	5.3	NO
EA	11.9	1.0	1.1	7.1	0.2	0.4	1.8	0.5	0.9	4.3	-0.4	-0.5	25.1	1.4	1.8	EA
EU	11.4	0.9	0.8	6.9	0.2	0.3	1.7	0.5	0.9	4.4	-0.4	-0.5	24.4	1.2	1.6	EU

This scenario does not affect the education projections, which are identical to the baseline in this table.

Source: European Commission, EPC.

Table 8: Risk scenario – expenditure projections

2024 Ageing Report - risk scenario (health care and long-term care): age-related expenditure (%/pps of GDP)																
	pensions			health care			long-term care			education			total			
	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	2022	Δ 2022-45	Δ 2022-70	
BE	12.7	1.9	3.5	6.1	0.9	1.3	2.3	1.6	3.9	5.6	-0.8	-0.8	26.8	3.6	8.0	BE
BG	9.5	-0.1	0.1	4.5	1.2	1.2	0.5	0.6	2.5	3.7	-0.1	0.1	18.2	1.6	3.9	BG
CZ	8.7	1.3	1.7	6.4	0.7	1.2	1.5	1.1	2.9	4.1	0.1	0.3	20.6	3.3	6.2	CZ
DK	8.3	0.0	-1.4	7.4	0.7	1.3	3.0	2.1	3.7	5.8	-0.5	-0.9	24.4	2.3	2.7	DK
DE	10.2	0.8	1.2	8.0	0.5	0.9	1.9	0.9	1.4	4.3	0.2	0.2	24.3	2.4	3.8	DE
EE	7.4	0.1	-0.7	5.1	1.1	1.5	0.4	1.5	6.0	3.9	-0.6	-0.6	16.8	2.1	6.3	EE
IE	3.8	1.7	2.8	4.1	1.5	2.5	1.2	0.7	2.0	2.8	-0.6	-0.7	12.0	3.3	6.6	IE
EL	14.5	-0.5	-2.5	5.4	1.2	1.5	0.1	0.3	3.1	3.4	-0.4	-0.5	23.4	0.6	1.7	EL
ES	13.1	3.8	3.6	5.9	1.5	2.0	0.8	1.1	3.6	4.1	-0.7	-0.6	23.9	5.7	8.6	ES
FR	14.4	-0.5	-0.9	8.8	0.6	1.1	1.9	1.1	2.9	4.8	-0.7	-0.9	29.9	0.5	2.2	FR
HR	9.0	0.3	-0.2	5.8	1.4	2.0	0.5	0.4	1.3	3.4	-0.7	-0.7	18.8	1.4	2.4	HR
IT	15.6	0.9	-1.9	6.3	0.5	0.9	1.6	0.7	1.5	3.8	-0.6	-0.8	27.3	1.5	-0.3	IT
CY	8.2	2.7	3.6	7.5	1.3	1.9	0.2	0.4	3.6	5.0	-0.4	-0.5	20.9	4.0	8.7	CY
LV	7.2	-0.8	-1.7	6.0	0.7	1.0	0.5	0.7	2.6	3.6	-0.4	-0.2	17.2	0.1	1.6	LV
LT	6.4	3.1	3.2	4.3	1.4	1.8	1.0	1.9	8.4	3.0	-0.4	-0.3	14.8	6.0	13.2	LT
LU	9.2	2.6	8.3	3.9	0.9	1.7	1.1	0.9	3.0	3.0	-0.4	-0.4	17.2	4.0	12.5	LU
HU	7.7	2.4	4.3	4.3	1.1	1.5	0.5	0.8	3.4	3.5	0.0	0.1	16.0	4.3	9.3	HU
MT	6.2	-0.5	4.4	5.1	1.2	3.2	1.2	0.8	5.5	4.5	-0.7	-0.1	16.9	0.8	12.9	MT
NL	6.5	1.4	2.0	5.7	0.9	1.4	3.8	1.8	3.8	4.9	-0.7	-1.0	21.0	3.3	6.1	NL
AT	13.7	0.5	0.4	7.8	1.5	2.1	1.6	1.2	2.9	4.6	-0.5	-0.4	27.7	2.7	4.9	AT
PL	10.2	0.4	-0.2	4.4	1.5	2.2	0.5	1.1	4.2	3.9	-0.2	0.1	19.1	2.8	6.3	PL
PT	12.2	2.9	-1.8	6.2	1.4	2.0	0.5	1.8	8.3	4.4	0.0	-0.1	23.3	6.1	8.4	PT
RO	8.5	2.1	-0.9	4.4	1.6	2.0	0.3	0.7	3.1	2.5	0.0	0.0	15.8	4.5	4.3	RO
SI	9.8	3.0	3.8	7.0	1.7	2.2	1.0	1.3	3.2	4.3	-0.4	-0.3	22.1	5.5	8.9	SI
SK	8.5	2.7	2.8	5.7	2.2	2.8	1.0	1.5	4.4	3.7	0.1	0.3	19.0	6.6	10.4	SK
FI	12.8	-0.4	1.4	6.2	0.9	1.5	2.1	1.6	3.8	5.3	-0.9	-1.1	26.4	1.1	5.6	FI
SE	7.4	-0.4	-0.2	7.3	0.6	1.3	3.2	1.0	3.1	5.8	-0.5	-0.6	23.6	0.7	3.6	SE
NO	10.8	1.2	1.7	7.7	1.3	2.1	4.0	2.1	4.6	7.5	-1.2	-1.4	30.1	3.4	7.0	NO
EA	11.9	0.9	0.6	7.1	0.8	1.3	1.8	1.1	2.6	4.3	-0.4	-0.5	25.1	2.2	4.0	EA
EU	11.4	0.7	0.4	6.9	0.7	1.2	1.7	1.0	2.7	4.4	-0.4	-0.5	24.4	2.1	3.9	EU

This scenario does not affect the pension and education projections, which are identical to the baseline in this table.

Source: European Commission, EPC.

PART I

LONG-TERM PROJECTIONS OF AGE-RELATED EXPENDITURE

1. PENSIONS

1.1. INTRODUCTION

This chapter presents (i) the main features of public pension systems in the EU, (ii) expenditure projections up to 2070 and (iii) changes compared to the previous update. Public pensions represent a substantial share of government spending. Given the direct link between the size of the older population and the number of pensioners, projections for the latter and for average benefits help identify pressures on public finances stemming from rising pension expenditure in the medium to long term.

Since the state plays a central role in the pension provision in all EU Member States, the projections focus on public schemes. A broad definition applies: all schemes that are statutory and administered by the government are considered, i.e. pension benefits for which the state is the ultimate guarantor, thus bearing the costs and risks attached to the scheme. The set-up of public pension systems varies significantly across the EU (see Sections 1.2 to 1.4), complicating cross-country comparisons. These differences stem from historically different views on the role of pension systems in providing retirement income and different approaches on how to achieve this. Moreover, many countries have introduced comprehensive pension reforms in recent decades, as reflected in the projections (see Sections 1.5 to 1.8). Section 1.9 compares the latest projections with those from the 2021 Ageing Report.

1.2. TYPOLOGY OF PUBLIC PENSION SCHEMES ⁽⁹⁾

Two of the most common criteria to classify pension systems are the funding source and the covered risk. When looking at the covered risk, schemes can be subdivided into old-age and early, disability, survivor and minimum pensions. In terms of funding, pensions are either contributory (i.e. earnings-related) or financed through taxes (i.e. non-earnings-related or non-contributory). The public pension projections discussed in this chapter reflect this diversity.

Table I.1.1: **Main type of public pension scheme**

BE	DB	LT	flat rate + PS
BG	DB	LU	DB
CZ	flat rate + DB	HU	DB
DK	flat rate + DB	MT	flat rate + DB
DE	PS	NL	flat rate + DB
EE	flat rate + PS	AT	DB
IE	flat rate + DB	PL	NDC
EL ⁽¹⁾	flat rate + DB + NDC	PT	DB
ES	DB	RO	PS
FR ⁽²⁾	DB + PS	SI	DB
HR	PS	SK	PS
IT	NDC	FI	DB
CY	PS	SE	NDC
LV	NDC	NO	NDC

(1) The NDC is an auxiliary mandatory pension scheme.

(2) PS refers to the complementary AGIRC and ARRCO schemes.

Source: European Commission, EPC.

In most countries, the public pension system consists of statutory old-age pension schemes, based on earnings or contributions. In Denmark, Ireland and the Netherlands, the old-age benefit consists of a flat-rate pension. Other countries combine a flat-rate benefit with an earnings-related component. Private pensions exist in all Member States but their coverage in the projections is limited. Distinction is made between occupational, mandatory individual and voluntary individual schemes (see Annex I and Section 1.5). While private schemes are usually funded, the degree of funding relative to the pension liabilities differs.

In terms of benefit calculation, three broad types of earnings-related public pensions can be distinguished across EU Member States. A distinction is made between defined benefit (DB),

⁽⁹⁾ For a detailed description of all pension schemes in EU Member States, please consult the [PENSREF database](#).

notional defined contribution (NDC) and point systems (PS) (see Table I.1.1). They differ in the way pension rights are accumulated and how pension benefits are calculated upon retirement. ⁽¹⁰⁾

The type of risk covered by publicly provided pension benefits varies across countries. In addition to old-age benefits, most countries also provide early retirement, disability and survivors' pensions (see Table I.A1.1 in Annex I).

The Ageing Report applies a broad definition of public pension expenditure. Although granted for extended periods to people outside of the labour market, disability benefits are not always considered pensions but rather part of the sickness insurance scheme. Nevertheless, for the purpose of the Ageing Report, such benefits are considered to be pension benefits and captured by the disability pension projections. The same holds for social assistance schemes that in practice provide a (quasi) minimum pension for people who do not qualify for the earnings-related scheme or have accrued limited pension rights.

'Special pensions schemes' deviate from the standard regime in terms of eligibility, benefit calculation or higher state funding. They are granted based on a *strenuous occupational activity* (e.g. difficult working conditions or security forces) or a *special status* (e.g. certain civil servants or special merits). As discussed in previous Ageing Reports, these preferential schemes exist in nearly all Member States. As the projections are exhaustive, special schemes are generally included in the projections. Box I.1.2 at the end of this chapter provides an overview of early retirement ages for four frequent types of special pensions, namely for police officers, army officers, fire fighters and train crew.

Several countries have switched part of their public pension schemes into (quasi) mandatory private funded schemes. ⁽¹¹⁾ These are typically statutory but the insurance relationship is between the individual and the pension fund. Consequently, insured people maintain ownership of the pension assets, meaning that they enjoy the returns and bear the risks. Participation in a funded scheme is conditional on being already covered by the public scheme and is usually mandatory for new labour market entrants. However, the mandatory individual schemes have been the subject of repeated reforms and were even abolished in some cases. In other countries, participants can opt-out of the scheme if they wish, meaning they are no longer fully mandatory.

The way in which countries finance their pension systems differs, with large variation in the extent to which contributions suffice to cover expenditure. Employment-related systems are usually financed from compulsory contributions by workers and employers. Most public pension schemes operate on a pay-as-you-go (PAYG) basis, whereby current contributions fund current benefits. However, public authorities often participate in the financing of employment-related schemes. This could take the form of a fixed appropriation from general government revenues, a set contribution rate or a subsidy to cover deficits within the pension system. In some cases, the government pays the contributions for low-paid workers. Guaranteed minimum pensions are generally covered by general government resources. Some predominantly PAYG pension schemes (e.g. Finland and Luxembourg) have statutory requirements for partial pre-funding. In view of rising pension expenditure, several countries have also created reserve funds for their public pension schemes (e.g. Spain and Portugal).

⁽¹⁰⁾ See Chapter 1 of Part II in [Volume I of the 2024 Ageing Report](#).

⁽¹¹⁾ This is the case for Bulgaria, Estonia, Croatia, Latvia, Lithuania, Poland, Romania, Slovakia and Sweden.

1.3. COVERAGE OF THE PENSION PROJECTIONS

Publicly provided or first pillar pensions account for the bulk of retirement income in EU countries. The Ageing Report's expenditure projections therefore focus on public pensions, with an exhaustive coverage of old-age and early, minimum, disability and survivors' pension benefits, as well as any other pension-like benefit.⁽¹²⁾ In contrast, projections for second (occupational pensions) and third pillars (individual pensions) are provided on a voluntary basis by the Member States.⁽¹³⁾ Table I.A1.1 in Annex I provides a detailed overview of the coverage for each country.

National projection models were used to prepare the pension projections in this report, which have been reviewed in-depth by the AWG and the Commission. Given the diversity and complexity of national pension systems, it is difficult to project pension expenditure by means of one common model for all Member States. Therefore, the approach of past exercises is maintained, using national projection models to maximally account for institutional features and pension parameters in each country. The use of country-specific projection models introduces nevertheless an element of heterogeneity in the results. To ensure high quality and comparable pension projections, the AWG and the Commission assessed and discussed the results for each country in-depth. These reviews verified (i) the plausibility and consistency of the projections, (ii) adherence to the common methodology and underlying assumptions as described in Volume I of this report and (iii) whether projections are conform to current legislation, with a general cut-off date of 1 December 2023.

1.4. MAIN FEATURES OF PENSION SYSTEMS IN THE EU

This section discusses key pension parameters that help explain pension expenditure developments. Pension spending is not only determined by purely demographic factors, i.e. the number of older people, but also by the eligibility requirements, e.g. age and career requirements, and the generosity of the system, e.g. accrual rates and indexation variables.

Pensionable earnings, valorisation and indexation

The definition of pensionable earnings, the way built-up pension rights are valorised and the indexation of existing pension benefits are essential factors for future pension spending (see Annex Table I.A1.2).

Most Member States use full career earnings to determine pension entitlements, thus establishing a close relationship between the contributory period and the pension benefit. In terms of financial sustainability, this leads, *ceteris paribus*, to lower pension expenditure in comparison to countries where benefits are calculated on only part of the entire career. Considering only the best or last earning years results in higher entitlements as wages tend to rise throughout careers. In countries where flat-rate benefits are the main pension component (Denmark, Ireland and the Netherlands), the pensionable earnings reference is irrelevant.

Valorisation rules define how past pension contributions are capitalised upon retirement. Sixteen Member States and Norway valorise acquired rights based on wage growth or a combination of wage and price growth. Estonia, Latvia and Lithuania account for the demographic impact on the

⁽¹²⁾ The Austrian figures include the *Ausgleichszulage* and *Rehabilitationsgeld*. In the case of Estonia the *work ability allowance* is accounted for. More details can be found in the respective pension fiches for these countries.

⁽¹³⁾ The Irish public service occupational scheme, which provides pension benefits to civil servants, is included under public pension expenditure in the projections.

contributory base by valorising on the basis of changes in the wage bill or social contributions. Italy uses GDP growth to time-adjust past contributions. Four countries (Belgium, Spain, France and Malta) uprate rights purely with inflation. The flat-rate systems of Denmark, Ireland and the Netherlands do not involve a valorisation of accumulated pension rights.

Another way to look at the pensionable earnings reference and the valorisation rule is through the replacement rate and the income distribution. Combinations of both parameters will result in a different average initial pension benefit relative to the last average wage received – the replacement rate.⁽¹⁴⁾ This determines whether pensioners will be in a higher or lower percentile of the income distribution compared with their pre-retirement situation. Countries aiming to preserve the relative position of new pensioners in the overall personal income distribution tend to use the full career as reference for the pensionable earnings and to apply a wage valorisation rule. Alternatively, using the best career wages or an average of final years as reference for the pensionable earnings tends to preserve the relative income of the pensioners compared to the distribution of wages at retirement. Valorisation rules that disregard or only partially consider the increase in labour productivity lead to lower pension benefits relative to wages and hence a lower position in the income distribution at retirement.

Once new pension benefits are determined, their indexation determines how they evolve relative to wage and economic growth over time. Aside from the replacement rate, the benefit ratio – the average pension benefit relative to the average wage – is therefore also determined by the indexation parameter. The indexation variable determines whether pensioners maintain their position in the income distribution throughout retirement. In the Ageing Report projections, wages are assumed to evolve in line with prices and labour productivity. A nominal wage indexation rule thus preserves pensioners' relative position in the income distribution since benefits and wages grow at the same rate. On the contrary, partial nominal wage indexation or price indexation pushes pensioners into lower income percentiles.

Overall, the generosity of a pension system is therefore determined by:

- The average replacement rate at retirement (influenced by pensionable earnings and valorisation rule)
- The change in the benefit ratio (influenced by indexation rule)⁽¹⁵⁾

⁽¹⁴⁾ The accrual rate and the contributory period are the other determinants of the pension benefit in an earnings-related system. See Section 1.7.

⁽¹⁵⁾ See Sections 1.6.2 and 1.6.3 for a more detailed analysis of the indicators.

Indexation rules often differ from valorisation rules. 23 Member States index pension benefits at less than nominal wage growth, with pure price indexation in six of them (ES, FR, IT, HU, AT and SK). The legislated indexation rule is particularly important for minimum pensions (see Section 1.6.2.).

In addition, several countries have introduced automatic balancing mechanisms or sustainability factors, which both affect pension benefits. As shown in Table I.1.2, four countries (DE, LT, LU and SE) have automatic balancing mechanisms, which would reduce pension indexation if the pension system were to incur a deficit. Another adjustment mechanism found in eight countries (FR, FI, IT, LV, PL, PT, SE and NO) is a sustainability factor, which determines the initial pension benefit in function of life expectancy. A third adjustment mechanism concerns a link between the legal retirement age and gains in life expectancy, discussed in the next section.

Table I.1.2: **Automatic adjustment mechanisms**

	Automatic balancing mechanism	Sustainability factor (benefit linked to life expectancy) ⁽⁵⁾	Retirement age linked to life expectancy
CY			X
DE	X		
DK ⁽¹⁾			X
FR ⁽²⁾		X	
FI		X	X
EL ⁽³⁾			X
EE			X
IT		X	X
LV		X	
LT	X		
LU	X		
NL ⁽⁴⁾			X
PL		X	
PT ⁽⁴⁾		X	X
SK			X
SE ⁽⁴⁾	X	X	X
NO		X	

(1) Subject to Parliamentary decision.

(2) Pension benefits evolve in line with life expectancy through the 'proratisation' coefficient; it has been legislated until 2028.

(3) An automatic balancing mechanism is applied in the auxiliary pension system.

(4) The legal retirement age is linked to two thirds of the increase in life expectancy.

(5) In NDC systems, the benefit is linked to changes in life expectancy through the annuity factor.

Source: European Commission, EPC.

Retirement ages and duration of retirement

In most Member States, the statutory retirement age is set to rise under current legislation, often substantially. This reflects either planned discretionary increases in the coming years, including a convergence of female with male legal retirement ages⁽¹⁶⁾, or steady increases due to the fact that legal retirement ages are linked to gains in life expectancy, as is the case in ten Member States (see Table I.1.2). The average statutory retirement age for men (women) is set to rise from around 65 (64.5) years today to around 67 years in 2070. Table I.1.3 gives an overview of statutory retirement ages, early retirement ages and whether penalties/bonuses apply for those who retire early/late.

There are significant differences between countries regarding actual retirement ages and incentives to postpone retirement. Early retirement schemes and other policies to provide pension income before reaching the official retirement age create an opportunity to advance one's labour market exit. The presence of bonuses and penalties also influences individuals' retirement behaviour. As a result, the *effective* retirement age is generally lower than the *statutory* one (see Graph I.1.1).⁽¹⁷⁾ Hence, to ensure that rising statutory retirement ages translate into higher effective retirement ages, governments would need to tighten early exit pathways accordingly, for example by extending career requirements, raising early retirement ages or increasing bonuses and penalties.

⁽¹⁶⁾ In 2022, eight Member States had a lower statutory retirement age for women than for men. Based on current legislation, in future this would be the case only in Poland and Slovakia.

⁽¹⁷⁾ The exceptions are Malta, Bulgaria, Poland and Austria, where women retire on average beyond the statutory retirement age.

Table I.1.3: **Statutory retirement ages, early retirement ages and incentives to postpone retirement**

	Statutory retirement age (early retirement age)								Incentives**	
	MALE				FEMALE				penalty	bonus
	2022	2030	2050	2070	2022	2030	2050	2070		
BE	65 (63)	67 (63)	67 (63)	67 (63)	65 (63)	67 (63)	67 (63)	67 (63)		X
BG	64.4 (63.4)	65 (64)	65 (64)	65 (64)	61.8 (60.8)	63.3 (62.3)	65 (64)	65 (64)	X	X
CZ	63.9 (60)	65 (62)	65 (62)	65 (62)	62.2 (59.2)	64.7 (61.7)	65 (62)	65 (62)	X	X
DK*	67 (63.5)	68 (65)	71.5 (68.5)	74 (71)	67 (63.5)	68 (65)	71.5 (68.5)	74 (71)		
DE	65.9 (63)	66.9 (63)	67 (63)	67 (63)	65.9 (63)	66.9 (63)	67 (63)	67 (63)	X	X
EE*	64.2 (59.2)	65.5 (60.5)	67.7 (62.7)	69.8 (64.8)	64.2 (59.2)	65.5 (60.5)	67.7 (62.7)	69.8 (64.8)	X	X
IE	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)	66 (66)		
EL*	67 (62)	68.5 (63.5)	70.5 (65.5)	72.5 (67.5)	67 (62)	68.6 (63.6)	70.5 (65.5)	72.5 (67.5)	X	
ES	66.2 (64.2)	67 (65)	67 (65)	67 (65)	66.2 (64.2)	67 (65)	67 (65)	67 (65)	X	X
FR	67 (62)	67 (63.6)	67 (64)	67 (64)	67 (62)	67 (63.6)	67 (64)	67 (64)	X	X
HR	65 (60)	65 (60)	65 (60)	65 (60)	63 (58)	65 (60)	65 (60)	65 (60)	X	X
IT*	67 (64)	67.3 (64.3)	69.2 (66.2)	70.8 (67.8)	67 (64)	67.3 (64.3)	69.2 (66.2)	70.8 (67.8)		
CY*	65 (65)	65.6 (65.6)	67.6 (67.6)	69.4 (69.4)	65 (65)	65.6 (65.6)	67.6 (67.6)	69.4 (69.4)	X	X
LV	64.3 (62.3)	65 (63)	65 (63)	65 (63)	64.3 (62.3)	65 (63)	65 (63)	65 (63)		
LT	64.3 (59.3)	65 (60)	65 (60)	65 (60)	63.7 (58.7)	65 (60)	65 (60)	65 (60)	X	X
LU	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)	65 (57)		
HU	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)	65 (65)		X
MT	63 (61)	65 (61)	65 (61)	65 (61)	63 (61)	65 (61)	65 (61)	65 (61)		X
NL*	66.6 (66.6)	67.3 (67.3)	68.5 (68.5)	69.8 (69.8)	66.6 (66.6)	67.3 (67.3)	68.5 (68.5)	69.8 (69.8)		
AT	65 (60)	65 (60)	65 (60)	65 (60)	60 (55)	63.5 (60)	65 (60)	65 (60)	X	X
PL	65 (65)	65 (65)	65 (65)	65 (65)	60 (60)	60 (60)	60 (60)	60 (60)		
PT*	66.6 (60)	66.9 (60)	68.1 (60)	69.2 (60)	66.6 (60)	66.9 (60)	68.1 (60)	69.2 (60)	X	X
RO	65 (60)	65 (60)	65 (60)	65 (60)	61.8 (56.8)	63 (58)	65 (60)	65 (60)	X	
SI	65 (60)	65 (60)	65 (60)	65 (60)	65 (60)	65 (60)	65 (60)	65 (60)	X	X
SK*	62.8 (60.8)	64 (62)	66.1 (64.1)	68.3 (66.3)	62 (60)	63.2 (61.2)	65.4 (63.4)	67.7 (65.7)	X	X
FI*	64.5 (61)	65.4 (62.4)	66.9 (63.9)	68.3 (65.3)	64.5 (61)	65.4 (62.4)	66.9 (63.9)	68.3 (65.3)	X	X
SE*	65 (62)	67 (64)	68 (65)	70 (67)	65 (62)	67 (64)	68 (65)	70 (67)		
NO	67 (62)	67 (62)	67 (62)	67 (62)	67 (62)	67 (62)	67 (62)	67 (62)		

BE – A pension bonus was voted in Parliament on 4 April 2024.

BG – The latest pension reform included a provision to link retirement ages to life expectancy as from 2037. This provision has not been implemented, though.

CZ – Statutory retirement age depends on the number of children. Values for women with two children are reported.

DE – Two types of early retirement exist: (i) as of 63y with at least 35 contributory years (with permanent deduction) or (ii) after at least 45 contributory years at the age of 64, rising to 65 by 2029 (without deduction).

IT – The standard minimum age for early retirement under the NDC system is reported.

SK – The statutory retirement age depends on the number of children: weighted average is reported for women. The standard Early retirement is reported: 2 years prior to the statutory retirement age (since 2023 early retirement is also possible after 40 years of contribution).

SE – Retirement is flexible as of the age of 62 without an upper limit, rising in line with life expectancy at 65 years.

NO – Retirement is flexible as of the age of 62.

*Countries where the statutory retirement age is legislated to increase in line with life expectancy. Reported retirement ages are calculated based on life expectancy in the Eurostat population projections.

**Actuarial equivalence is not considered a penalty/bonus.

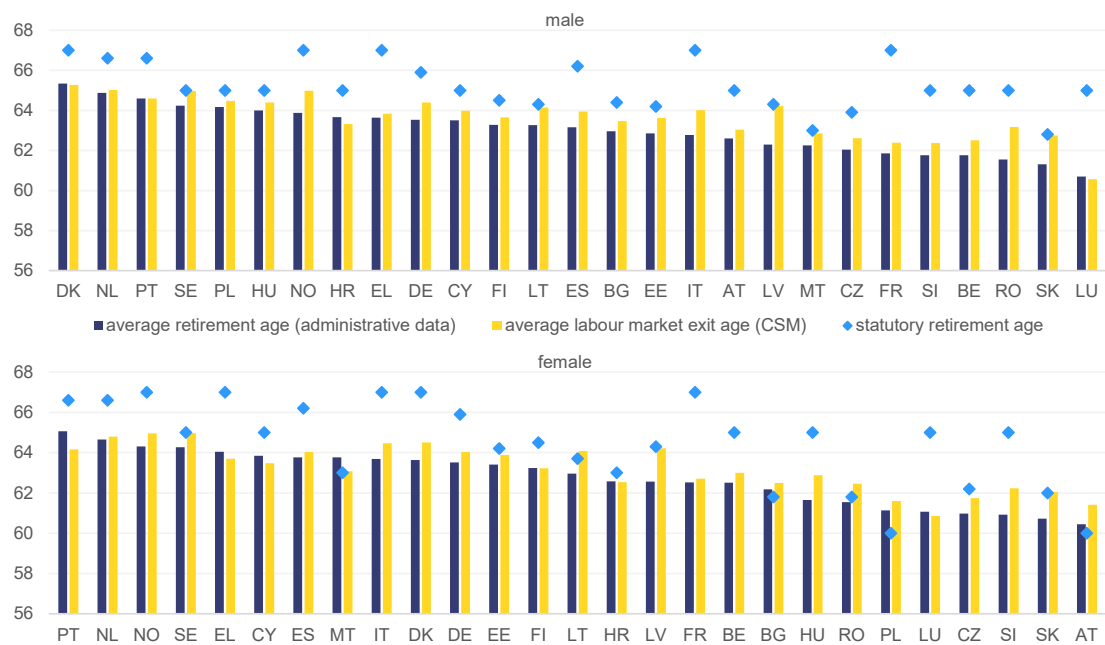
Source: European Commission, EPC.

The average age at which people leave the labour market provides a proxy for the effective retirement age. Graph I.1.1 compares the average effective retirement age, i.e. the age at which people start drawing a pension benefit, with the average age at which people currently leave the labour market.⁽¹⁸⁾ The differences between both series point to a further diversity in retirement

⁽¹⁸⁾ Labour market exit ages are based on the labour force projections of the Cohort Simulation Model (CSM), presented in [Volume I of the 2024 Ageing Report](#).

behaviour across countries since the moment people leave the labour market – and thus stop paying pension contributions – does not necessarily coincide with the moment they actually start drawing pension benefits. For example, many countries allow people to continue working upon (partial) retirement. Conversely, people might be neither active on the labour market nor entitled to pension benefits yet. The use of different definitions (administrative versus survey data for the CSM, labour market status of disability pensioners, recording of exits throughout calendar year) complicates comparisons between levels for both series. The change in the projected labour market exit age is nevertheless considered a good proxy for the expected change in the effective retirement age and used as such in the projection exercise.

Graph I.1.1: Average retirement age, average labour market exit age and statutory retirement age



Administrative data are 2022 figures and show the average retirement age based on entries into old-age, early retirement or disability pension; 2021 figures for BE, DK, FR and MT; IE is not included since no figures for disability entries are available. Average labour market exit ages (CSM) refer to 2023. Statutory retirement age is 2022.

Source: European Commission, EPC.

By 2070, the average age at which people exit the labour market in the EU would increase by around 2 years (see Table I.1.4). This increase – 1.9 years for men and 2.2 years for women – reflects legislated measures, including discretionary increases in early and statutory retirement ages, an automatic increase in line with gains in life expectancy or other measures to delay retirement, such as stricter financial incentives or career length requirements to retire early. Higher entry ages into the labour market, because of longer schooling, may also translate into higher exit ages.

The average retirement spell in the EU is projected to increase by 3-4 years by 2070 (see Table I.1.5). In those Member States that have legislated a link to life expectancy, the duration of retirement increases by less. The retirement duration goes from the equivalent of 44% of the working career in 2023 to 52% in 2070 for men and from 56% to 62% for women, though it generally falls for countries with a link. Overall, a larger share of an increasing lifespan will be spent in retirement on average.

Table I.1.4: **Average effective labour market exit age**

	male				female				
	2023	2030	2050	2070	2023	2030	2050	2070	
BE	62.5	64.0	64.2	64.4	63.0	64.1	64.2	64.4	BE
BG	63.5	64.0	64.2	64.4	62.5	63.2	64.0	64.2	BG
CZ	62.6	63.9	63.9	63.9	61.7	63.7	64.0	64.0	CZ
DK*	65.3	65.8	67.8	69.0	64.5	65.4	67.5	69.0	DK*
DE	64.4	65.1	65.3	65.5	64.0	64.8	65.2	65.5	DE
EE*	63.6	64.6	67.0	68.4	63.9	64.7	67.1	68.4	EE*
IE	64.3	64.8	64.8	64.8	64.1	64.8	64.8	64.8	IE
EL*	63.8	64.6	66.4	67.5	63.7	64.6	66.3	67.5	EL*
ES	64.0	65.6	66.4	66.4	64.0	65.6	66.4	66.4	ES
FR	62.4	63.7	64.8	64.8	62.7	63.8	64.8	64.8	FR
HR	63.3	63.6	63.7	63.7	62.5	63.2	63.7	63.7	HR
IT*	64.0	65.2	66.7	68.6	64.5	65.6	67.1	69.0	IT*
CY*	64.0	64.3	65.4	66.7	63.5	63.8	65.1	66.7	CY*
LV	64.2	64.9	64.9	64.9	64.2	64.9	64.9	64.9	LV
LT	64.1	64.8	64.9	64.9	64.1	64.8	64.9	64.9	LT
LU	60.6	60.7	61.2	61.5	60.9	61.0	61.1	61.5	LU
HU	64.4	64.6	64.6	64.6	62.9	63.3	64.0	64.0	HU
MT	62.9	63.4	63.6	63.6	63.1	63.6	63.6	63.6	MT
NL*	65.0	65.4	66.6	67.8	64.8	65.2	66.6	67.8	NL*
AT	63.0	63.2	63.6	63.6	61.4	62.8	63.5	63.5	AT
PL	64.5	64.5	64.5	64.5	61.6	61.6	61.6	61.6	PL
PT*	64.6	64.9	65.8	66.9	64.2	64.7	65.5	66.4	PT*
RO	63.2	63.4	63.6	63.6	62.5	63.0	64.4	64.4	RO
SI	62.4	63.0	64.0	64.0	62.2	62.9	64.0	64.0	SI
SK*	62.8	63.6	65.2	66.8	62.1	62.8	64.5	66.1	SK*
FI*	63.7	64.2	66.2	67.4	63.2	63.7	65.5	67.4	FI*
SE*	65.0	65.8	66.4	67.9	65.0	65.7	66.4	67.9	SE*
NO	65.0	65.1	65.3	65.6	64.7	65.1	65.3	65.6	NO
EA	63.8	64.8	65.6	66.1	63.7	64.8	65.6	66.1	EA
EU	63.8	64.7	65.4	65.9	63.5	64.4	65.1	65.7	EU

- The average effective exit age from the labour market is based on the Cohort Simulation Model's cumulated exit probabilities for the reference age group 51-74.

- RO: exit ages and related macroeconomic assumptions were updated compared to Part I of this report, to account for the pension reforms adopted in November 2023.

*Countries where the statutory retirement age is legislated to increase in line with the increase in life expectancy.

Source: European Commission, EPC.

Table I.1.5: Duration of retirement: years, share of average working career and share of adult life

	Duration of retirement (years)						Duration of retirement as a share of average working career						Percentage of adult life spent in retirement						
	MALE			FEMALE			MALE			FEMALE			MALE			FEMALE			
	2023	2070	change	2023	2070	change	2023	2070	change	2023	2070	change	2023	2070	change	2023	2070	change	
BE	20.5	24.5	4.0	24.1	27.8	3.7	51.1	58.6	7.4	60.5	68.1	7.7	32.5	35.5	3.0	35.9	38.5	2.6	BE
BG	15.2	22.1	6.9	20.2	25.5	5.3	37.7	53.7	16.0	54.1	65.5	11.5	25.9	33.2	7.3	32.2	36.6	4.4	BG
CZ	17.7	23.3	5.6	22.5	26.6	4.1	43.6	55.7	12.2	61.1	68.8	7.8	29.3	34.6	5.3	35.0	37.7	2.7	CZ
DK*	18.8	20.0	1.2	21.5	22.8	1.3	42.8	42.2	-0.6	50.4	48.9	-1.4	29.3	29.0	-0.4	32.6	31.8	-0.8	DK*
DE	19.1	23.3	4.2	22.4	26.4	4.0	43.6	51.9	8.3	53.2	60.8	7.6	30.1	33.9	3.8	33.7	36.7	3.0	DE
EE*	16.6	19.7	3.1	21.9	23.5	1.6	38.6	41.4	2.8	50.5	49.4	-1.1	27.6	28.9	1.4	33.3	32.7	-0.6	EE*
IE	20.2	23.9	3.7	23.0	27.0	4.0	45.5	53.4	7.9	52.3	60.9	8.6	31.3	34.8	3.4	34.3	37.6	3.3	IE
EL*	19.7	21.3	1.6	22.8	23.9	1.1	48.0	48.0	0.0	57.1	55.2	-1.9	31.0	31.0	0.0	34.3	33.5	-0.8	EL*
ES	20.5	23.3	2.8	24.7	26.7	2.0	49.2	53.0	3.8	60.4	62.1	1.7	31.8	33.4	1.6	35.9	36.5	0.6	ES
FR	22.1	24.1	2.0	25.6	27.7	2.1	53.6	55.4	1.9	63.0	65.4	2.4	34.3	35.0	0.7	37.5	38.2	0.7	FR
HR	17.2	22.8	5.6	21.2	26.2	5.0	40.6	53.9	13.2	53.0	64.7	11.8	28.4	34.3	5.8	33.3	37.5	4.2	HR
IT*	20.3	20.5	0.2	22.9	23.5	0.6	50.2	45.6	-4.6	59.2	54.7	-4.5	31.6	29.7	-1.9	34.0	32.4	-1.5	IT*
CY*	20.0	21.9	1.9	23.7	24.5	0.8	46.2	47.8	1.6	56.7	54.7	-1.9	31.3	31.9	0.7	35.3	34.4	-0.9	CY*
LV	14.9	21.5	6.6	20.1	25.4	5.3	34.4	49.0	14.6	47.8	60.2	12.4	25.2	32.4	7.2	31.3	36.1	4.9	LV
LT	15.2	21.7	6.5	20.6	25.7	5.1	35.6	50.2	14.7	49.0	60.4	11.4	25.6	32.6	7.0	31.8	36.4	4.6	LT
LU	22.7	26.6	3.9	26.1	30.8	4.7	58.7	68.1	9.4	68.1	79.9	11.8	35.9	39.0	3.2	39.0	42.6	3.6	LU
HU	15.3	21.8	6.5	20.2	26.3	6.1	36.0	51.2	15.2	51.1	65.3	14.2	25.6	32.8	7.2	32.0	37.4	5.4	HU
MT	21.3	24.9	3.6	24.4	28.1	3.7	49.3	56.8	7.5	56.9	65.0	8.1	33.2	36.3	3.1	36.2	39.2	3.0	MT
NL*	19.0	20.9	1.9	21.5	23.6	2.1	42.1	44.7	2.7	48.7	51.4	2.6	29.7	30.4	0.7	32.4	33.0	0.6	NL*
AT	20.3	24.4	4.1	25.4	27.5	2.1	47.6	56.7	9.1	63.0	65.4	2.4	32.0	35.9	3.9	38.0	38.7	0.7	AT
PL	16.4	23.3	6.9	22.6	28.9	6.3	38.5	55.0	16.5	59.7	77.0	17.3	26.9	34.4	7.4	35.2	41.0	5.8	PL
PT*	19.8	22.3	2.5	23.2	25.7	2.5	47.2	50.5	3.3	56.0	59.1	3.1	30.7	32.2	1.5	34.4	35.6	1.2	PT*
RO	15.8	22.8	7.0	20.8	26.3	5.5	38.7	55.5	16.8	56.8	68.6	11.8	26.8	34.3	7.5	32.9	37.2	4.3	RO
SI	20.3	24.1	3.8	24.5	27.6	3.1	49.7	57.2	7.5	62.3	67.6	5.2	32.4	35.4	3.0	36.7	38.5	1.8	SI
SK*	16.8	20.6	3.8	21.9	24.9	3.0	41.4	46.4	5.0	57.7	59.9	2.2	28.2	30.6	2.4	34.2	35.1	0.8	SK*
FI*	19.3	21.7	2.4	23.7	24.9	1.2	45.3	47.6	2.2	57.5	55.7	-1.9	30.7	31.4	0.7	35.4	34.4	-1.0	FI*
SE*	19.7	21.2	1.5	22.6	24.2	1.6	44.5	45.2	0.7	51.7	52.4	0.8	30.5	30.7	0.2	33.4	33.6	0.1	SE*
NO	20.2	23.3	3.1	22.4	25.9	3.5	45.3	52.3	6.9	51.9	59.7	7.8	31.0	33.8	2.8	33.4	36.2	2.8	NO
EA	20.3	23.9	3.6	24.4	27.4	3.0	48.3	54.5	6.2	59.6	64.2	4.6	32.3	35.0	2.7	36.7	38.3	1.6	EA
EU	18.7	22.5	3.8	22.7	26.0	3.3	44.4	51.7	7.2	56.2	61.7	5.5	29.9	33.1	3.2	34.5	36.4	2.0	EU

- Duration of retirement is measured as remaining life expectancy (EUROPOP2023) at the average effective labour market exit age.

- The average working career is defined as the average exit age from the labour market minus the effective entry age.

- Adult life spent in retirement is defined as the ratio between the life expectancy at the average exit age and the estimated age of death minus 20 years.

*Countries where the statutory retirement age is legislated to increase in line with the increase in life expectancy.

Source: European Commission, EPC.

1.5. PENSION EXPENDITURE PROJECTIONS

1.5.1. Public pensions

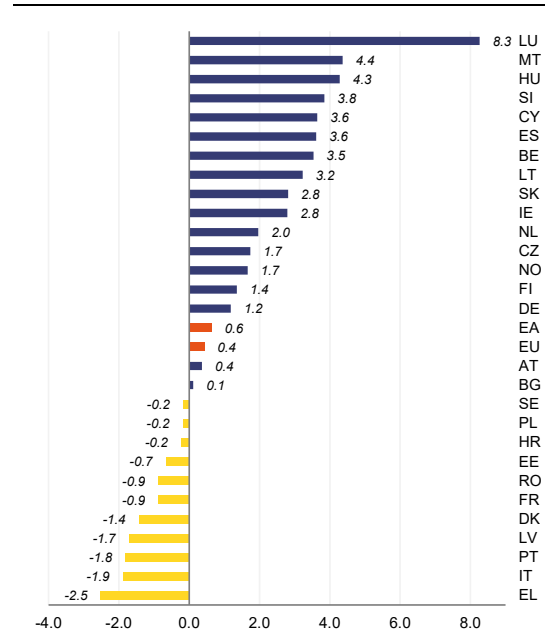
Overall expenditure projections 2022-2070

Public pension spending is expected to rise, to varying degrees, in 16 Member States plus Norway by 2070. The pension projections cover the period up to 2070, starting from base year 2022. Pension spending would rise by 0.4 pps of GDP on average in the EU over this period. The biggest increase is projected for Luxembourg, at about 8 pps of GDP (see Graph I.1.2). At unchanged policy, an increase of 2 percentage points of GDP or more is also expected for Malta, Hungary, Slovenia, Cyprus, Spain, Belgium, Lithuania, Slovakia, Ireland and the Netherlands. Czechia, Norway, Finland and Germany would see pension expenditure increase by between 1 and 2 pps of GDP. Minor increases are projected for Austria and Bulgaria.

Conversely, 11 Member States are expected to experience an overall decline in public pension expenditure. The largest decrease is projected for Greece, at -2.5 pps of GDP, followed by Italy, Portugal, Latvia and Denmark, with a decrease of between 1 and 2 pps of GDP. Six other Member States would see spending fall by less than 1 pp, namely France, Romania, Estonia, Croatia, Poland and Sweden.

Spending would rise considerably during the first part of the projection period, with pressures abating thereafter on average. Breaking down the projection period into 2022-2045 and 2045-2070 shows that expenditure would rise by 0.7 pps of GDP on average in the first half, followed by a 0.3 pps decrease in the second part (see Table I.1.6). Pension spending would increase in a large majority of countries over the next few decades. This includes several of the countries for which expenditure would fall over the full projection period, such as Italy, Portugal and Romania. In the period up to 2045, the largest spending hike is expected for Spain, at almost 4 pps of GDP, followed by Lithuania, Slovenia, Portugal, Slovakia, Cyprus and Luxembourg, with an increase of 2.5 to about 3 pps of GDP. Declines are limited in this first period both in number and size: Bulgaria, Greece, France, Latvia, Malta, Finland and Sweden would see pension spending fall in 2022-2045, with a maximum decrease of 0.8 pps of GDP in Latvia. In 2045-2070, changes range from -4.7 pps of GDP in Portugal to +5.7 pps in Luxembourg. In most countries spending continues to increase in this period, though they are fewer and, except for Luxembourg and Malta, the size of the increase is smaller. In Bulgaria, Finland and Sweden spending would increase after having fallen in 2022-2045. In twelve countries expenditure is projected to fall in the second half of the projection period. For Greece, France and Latvia a decline in pension spending is projected in both 2022-2045 and 2045-2070.

Graph I.1.2: Change in gross public pension expenditure 2022-2070 (baseline, pps of GDP)



Source: European Commission, EPC.

Table I.1.6: **Level and change in gross public pension expenditure (baseline, %/pps of GDP)**

	2022	change 2022-2045		2045	change 2045-2070		2070	change 2022-2070	
BE	12.7		1.9	14.6		1.6	16.2	3.5	BE
BG	9.5		-0.1	9.3		0.3	9.6	0.1	BG
CZ	8.7		1.3	10.0		0.4	10.4	1.7	CZ
DK	8.3		0.0	8.3		-1.5	6.8	-1.4	DK
DE	10.2		0.8	11.0		0.4	11.4	1.2	DE
EE	7.4		0.1	7.5		-0.8	6.7	-0.7	EE
IE	3.8		1.7	5.5		1.1	6.6	2.8	IE
EL	14.5		-0.5	14.0		-2.0	12.0	-2.5	EL
ES	13.1		3.8	16.9		-0.2	16.7	3.6	ES
FR	14.4		-0.5	13.9		-0.3	13.6	-0.9	FR
HR	9.0		0.3	9.3		-0.5	8.8	-0.2	HR
IT	15.6		0.9	16.5		-2.8	13.7	-1.9	IT
CY	8.2		2.7	10.9		1.0	11.8	3.6	CY
LV	7.2		-0.8	6.3		-0.9	5.4	-1.7	LV
LT	6.4		3.1	9.6		0.1	9.7	3.2	LT
LU	9.2		2.6	11.8		5.7	17.5	8.3	LU
HU	7.7		2.4	10.2		1.8	12.0	4.3	HU
MT	6.2		-0.5	5.6		4.9	10.5	4.4	MT
NL	6.5		1.4	7.9		0.6	8.5	2.0	NL
AT	13.7		0.5	14.2		-0.1	14.0	0.4	AT
PL	10.2		0.4	10.6		-0.5	10.1	-0.2	PL
PT	12.2		2.9	15.1		-4.7	10.4	-1.8	PT
RO	8.5		2.1	10.6		-3.0	7.6	-0.9	RO
SI	9.8		3.0	12.8		0.9	13.7	3.8	SI
SK	8.5		2.7	11.2		0.1	11.3	2.8	SK
FI	12.8		-0.4	12.3		1.8	14.1	1.4	FI
SE	7.4		-0.4	7.0		0.2	7.2	-0.2	SE
NO	10.8		1.2	12.0		0.5	12.5	1.7	NO
EA	11.9		0.9	12.7		-0.2	12.5	0.6	EA
EU	11.4		0.7	12.1		-0.3	11.8	0.4	EU

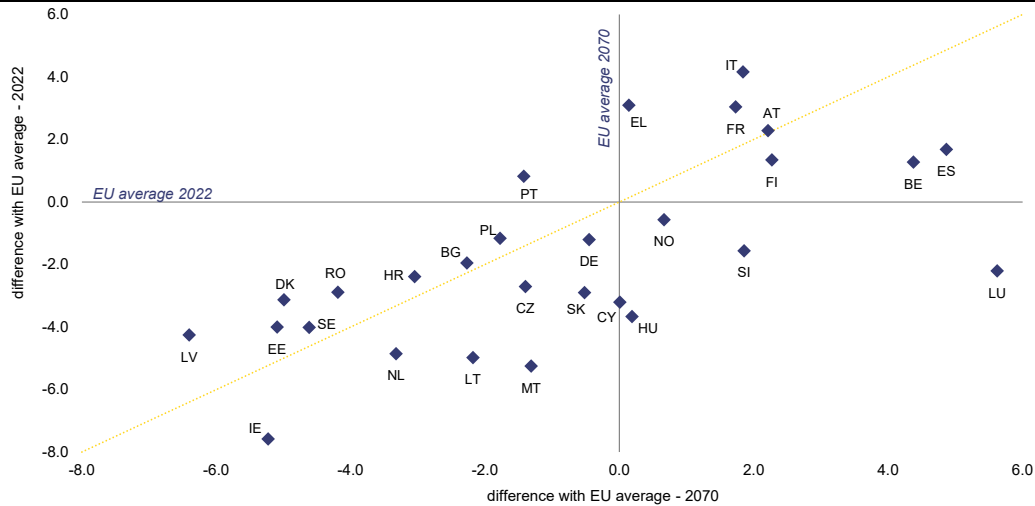
AT: figures include the Ausgleichszulage and Rehabilitationsgeld.

Source: European Commission, EPC.

While sharp increases in expenditure help trace sustainability risks, expenditure levels need to be factored in as well. Countries with a similar increase in pension expenditure do not necessarily face equal risks if current spending on pension benefits – or total government spending – differs. In addition, revenue developments and adequacy considerations play a role as well. Graph I.1.3 compares spending levels in 2022 and 2070 to the average spending in the EU:

- *Countries located in the upper-right quadrant have a higher public pension expenditure level than the EU average, both in 2022 and 2070.* Those situated right of the 45-degree line in this quadrant (Finland, Belgium and Spain) show a larger than average increase over the projection period. Conversely, a projected decrease in the pension expenditure-to-GDP ratio moves Greece, France and Italy closer to the EU average by 2070.
- *Several of the countries with the biggest projected overall increase start from a comparatively low level.* This is especially the case for Malta, Lithuania, Hungary and Cyprus and, to a lesser extent, Luxembourg and Slovenia. At 17.5% of GDP, Luxembourg would nevertheless have the highest pension expenditure ratio of all Member States in 2070, followed by Spain with 16.7% and Belgium with 16.2%.

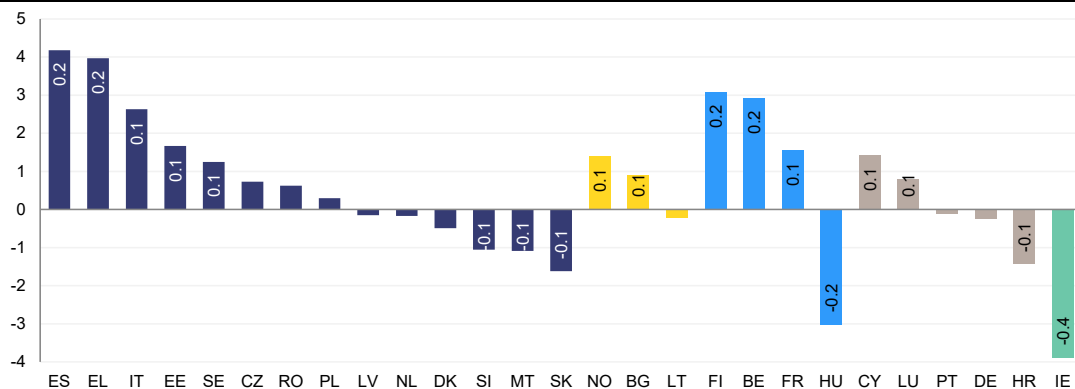
Graph I.1.3: Pension spending in 2022 and 2070: relative position towards the EU average (pps of GDP difference)



Source: European Commission, EPC.

Pension expenditure already rose significantly in many Member States in the years before 2022. Since 2000, the pension expenditure-to-GDP ratio rose substantially in Spain (+4.2 pps), Greece (+4 pps), Italy (+2.6 pps), Estonia (+1.7 pps) and Sweden (+1.2 pps) (see Graph I.1.4). Between 2007 and 2022, Finland (+3.1 pps), Belgium (+2.9 pps) and France (+1.6 pps) also saw a strong increase in pension spending, especially when considering the shorter period during which it took place. The same is true for Cyprus (+1.4 pps) in 2010-2022. For several of these countries pension expenditure is projected to continue rising as discussed higher. At the same time, pension expenditure in several other Member States remained more stable in recent years or even fell relative to GDP.

Graph I.1.4: Change in gross public pension expenditure prior to 2022 (pps of GDP, available period)

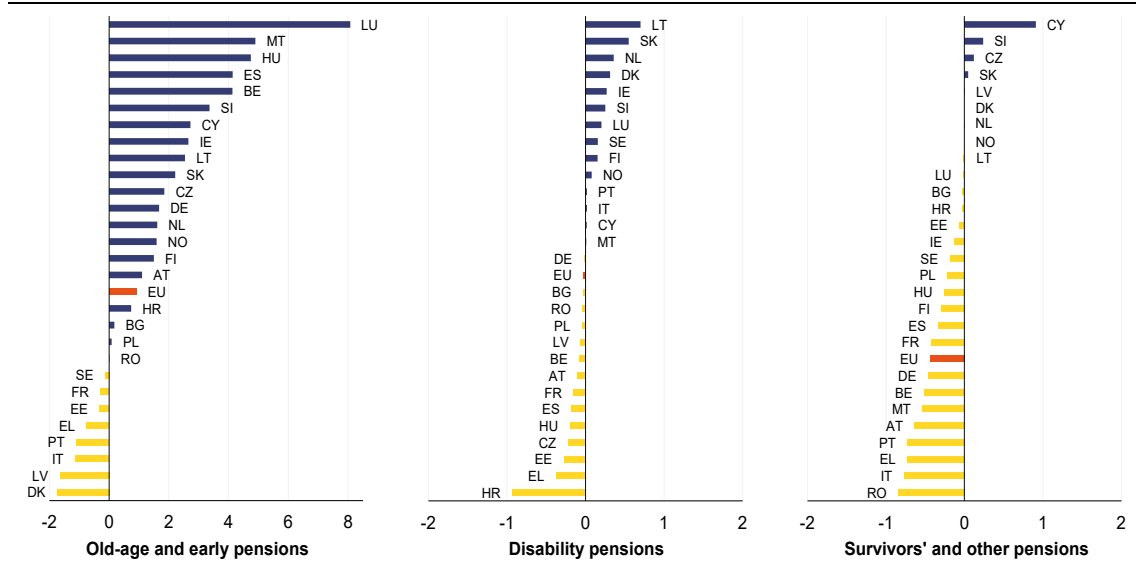


based on figures for: 2000-2022 2003-2022 2007-2022 2010-2022 2011-2022

- Bars show the overall change in pension spending during the available period; labels show the average annual change.
- No historical expenditure figures were reported by Austria.

Source: European Commission, EPC.

Graph I.1.5: **Change in gross public pension expenditure by main scheme, 2022-2070 (pps of GDP)**



- IE: 'Old-age and early pensions' include the public service occupational scheme.
- EE: 'Disability pensions' include the work ability allowance.
- AT: *Ausgleichszulage* and *Rehabilitationsgeld* are included under 'other pensions'.
- EL: excluding the impact of retroactive benefit payments.

Source: European Commission, EPC.

Changes for the main general schemes

Overall spending dynamics are driven by old-age and early pensions schemes (see Graph I.1.5). All countries that are projected to have a higher total expenditure ratio in 2070 compared to 2022 would see spending on old-age and early pensions rise. For the EU, the average increase amounts to 0.9 pps of GDP. The largest increase is projected in Luxembourg (8.1 pps). Malta, Hungary, Spain and Belgium also show substantial increases of around 4-5 pps of GDP. For eight countries a decline is projected for old-age and early pension spending.

Average spending on disability pensions would remain stable in the EU over the long term.

Changes are smaller than 0.5 pps for all countries except Lithuania and Slovakia, with increases of 0.7 pps and 0.6 pps of GDP respectively, and Croatia, with a decrease by 0.9 pps of GDP. The decline for Croatia is due to a gradual disappearance of the large group of war veterans currently receiving disability benefits.

Spending on survivors' pensions and all other schemes would fall by 0.4 pps of GDP in the EU by 2070.

Cyprus (+0.9 pps of GDP) is the only country with a substantial expected increase. It reflects the introduction in 2019 of survivor pensions for men under the same conditions as for women, resulting in a gradual increase in the number of male surviving beneficiaries until 2040. Survivor pensions are generally projected to decline because of higher female labour market participation and the associated build-up of personal pension rights, fewer marriages and partial upward convergence in male and female life expectancy. In the case of Romania (-0.8 pps), 'other benefits' drive the decline. These comprise the special pension schemes, on which spending would fall

over time because some schemes are winded down (e.g. farmers) while others (e.g. security and defence forces) have been reformed in recent years, bringing them closer to the general scheme. ⁽¹⁹⁾

Public pension expenditure: time profile

When looking at changes by decade, broad patterns can be distinguished in the projected dynamics for pension spending.

- *In 2022-2030, pension expenditure rises by 0.5 pps on average in the EU, increasing in 21 Member States.* The biggest increase would be in Romania (+1.9 pps of GDP), with spending rising by more than 1 pp of GDP in ten more countries: Slovakia, Lithuania, Austria, Portugal, Norway, Spain, Croatia, Cyprus, Italy and Poland. The projections for Greece entail an expenditure decline of 1.8 pps by 2030, with a smaller decrease in Czechia, France, Latvia, Hungary and Malta.
- *During the 2030s, the overall upward trend continues, though at a slower pace, with a rise of 0.3 pps in the EU and increases in 15 Member States.* Spain is projected to see spending grow by 1.9 pps of GDP. Also in Luxembourg, Hungary, Slovenia, Lithuania, Portugal, Czechia, Cyprus and Greece expenditure would rise by more than 1 pp of GDP. Bulgaria has the largest expected fall, at 0.9 pps.

Table I.1.7: **Gross public pension expenditure - change per decade (pps of GDP)**

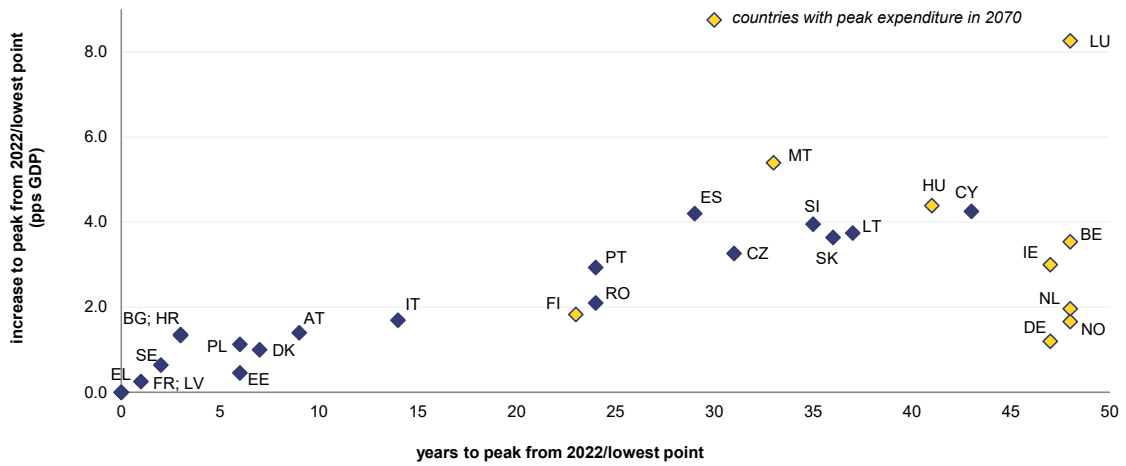
	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
BE	0.9	0.8	0.4	0.7	0.8	3.5
BG	0.8	-0.9	0.1	0.3	-0.2	0.1
CZ	-0.7	1.1	1.5	0.4	-0.6	1.7
DK	1.0	-0.4	-1.0	-0.9	0.0	-1.4
DE	0.6	0.3	-0.1	0.2	0.2	1.2
EE	0.4	-0.3	-0.1	0.0	-0.7	-0.7
IE	0.3	0.9	0.9	0.5	0.2	2.8
EL	-1.8	1.0	0.3	-1.4	-0.7	-2.5
ES	1.2	1.9	1.1	-0.4	-0.2	3.6
FR	-0.1	-0.2	-0.4	-0.2	0.1	-0.9
HR	1.1	-0.5	-0.5	-0.3	0.0	-0.2
IT	1.1	0.4	-1.6	-1.7	-0.1	-1.9
CY	1.1	1.1	0.6	1.0	-0.2	3.6
LV	-0.2	-0.4	-0.2	-0.2	-0.7	-1.7
LT	1.7	1.2	0.5	0.4	-0.5	3.2
LU	0.6	1.5	1.3	2.4	2.5	8.3
HU	-0.1	1.4	1.6	0.8	0.6	4.3
MT	-0.7	-0.2	1.1	2.4	1.8	4.4
NL	0.7	0.7	-0.1	0.1	0.5	2.0
AT	1.3	-0.4	-0.7	0.0	0.1	0.4
PL	1.1	-0.7	0.1	-0.1	-0.6	-0.2
PT	1.3	1.2	-0.1	-2.8	-1.4	-1.8
RO	1.9	-0.1	0.2	-1.0	-1.9	-0.9
SI	0.9	1.3	1.4	0.3	-0.1	3.8
SK	1.7	0.6	0.8	0.6	-0.8	2.8
FI	0.5	-0.7	-0.3	0.9	0.8	1.4
SE	0.2	-0.4	-0.1	0.3	-0.1	-0.2
NO	1.2	0.1	-0.1	0.2	0.3	1.7
EA	0.5	0.4	-0.2	-0.2	0.1	0.6
EU	0.5	0.3	-0.1	-0.2	0.0	0.4

Source: European Commission, EPC.

- *While still rising in 15 Member States between 2040 and 2050, pension spending would decline slightly in the EU, by 0.1 pp of GDP on average.* The largest decrease is expected for Italy (-1.6 pps of GDP) and Denmark (-1 pp). Spending would continue to rise considerably in several Member States: 1.6 pps in Hungary, 1.5 pps in Czechia, 1.4 pps in Slovenia, 1.3 pps in Luxembourg and 1.1 pps in Spain and Malta, which until then would have seen spending decline according to the projections.
- *Similarly, in 2050-2060, a small decline of 0.2 pps of GDP is expected on average in the EU, despite rising pension spending in 16 Member States.* Portugal (-2.8 pps of GDP), Italy (-1.7 pps) and Greece (-1.4 pps) show the largest projected decline over this decade. At the same time, spending would continue to rise rapidly in Malta and Luxembourg (+2.4 pps) and to a lesser extent in Cyprus (+1 pp).

⁽¹⁹⁾ Special pension schemes, which should in principle be included in the projections for all countries, are usually included under the old-age and early retirement scheme.

Graph I.1.6: Years and increase to peak expenditure



The graph shows on the horizontal axis the number of years between the lowest point (situated between 2022 and the peak) and the year in which expenditure is projected to peak. The increase in pension expenditure over this low-to-peak period is shown along the vertical axis.

Source: European Commission, EPC.

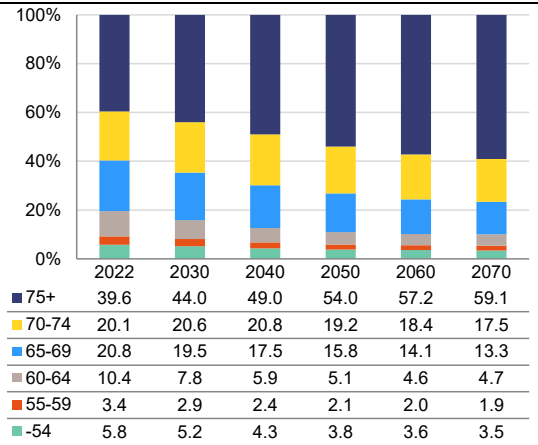
- Finally, in 2060-2070, pension spending would fall in most Member States, though it is flat on average in the EU. This reflects continuously high upward pressure in a limited number of countries, in particular for Luxembourg (+2.5 pps) and Malta (+1.8 pps), while spending falls only limitedly in the 17 Member States with a projected decline during the 2060s, except for Romania (-1.9 pps) and Portugal (-1.4 pps).

There are large differences between countries in the increase and the number of years until pension expenditure peaks. As shown in Table I.1.7, spending is projected to rise continuously in some countries, e.g. Belgium and Luxembourg. These countries reach their peak only at the end of the projection period and the increase to this peak coincides with the total change between 2022 and 2070 (see Graph I.1.6). However, for most countries, peak expenditure is situated well before the end of the projection period. In such cases, the total change in public pension expenditure between 2022 and 2070 might not provide an accurate view of expected risks. For example, in the cases of Romania, Italy and Portugal, pension spending would fall by 2070 as compared with the 2022 starting point because an initial expenditure rise is more than offset by a subsequent decline. The expenditure-to-GDP ratio would peak in 2046 for Portugal and Romania, at a level 2.9 and 2.1 pps of GDP above the 2022 starting point, respectively. For Italy, an increase of 1.7 pps is projected between 2022 and the peak in 2036.

Developments by age group

For all age groups below the age of 75, the share in the total number of public pensioners is projected to decrease between 2022 and 2070 (see Graph I.1.7). The shares of pensioners younger than 54 and those in the age group 55-59 would fall slightly, from already low levels. These groups are affected by tighter eligibility rules for survivors' and disability pensions. For the 60-64 and the 65-69 age groups, shares fall by about 6-8 pps. These age brackets are subject to rising early and statutory retirement ages in many countries. The share of pensioners aged 70-74 in total pensioners rises initially but this is more than reversed thereafter.

Graph I.1.7: **Share of public pensioners per age group: EU (% of total public pensioners)**

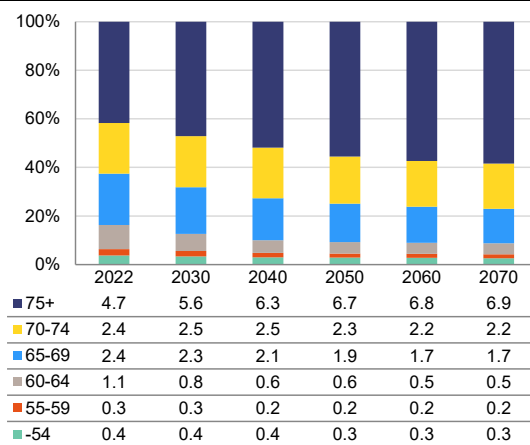


Source: European Commission, EPC.

Lower shares of pensioners younger than 75 in the EU mirror the rising share of pensioners beyond the age of 75. The latter would go from around four in ten of all retirees now to almost six in ten in 2070. Aside from stricter access to retirement for lower age brackets, this shift also reflects the rising life expectancy across the board, which leads, together with the inflow of the baby boomer cohorts, to an expansion of the 75+ age group.

When looking at the age groups' share in total pension expenditure rather than their share in the number of pensioners, a similar picture emerges. For the EU, pension expenditure is projected to decrease for the age groups below 75 (see Graph I.1.8), thereby compensating for the higher spending on the 75+ age cohort. The latter would represent almost 60% of total pension spending in 2070, compared to around 40% in 2022. This change is very close to that observed for the number of pensioners and corresponds to an increase of 2.2 pps of GDP. The biggest reduction in pension spending is for the age groups 60-64 (-0.6 pps) and 65-69 (-0.7 pps). Benefits of people younger than 60 would reduce slightly, from 0.7% of GDP in 2022 to 0.5% in 2070. The 70-74 age bracket is relatively stable as well in terms of expenditure share.

Graph I.1.8: **Share of public pension expenditure per age group: EU (% of total expenditure)**



The bottom table shows spending as % of GDP.

Source: European Commission, EPC.

In all countries, pension expenditure benefiting people above the age of 75 is expected to rise. Table I.1.8 provides an overview of change in expenditure by age bracket for all countries. It shows how pension expenditure would increase for people over 75 by 2070 as compared to 2022, with the biggest increases in Cyprus, Slovenia, Spain, Luxembourg, Slovakia and Belgium. In a few countries this is also the case for the 70-74 age group. Some exceptions aside, pension spending is projected to decline for the younger age groups. In particular, expenditure in the 60-64 age group would fall by more than 1 pp of GDP in Greece, France, Italy, Austria and Romania, due to reforms that should reduce the number of retirees in this age bracket.

Table I.1.8: **Change in public pension expenditure per age group in 2022-2070 (pps of GDP)**

	-54	55-59	60-64	65-69	70-74	75+
BE	-0.2	-0.1	-0.6	-0.2	0.6	4.0
BG	-0.4	-0.2	-0.6	-0.6	-0.4	2.3
CZ	-0.1	-0.1	-0.4	-0.4	-0.2	3.0
DK	-0.1	-0.1	-0.3	-1.1	-0.8	1.0
DE	-0.1	-0.1	-0.3	-0.3	0.1	1.8
EE	0.0	0.0	-0.3	-1.4	-0.3	1.7
IE	0.0	0.1	0.1	0.4	0.4	2.0
EL	-0.3	-0.5	-1.4	-1.4	-0.3	2.1
ES	-0.2	-0.1	-0.4	-0.6	0.3	4.6
FR	-0.2	-0.1	-1.1	-0.7	-0.6	1.8
HR	-0.4	-0.3	-0.6	-0.6	-0.1	1.8
IT	-0.1	-0.2	-1.3	-1.9	-0.3	1.9
CY	-0.2	-0.1	-0.5	-1.5	0.6	5.4
LV	-0.1	-0.1	-0.2	-0.8	-0.9	0.3
LT	0.2	0.1	0.0	-0.2	0.3	2.6
LU	0.0	-0.1	0.7	1.4	1.6	4.6
HU	-0.1	0.0	0.2	0.2	0.8	3.3
MT	0.0	0.0	0.0	0.6	0.7	3.1
NL	0.0	-0.1	0.0	-0.4	0.2	2.2
AT	-0.1	-0.1	-1.1	-0.3	0.1	1.7
PL	-0.3	-0.1	-0.6	-1.4	-0.8	3.0
PT	-0.1	-0.1	-0.5	-1.2	-0.8	0.9
RO	-0.3	-0.3	-1.5	-1.1	-0.4	2.7
SI	0.0	-0.1	-0.6	-0.6	0.2	5.0
SK	-0.1	0.0	-0.9	-0.6	0.2	4.3
FI	-0.1	-0.1	-0.3	-1.4	-0.1	3.4
SE	-0.1	0.0	-0.2	-0.7	-0.1	0.9
NO	-0.3	0.1	0.4	0.1	-0.1	1.6
EA	-0.1	-0.1	-0.6	-0.7	-0.1	2.2
EU	-0.1	-0.1	-0.6	-0.7	-0.2	2.1

- EE: excluding work ability allowance.
- IE: excluding occupational scheme of civil servants.
- EL: excluding the impact of retroactive benefit payments.
- AT: excluding Ausgleichszulage and Rehabilitationsgeld.

Source: European Commission, EPC.

Pension system funding and system balance

Under pay-as-you-go arrangements, public pension benefits are paid from current contributions and general taxation. Table I.AI.4 in Annex I provides an overview of the different contribution rates for employers, employees and self-employed. In some cases, a specific state contribution applies or a predefined share of certain tax revenues is allocated to the social security scheme. Some Member States have reserve funds that, under certain circumstances, contribute to the pension scheme. Eventual remaining shortfalls within the system are covered by the general government budget.

Revenues of public pension schemes are projected to remain broadly stable in most countries, though large differences exist between Member States. As shown in Table I.1.9, in 2022, system revenues totalled 14% of GDP in Portugal, 13% in Spain and Finland, 12% in Greece, 11% in Italy, France and Norway, and 10% in Germany, Luxembourg and Austria. They were less than 6% of GDP in Romania, Croatia, Sweden, Bulgaria and Ireland. The projections assume that implicit contribution rates (contributions relative to the wage bill) either remain constant over the projection period or adjust in line with legislation. Relative to GDP, the largest increases are projected in Ireland (+2.1 pps of GDP), the Netherlands (+1.9 pps), Cyprus (+1.9 pps), Finland (+1.5 pps), Spain (+1.1 pps), Croatia (+0.9 pps), Germany (+0.9 pps) and Lithuania (+0.8 pps). This reflects legislated increases in

contribution rates, higher government contributions, the interaction with private pillar contributions ⁽²⁰⁾ or built-in automatic system stabilisers. For instance, the contribution rate in Finland is set at a level that covers the funded part of the public scheme and keeps the buffer funds at their target level. In Germany, the contribution rate is adjusted to ensure that the 'sustainability fund' holds an amount between 20% and 150% of the monthly pension expenditure. Revenues of the public pension system are projected to decrease the most in Portugal (-3.8 pps of GDP), Greece (-2.1 pps), Slovakia (-1 pp) and Latvia (-0.8 pps).

Table I.1.9: Pension contributions and balance of the public scheme (% of GDP)

	contributions				pension system balance				
	2022	2045	2070	change 2022-2070	2022	2045	2070	lowest	
					value	year			
BE	:	:	:	:	:	:	:	:	:
BG	4.7	5.1	5.1	0.4	-4.8	-4.2	-4.4	-6.0	2025
CZ	8.2	7.7	7.7	-0.6	-0.5	-2.4	-2.8	-3.4	2058
DK	:	:	:	:	:	:	:	:	:
DE	9.9	10.5	10.8	0.9	-0.3	-0.5	-0.5	-0.7	2025
EE	6.1	6.1	6.0	-0.2	-1.3	-1.4	-0.8	-1.7	2028
IE	2.7	3.5	4.8	2.1	-0.2	-1.0	-1.1	-1.1	2070
EL	12.5	12.4	10.4	-2.1	-2.0	-1.6	-1.6	-2.0	2022
ES	12.9	14.4	14.0	1.1	-0.2	-2.5	-2.7	-3.1	2053
FR	11.1	11.0	11.0	-0.1	-3.3	-2.9	-2.5	-3.4	2028
HR	5.7	6.6	6.6	0.9	-3.3	-2.8	-2.2	-4.4	2024
IT	10.9	11.2	11.3	0.4	-4.7	-5.3	-2.4	-6.0	2036
CY	8.2	9.9	10.0	1.9	0.0	-0.9	-1.8	-2.4	2065
LV	7.9	7.2	7.1	-0.8	0.8	0.9	1.7	0.4	2028
LT	6.8	7.8	7.6	0.8	0.3	-1.8	-2.1	-2.4	2060
LU	9.8	9.4	9.4	-0.4	0.6	-2.4	-8.0	-8.0	2070
HU	6.8	6.9	6.8	0.0	-0.9	-3.3	-5.2	-5.2	2070
MT	7.6	7.9	7.2	-0.4	1.4	2.3	-3.4	-3.4	2070
NL	6.9	8.3	8.7	1.9	0.3	0.4	0.2	0.2	2068
AT	9.8	9.7	9.8	0.0	-3.6	-4.0	-3.8	-4.9	2032
PL	8.0	8.5	8.4	0.4	-2.2	-2.1	-1.6	-3.2	2027
PT	14.2	14.6	10.3	-3.8	1.9	-0.6	-0.1	-0.6	2045
RO	6.0	5.2	5.2	-0.7	-2.6	-5.4	-2.4	-5.4	2047
SI	9.1	9.1	9.1	0.0	-0.7	-3.7	-4.5	-4.7	2057
SK	7.4	6.8	6.4	-1.0	-1.1	-4.5	-5.0	-5.6	2061
FI	13.4	14.4	14.9	1.5	0.7	2.1	0.8	0.7	2022
SE	5.4	5.9	5.9	0.5	-0.7	0.9	1.0	-0.7	2022
NO	11.5	11.3	11.3	-0.1	0.6	-0.7	-1.2	-1.2	2070
EA	10.2	10.6	10.7	0.4	-1.6	-2.0	-1.7	-2.1	2036
EU	9.8	10.0	10.0	0.2	-1.6	-2.0	-1.7	-2.1	2036

Pension system balance = contributions – gross pension expenditure.

- BE: pensions are financed through a global social security contribution.

- DK: public pension scheme is financed through general taxes.

- IE: employer and employee contributions also fund other benefits, e.g. jobseekers' benefit, health and safety benefit, maternity benefit.

- EL: 2022 includes the impact of retroactive benefit payments.

- AT: figures exclude the Ausgleichszulage and Rehabilitationsgeld.

Source: European Commission, EPC.

Combining pension expenditure and contribution projections provides an estimate of financing gaps within the pension system, which would need to be covered through central government transfers. At unchanged policy, the pension system balance is projected to worsen in most countries (see Table I.1.9). With a deficit of 8% of GDP in 2070 and a deterioration of almost

⁽²⁰⁾ For Croatia, higher contributions reflect the transfers to the State Budget of 2nd pillar savings for those beneficiaries that will opt to receive a pension solely from the public scheme. Higher contributions to maturing supplementary schemes (see Section 1.5.2) result in lower public scheme contributions for Slovakia, Latvia and Greece.

9 pps of GDP compared to 2022, the sharpest widening of the internal balance is projected for Luxembourg, predominantly because of the developments at the spending side. Also Hungary, Slovakia and Slovenia would see their pension system deficit widen, by about 4 pps, to around 5% of GDP in 2070. For Bulgaria, Italy and Romania, the pension system deficit would reach 5–6% of GDP during the projection period.

Pension benefits can be the subject of personal income taxation or pensioners need to pay a compulsory social security contribution. In such case, these revenues help offset the impact of pension expenditure on public finances. However, in 11 Member States, pension benefits are exempt from taxation and in most other Member States the projections assume revenues to remain broadly stable, at about 1.4% of GDP on average, so that they do not substantially alter the change in *gross* pension expenditure. Countries where the tax level would increase by at least 0.5 pps of GDP by 2070 are Luxembourg (+1.4 pps), Germany (+0.5 pps) and Belgium (+0.5 pps) (see Annex Table II.1.75). Denmark (-0.6 pps) and Italy (-0.4 pps) show the largest decline in taxes on pensions. These trends capture changes in the gross pension expenditure-to-GDP ratio, considering that the projections assume a constant implicit tax rate, i.e. tax revenues remaining constant relative to expenditure, with some changes because of shifts in spending between pension categories. ⁽²¹⁾

1.5.2. Private pensions

Private pension schemes have become more widespread in the EU as participation in both occupational and individual schemes has been increasing. Most countries encourage the build-up of supplementary private pension savings to mitigate the burden of ageing populations on statutory social security schemes. In some countries, participation in certain private schemes is mandatory. The fact that countries increasingly employ civil servants on a contractual basis, rather than on a statutory basis, also gives rise to higher pension spending through occupational schemes.

- *Occupational schemes* exist in 22 countries (see Table I.AI.1 in Annex I). In eight of them participation is mandatory for at least part of those working.
- All countries have *individual voluntary pension saving instruments*.
- *Individual mandatory saving schemes* are less common; ten countries have fully or quasi mandatory private individual schemes. ⁽²²⁾

Within the context of the AWG projection exercise, Member States report private pension expenditure on a voluntary basis. For the 2024 cycle, 11 countries reported non-zero data, mostly for occupational and individual mandatory schemes (see Graph I.1.9).

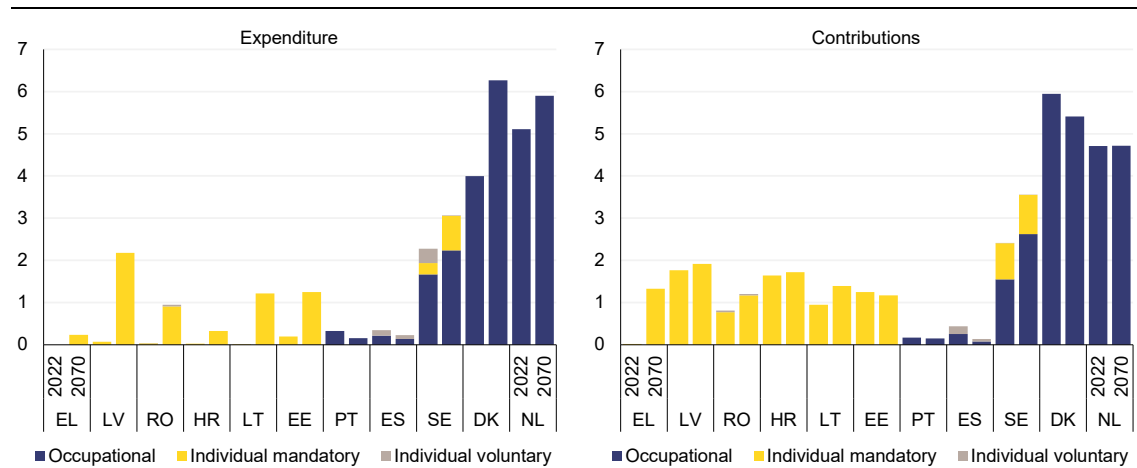
Despite their rising prevalence, privately managed schemes still represent only a fraction of total pension benefits in most countries. Only in the cases of the Netherlands (44%), Denmark (28%) and Sweden (21%) private pensions represented a significant share of total pension benefits in 2022. These countries have a tradition of providing occupational pensions to employees, with more than 90% of all employees covered and spending amounting to several percentage points of GDP. Spending on occupational pension benefits is projected to increase, from 2.3% of GDP in 2022 to 3.1%

⁽²¹⁾ For Germany, the tax burden rises from 7.5% in 2022 to 10% in 2070. This reflects an ongoing reform, which fully exempts contributions as of 2025, while fully taxing benefits by 2040 (2058 according to a pending legislative change).

⁽²²⁾ In Greece, the supplementary pensions of new labour market entrants are covered by a funded defined contribution scheme since 2022 (TEKA), treated as a mandatory private individual scheme in the projections even though the State guarantees the payment of a minimum contributory monthly pension benefit. More details can be found in the Greek pension fiche.

in 2070 in Sweden, from 4% to 6.3% in Denmark and from 5.1% to 5.9% in the Netherlands. Spain and Portugal also report on occupational schemes but these would remain irrelevant over the projection period.

Graph I.1.9: Private pension schemes: expenditure and contributions in 2022 and 2070 (% of GDP)



- Figures are shown for those countries that reported (non-zero) data for one of the three private pension scheme types.

- DK: individual voluntary plans are included in the data for occupational schemes.

- EL: individual mandatory pensions concern the TEKA scheme, introduced in 2022.

Source: European Commission, EPC.

Individual schemes are expected to grow over the next decades as they mature in some countries, while remaining limited in other.

In 2070, pension expenditure through individual *mandatory* schemes would amount to around 2% of GDP in Latvia, around 1% in Romania, Lithuania, Estonia and Sweden, 0.3% in Croatia and 0.2% in Greece. They would provide 29% of total pensions in Latvia, 16% in Estonia and about 10% in Romania, Lithuania and Sweden. Given that these schemes were introduced in recent decades for the youngest workers, contributions are currently already considerable while spending is still low or even zero. Moreover, in many countries, these schemes have been the subject of repeated reforms since their conception, allowing for people to opt-out again or have savings transferred to the public scheme. Only Spain, Sweden and Romania report data for individual *voluntary* pensions but amounts are negligible in Romania and Spain and are projected to remain so by 2070. The scheme is expected to disappear in the case of Sweden because the associated tax deduction was abolished in 2016, with zero new contributions to the scheme in 2022.

Box 1.1.1: Breakdown of the change in the pension expenditure-to-GDP ratio

The following formula is used to analyse the underlying drivers of pension expenditure over time:

$$\begin{aligned} & \frac{\text{pension expenditure}}{\text{GDP}} \\ &= \frac{\text{population} + 65}{\text{population} 20 - 64} \times \frac{\text{number of pensioners}}{\text{population} + 65} \times \frac{\text{average pension income}}{\frac{\text{GDP}}{\text{hours worked } 20 - 74}} \times \frac{\text{population } 20 - 64}{\text{hours worked } 20 - 74} \\ &= (\text{dependency ratio}) \times (\text{coverage ratio}) \times (\text{benefit ratio}) \times (\text{labour market effect}) \end{aligned}$$

As a result, the overall *change* in the public pension expenditure-to-GDP ratio is driven by four main factors:

- **The dependency ratio effect** quantifies the impact of demographic changes, namely the relative change in the old-age (+65y) versus the working-age population (20-64y). An increase in this ratio indicates that there are more older individuals relative to the working-age population, i.e. an ageing population.
- **The coverage ratio effect** is based on the total number of pensioners versus the population over 65. The analysis of the coverage ratio provides information on how developments in the effective exit age and the share of the population covered by the pension system influence pension spending.
- **The benefit ratio effect** indicates how the average pension (public pension expenditure divided by the number of pensioners) develops relative to the average wage. It shows changes in the variables that determine the pension benefit through the pension formula as well as indexation parameters.
- **The labour market effect** describes how changing labour market behaviour affects pension expenditure. A further breakdown is applied to arrive at more intuitive drivers:

$$\begin{aligned} \frac{\text{population } 20 - 64}{\text{hours worked } 20 - 74} &= \frac{\text{population } 20 - 64}{\text{working people } 20 - 64} \times \frac{\text{working people } 20 - 64}{\text{hours worked } 20 - 64} \times \frac{\text{hours worked } 20 - 64}{\text{hours worked } 20 - 74} \\ &= \left(\frac{1}{\text{employment rate}} \right) \times \left(\frac{1}{\text{labour intensity}} \right) \times \left(\frac{1}{\text{career shift}} \right) \end{aligned}$$

The three labour market components can be interpreted as follows:

- **The employment rate effect** is defined as the ratio of people aged 20-64 over the number of working people aged 20-64, i.e. the inverse of the employment rate. Under pay-as-you-go systems, a higher employment rate expands the contribution base, which enhances the sustainability of the pension system, at least in the medium term. When the employment rate increases, the pension expenditure ratio falls.
- **The labour intensity effect** is defined as the ratio of the working population aged 20-64 over the hours worked by the population aged 20-64, i.e. the inverse of labour intensity. As labour intensity increases, the pension expenditure ratio falls.
- **The career prolongation effect** is defined as the ratio of hours worked by the population aged 20-64 over the hours worked by the population aged 20-74, i.e. the inverse of the career shift. A decrease of this ratio captures the effect of a career prolongation beyond the age of 65, e.g. because of reforms that raise the statutory retirement age or because of active ageing policies. An increase in the hours worked by people over 65 brings the pension expenditure ratio down.

1.6. DRIVERS OF PENSION EXPENDITURE

1.6.1. Breakdown of projected change in pension expenditure

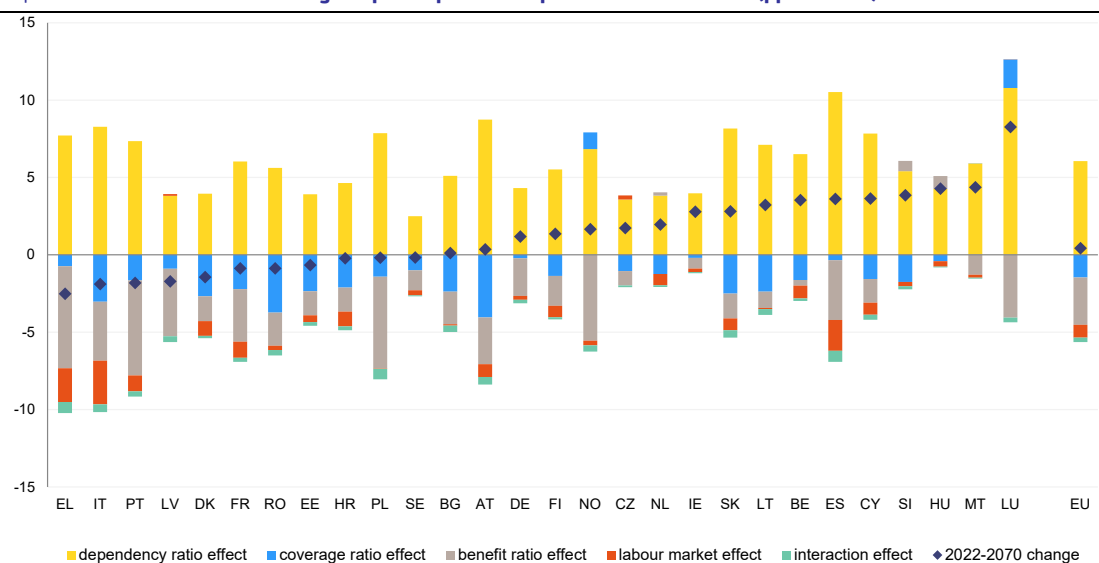
The projected change in pension spending can be disaggregated into different components, which help explain the overall dynamics. The total change in public pension expenditure can be allocated over four components: the dependency ratio, the coverage ratio, the benefit ratio and the labour market impact. The latter is further divided into three subcomponents: employment, labour intensity and career shift effects (see also Box I.1.1). The results of this breakdown are shown in Table I.1.10 and Graph I.1.10.

The demographic factor, captured by the dependency ratio, is the driving force behind upward expenditure trends. It is the only component that leads to a significant spending increase, having an expenditure-increasing impact for all countries. The contribution to the overall change in pension expenditure between 2022 and 2070 amounts to 6.1 pps of GDP on average, ranging from 2.5 pps of GDP in Sweden to 10.8 pps in Luxembourg. Other countries where the demographic effect alone would result in pension expenditure rising by at least 7 pps of GDP by 2070 are Greece, Spain, Italy, Cyprus, Lithuania, Austria, Poland, Portugal and Slovakia.

The upward dependency ratio effect is countered by downward contributions from the coverage ratio, the benefit ratio and the labour market effect. For the EU, these three components together almost fully offset the adverse demographic impact over the projection period. This is in particular due to the benefit ratio (-3.1 pps of GDP) and to a lesser extent because of the coverage ratio (-1.5 pps) and changes in the labour market (-0.8 pps). The residual from the interaction effect between the different components is favourable for all countries (-0.3 pps on average).

In most countries, a lower coverage ratio is expected to mitigate the impact of ageing on pension spending. In 25 countries, the coverage ratio is expected to reduce expenditure; by 3 to 4 pps of GDP in Italy, Romania and Austria. Countries that link the statutory retirement age to life

Graph I.1.10: Contribution to change in public pension expenditure 2022-2070 (pps of GDP)



LU: see note Table I.1.10.

Source: European Commission, EPC.

Table I.1.10: **Breakdown of change in public pension expenditure 2022-2070 (pps of GDP)**

	2022 level	dependency ratio	coverage ratio	benefit ratio	labour market effect				residual	2070 level
					total (a+b+c)	employment rate (a)	labour intensity (b)	career shift (c)		
BE	12.7	6.5	-1.6	-0.4	-0.8	-0.7	0.1	-0.2	-0.2	16.2
BG	9.5	5.1	-2.4	-2.1	-0.1	-0.1	0.0	0.0	-0.4	9.6
CZ	8.7	3.6	-1.0	-0.9	0.3	0.2	0.0	0.1	-0.1	10.4
DK	8.3	4.0	-2.7	-1.6	-0.9	-0.5	0.0	-0.5	-0.2	6.8
DE	10.2	4.3	-0.2	-2.4	-0.2	-0.2	0.0	-0.1	-0.2	11.4
EE	7.4	3.9	-2.4	-1.5	-0.4	-0.4	0.0	-0.1	-0.2	6.7
IE	3.8	4.0	-0.2	-0.7	-0.2	-0.2	0.0	-0.1	-0.1	6.6
EL	14.5	7.7	-0.7	-6.6	-2.2	-1.7	0.0	-0.6	-0.7	12.0
ES	13.1	10.5	-0.3	-3.9	-2.0	-1.4	0.0	-0.7	-0.7	16.7
FR	14.4	6.0	-2.2	-3.4	-1.0	-0.9	0.0	-0.1	-0.3	13.6
HR	9.0	4.6	-2.1	-1.6	-1.0	-0.8	0.0	-0.2	-0.2	8.8
IT	15.6	8.3	-3.0	-3.8	-2.8	-1.6	0.0	-1.3	-0.5	13.7
CY	8.2	7.8	-1.6	-1.5	-0.8	-0.5	0.0	-0.3	-0.3	11.8
LV	7.2	3.8	-0.9	-4.4	0.1	-0.1	0.0	0.2	-0.4	5.4
LT	6.4	7.1	-2.4	-1.0	-0.1	-0.1	0.0	0.0	-0.4	9.7
LU	9.2	10.8	1.8	-4.1	0.0	0.0	0.1	0.0	-0.3	17.5
HU	7.7	4.3	-0.4	0.8	-0.4	-0.3	0.0	0.0	0.0	12.0
MT	6.2	5.9	0.0	-1.3	-0.2	-0.2	0.0	0.0	-0.1	10.5
NL	6.5	3.8	-1.2	0.2	-0.7	-0.4	0.0	-0.3	-0.1	8.5
AT	13.7	8.7	-4.0	-3.0	-0.8	-0.8	0.0	-0.1	-0.5	14.0
PL	10.2	7.9	-1.4	-5.9	0.0	0.0	0.0	0.0	-0.7	10.1
PT	12.2	7.3	-1.7	-6.1	-1.0	-0.5	0.0	-0.5	-0.3	10.4
RO	8.5	5.6	-3.7	-2.1	-0.3	-0.1	0.0	-0.2	-0.4	7.6
SI	9.8	5.4	-1.7	0.7	-0.3	-0.3	0.0	0.0	-0.2	13.7
SK	8.5	8.2	-2.5	-1.6	-0.8	-0.4	0.0	-0.4	-0.5	11.3
FI	12.8	5.5	-1.4	-1.9	-0.7	-0.3	0.0	-0.4	-0.1	14.1
SE	7.4	2.5	-1.0	-1.3	-0.3	-0.2	0.0	-0.2	-0.1	7.2
NO	10.8	6.8	1.1	-5.6	-0.3	-0.2	0.0	-0.1	-0.4	12.5
EA	11.9	6.2	-1.3	-2.9	-1.1	-0.7	0.0	-0.4	-0.3	12.5
EU	11.4	6.1	-1.5	-3.1	-0.8	-0.6	0.1	-0.3	-0.3	11.8

- Breakdown is based on number of pensioners.

- LU: As cross-border workers in Luxembourg are not covered in the labour force projections for the pension projection exercise, the labour market and coverage ratio effects from the standard breakdown are not meaningful. When limiting the breakdown to the contribution of alternative dependency (number of pensioners/number of contributors) and benefit ratios (average pension income/(GDP/number of contributors)), these would explain respectively 13 pps and -2 pps of GDP of the change in total pension expenditure between 2022 and 2070, with a residual of -2.8 pps of GDP. This remark also concerns the other tables in this section.

- AT: figures include the Ausgleichszulage and Rehabilitationsgeld.

Source: European Commission, EPC.

expectancy, like Italy, or where the early retirement is set to rise, like in Romania and Austria, should indeed be expected to see the number of pensioners increase by less than the 65+ population, leading to a lower coverage ratio as people start to draw pension benefits later. In some countries (e.g. France, Austria, Spain and Lithuania), a lower coverage ratio reduces pension expenditure already significantly by 2030, due in part to the timing of reforms. The coverage ratio is expected to cause pension expenditure to increase only in Luxembourg (+1.8 pps of GDP) and Norway (+1.1 pps), with a neutral impact for Malta.

The downward contribution from the benefit ratio is higher on average because of sharp reductions for a group of countries. With the exceptions of Hungary (+0.8 pps of GDP), Slovenia (+0.7 pps) and the Netherlands (+0.2 pps), the benefit ratio effect is set to reduce pension expenditure over time. Lower benefit ratios result in the steepest decline in pension spending in Greece (-6.6 pps), Portugal (-6.1 pps), Poland (-5.9 pps), Norway (-5.6 pps), Latvia (-4.4 pps) and Luxembourg (-4.1 pps). Also for Spain, Italy, France and Austria, pension benefits growing slower than wages reduces the pension expenditure-to-GDP ratio by at least 3 pps during the projection period.

The varying impact of the coverage ratio and the benefit ratio effects mostly reflect the extent to which and the way in which countries have implemented reforms. Measures that tighten access to the public pension scheme can affect both ratios, e.g. the decision to increase the statutory retirement age or a shift to second pillar pension schemes classified outside the public sector. Measures that change the generosity of future pension benefits produce an impact on the benefit ratio, e.g. through the introduction of sustainability factors or the application of less generous indexation rules.

The labour market effect is generally low and negative, meaning that assumed labour market changes mostly reduce pension spending. The employment rate and the career shift are driving the overall labour market effect. The contribution from changes in labour intensity is about neutral for all countries. This reflects the macroeconomic assumptions underlying the projections. For Czechia and Latvia, there is a small expenditure-increasing impact. For the other countries, labour market dynamics reduce expenditure by up to 1 pp of GDP, with the exceptions of Italy (-2.8 pps), Greece (-2.2 pps) and Spain (-2 pps). The latter countries are expected to see a strong decline in unemployment rates over time ⁽²³⁾, reflecting the agreed assumptions, with an additional impact from the career shift effect.

Dependency ratio effect

A higher dependency ratio pushes up pension expenditure for all countries in 2022-2070. This reflects an ageing society: for every 10 persons in the EU older than 65 years in 2022, there were 28 persons aged between 20 and 64. By 2045, this would fall to 19 people, decreasing further to 17 people in 2070. This corresponds to a higher old-age dependency ratio and thus a contributory base that narrows relative to the number of potential retirees. ⁽²⁴⁾ Policy measures aimed at increasing statutory and effective retirement ages or lifting employment rates of older worker (as captured by the coverage ratio) and measures to control the increase in the average pension benefit (as captured by the benefit ratio) could help offset the budgetary impact of such demographic shifts.

The contribution of the dependency ratio over time shows a pronounced ageing effect in the next decades, which abates towards the 2050s (see Table I.1.11). Cross-country differences reflect varying ageing dynamics. In particular:

- *In the period 2022-2030, the dependency ratio rises fast as the post-war baby-boom generation continues to enter retirement, driving up pension spending by 1.8 pps of GDP on average in the EU.* A rising dependency ratio leads to the largest increase in pension expenditure in Austria (+3.2 pps of GDP), with demographic pressure raising pension expenditure by at least 2 pps of GDP in Italy, Spain, Greece, Portugal, France and Slovakia. In Malta and Hungary the dependency ratio effect is muted at the start of the projections.
- *The demographic effect continues to exert upward pressure on pension expenditure for all countries in 2030-2040, by 2.1 pps of GDP on average, with the sole exception of Malta.* Shifting demographics drive up pension expenditure by 4.4 pps of GDP in Spain and 4.3 pps in Italy. Pension spending would rise by at least 2 pps of GDP purely because of demographic changes in Greece, Portugal, Austria, Romania, Luxembourg, France and Slovakia over the same period.

⁽²³⁾ See Chapter 2 of Part I in [Volume I of the 2024 Ageing Report](#).

⁽²⁴⁾ For an overview of old-age dependency ratio projections, see Chapter 1 of Part I in [Volume I of the 2024 Ageing Report](#).

- *Demographic pressures start to abate in 2040-2050, when continued ageing lifts pension expenditure by 1.3 pps of GDP on average.* The dependency ratio effect remains positive for all countries; it is zero in the Netherlands. The biggest impact would be in Spain (+3.3 pps of GDP), Slovakia (+3.1 pps), Poland (+3.1 pps) and Greece (+3 pps), with an increase of around 2 pps in Portugal, Slovenia, Bulgaria, Luxembourg and Romania.
- *This slower increase continues in 2050-2060, with an average increase in pension spending of 0.6 pps of GDP in the EU because of population ageing.* Ageing lifts pension expenditure by maximum 2 pps of GDP in all countries except Luxembourg and Malta (+2.7 pps), Cyprus (+2.4 pps) and Lithuania (+2.2 pps). Few countries see a small decrease in pension expenditure.
- *Finally, in 2060-2070, the demographic factor is expected to raise spending by just 0.2 pps of GDP on average in the EU and to reduce expenditure in ten countries.* Cyprus and Malta would see pension expenditure increase by more than 2 pps of GDP given a further increase in the dependency ratio. In the final decade, favourable demographic developments would reduce pension spending by 1.1 pps of GDP in Greece and by 0.8 pps in Bulgaria, Czechia and Slovakia.

Table I.1.11: **Contribution of the dependency ratio effect to the change in public pension expenditure (pps of GDP)**

	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
BE	1.9	1.6	0.9	1.1	1.0	6.5
BG	1.0	1.8	2.0	1.1	-0.8	5.1
CZ	0.5	1.3	1.8	0.8	-0.8	3.6
DK	1.1	1.3	0.1	0.7	0.7	4.0
DE	1.9	1.2	0.1	0.6	0.5	4.3
EE	0.8	0.9	1.2	1.2	-0.2	3.9
IE	0.6	1.0	1.4	0.5	0.5	4.0
EL	2.4	3.8	3.0	-0.4	-1.1	7.7
ES	2.6	4.4	3.4	0.0	0.1	10.5
FR	2.0	2.0	0.8	0.5	0.7	6.0
HR	1.6	1.1	1.1	0.5	0.5	4.6
IT	2.7	4.3	1.4	-0.3	0.2	8.3
CY	1.7	1.3	1.5	2.4	0.9	7.8
LV	1.3	1.1	1.1	1.1	-0.7	3.8
LT	1.7	1.7	1.4	2.2	0.2	7.1
LU	1.6	2.2	2.0	2.7	2.3	10.8
HU	0.2	1.4	1.7	1.0	0.0	4.3
MT	0.1	-0.1	1.1	2.7	2.1	5.9
NL	1.2	1.1	0.0	0.5	1.1	3.8
AT	3.2	2.8	1.0	1.2	0.6	8.7
PL	1.8	1.4	3.1	2.0	-0.4	7.9
PT	2.2	3.2	2.1	-0.2	0.0	7.3
RO	0.7	2.8	1.9	0.7	-0.5	5.6
SI	1.9	1.7	2.1	0.4	-0.6	5.4
SK	2.0	2.0	3.1	1.9	-0.8	8.2
FI	1.3	0.3	1.0	1.7	1.2	5.5
SE	0.5	0.5	0.3	1.0	0.3	2.5
NO	1.6	1.9	0.9	1.3	1.1	6.8
EA	2.0	2.3	1.1	0.4	0.4	6.2
EU	1.8	2.1	1.3	0.6	0.2	6.1

LU: the alternative dependency ratio effect (see comment Table I.1.10) amounts to 1.1, 2.5, 2.7, 3.5 and 3.2 pps for the respective time periods, with a total of 13 pps of GDP in 2022-2070. Considering the broad similarity of the numbers, the text refers to the numbers for the standard breakdown, which only accounts for the resident population, though.

Source: European Commission, EPC.

Coverage ratio effect

The coverage ratio relates the number of pensioners to the number of people older than 65 years. It thus gives an idea about the extent to which a country grants pension benefits to people below the age of 65. Reforms that eliminate or tighten access to early retirement, increase the statutory retirement age or, more generally, try to increase the effective retirement age, for example through a bonus-penalty system or active labour market policies, reduce the coverage ratio.

A significant fall of the coverage ratio is expected over the projection period. In the EU, the coverage ratio is projected to fall by 15 pps between 2022 and 2070, mostly in the period up to 2040 (see Table I.1.12). It would increase only in Luxembourg, Norway and Malta. The sharpest decrease is expected for Lithuania, Romania, Austria, Estonia, Denmark, Bulgaria and Slovakia, where the coverage ratio would decline by at least 30 pps. The contribution per decade of variations in the coverage ratio to changes in the pension expenditure-to-GDP ratio is shown in Table I.1.13. In the EU, lower coverage reduces pension expenditure by 1.5 pps of GDP over the projection period, especially in the 2020s and 2030s, with a broadly neutral impact beyond 2040.

Table I.1.12: Coverage ratio (%)

	2022	2030	2040	2050	2060	2070	2022-70
BE	133.9	123.8	120.6	120.5	119.2	118.5	-15.5
BG	136.9	126.7	111.5	101.2	99.9	106.5	-30.4
CZ	129.9	123.0	117.9	113.7	112.0	114.3	-15.5
DK	111.2	104.2	95.3	92.3	82.9	79.7	-31.5
DE	124.4	117.5	120.6	124.0	123.8	121.4	-3.0
EE	119.2	108.2	100.0	92.6	89.7	86.7	-32.5
IE	137.8	136.0	134.9	132.1	133.4	132.2	-5.6
EL	103.4	96.0	92.6	93.2	94.6	97.8	-5.6
ES	103.6	95.2	92.1	94.5	98.9	99.0	-4.6
FR	141.2	127.9	121.6	121.3	121.2	120.6	-20.6
HR	140.7	127.6	121.6	115.9	114.2	112.7	-28.1
IT	104.5	98.0	91.2	90.5	88.9	86.1	-18.4
CY	113.8	111.2	116.1	118.2	112.3	100.0	-13.7
LV	137.8	129.5	124.4	122.1	118.9	120.9	-17.0
LT	165.8	141.7	132.1	128.8	122.7	122.3	-43.4
LU	234.8	241.9	248.0	257.5	266.0	273.5	38.8
HU	127.6	130.8	127.7	123.3	121.4	122.2	-5.4
MT	99.1	96.9	101.7	102.7	100.4	100.2	1.1
NL	114.3	108.3	107.0	104.6	99.4	96.7	-17.7
AT	144.7	132.5	119.9	115.2	110.4	108.8	-35.9
PL	132.7	126.2	127.9	121.8	115.4	115.9	-16.8
PT	112.5	106.7	101.9	99.8	100.0	99.3	-13.2
RO	133.8	133.5	117.7	111.2	102.9	90.7	-43.1
SI	140.0	129.6	122.8	118.0	117.0	118.8	-21.2
SK	144.8	141.6	137.0	123.5	116.0	114.9	-30.0
FI	124.3	118.6	117.5	115.4	113.0	111.8	-12.5
SE	126.6	122.7	117.7	116.9	112.0	110.3	-16.3
NO	138.2	150.6	151.8	159.9	161.3	151.6	13.4
EA	121.6	113.0	109.4	109.6	109.9	108.9	-12.7
EU	123.4	115.6	111.6	110.8	109.9	108.8	-14.6

The coverage ratio is calculated as the total number of public pensioners relative to the population 65 and over.

Source: European Commission, EPC.

Table I.1.13: Contribution of the coverage ratio effect to the change in public pension expenditure (pps of GDP)

	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
BE	-1.0	-0.3	0.0	-0.2	-0.1	-1.6
BG	-0.8	-1.2	-0.9	-0.1	0.6	-2.4
CZ	-0.4	-0.3	-0.3	-0.2	0.2	-1.0
DK	-0.6	-0.8	-0.3	-0.8	-0.3	-2.7
DE	-0.6	0.3	0.3	0.0	-0.2	-0.2
EE	-0.7	-0.6	-0.6	-0.2	-0.2	-2.4
IE	0.0	0.0	-0.1	0.1	-0.1	-0.2
EL	-1.0	-0.5	0.1	0.2	0.4	-0.7
ES	-1.1	-0.5	0.4	0.8	0.0	-0.3
FR	-1.4	-0.7	0.0	0.0	-0.1	-2.2
HR	-0.9	-0.5	-0.5	-0.1	-0.1	-2.1
IT	-1.0	-1.2	-0.1	-0.3	-0.4	-3.0
CY	-0.2	0.4	0.2	-0.6	-1.4	-1.6
LV	-0.4	-0.3	-0.1	-0.2	0.1	-0.9
LT	-1.1	-0.6	-0.2	-0.5	0.0	-2.4
LU	0.3	0.3	0.4	0.4	0.4	1.8
HU	0.2	-0.2	-0.3	-0.2	0.1	-0.4
MT	-0.1	0.3	0.1	-0.2	0.0	0.0
NL	-0.4	-0.1	-0.2	-0.4	-0.2	-1.2
AT	-1.2	-1.5	-0.6	-0.6	-0.2	-4.0
PL	-0.5	0.1	-0.5	-0.6	0.0	-1.4
PT	-0.7	-0.6	-0.3	0.0	-0.1	-1.7
RO	0.0	-1.3	-0.6	-0.8	-1.1	-3.7
SI	-0.8	-0.6	-0.5	-0.1	0.2	-1.7
SK	-0.2	-0.3	-1.1	-0.7	-0.1	-2.5
FI	-0.6	-0.1	-0.2	-0.3	-0.1	-1.4
SE	-0.2	-0.3	-0.1	-0.3	-0.1	-1.0
NO	1.0	0.1	0.6	0.1	-0.8	1.1
EA	-0.9	-0.4	0.0	0.0	-0.1	-1.3
EU	-0.7	-0.4	-0.1	-0.1	-0.1	-1.5

Source: European Commission, EPC.

Benefit ratio effect

Future pension expenditure is also impacted by the way in which pension benefits are adjusted for inflation and productivity gains. The valorisation of acquired pension rights, accrual rates and conditions for enjoying full pension benefits are other important parameters. Together these design features determine the generosity of the pension system, which can be measured through the benefit ratio. The latter expresses the average pension benefit in terms of the average wage. A lower relative generosity of pensions because of parametric reforms thus results in a lower benefit ratio. Section 1.6.2. takes a closer look at benefit ratios.

On average in the EU, benefit ratios are expected to decline, reducing pension spending by 3.1 pps of GDP by 2070. Table I.1.14 shows the benefit ratio effect, i.e. the increase or decrease of public pension expenditure that can be related to changes in the benefit ratio. Over the entire projection period, pension systems would become slightly more generous in Hungary, the Netherlands and Slovenia⁽²⁵⁾, while in all other countries the benefit ratio is expected to decline, thus reducing pension expenditure.

In 2022-2030, the average decrease in benefit ratios lowers pension expenditure by just 0.3 pps of GDP since there are eleven countries where benefits are set to grow faster than wages. The most negative contributions are expected in Greece (-2.4 pps of GDP), Norway (-1.4 pps), Luxembourg (-1.2 pps), Latvia (-1.1 pps) and Czechia (-1 pp). On the other hand, pension benefits rising faster than wages would cause the pension expenditure ratio to rise by 1.1-1.2 pps in Croatia, Lithuania and Romania.

The benefit ratio effect is negative in most countries between 2030 and 2070. The benefit ratio effect causes pension expenditure to decrease steadily, by 2.8 pps of GDP on average in the EU in 2030-2070. The expenditure reducing effect is the largest in 2030-2050, at -2 pps of GDP on average with large declines in Poland (-4.3 pps), Italy (-3.5 pps), Greece (-3.2 pps), Norway (-3.1 pps), Spain (-2.9 pps) and Portugal (-2.5 pps).

Table I.1.14: **Contribution of the benefit ratio effect to the change in public pension expenditure (pps of GDP)**

	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
BE	0.4	0.0	-0.4	-0.2	-0.1	-0.4
BG	0.4	-1.2	-0.8	-0.4	-0.1	-2.1
CZ	-1.0	0.2	0.1	-0.2	-0.1	-0.9
DK	0.6	-0.6	-0.8	-0.5	-0.4	-1.6
DE	-0.6	-1.1	-0.5	-0.3	0.0	-2.4
EE	0.2	-0.4	-0.4	-0.7	-0.2	-1.5
IE	-0.2	0.0	-0.2	-0.1	-0.3	-0.7
EL	-2.4	-1.4	-1.8	-1.2	0.2	-6.6
ES	0.7	-0.9	-2.0	-1.4	-0.2	-3.9
FR	-0.4	-0.9	-1.0	-0.6	-0.5	-3.4
HR	1.1	-0.8	-0.9	-0.6	-0.4	-1.6
IT	0.0	-1.3	-2.2	-0.9	0.6	-3.8
CY	-0.4	-0.5	-0.8	-0.4	0.5	-1.5
LV	-1.1	-1.2	-1.0	-0.9	-0.2	-4.4
LT	1.1	0.1	-0.5	-1.0	-0.8	-1.0
LU	-1.2	-0.9	-1.2	-0.6	-0.1	-4.1
HU	-0.3	0.3	0.4	0.0	0.5	0.8
MT	-0.5	-0.4	-0.1	-0.1	-0.3	-1.3
NL	0.1	-0.1	0.2	0.2	-0.1	0.2
AT	-0.2	-1.1	-1.0	-0.4	-0.3	-3.0
PL	-0.1	-2.3	-2.0	-1.2	-0.4	-5.9
PT	0.1	-0.9	-1.6	-2.6	-1.1	-6.1
RO	1.2	-1.2	-0.9	-0.8	-0.5	-2.1
SI	-0.2	0.5	0.1	0.0	0.3	0.7
SK	0.1	-1.0	-0.6	-0.1	0.1	-1.6
FI	-0.3	-0.7	-0.7	-0.2	0.0	-1.9
SE	0.0	-0.5	-0.4	-0.2	-0.3	-1.3
NO	-1.4	-1.6	-1.5	-1.1	0.0	-5.6
EA	-0.3	-1.0	-1.0	-0.6	-0.1	-2.9
EU	-0.3	-1.0	-1.1	-0.6	-0.1	-3.1

LU: the alternative benefit ratio effect (see comment Table I.1.10) results in contributions of -0.5, -0.7, -0.6, -0.2 and 0 pps, with a total of -2 pps of GDP in 2022-2070.

Source: European Commission, EPC.

⁽²⁵⁾ When looking only at the earnings-related benefit ratio, instead of the total public benefit ratio, also in Ireland and Norway the generosity would rise.

Labour market effect

Policy measures to lift employment increase the economic growth potential and expand the contributory base. Moreover, when employment increases among older age groups, this leads to higher effective retirement ages and a shorter retirement spell. Such measures thus potentially bear multiple gains with respect to the sustainability of pension systems.

The labour market effect generally reduces pension costs, though by less than the benefit and coverage ratios. The overall effect of the labour market assumptions is small for most countries and is concentrated in the first half of the projection period (see Table I.1.15). The impact is the largest for Italy, Greece and Spain, where the labour assumptions reduce pension spending by 2-3 pps of GDP by 2070. For France, Croatia and Portugal, the impact is 1 pp of GDP. For all other countries it is less. Additional labour market reforms might help countries curb rising pension costs to the extent that they successfully increase employment rates, especially among older persons (see Section 1.8.2.).

Table I.1.15: **Contribution of the labour market effect to the change in public pension expenditure (pps of GDP)**

	2022-30	2030-40	2040-50	2050-60	2060-70	2022-70
BE	-0.4	-0.3	-0.1	-0.1	0.0	-0.8
BG	0.2	-0.1	-0.2	-0.2	0.1	-0.1
CZ	0.3	0.0	-0.1	-0.1	0.1	0.3
DK	-0.1	-0.3	-0.1	-0.3	-0.1	-0.9
DE	0.0	-0.1	0.0	-0.1	0.0	-0.2
EE	0.2	-0.1	-0.3	-0.2	0.0	-0.4
IE	-0.1	-0.1	-0.1	0.0	0.0	-0.2
EL	-0.6	-0.7	-0.7	0.0	-0.2	-2.2
ES	-0.7	-0.8	-0.5	0.2	-0.1	-2.0
FR	-0.3	-0.5	-0.2	0.0	0.0	-1.0
HR	-0.6	-0.2	-0.2	0.0	0.0	-1.0
IT	-0.5	-1.0	-0.6	-0.3	-0.4	-2.8
CY	0.1	-0.1	-0.2	-0.4	-0.1	-0.8
LV	0.2	0.0	-0.1	-0.1	0.1	0.1
LT	0.0	0.0	0.0	-0.2	0.1	-0.1
LU	0.0	0.0	0.2	0.0	-0.1	0.0
HU	-0.1	-0.1	-0.1	-0.1	0.0	-0.4
MT	-0.2	0.0	0.0	0.0	0.0	-0.2
NL	-0.1	-0.2	-0.1	-0.2	-0.2	-0.7
AT	-0.3	-0.4	0.0	-0.1	0.0	-0.8
PL	-0.1	0.2	-0.1	-0.2	0.2	0.0
PT	-0.2	-0.3	-0.2	-0.1	-0.2	-1.0
RO	0.0	-0.2	-0.1	-0.1	0.1	-0.3
SI	0.1	-0.2	-0.3	0.0	0.1	-0.3
SK	-0.1	0.1	-0.4	-0.3	-0.1	-0.8
FI	0.2	-0.1	-0.3	-0.3	-0.2	-0.7
SE	0.0	-0.1	0.0	-0.2	0.0	-0.3
NO	0.1	-0.2	-0.1	-0.1	0.0	-0.3
EA	-0.2	-0.4	-0.2	-0.1	-0.1	-1.1
EU	-0.2	-0.3	-0.2	-0.1	-0.1	-0.8

Source: European Commission, EPC.

1.6.2. Benefit ratio

As discussed above, the main downward pull on pension spending comes from the benefit ratio effect, which captures the financial generosity of pension systems. This highlights the importance of the benefit ratio for the overall development of pension expenditure. In fact, the benefit ratio effect is positive or about neutral for some of the countries with the biggest projected expenditure increase, e.g. Slovenia, Hungary and Belgium.

A range of reforms implemented in the past decade to strengthen the fiscal sustainability of the pension system results in a reduction of the benefit ratio. Evidently, for countries with a relatively low current benefit ratio, such adjustments could affect pension adequacy, defined as the extent to which pension benefits suffice to ensure retirees a decent standard of living and protect them from poverty, thus putting the focus on retirement income of people at the lower end of the income distribution. This matter is the subject of the Pension Adequacy Report.⁽²⁶⁾ The baseline pension projections of the Ageing Report assume indexation in line with current legislation. A sensitivity scenario is conducted to estimate the budgetary cost of preventing the earnings-related benefit ratio from falling below 90% of the base year level (see Section 1.8.3.).

⁽²⁶⁾ This is a joint triennial report from the Social Protection Committee and the European Commission (DG EMPL). The 2024 edition is scheduled for publication in May 2024.

Table I.1.16: **Benefit ratio: 2022, 2045 and 2070 (%)**

	Public pensions: earnings-related				Public pensions: total				All pensions (public & private)				
	2022	2045	2070	2022-70 (pps)	2022	2045	2070	2022-70 (pps)	2022	2045	2070	2022-70 (pps)	
BE	48.3	46.7	44.9	-3.4	46.4	45.5	43.9	-2.5					BE
BG	33.4	29.9	26.5	-6.9	31.1	26.9	24.5	-6.6					BG
CZ	43.1	42.3	41.3	-1.8	42.7	41.1	40.3	-2.3					CZ
DK	39.3	33.5	26.7	-12.6	41.1	36.0	30.1	-11.0	61.0	57.1	57.6	-3.3	DK
DE	40.8	35.8	34.4	-6.4	43.0	36.8	35.0	-8.0					DE
EE	31.6	31.5	27.1	-4.5	28.8	28.4	24.4	-4.4	29.6	30.2	28.9	-0.6	EE
IE	30.6	30.5	31.1	0.5	29.7	29.7	30.3	0.6					IE
EL	78.2	62.0	55.6	-22.6	76.4	60.5	53.0	-23.4	76.4	60.6	54.0	-22.3	EL
ES	70.0	63.6	53.7	-16.3	64.1	59.9	51.4	-12.7	65.7	61.4	52.1	-13.6	ES
FR	45.4	39.2	34.4	-11.0	47.1	41.9	37.3	-9.8					FR
HR	29.5	27.8	24.0	-5.5	29.7	28.2	24.1	-5.6	29.8	28.9	25.0	-4.8	HR
IT	71.2	61.6	57.7	-13.5	69.3	60.3	55.7	-13.6					IT
CY	59.9	47.5	43.5	-16.3	57.2	51.3	49.3	-7.9					CY
LV	28.4	18.8	13.9	-14.5	25.5	17.5	13.5	-12.0	25.7	19.8	18.9	-6.8	LV
LT	29.5	30.0	23.4	-6.1	23.8	28.7	23.2	-0.6	23.9	29.7	26.1	2.2	LT
LU	57.9	47.0	43.9	-14.0	52.1	45.4	42.5	-9.6					LU
HU	39.3	41.7	43.0	3.7	38.2	39.6	41.5	3.4					HU
MT	36.2	32.4	31.3	-4.9	38.7	33.1	32.0	-6.7					MT
NL	34.1	34.9	35.4	1.3	37.8	38.4	39.1	1.3	67.3	63.8	66.3	-1.0	NL
AT	54.4	48.1	44.1	-10.3	55.5	49.9	46.0	-9.5					AT
PL	47.0	33.4	26.2	-20.8	44.5	31.5	24.7	-19.8					PL
PT	48.7	46.8	31.3	-17.4	52.9	49.8	34.3	-18.6	54.3	50.5	34.8	-19.5	PT
RO	33.6	35.0	29.7	-3.9	33.9	34.3	28.9	-5.0	34.0	36.8	32.5	-1.6	RO
SI	33.8	36.6	37.2	3.4	31.6	34.1	34.9	3.4					SI
SK	37.0	32.6	32.2	-4.8	37.9	34.2	33.3	-4.6					SK
FI	48.0	43.0	42.0	-6.0	50.8	45.0	44.0	-6.8					FI
SE	33.7	26.7	23.1	-10.6	36.0	33.2	30.4	-5.5	47.0	45.4	43.3	-3.7	SE
NO	44.5	46.6	48.9	4.4	56.6	42.0	36.2	-20.5					NO
EA	45.7	40.8	37.0	-8.6	44.9	40.9	37.4	-7.6					EA
EU	43.8	39.2	35.5	-8.3	43.2	39.3	35.8	-7.3					EU

- The benefit ratio expresses the average pension as a share of the average gross wage.
- 'Public pension: earnings-related' refers to old-age earnings-related pensions, including flat-rate pension components. 'Public pensions: total' includes all public pensions. 'All pensions' also includes private occupational and private individual benefits; it is shown insofar Member States reported private pension data.
- Unweighted averages for EA/EU.
- IE: occupational scheme of civil servants included in public pensions (earnings-related and total).
- AT: the Ausgleichszulage and the Rehabilitationsgeld are included in public pensions (total).

Source: European Commission, EPC.

Most countries project a decline in the benefit ratio for earnings-related public pensions.

Table I.1.16 provides the level and the change in the benefit ratio for the public pension system (earnings-related and total benefits), as well as for the overall pension system for those countries that provided projections on private pension schemes. Between 2022 and 2070, a decrease of 8.3 pps is expected on average in the EU. The earnings-related benefit ratio would decrease the most in Greece (-23 pps), Poland (-21 pps), Portugal (-17 pps), Cyprus (-16 pps) and Spain (-16 pps), with also Latvia, Luxembourg, Italy, Denmark, France, Sweden and Austria projected to see a double-digit decrease. Apart from Latvia, these countries were among those with the highest benefit ratios in 2022 – for Denmark and Sweden the total benefit ratio is more relevant. The decline in the benefit ratio for these countries is caused by a combination of falling replacement rates because of automatic adjustment mechanisms and indexation of benefits at rates below wage growth, in addition to country-specific elements.⁽²⁷⁾ Earnings-related pensions would become somewhat more generous in five countries: Ireland, Hungary, the Netherlands, Slovenia and Norway.

⁽²⁷⁾ For Cyprus, which projects an increase in the replacement rate of public pensions, the decline in the benefit ratio is caused by the closure of the civil servant scheme (GEPs) for new members since 2011. For Portugal, the phasing-out of the CGA

Trends for total public pensions are similar to those for earnings-related benefits, with a decline in the benefit ratio for both. The decrease is generally somewhat smaller, though, as non-earnings-related benefits tend to be indexed at higher rates. The large difference for Norway (+4 pps for the earnings-related benefit ratio vs -20 pps for all public benefits) is due to the inclusion of pensioners living abroad in the projections, typically concerning people with shorter spells of work in Norway who will receive the minimum pension. Minimum pension projections are a special case in the Ageing Report projections.

Minimum pensions or social allowance benefits are meant to protect against old-age poverty in case of incomplete careers or insufficient contribution years to qualify for earnings-related benefits. Amounts are usually means-tested and generally lower than earnings-related benefits. Some countries have separate earnings-related minimum pensions. To protect recipients against poverty, both absolute amounts and the degree to which these keep pace with standards of living matter. This is particularly the case in countries that currently have low replacement rates, or in those countries where many people depend on non-contributory minimum or basic pensions.

The indexation rules assumed for minimum pensions in this report reflect these schemes' purpose to protect pensioners against poverty. The strict application of legal indexation rules close to price growth, would eventually lead to a decline in average minimum pensions. If this were the case, their effectiveness in protecting retirees against poverty would be eroded over time. However, also in countries with less generous indexation rules – or no formally fixed rules – minimum benefits have in practice been revised more in line with wages through discretionary adjustments beyond the legal indexation, exactly to correct for the standard of living and uphold the adequacy of benefits over time. For this reason, the projections assume that, insofar a minimum pension exists, it is adjusted in line with legislation for a maximum of ten years, after which they should follow wage growth for all countries, regardless of the national legislation or practice.

Private pension schemes mitigate the projected decrease of public pension benefit ratios. A subset of 11 countries reported data for occupational or individual private pension schemes, allowing to calculate overall pension benefit ratios. These supplementary schemes generally compensate for a lower generosity of public pensions, resulting in a higher overall benefit ratio and a lower decline than projected for public pensions alone. Still, in countries such as Estonia, Croatia, Latvia, Lithuania and Romania, low (and declining) pension adequacy remains an issue, even when accounting for private schemes.

For countries with large private schemes, total benefit ratios are substantially higher than public ones. The Netherlands and Denmark, which have near-universal private occupational pension schemes, had a total pension benefit ratio of 60-70% in 2022. This is 33 and 22 pps higher than the benefit ratio of their respective public pension schemes. By 2070, total benefit ratios would fall somewhat but remain high, at 66% in the Netherlands and 58% in Denmark. In the case of Sweden, which also has sizeable private schemes (see Section 1.5.2), the NDC public system results in a decline in the benefit ratio over the projection period as retirement ages increase by less than the expected gain in life expectancy, leading to lower annuities. The occupational and individual schemes compensate for the decline in the public scheme.

scheme for civil servants contributes to the decrease in the benefit ratio. For France, the 1993 reform reduced pension benefits for private sector employees through an increase in the number of years considered in the benefit formula (from 10 to 25 years) and price indexation of past wages (replacing wage indexation). These measures continue to have a downward effect on the average benefit ratio.

1.6.3. Replacement rate

Replacement rates measure the very first pension benefit against the last wage before retirement. As such, a downward trend in the replacement rate might cause the benefit ratio to decrease. Changes in replacement rates between 2022 and 2070 are shown in Table I.1.17 for earnings-related public pensions and, for those countries that provided the required data on private schemes, all pensions.

Table I.1.17: **Replacement rate: 2022, 2045 and 2070 (%)**

	Public pensions: earnings-related				All pensions (public & private)				
	2022	2045	2070	2022-70 (pps)	2022	2045	2070	2022-70 (pps)	
BE	35.1	36.3	34.6	-0.5					BE
BG	41.7	32.0	29.9	-11.7					BG
CZ	47.9	52.7	48.3	0.4					CZ
DK	29.4	27.9	23.7	-5.8	56.3	52.6	52.5	-3.8	DK
DE	36.8	34.9	35.1	-1.7					DE
EE	45.6	45.6	38.7	-6.9					EE
IE	34.6	34.9	36.6	2.0					IE
EL	75.9	62.0	65.2	-10.7	75.9	62.0	70.6	-5.3	EL
ES	77.2	67.6	64.0	-13.2					ES
FR	41.6	35.0	34.4	-7.2					FR
HR	29.2	26.4	23.7	-5.4	29.9	27.8	25.0	-5.0	HR
IT	59.3	46.4	52.3	-7.1					IT
CY	37.5	42.9	49.0	11.5					CY
LV	56.3	25.6	23.7	-32.5					LV
LT	26.7	22.5	18.5	-8.2	27.2	26.5	26.4	-0.8	LT
LU	51.0	44.9	46.8	-4.2					LU
HU	39.9	46.6	48.3	8.5					HU
MT	51.8	49.0	49.6	-2.2					MT
NL	27.2	27.2	27.2	0.0	62.6	59.4	61.0	-1.6	NL
AT	53.2	54.2	54.4	1.2					AT
PL	58.2	28.7	26.8	-31.4					PL
PT	69.4	91.2	38.9	-30.5	67.3	87.0	37.0	-30.4	PT
RO	38.0	36.5	30.7	-7.4	39.7	40.6	39.0	-0.7	RO
SI	34.7	33.2	34.0	-0.7					SI
SK	39.6	36.0	34.7	-4.9	40.7	43.3	45.9	5.2	SK
FI	45.3	39.0	38.0	-7.3					FI
SE	30.8	25.0	25.5	-5.3	37.2	35.1	32.7	-4.5	SE
NO	21.5	17.5	19.6	-1.8					NO
EA	46.4	42.7	40.0	-6.4					EA
EU	45.0	40.9	38.2	-6.7					EU

- The replacement rate expresses the average new pension as a share of the average gross wage at retirement.
- Flat-rate pension components are included in the earnings-related public pensions.
- Unweighted averages for EA/EU.
- EL: 2023 instead of 2022.
- EL, ES, CY, PT & SK: denominator is the average wage rather than the average wage at retirement.
- RO: Second pillar benefits are paid as a lump sum or as instalments over a period of five years. The projections assume lump sum payments but for the purposes of the replacement rate, these are converted in annuities.

Source: European Commission, EPC.

On average, the projected decline in the replacement rate for earnings-related public pensions in the EU (-6.7 pps) is smaller than the decline in the pension benefit ratio (-8.3 pps). The difference indicates that the average indexation of pension benefits in payment is lower than wage growth. The largest declines in the public replacement rate are projected in Latvia (-33 pps), Poland (-31 pps), Portugal (-31 pps), Spain (-13 pps), Bulgaria (-12 pps) and Greece (-11 pps). Latvia and Poland have a NDC public pension system, which have built-in sustainability factors. Portugal, which has a defined benefit set-up, also applies a sustainability factor for certain pensions. Moreover, the best 40 career years will be used to determine the pension benefits of future retirees, compared to more favourable reference periods for current pensioners. In addition to the sustainability

factor, Latvia valorises pension rights based on the overall wage bill, thus applying an additional demographic correction given the projected decline in the working-age population. Latvia, Bulgaria and Greece have a mandatory private scheme, which offsets the decline in the public pillar – though only Greece reports data on replacement rates for these schemes. A rising replacement rate is expected in Cyprus (+11 pps) and Hungary (+8 pps), with more limited increases in Ireland, Austria and Czechia. These countries valorise acquired rights upon retirement on the basis of wage growth. In addition, for Cyprus, there is the maturing of the supplementary part of the general scheme.

Private pension schemes compensate for the decline in the public pension replacement rate.

For instance, in Denmark and the Netherlands, the overall replacement rate would remain stable at around 55% and 69% of the final wage, respectively. Portugal is the exception since the decrease in the public scheme does not go hand in hand with a build-up of pension rights in the supplementary schemes. For countries like Croatia and Lithuania, replacement rate levels remain low, even when accounting for the private schemes.

1.7. DISAGGREGATION OF NEW PENSIONS

Analysing changes for new pensions – the benefits granted to newly retired people – allows assessing reform effects.

Public pension expenditure is the sum of the remaining stock of existing pensions and the flows of new pensions that arise over the projection period. Indexation rules and mortality rates determine how existing pensions change over time. As to new pensions, their dynamic is affected by the flow of new pensioners, as well as their first pension benefit, in turn determined by the career length of new pensioners, their average pensionable earnings (linked to past wages) and the way pension rights accrue throughout the career on the basis of those earnings. More precisely, the following disaggregation can be applied:

$$P_{new} = N_{new} \times \bar{C}_{new} \times \bar{A}_{new} \times \bar{PE}_{new}$$

With P_{new} total spending on new pensions, N_{new} the number of new pensions (pensioners), \bar{C}_{new} the average contributory period or career length of new pensions, \bar{A}_{new} the average effective accrual rate of the new pensions and \bar{PE}_{new} the average pensionable earnings during the contributory period. For some countries, an additional sustainability factor or adjustment factor might apply.

Data on contributory years and average accrual rates provide a clearer picture of the future drivers of (new) pension expenditure.

In the case of defined benefit systems, the accrual rate is predefined. For NDC systems, it is determined by the contribution rate to the notional accounts and the annuity factor. Accrual rates are not relevant for flat-rate systems. For point systems, a disaggregation based on the above formula is neither feasible – because pensionable earnings are not explicitly considered but rather accounted for through the point accumulation – nor meaningful because of the inherent nature of a point system. For this reason, an alternative formula is used for new spending in point systems:

$$P_{new} = N_{new} \times \bar{P}_{new} = N_{new} \times v_T \times \bar{pp}_T$$

Where total new pension expenditure P_{new} is the product of the number of new pensioners N_{new} and the average new pension benefit \bar{P}_{new} . The latter equals the pension point value at retirement v_T , multiplied with \bar{pp}_T , which is the average number of accumulated pension points of new pensioners. An additional sustainability factor or adjustment factor might apply. The average number of pension

points \overline{pp}_T) can be further disaggregated. Under some social-security regimes, one can accrue pension points in ways other than contributions, and those points can be considerable in terms of the final amount. Therefore, it is relevant to have information on the time span needed to accumulate pension points, independently of how they were accrued:

$$\overline{pp}_T = \bar{C}_T \times \overline{pp}_t$$

With \bar{C}_T the average contributory period (actual and virtual) and \overline{pp}_t the average yearly number of pension points. The latter can be interpreted as an implicit accrual rate in the case of a point system, namely the total number of pension points at retirement divided by the contributory period.

Table I.1.18: **Average contributory period of new earnings-related public pensions (years)**

	2022	2030	2040	2050	2060	2070	2022-70
BE	38.5	42.0	40.5	40.5	40.3	40.4	1.9
BG	35.7	37.0	37.4	37.1	36.8	36.4	0.8
CZ	44.3	46.3	46.8	42.8	41.8	41.8	-2.5
DK	:	:	:	:	:	:	:
DE	:	:	:	:	:	:	:
EE	:	:	:	:	:	:	:
IE	:	:	:	:	:	:	:
EL	31.9	32.4	31.5	34.3	35.9	38.4	6.6
ES	37.8	38.4	39.4	40.4	41.5	42.6	4.8
FR	33.9	31.1	31.6	31.7	33.9	34.3	0.5
HR	32.2	33.1	33.8	33.9	33.9	33.9	1.7
IT	35.5	34.6	34.6	34.4	36.0	37.7	2.2
CY	:	:	:	:	:	:	:
LV	36.0	36.0	36.0	36.0	36.0	36.0	0.0
LT	35.5	38.6	38.6	38.4	38.3	38.3	2.8
LU	25.2	24.3	24.6	24.6	25.3	25.5	0.3
HU	35.9	37.1	38.5	38.4	38.1	39.0	3.1
MT	36.4	35.6	36.0	36.4	36.7	37.0	0.6
NL	:	:	:	:	:	:	:
AT	38.7	39.3	39.1	39.2	39.4	39.3	0.7
PL	36.6	37.3	38.1	38.0	39.1	39.1	2.5
PT	34.3	35.8	36.8	36.1	37.8	38.3	3.9
RO	35.4	37.7	38.8	38.8	38.9	39.0	3.6
SI	38.1	39.1	36.3	34.6	36.4	36.3	-1.8
SK	42.0	42.7	43.3	44.2	44.9	45.7	3.8
FI	37.6	38.0	36.7	37.7	38.3	39.2	1.6
SE	40.0	39.7	38.3	39.6	41.5	42.4	2.4
NO	33.7	31.2	28.9	26.8	29.0	34.1	0.4
EA	35.6	36.1	35.9	36.2	37.0	37.5	2.0
EU	36.3	37.0	37.0	37.0	37.7	38.1	1.9

- In countries with point systems, new systems do not (solely) depend on the contribution period. As a result, no data is available for DE, EE and CY.

- DK, NL, IE: flat-rate system.

- EL: 2023 instead of 2022; figures concern the main pension scheme.

- FR: contributory period is defined as number of years in employment, excluding non-contributory periods that count for insurance (e.g. unemployment, childcare).

- For countries using microsimulation models (e.g. FR, HU, SE, NO), part of the volatility in the average contributory period from one year to another is due to sample size.

Source: European Commission, EPC.

Table I.1.19: **Average effective accrual rate of new earnings-related public pensions (%)**

	2022	2030	2040	2050	2060	2070	2022-70
BE	1.4	1.4	1.4	1.4	1.4	1.4	0.0
BG	1.4	1.4	1.4	1.4	1.4	1.4	0.0
CZ	1.6	1.7	1.6	1.7	1.7	1.7	0.1
DK	:	:	:	:	:	:	:
DE*	0.8	0.8	0.8	0.8	0.8	0.8	0.1
EE*	1.0	1.0	1.1	0.9	0.9	0.9	-0.2
IE	:	:	:	:	:	:	:
EL	1.1	1.1	1.1	1.1	1.1	1.2	0.1
ES	2.5	2.4	2.2	2.0	1.9	1.9	-0.7
FR*	1.5	1.4	1.4	1.4	1.4	1.4	-0.1
HR*	1.0	1.0	1.0	1.0	1.0	1.0	0.0
IT	1.8	1.8	1.7	1.7	1.7	1.7	-0.1
CY*	1.3	1.3	1.2	1.2	1.2	1.2	-0.1
LV	1.1	1.0	0.8	0.7	0.6	0.6	-0.5
LT*	1.2	1.1	1.1	1.1	1.1	1.1	-0.1
LU	2.3	2.1	2.0	1.9	1.9	1.9	-0.4
HU	2.3	2.2	2.1	2.1	2.1	2.0	-0.2
MT	1.9	1.7	1.7	1.7	1.7	1.7	-0.3
NL	:	:	:	:	:	:	:
AT	1.8	1.8	1.8	1.8	1.8	1.8	0.0
PL	1.0	0.9	0.9	0.8	0.8	0.7	-0.3
PT	2.2	2.2	2.3	2.3	2.2	2.2	0.0
RO*	0.9	1.0	1.0	1.0	1.0	1.0	0.1
SI	1.6	1.7	1.7	1.7	1.7	1.7	0.0
SK*	0.9	0.9	0.8	0.8	0.8	0.8	-0.1
FI	1.6	1.5	1.4	1.5	1.6	1.6	0.0
SE	0.9	0.9	0.9	0.9	0.9	0.9	0.0
NO	0.9	0.9	0.9	0.9	0.9	0.8	-0.1

*Point system countries (average accrual rate calculated as average pension points at retirement divided by average contribution period); FR has a mixture of DB (main scheme) and PS (complementary schemes), see pension fiche for more details.

- DK, NL, IE: flat-rate systems.

- EL: 2023 instead of 2022; figures concern the main pension scheme.

Source: European Commission, EPC.

Contributory period

Contributory periods can increase for several reasons, including rising statutory retirement ages that force employees to continue working to receive full benefits. The abolition of early retirement schemes or the tightening of eligibility criteria for certain benefits (e.g. disability pensions or additional contributory years for military service periods, years of study or number of children) are other factors that might lead to longer contributory periods.

Average contributory periods for new pensions are expected to follow an upward trend over the long term, with an average increase of about 2 years in the EU (see Table I.1.18). The largest increase in the contribution period would be in Greece, at about 7 years, followed by Spain with about 5 years, and Portugal, Slovakia and Romania with about 4 years. They are among the countries with the lowest value in 2022. For Greece, a longer contributory period stems from the link to life expectancy, with also other countries featuring such mechanism expected to see contributory periods rise. For Spain, it is driven by a particularly strong increase for women, reflecting convergence to male levels, which in turn is rising because of the ongoing increase in the legal retirement age and incentives to delay retirement.

In contrast, contribution periods would fall in Czechia and Slovenia, by about 2-2.5 years. In Czechia, as in many other countries, a wide range of non-contributory periods (e.g. study, unemployment, childcare) counts for insurance so these are included in the contributory period. The Czech decline beyond 2040 is due to the cancellation of studies as insured periods. For Slovenia, the average contributory period initially increases due to the retirement of cohorts that entered the labour market still relatively early. However, data on the contributory periods of the currently active population shows that younger cohorts have accumulated shorter contributory periods than older generations at the same age given late labour market entry and higher unemployment. The strong decline in the average contributory period seen for Norway during most of the projection period is due to immigration: immigrants on average spent fewer years in Norway compared to natives and accordingly have fewer contributory years.

Longer average careers translate into a shorter period spent into retirement – without considering the increase in life expectancy – and into higher economic growth because of higher employment rates. As such, a rising trend in the average contributory period exerts downward pressure on public pension expenditure. At the same time, however, a longer working life allows people to accumulate more pension rights, thus increasing pension expenditure, unless average yearly accrual rates are reduced in parallel.

Accrual rate

For most countries, the projections assume an accrual rate that remains about constant between 2022 and 2070 (see Table I.1.19). Spain shows a steady fall in the average accrual rate of new pensions (-0.7 pps in 2022-2070), due to the interplay between average growth of new pensions and changes in contributory periods and in pensionable income. For Latvia, which has a NDC system, the decline in the average accrual rate (-0.5 pps) results from a lower notional contribution rate and a higher sustainability factor. The fall for Luxembourg (-0.4 pps) is due to the annual decrease in the accrual rate until the early 2050s, as introduced by the 2012 pension reform, an effect reinforced by the decline in the average career length in the next few decades (see Table I.1.18) due to the growing proportion of migrants in the resident workforce.

1.8. SENSITIVITY TESTS AND ALTERNATIVE SCENARIOS

To assess how changes in the macroeconomic and budgetary assumptions affect the projections, the Ageing Report includes sensitivity tests and alternative scenarios. Sensitivity tests are an indispensable element of any long-term projection exercise given the inherent uncertainty that is involved. In the case of the Ageing Report, which is prepared based on common assumptions and a ‘no-policy change’ scenario, they quantify the responsiveness of the expenditure projections to changes in policy assumptions and in key drivers such as demographic and macroeconomic variables.

Seven sensitivity tests and three policy scenarios are conducted around the baseline projections (see Table I.1.20). The sensitivity tests apply a uniform shock to a specific variable for all Member States, affecting life expectancy, migration, fertility, employment and productivity. In addition, up to three policy scenarios are conducted, which deviate from the constant policy assumption applied in the baseline. The policy scenarios provide a ‘what-if’ view to enrich the analysis and are only run if the baseline does not already include such policy. In what follows, the results of the sensitivity tests and alternative scenarios are presented as deviations from the baseline projections.

Table I.1.20: Overview of the sensitivity tests and the policy scenarios for pensions

Demography			Labour force	Productivity	Pension policy scenarios		
Higher life expectancy	Lower/higher migration	Lower fertility	Higher employment rate older workers	Lower/higher TFP growth	Link retirement age to life expectancy	Constant retirement age	Constant benefit ratio
Additional gain in life expectancy at birth of two years by 2070.	33% lower/higher non-EU immigration over the entire projection period.	20% lower fertility rate over the entire projection period.	Employment rate of older workers (55-74y) 10 pps higher than assumed in the baseline projection.	TFP growth converges to 0.6%/1.0% (instead of 0.8%).	Effective retirement age shifts in line with 3/4th of the expected change in life expectancy.	The early and statutory retirement ages, as well as career requirements, are fixed at 2023 levels.	When the benefit ratio declines by 10% relative to the base year, measures are taken to stabilise the benefit ratio from that point onwards.

For a detailed description, see Chapter 5 in EC-EPC (2023).

Source: European Commission, EPC.

1.8.1. Sensitivity tests on demographic variables

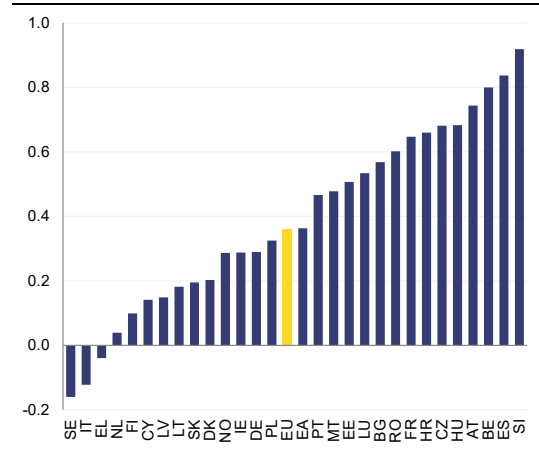
Life expectancy

An increase in life expectancy at birth of around two years as compared to the assumptions in the baseline scenario would push up average pension expenditure by 0.4 pps of GDP in 2070 (see Graph I.1.11). This

reflects how people would spend a longer period in retirement. The expenditure-increasing effect would be somewhat offset by the positive effect a larger labour force has on economic growth. Moreover, some countries have introduced automatic adjustment mechanisms in their pension system (see Table I.1.2). This shows in the estimated impact on the pension expenditure ratio for these countries: the six Member States with the lowest impact all have such mechanisms. In Sweden, Italy and Greece, estimates even point to a reduction of the pension expenditure ratio. Aside from a link to life expectancy, Sweden and Italy have NDC systems, which adjust pension benefits for the estimated remaining life expectancy when entering retirement.

For Greece it reflects, in addition to the link, favourable denominator effects. A stronger-than-assumed rise in life expectancy would have the biggest impact on pension spending in Slovenia (+0.9 pps of GDP), Spain and Belgium (+0.8 pps), Austria, Hungary, Czechia and Croatia (+0.7 pps) and France, Romania and Bulgaria (+0.6 pps).

Graph I.1.11: Higher increase in life expectancy: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)



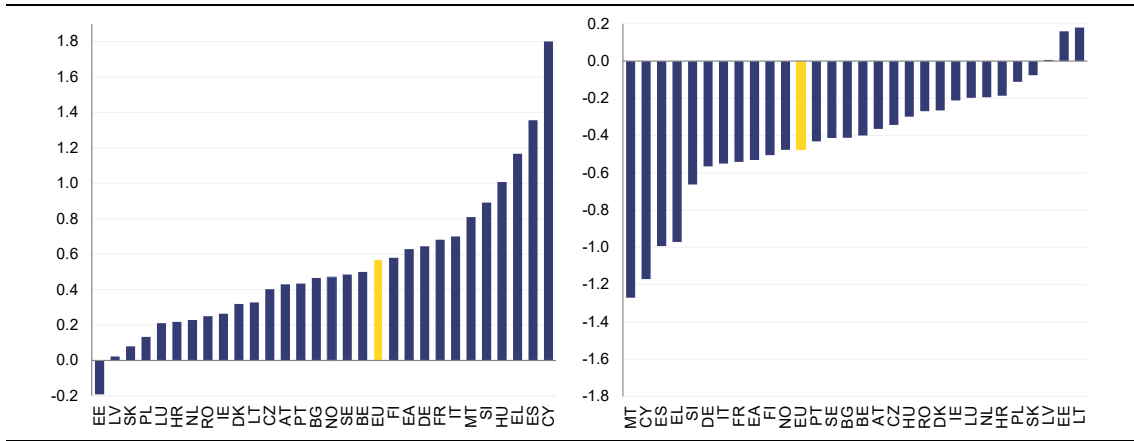
Source: European Commission, EPC.

Migration

Pension expenditure would increase, to a variable extent, under the assumption that non-EU immigration is 33% lower during the entire projection period (see Graph I.1.12, left). Countries generally assume that a large share of migrants enters the labour market upon arrival and will be making pension contributions during much of the projection period rather than enjoying pensions themselves. As a result, relative to the baseline projections, the impact on the pension expenditure-to-GDP ratio averages 0.6 pps of GDP by 2070. The impact stems mainly from the denominator as lower migration inflows shrink the labour force and thus economic growth. The biggest impact would be in Cyprus (+1.8 pps of GDP), a small country where migration represents a high proportion of total population in the baseline. The impact would also be non-negligible in Malta, Slovenia, Hungary, Greece and Spain, at between 0.8 and 1.4 pps. In Estonia, spending would fall slightly when assuming lower migration.

Assuming non-EU immigration to be 33% higher than the baseline yields a more or less symmetric picture (see Graph I.1.12, right). Malta (-1.3 pps of GDP) and Cyprus (-1.2 pps) would benefit the most, followed by Spain and Greece (-1 pp) and Slovenia (-0.7 pps). For Lithuania and Estonia higher immigration is estimated to slightly increase pension spending. This reflects valorisation and indexation in these countries being linked to the development of social contributions, which, in the case of higher immigration, means higher average pension benefits.

Graph I.1.12: **Lower/higher migration (left/right): change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**

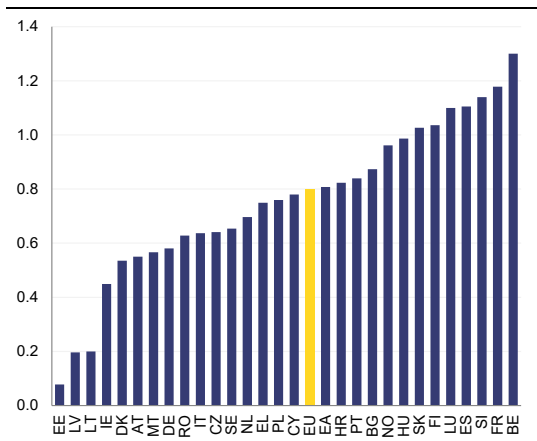


Source: European Commission, EPC.

Fertility

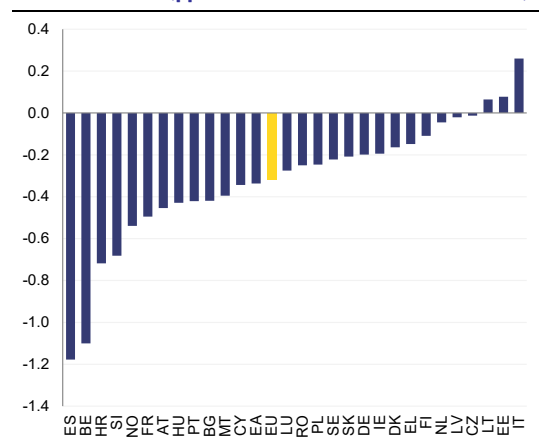
Setting fertility rates 20% lower during the entire projection period would drive up pension spending in all countries. This scenario implies not only a lower population growth, but also a more pronounced ageing process. While the baseline assumes an upward convergence in fertility rates, they would nevertheless stay below the natural replacement rate of 2.1 in all countries by 2070. A more conservative assumption would result in higher dependency ratios, i.e. the older population representing a higher share of the working-age population. Higher employment rates would not offset the drop in employment levels. Lower fertility would push up pension expenditure by 0.8 pps of GDP on average. As shown in Graph I.1.13, the impact of lower birth rates would be the biggest in Belgium (+1.3 pps of GDP on top of baseline), France (+1.2 pps), Slovenia, Spain and Luxembourg (+1.1 pp), and Finland, Slovakia, Hungary and Norway (+1 pp). The impact is limited for Estonia, Latvia and Lithuania due to the already mentioned specific valorisation and indexation mechanisms that incorporate changes in the labour force.

Graph I.1.13: **Lower fertility: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**



Source: European Commission, EPC.

Graph I.1.14: **Higher employment of older workers: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**



Source: European Commission, EPC.

1.8.2. Sensitivity tests on macroeconomic variables

Employment

If the employment rate of workers aged 55 to 74 years were to rise by 10 pps on top of the baseline assumption, this would lower pension expenditure by 0.3 pps of GDP on average in the EU. ⁽²⁸⁾ The effect of such assumption is estimated to be fairly similar across countries, though with some outliers in both directions. Two opposite dynamics would take place. On the one hand, increased employment among workers aged 55-74 leads to higher GDP growth and fewer pensioners with on average a shorter pension spell. These factors reduce public pension expenditure. On the other hand, a longer career enables employees to accrue more pension rights, especially in countries that apply a bonus system beyond a certain age or career length. This leads to higher public pension expenditure.

As shown in Graph I.1.14, the expenditure-reducing factors dominate in most countries. Spain (-1.2 pps of GDP), Belgium (-1.1 pps) and Croatia and Slovenia (-0.7 pps) have the most to gain from higher employment among older workers. Those gains are often even more substantial in the medium term. For instance, in 2040 the decrease relative to the baseline amounts to 1.7 pps of GDP for Spain and 1 pp for Slovenia. If employment were effectively to be lifted among older workers, Italy would expect pension expenditure to increase by 0.3 pps of GDP relative to the baseline by 2070. This reflects how the accumulation of additional rights outweighs the expenditure-reducing factors, at least in the long term; in 2030 and 2040 spending would be 1.2 pps and 0.7 pps lower, respectively.

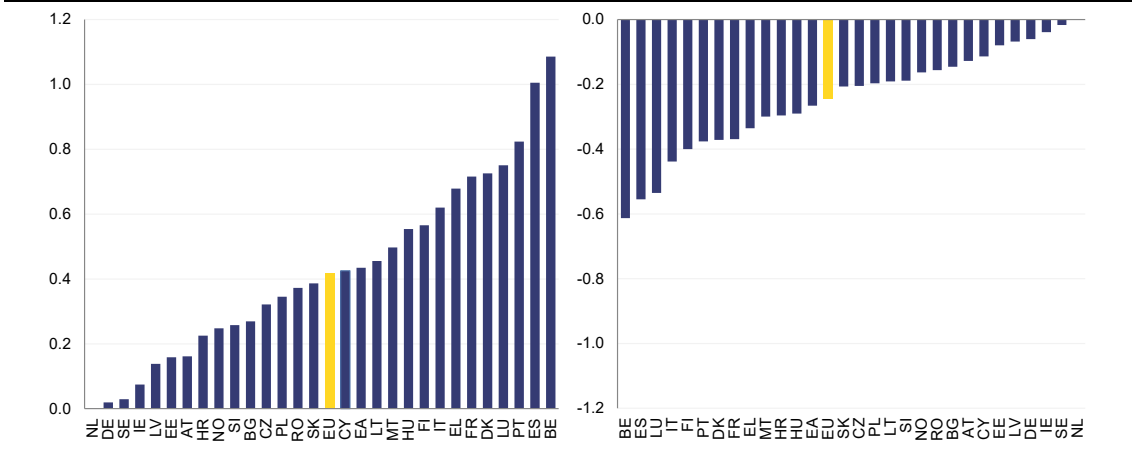
Productivity

Under less favourable productivity developments than assumed in the baseline, pension expenditure would increase. The sensitivity test assumes total factor productivity (TFP) growth to converge to 0.6%, close to historical trends, as compared with 0.8% in the baseline. In that case, average public pension expenditure would be 0.4 pps of GDP higher in the EU (see Graph I.1.15, left). Belgium (+1.1 pps of GDP), Spain (+1 pp), Portugal and Luxembourg (+0.8 pps) and Denmark, France and Greece (+0.7 pps) would be the most affected by weaker productivity growth. In contrast, the impact would be negligible for the Netherlands, Germany, Sweden and Ireland. These countries have in common that valorisation and indexation are both based on wage growth. Since the latter is determined by productivity growth, a change in productivity has a similar impact on nominator (pension expenditure) and denominator (GDP).

Conversely, higher productivity growth would reduce pension expenditure (see Graph I.1.15, right). In this case, TFP growth is assumed to converge to 1% in the long term, for instance because of a better-than-anticipated dispersion of new technology or a higher level of average educational attainment. The aggregate effect on pension spending from a permanent increase in TFP growth for the EU is estimated at -0.2 pps of GDP, with a maximum of around 0.6 pps in Belgium, Spain and Luxembourg.

⁽²⁸⁾ By drawing on people that are assumed to be inactive under the baseline.

Graph I.1.15: **Lower/higher TFP growth (left/right): change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**

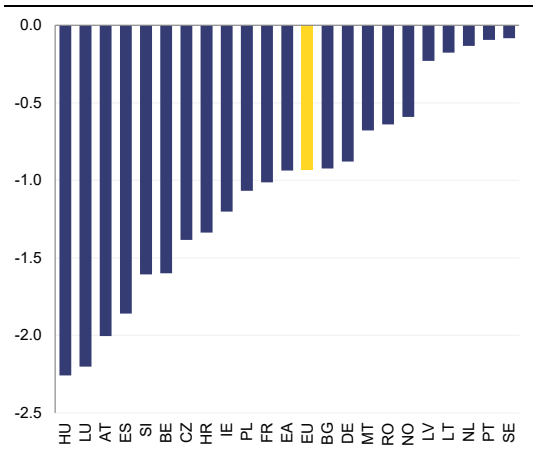


Source: European Commission, EPC.

1.8.3. Policy-change scenarios

Linking the retirement age to increases in life expectancy

Graph I.1.16: **Linking retirement age to life expectancy: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**



Source: European Commission, EPC.

The introduction of an automatic link between legal retirement ages and life expectancy would have a substantial downward impact on pension expenditure in many countries (see Graph I.1.16).⁽²⁹⁾ As careers would rise in line with longevity, the decline in the number of pensioners results in a lower coverage ratio so that pension expenditure falls in comparison to the baseline. In addition, higher employment lifts economic growth. At the same time, longer careers lead to a higher benefit ratio as more rights accrue. Overall, pension expenditure ratios are estimated to go down in all countries for which this policy-change scenario was conducted, i.e. countries that do not apply a full link between retirement ages and life expectancy.⁽³⁰⁾

Impacts would be particularly strong in countries without other automatic adjustment mechanisms. The strongest impact would be for Hungary (-2.3 pps of GDP compared to the baseline), Luxembourg (-2.2 pps) and Austria (-2 pps). For Slovenia, Belgium, Czechia, Croatia, Ireland, Poland and France, the introduction of a link to life expectancy is estimated to lower spending by

⁽²⁹⁾ The link results in an increase of the effective retirement age compared to the baseline. To account for the fact that the baseline incorporates legislated changes in the retirement age, the link only starts once these discretionary increases have been enacted.

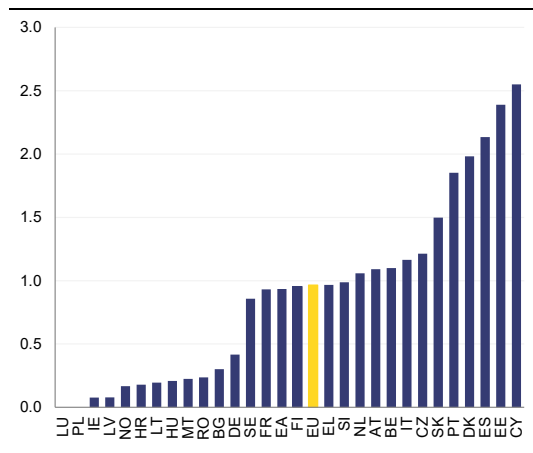
⁽³⁰⁾ Denmark, Estonia, Greece, Italy, Cyprus, Finland and Slovakia have a full link.

between 1 and 2 pps of GDP. Countries with only mildly lower spending under this scenario often already have other automatic adjustment mechanisms. This is for example the case in Sweden, Portugal and the Netherlands, which all three currently have a partial link to life expectancy. Latvia and Norway adjust benefits to remaining life expectancy at retirement.

Constant retirement age

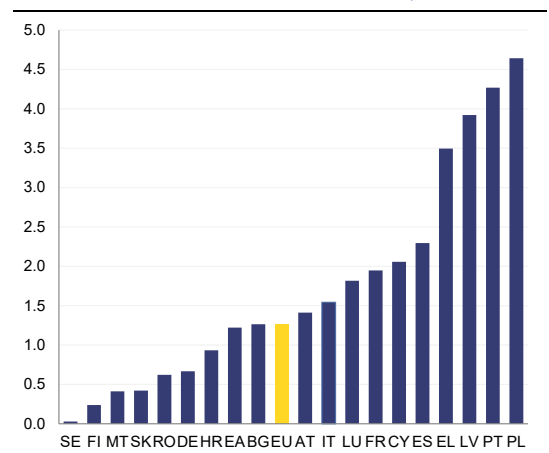
Keeping the main eligibility requirements such as legal retirement ages unchanged at current levels over the entire projection period would have a sizeable upward impact on pension expenditure in most countries (see Graph I.1.17). This scenario allows quantifying the expected impact of already legislated but not yet applicable reforms (included in the baseline), which risk not being enacted in full. The most affected countries would be Cyprus (+2.5 pps of GDP), Estonia (+2.4 pps), Spain (+2.1 pps) and Denmark (+2 pps). The impact is also more than 1 pp of GDP for Portugal, Slovakia, Czechia, Italy, Belgium, Austria and the Netherlands. The impact is small for countries that, at current legislation, have an effective retirement age that is projected to increase modestly. The high impact of the constant retirement age scenario underscores the risks of policy reversals on future pension expenditure for countries that adopted far-reaching reforms.

Graph I.1.17: **Constant retirement age: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**



Source: European Commission, EPC.

Graph I.1.18: **Constant benefit ratio: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**



Source: European Commission, EPC.

Constant benefit ratio

Allowing only a limited fall in pension adequacy would put large upward pressure on pension spending in several countries. This illustrates the strong role of measures reducing the generosity of the pension system in the baseline projection. The scenario is conducted for all countries that, according to the baseline, would see a fall of the benefit ratio by more than 10% relative to the base year level.⁽³¹⁾ In these cases, it is assumed that the benefit ratio would remain constant at the lower 90% mark for the remainder of the projection period. As shown in Graph I.1.18, stemming the projected decline in pension adequacy would imply significantly higher public expenditure in Poland (+4.6 pps of GDP), Portugal (+4.3 pps), Latvia (+3.9 pps) and Greece (+3.5 pps). In Spain, Cyprus, France, Luxembourg and Italy, stabilising pension adequacy close to current levels would lift pension expenditure by 1.5-2.5 pps of GDP by 2070.

⁽³¹⁾ The earnings-related public pension benefit ratio is used as a basis. For countries that report on private schemes (see Table I.1.16), the total benefit ratio determines whether and when this scenario is activated.

Table I.1.21 provides an overview of the impact of the different tests and scenarios. In general, the countries with the biggest pension expenditure increase in the baseline projections also tend to be the most exposed to the unfavourable scenarios.

Table I.1.21: **Summary table: impact of sensitivity tests and policy scenarios: change in public pension spending 2022-2070 (pps of GDP deviation from the baseline)**

	baseline (%GDP)	impact of unfavourable scenarios (pps of GDP)					impact of favourable scenarios (pps of GDP)				
		higher life expectancy	lower migration	lower fertility	lower TFP growth	constant ret. age	constant BR	higher migration	higher empl. 55-74	higher TFP growth	link life expectancy
LU	8.3	0.5	0.2	1.1	0.8	0.0	1.8	-0.2	-0.3	-0.5	-2.2
MT	4.4	0.5	0.8	0.6	0.5	0.2	0.4	-1.3	-0.4	-0.3	-0.7
HU	4.3	0.7	1.0	1.0	0.6	0.2		-0.3	-0.4	-0.3	-2.3
SI	3.8	0.9	0.9	1.1	0.3	1.0		-0.7	-0.7	-0.2	-1.6
CY	3.6	0.1	1.8	0.8	0.4	2.5	2.1	-1.2	-0.3	-0.1	
ES	3.6	0.8	1.4	1.1	1.0	2.1	2.3	-1.0	-1.2	-0.6	-1.9
BE	3.5	0.8	0.5	1.3	1.1	1.1		-0.4	-1.1	-0.6	-1.6
LT	3.2	0.2	0.3	0.2	0.5	0.2		0.2	0.1	-0.2	-0.2
SK	2.8	0.2	0.1	1.0	0.4	1.5	0.4	-0.1	-0.2	-0.2	
IE	2.8	0.3	0.3	0.4	0.1	0.1		-0.2	-0.2	0.0	-1.2
NL	2.0	0.0	0.2	0.7	0.0	1.1		-0.2	0.0	0.0	-0.1
CZ	1.7	0.7	0.4	0.6	0.3	1.2		-0.3	0.0	-0.2	-1.4
NO	1.7	0.3	0.5	1.0	0.2	0.2		-0.5	-0.5	-0.2	-0.6
FI	1.4	0.1	0.6	1.0	0.6	1.0	0.2	-0.5	-0.1	-0.4	
DE	1.2	0.3	0.6	0.6	0.0	0.4	0.7	-0.6	-0.2	-0.1	-0.9
EA	0.6	0.4	0.6	0.8	0.4	0.9	1.2	-0.5	-0.3	-0.3	-0.9
EU	0.4	0.4	0.6	0.8	0.4	1.0	1.3	-0.5	-0.3	-0.2	-0.9
AT	0.4	0.7	0.4	0.6	0.2	1.1	1.4	-0.4	-0.5	-0.1	-2.0
BG	0.1	0.6	0.5	0.9	0.3	0.3	1.3	-0.4	-0.4	-0.1	-0.9
SE	-0.2	-0.2	0.5	0.7	0.0	0.9		-0.4	-0.2	0.0	-0.1
PL	-0.2	0.3	0.1	0.8	0.3	0.0	4.6	-0.1	-0.2	-0.2	-1.1
HR	-0.2	0.7	0.2	0.8	0.2	0.2	0.9	-0.2	-0.7	-0.3	-1.3
EE	-0.7	0.5	-0.2	0.1	0.2	2.4		0.2	0.1	-0.1	
RO	-0.9	0.6	0.2	0.6	0.4	0.2	0.6	-0.3	-0.3	-0.2	-0.6
FR	-0.9	0.6	0.7	1.2	0.7	0.9	1.9	-0.5	-0.5	-0.4	-1.0
DK	-1.4	0.2	0.3	0.5	0.7	2.0		-0.3	-0.2	-0.4	
LV	-1.7	0.1	0.0	0.2	0.1	0.1	3.9	0.0	0.0	-0.1	-0.2
PT	-1.8	0.5	0.4	0.8	0.8	1.9	4.3	-0.4	-0.4	-0.4	-0.1
IT	-1.9	-0.1	0.7	0.6	0.6	1.2	1.5	-0.6	0.3	-0.4	
EL	-2.5	0.0	1.2	0.7	0.7	1.0	3.5	-1.0	-0.1	-0.3	

- The constant benefit ratio scenario is only conducted for those countries that under the baseline have a 10% decline in their benefit ratio compared to the 2022 level.

- The link to life expectancy scenario is only conducted for countries that do not already have a full link legislated.

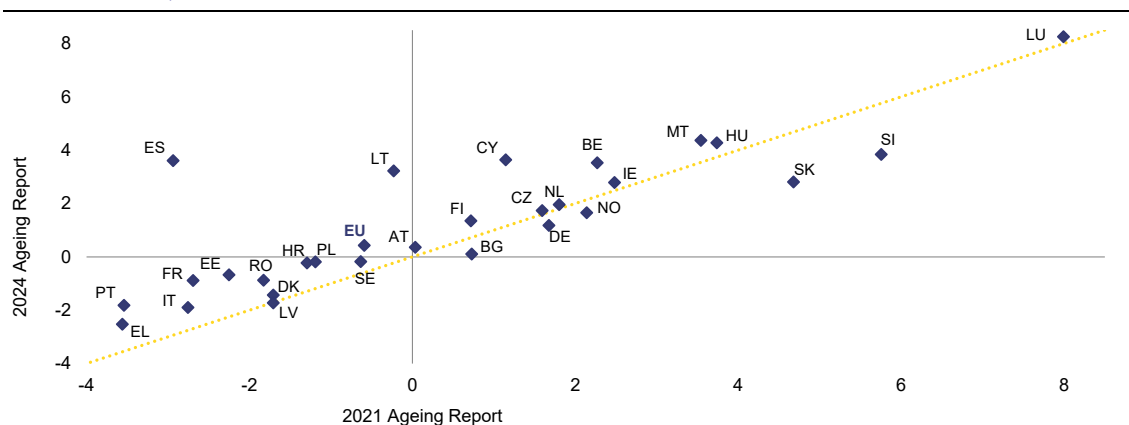
Source: European Commission, EPC.

1.9. COMPARISON WITH THE 2021 AGEING REPORT

The projected change in public pension expenditure in 2022-2070 is 1 pp of GDP higher on average than in the 2021 Ageing Report. In the EU, the projected change in expenditure over the projection period is +0.4 pps of GDP versus -0.6 pps of GDP in the 2021 exercise (see Table I.1.22). While actual pension spending was 0.9 pps of GDP lower in 2022 than projected in the 2021 update, the 2070 expenditure is about the same (0.1 pp higher), so that the overall change between 2022 and 2070 is one percentage point higher.

The updated projections entail an upward revision for a large majority of countries. The distance from the 45-degree line in Graph I.1.19 indicates the size of the revision. The change in pension spending over the period 2022-2070 was revised downward for five countries: Germany and Norway (-0.5 pps of GDP) Bulgaria (-0.6 pps), Slovenia and Slovakia (both -1.9 pps), with no change for Latvia. Among the remaining 22 countries, the upward revision exceeds 1 pp of GDP in Croatia (+1.1 pps), Belgium (+1.3 pps), Estonia (+1.6 pps), Portugal (+1.7 pps), France (+1.8 pps), Cyprus (+2.5 pps), Lithuania (+3.5 pps) and Spain (+6.6 pps).

Graph I.1.19: **Change in public pension expenditure in 2022-2070: latest projections vs 2021 Ageing Report (pps of GDP)**



Source: European Commission, EPC.

In nearly all countries, actual pension expenditure in 2022 turned out to be lower than projected in the 2021 Ageing Report. In general, this can be attributed to two factors. First, a milder economic impact of COVID-19 than anticipated in spring 2020, when the macroeconomic assumptions for the 2021 Ageing Report were finalised: in 2021, nominal GDP was 4% higher in the EU than projected in spring 2020. Then, in 2022, high inflation resulted in a substantial increase in nominal GDP, which was 9% higher in the EU than projected in the 2021 Ageing Report, while the indexation of pension benefits generally occurs with a lag, thus lowering the pension expenditure-to-GDP ratio. For most countries, the base year difference was smaller than 1 pp of GDP. It was larger for Malta (-1.2 pps of GDP), Ireland and Lithuania (-1.3 pps), Poland (-1.4 pps), Cyprus (-1.5 pps), Croatia (-1.7 pps) and Romania (-5.2 pps). In Romania, a planned increase in the pension point value by 30% in 2021 did not take place. Only in Bulgaria, pension spending was higher in 2022 than projected in the 2021 Ageing Report.

Table I.1.22: Comparison of public pension expenditure in 2022 and 2070: 2021 vs 2024 Ageing Report (%/pps of GDP)

	2021 AR	2024 AR	Δ 2022	2021 AR	2024 AR	Δ 2070	2021 AR	2024 AR	Δ 2022-70	
BE	12.9	12.7	-0.2	15.2	16.2	1.1	2.3	3.5	1.3	BE
BG	8.9	9.5	0.5	9.7	9.6	-0.1	0.7	0.1	-0.6	BG
CZ	9.3	8.7	-0.6	10.9	10.4	-0.5	1.6	1.7	0.1	CZ
DK	9.0	8.3	-0.7	7.3	6.8	-0.4	-1.7	-1.4	0.3	DK
DE	10.8	10.2	-0.6	12.4	11.4	-1.1	1.7	1.2	-0.5	DE
EE	7.7	7.4	-0.3	5.4	6.7	1.3	-2.3	-0.7	1.6	EE
IE	5.1	3.8	-1.3	7.6	6.6	-1.0	2.5	2.8	0.3	IE
EL	15.5	14.5	-1.0	11.9	12.0	0.1	-3.6	-2.5	1.0	EL
ES	13.2	13.1	-0.1	10.3	16.7	6.4	-2.9	3.6	6.6	ES
FR	15.3	14.4	-0.8	12.6	13.6	1.0	-2.7	-0.9	1.8	FR
HR	10.7	9.0	-1.7	9.5	8.8	-0.7	-1.3	-0.2	1.1	HR
IT	16.3	15.6	-0.8	13.6	13.7	0.1	-2.8	-1.9	0.9	IT
CY	9.7	8.2	-1.5	10.9	11.8	1.0	1.1	3.6	2.5	CY
LV	7.6	7.2	-0.5	5.9	5.4	-0.5	-1.7	-1.7	0.0	LV
LT	7.8	6.4	-1.3	7.5	9.7	2.1	-0.2	3.2	3.5	LT
LU	10.0	9.2	-0.8	18.0	17.5	-0.5	8.0	8.3	0.3	LU
HU	8.6	7.7	-0.9	12.4	12.0	-0.3	3.7	4.3	0.5	HU
MT	7.3	6.2	-1.2	10.9	10.5	-0.4	3.5	4.4	0.8	MT
NL	7.3	6.5	-0.8	9.1	8.5	-0.6	1.8	2.0	0.2	NL
AT	14.3	13.7	-0.6	14.3	14.0	-0.3	0.0	0.4	0.3	AT
PL	11.7	10.2	-1.4	10.5	10.1	-0.4	-1.2	-0.2	1.0	PL
PT	13.1	12.2	-0.8	9.5	10.4	0.9	-3.5	-1.8	1.7	PT
RO	13.7	8.5	-5.2	11.9	7.6	-4.3	-1.8	-0.9	1.0	RO
SI	10.2	9.8	-0.4	16.0	13.7	-2.3	5.8	3.8	-1.9	SI
SK	9.5	8.5	-1.0	14.2	11.3	-2.9	4.7	2.8	-1.9	SK
FI	13.6	12.8	-0.9	14.4	14.1	-0.3	0.7	1.4	0.6	FI
SE	8.1	7.4	-0.8	7.5	7.2	-0.3	-0.6	-0.2	0.5	SE
NO	11.4	10.8	-0.6	13.6	12.5	-1.1	2.1	1.7	-0.5	NO
EA	12.7	11.9	-0.8	12.1	12.5	0.4	-0.5	0.6	1.2	EA
EU	12.3	11.4	-0.9	11.7	11.8	0.1	-0.6	0.4	1.0	EU

Source: European Commission, EPC.

Table I.1.23: Breakdown of the revision in the 2022-2070 expenditure change (pps of GDP)

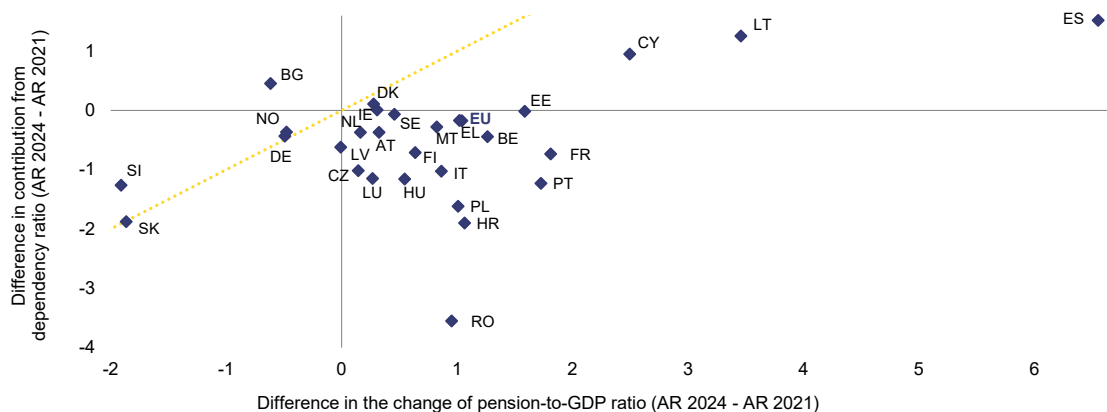
	revision 2022-2070 (1+2+3+4+5)	attributed to					
		Dependency ratio (1)	Coverage ratio (2)	Benefit ratio (3)	Labour market effect (4)	Residual (5)	
BE	1.3	-0.4	0.2	2.3	-0.4	-0.3	BE
BG	-0.6	0.5	-0.4	0.0	0.1	-0.7	BG
CZ	0.1	-1.0	0.5	0.4	0.3	-0.1	CZ
DK	0.3	0.1	0.4	0.6	0.0	-0.7	DK
DE	-0.5	-0.4	0.7	-0.4	0.0	-0.4	DE
EE	1.6	0.0	-0.1	2.4	0.3	-1.0	EE
IE	0.3	0.0	0.5	-0.7	-0.1	0.5	IE
EL	1.0	-0.2	0.7	-0.8	1.6	-0.3	EL
ES	6.6	1.5	-0.3	5.3	0.7	-0.7	ES
FR	1.8	-0.7	-0.3	3.5	0.2	-0.8	FR
HR	1.1	-1.9	0.9	2.6	0.0	-0.6	HR
IT	0.9	-1.0	0.5	2.0	0.3	-0.9	IT
CY	2.5	1.0	-1.1	2.6	0.3	-0.3	CY
LV	0.0	-0.6	0.4	0.4	0.1	-0.4	LV
LT	3.5	1.3	-0.7	2.8	0.5	-0.4	LT
LU	0.3	-1.1	-0.6	2.0	0.2	-0.1	LU
HU	0.5	-1.2	0.7	0.5	0.7	-0.2	HU
MT	0.8	-0.3	-0.1	1.1	0.4	-0.3	MT
NL	0.2	-0.4	-0.1	1.0	-0.2	-0.2	NL
AT	0.3	-0.4	-1.1	1.9	0.0	-0.1	AT
PL	1.0	-1.6	0.7	1.6	0.4	-0.1	PL
PT	1.7	-1.2	0.5	2.4	0.5	-0.4	PT
RO	1.0	-3.6	-0.8	0.8	0.4	4.1	RO
SI	-1.9	-1.3	-0.1	-0.1	0.3	-0.7	SI
SK	-1.9	-1.9	0.0	0.6	-0.7	0.2	SK
FI	0.6	-0.7	0.2	1.3	0.4	-0.5	FI
SE	0.5	-0.1	-1.2	2.0	-0.1	-0.2	SE
NO	-0.5	-0.4	0.0	0.3	-0.1	-0.3	NO
EA	1.2	-0.6	0.1	1.9	0.2	-0.5	EA
EU	1.0	-0.2	0.0	1.4	0.2	-0.4	EU

Source: European Commission, EPC.

Upward revisions are generally driven by the benefit ratio effect. Table I.1.23 allocates the difference in the projected expenditure change in 2022-2070 between the two most recent Ageing Reports over the dependency ratio effect, the coverage ratio effect, the benefit ratio effect and the labour market effect. ⁽³²⁾ In particular:

- *The change in the old-age dependency ratio effect is downward for most countries* (see Graph I.1.20), reflecting overall more favourable demographic projections. The largest downward revisions in the dependency ratio effect in 2022-2070 as compared to the 2021 projections are for Romania (-3.6 pps), Croatia and Slovakia (-1.9 pps) and Poland (-1.6 pps). In few countries, there are upward revisions, with the biggest increases as compared to the 2021 projections for Spain (+1.5 pps of GDP), Lithuania (+1.5 pps) and Cyprus (+1.3 pps).
- *The coverage ratio effect is relatively small.* It contributes less than 1 pp of GDP to the overall revision, with the exceptions of Cyprus and Austria (-1.1 pps) and Sweden (-1.2 pps)
- *For nearly all countries the benefit ratio effect is larger than in the 2021 projections and generally dominates the other components* (see Graph I.1.21). It reflects new pension measures and changes in the macroeconomic assumptions. The impact is at least 2 pps of GDP for eleven countries: Spain (+5.3 pps of GDP, reflecting the abolition of the sustainability factor and the return to full price indexation), France (+3.5 pps), Lithuania (+2.8 pps), Croatia and Cyprus (+2.6 pps), Estonia and Portugal (+2.4 pps), Belgium (+2.3 pps), and Italy, Sweden and Luxembourg (+2 pps). A lower benefit ratio reduced pension expenditure in 4 countries, with the biggest impact in Greece (-0.8 pps) and Ireland (-0.7 pps).
- *With some exceptions, the labour market effect is not a major driver of the revisions in pension spending.* The upward revision for Greece (+1.6 pps) and for Spain and Hungary (+0.7 pps) reflects the updated labour market assumptions for these countries, as is the case for Slovakia, where 0.7 pps of the overall downward revision of 1.9 pps of GDP in 2022-2070 can be attributed to more favourable labour market assumptions, including the impact of the introduction of a link to life expectancy.

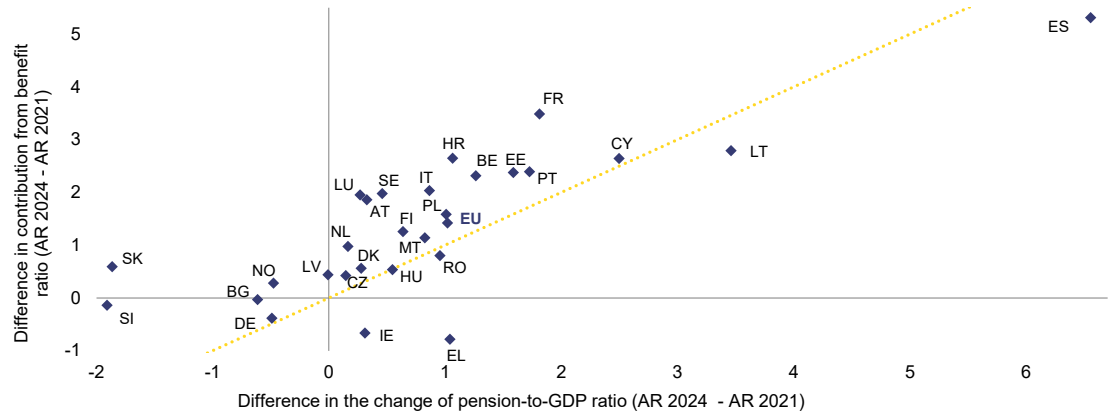
Graph I.1.20: **Revision in the dependency ratio effect vs revision in public pension spending 2022-2070 (pps of GDP)**



Source: European Commission, EPC.

⁽³²⁾ The residual shows the difference between the changes in the expenditure that cannot be attributed to any of the four drivers. The value for Romania (+4.1 pps) stands out and is due to the big differences in the base year (see Table I.1.23).

Graph I.1.21: Revision in the benefit ratio effect vs revision in public pension spending 2022-2070 (pps of GDP)



Source: European Commission, EPC.

An alternative breakdown allocates the revision compared to the 2021 Ageing to changes in the underlying assumptions, better modelling or broader coverage, the interpretation of the constant policy assumption and reforms adopted since the previous update (see Table I.1.24).

This breakdown shows that changes in the underlying demographic and macroeconomic assumptions are the main drivers behind revisions as compared to the 2021 exercise. For most countries, the new set of assumptions resulted in an upward revision of the change in pension expenditure between 2022 and 2070. The expenditure-increasing impact is the biggest for Lithuania (+3.2 pps of GDP), Cyprus and France (+2 pps), Portugal (+1.8 pps), Bulgaria (+1.6 pps), Spain (+1.4 pps), Finland (+1.3 pps), and Poland and Greece (+1.2 pps). The updated assumptions lowered the projected change in 2022-2070 by 1.4 pps and by 1.3 pps in Luxembourg and Romania, respectively.

Pension reforms adopted since the finalisation of the 2021 Ageing Report are a second main source of revisions. While absent or small in most countries, in several countries policy measures help explain the revisions compare to the previous update. The main example is Spain, where it increases pension expenditure by 4.6 pps of GDP over the projection period given the abolition of the sustainability factor and the return to full price indexation, partly offset by other measures.⁽³³⁾

In Romania, policy measures lift pension expenditure by 2.2 pps of GDP: abandoning the planned increase in the pension point value in 2021 lowered pension expenditure by 3.7 pps of GDP in 2022 compared to the previous projections but this effect fades to 1.5 pps of GDP in 2070. Other countries where government measures increased pension expenditure include Lithuania (+0.6 pps), Belgium (+0.5 pps)⁽³⁴⁾, and Croatia and Cyprus (+0.4 pps).⁽³⁵⁾ In contrast, pension reforms lowered the projected change in pension expenditure substantially in Bulgaria (-2.3 pps) and Slovakia (-1.5 pps). For Bulgaria this results from high pension indexation at the start of the projections, the effect of which dwindles in the long term. For Slovakia, the reduction comes from the decisions to relink the legal retirement age to gains in life expectancy and to lower the growth rate of the point value.

Changes in the modelling, the coverage of the projections or the interpretation of the constant policy assumption only matter for a limited number of countries.

For Luxembourg, changes in the way disability, survivor and old-age pensioners are estimated increase pension expenditure by 1.7 pps of GDP by 2070. Spain introduced a series of methodological improvements

⁽³³⁾ See Box 3.6 in the Spanish pension fiche for a detailed overview.

⁽³⁴⁾ The projections for Belgium do not include the measures adopted by Parliament on 4 April 2024.

⁽³⁵⁾ For Poland, policy measures increased pension expenditure by +0.4 pps of GDP in 2022 compared to the previous projections. Since this impact remains constant until 2070, the contribution to the revision in 2022-2070 is zero, though.

concerning the projection of average new old-age benefits, special pensions and the share of new maximum pension benefits, which together increase pension expenditure by 0.5 pps in 2070, with a higher impact in the medium term. Portugal changed the way new pensions from public entities and non-contributory pensions are estimated, resulting in 0.4 pps of GDP higher spending in 2070. In the Finnish projections, a more accurate assessment of the incidence of disability based on updated statistical data results in lower take-up rates of disability pensions than previously assumed. As a result, pension expenditure would be 0.6 pps of GDP lower in 2070. A change in the interpretation of the constant policy assumption reduced pension expenditure by 1.2 pps of GDP by 2070 for Slovenia, considering that future generations will have considerably lower contributory periods on the basis of current data for younger cohorts. For Estonia, changes in the expected way the first and mandatory second pillar interact result in 0.5 pps of GDP higher expenditure by 2070. Revisions are discussed in detail in Section 3.6 of the country fiches accompanying this report.

Table I.1.24: **Alternative breakdown of the revision in the 2022-2070 expenditure change (pps of GDP)**

	revision 2022-2070	due to changes in				
		assumptions	coverage or modelling	constant policy	policy measures	
BE	1.3	0.8	0.0	0.0	0.5	BE
BG	-0.6	1.6	0.0	0.0	-2.3	BG
CZ	0.1	0.5	0.0	0.0	-0.4	CZ
DK	0.3	0.2	0.0	0.0	0.1	DK
DE	-0.5	-0.4	0.0	0.0	0.0	DE
EE	1.6	0.8	0.0	0.5	0.3	EE
IE	0.3	-0.1	0.3	0.0	0.0	IE
EL	1.0	1.2	0.0	0.0	-0.2	EL
ES	6.6	1.4	0.5	0.0	4.6	ES
FR	1.8	2.0	-0.3	0.2	-0.2	FR
HR	1.1	0.7	-0.1	0.0	0.4	HR
IT	0.9	0.9	0.0	0.0	0.0	IT
CY	2.5	2.0	0.0	0.0	0.4	CY
LV	0.0	0.1	-0.2	0.0	0.1	LV
LT	3.5	3.2	-0.3	0.0	0.6	LT
LU	0.3	-1.4	1.7	0.0	0.0	LU
HU	0.5	0.8	0.0	0.0	-0.3	HU
MT	0.8	0.7	0.0	0.0	0.0	MT
NL	0.2	0.2	0.0	0.0	0.0	NL
AT	0.3	:	:	:	:	AT
PL	1.0	1.2	-0.2	0.0	0.0	PL
PT	1.7	1.8	0.4	0.0	-0.5	PT
RO	1.0	-1.3	0.0	0.0	2.2	RO
SI	-1.9	-0.7	-0.1	-1.2	0.0	SI
SK	-1.9	-0.7	0.4	0.0	-1.5	SK
FI	0.6	1.3	-0.6	0.0	-0.1	FI
SE	0.5	0.8	0.0	0.0	-0.3	SE
NO	-0.5	-0.6	0.1	0.0	0.0	NO

- AT: no breakdown reported.

- IE: breakdown only concerns Public Social Security Schemes.

- NL: the effect of improved modelling is comprised under the change in assumptions.

Source: European Commission, EPC.

Box I.1.2: Special pensions: overview of retirement conditions in the EU Member States for a number of frequent professions

The 2018 and 2021 Ageing Reports discussed the weight of special pensions in overall pension expenditure. ⁽¹⁾ Since the pension projections are exhaustive, covering all public pension schemes, special schemes are included in the overall projections. There are some exceptions, which concern small schemes. ⁽²⁾ Member States' country fiches provide more information on the precise type and conditions.

'Special pensions schemes' deviate from the standard regime in terms of eligibility, benefit calculation or higher state funding. They are granted based on a *strenuous occupational activity* (e.g. difficult working conditions or security forces) or a *special status* (e.g. certain civil servants or special merits). Advantages compared with the general scheme include one or more of the following factors: (i) a lower (early) retirement age, (ii) contributory periods are counted more favourably, (iii) a higher effective accrual rate or equivalent, (iv) a more favourable indexation rule or (v) higher state funding.

In the context of the 2024 Ageing Report, a mapping was conducted for the retirement conditions for a number of occupations for which special pension schemes are common. Table 1 compares the earliest retirement age under the general scheme with that for police officers, army officers, fire fighters and railway crew.

- *18 Member States have a lower early retirement age for army officers* compared to the general regime, with retirement possible below the age of 50 for Spanish, Maltese and Romanian military staff and, depending on the career length, for French, Croatian, Polish and Slovakian army officers. In addition to the age requirement, generally a minimum contributory period condition applies as well.
- *16 Member States deviate from the general regime for police officers*, for which the earliest retirement age is always at least as high as that for army officers. In Bulgaria, France, Latvia, Malta, Romania and, for women, Slovenia, police officers can retire before reaching the age of 55. Depending on the career length, this is also possible in Croatia and Poland.
- *In 14 Member States, fire fighters have the possibility to retire before the earliest retirement age under the general regime.* Conditions are often similar to those for army and police officers.
- *5 Member States allow train crew to retire before the standard early retirement age:* Belgium, Denmark, France, Croatia and Slovenia, at between 54 and 60 years.

⁽¹⁾ See Box II.1.2 in the 2018 Ageing Report and Box II.1.1 in the 2021 Ageing Report.

⁽²⁾ For example, Germany did not include the farmers' scheme.

(Continued on the next page)

Box (continued)

Table 1: **Earliest retirement age: general scheme and selected professions (2022)**

	general scheme*	army officers	police officers	fire fighters	train crew
BE	63	56	59 ⁽⁹⁾	=	55
BG	63.4 (60.8)	53.8	53.8	53.8	=
CZ	60 (59.2)	=	=	=	=
DK	63.5	60	60	=	60
DE	63	62 ⁽²⁾	= ⁽¹⁰⁾	60	=
EE	59.3	50	55	career condition ⁽¹¹⁾	=
IE	66	50	55	55	=
EL	62	60 ⁽³⁾	60 ⁽³⁾	60 ⁽³⁾	=
ES	63	45	59	59	=
FR	62	career condition ⁽⁴⁾	52	57	56
HR	60 (58)	career condition ⁽⁵⁾	career condition ⁽⁵⁾	career condition ⁽⁵⁾	career condition ⁽⁵⁾
IT	64	58	58	58	=
CY	65	=	=	=	n.a.
LV	62.3	50	50	50	=
LT	59.3 (58.7)	=	=	=	=
LU	57	=	=	=	=
HU	65	=	=	=	=
MT	61	43	43	43	n.a.
NL	66.6	=	=	=	=
AT	60 (55)	=	=	=	=
PL	60 (55)	career condition ⁽⁶⁾	career condition ⁽⁶⁾	=	=
PT	60	= ⁽⁷⁾	= ⁽⁷⁾	= ⁽⁷⁾	=
RO	60 (58)	47	47	47	=
SI	60	52	57.5 (54.5)	55	54
SK	60.8 (60) ⁽¹⁾	career condition ⁽⁸⁾	career condition ⁽⁸⁾	career condition ⁽⁸⁾	=
FI	64	56	=	=	=
SE	62	=	=	=	=

- No data reported by Germany, figures based on www.buzer.de & www.feuerwehrverband.de.

- In Finland, the lowest eligible age depends on the birth year. Figures shown are for the age cohort that became eligible for old-age pensions in 2022.

- Brackets: if different for men and women, figure for women shown in brackets.

- '=' if same as general regime.

* Contributory period requirement often applies on top of minimum age requirement.

(1) or with 40 contributory years; (2) as of 55 for officers; (3) or at least 40 contributory years; (4) 27/17 years for military officers/non-commissioned officers, otherwise, retirement is possible at 52y with 15 contributory years; (5) 15 years of service; (6) 25 contributory years (15y if employed before 2013); (7) or SRA -6y; (8) converging from 15y (before 2013) to 25y (as of 2032); (9) system of non-activity prior to retirement; (10) depends on Länder; (11) 25 contributory years.

Source: European Commission, EPC.

2. HEALTH CARE

2.1. INTRODUCTION

The size and growing importance of public expenditure on health care, notably driven by population ageing, innovations in health technology and the need to improve the resilience of health care systems, impact the sustainability of public finances. Hence, health care expenditure is an important topic in the policy debate on how to guarantee universal access to quality health care including in times of crises, while ensuring long-term fiscal sustainability. In this context, long-term budgetary projections are very helpful in that they allow policy makers considering different possible public expenditure trajectories. They also reveal the role of the main underlying drivers underpinning health care costs' developments.

This chapter presents the projection results regarding public expenditure on health care from 2022 to 2070 across the EU Member States. Projections were run using European Commission (DG ECFIN) models based on the methodology and data agreed with the Member States delegates in the EPC-AWG. The chapter starts by providing an overview of the determinants of health care expenditure (Section 2.2). It then presents the methodology used to project public expenditure on health care (Section 2.3) and the projection results under different scenarios (Section 2.4). Finally, the baseline results are compared to the previous projection exercise (Section 2.5) before drawing the concluding remarks (Section 2.6).

2.2. DETERMINANTS OF HEALTH CARE EXPENDITURE

Demand for health care provisions, generally associated with high potential benefits, is considerable and health care spending has increased over time. In the EU, total expenditure on health care (public and private, excluding long-term care (health)) represented 9.3% of GDP in 2021 ⁽³⁶⁾. A substantial part of this expenditure – 7.6% of GDP on average in the EU ⁽³⁷⁾ in 2021 – is public spending, with large variation across Member States ranging from 4.1% of GDP in Luxembourg to 9.2% of GDP in France. Overall, public expenditure on health care remained at a significant level over time in most EU Member States and further increased since the COVID-19 pandemic (see Graph I.2.1). Health care spending also represents a significant share of total government expenditure. Public spending on health care in 2021 accounted on average for 14.9% of total government spending in the EU, ranging from 9.6% in Luxembourg to 18.6% in Cyprus.

Public expenditure on health care is driven by a range of factors that affect both demand and supply of health care goods and services. Key determinants of demand include population size, structure and health status, individual and national income, as well as provisions regulating access to health care goods and services. More recently, the potential effects of climate change on health care demand are being more closely examined. Supply side determinants include the availability and distance to health care services, technological progress and the framework regulating the provision of those goods and services (institutional settings), as well as policies that aim to strengthen the resilience of health systems. The next sections briefly describe the influence of these factors on public spending on health care.

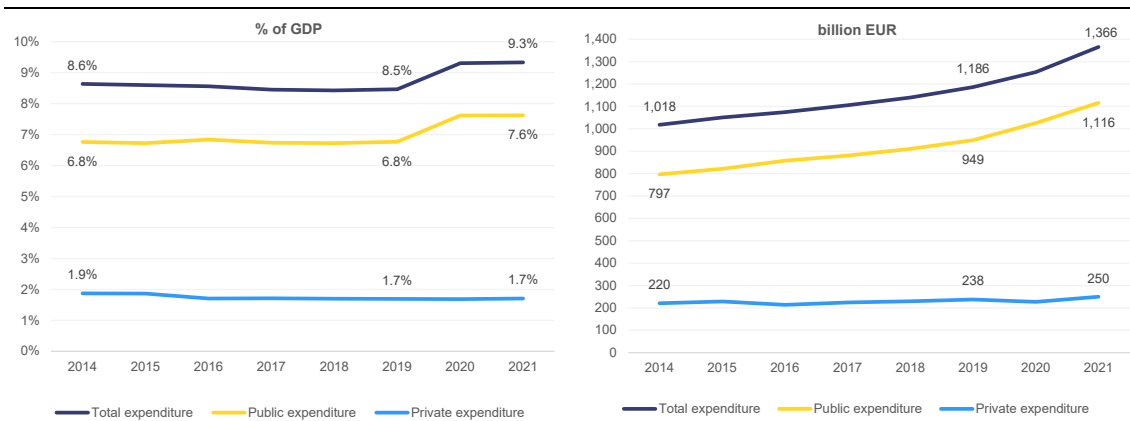
⁽³⁶⁾ Long-term care (health) expenditure is part of the long-term care expenditure projections (see Chapter 3).

⁽³⁷⁾ The averages presented in this chapter are weighted according to GDP.

2.2.1. Demographic structure of the population

Demand for health care goods and services depends on the number of people in need of care. Demand depends not only on the size but also on the health status of the population, which is linked to the age and gender structure of the population and notably with the share of elderly people in the overall population. Indeed, older people often develop multi-morbidity conditions, which require costly medical care.

Graph I.2.1: **Health care expenditure in the EU (excluding long-term care (health)) in 2014–2021 as % of GDP and in billion euro**



Source: Commission calculations based on Eurostat data (SHA and COFOG).

The relationship between the age of individuals and their use of health care is well displayed by the so-called ‘age-related expenditure profiles’ (as shown in Graph I.2.2). The graph plots average public per capita spending on health care excluding long-term care (health) (as % of GDP per capita) against the age of individuals in the EU, EU14 and New Member States (NMS).⁽³⁸⁾ Spending generally increases with the age of a person, notably from the age of 50, coinciding naturally with higher morbidity at an older age. The increase in public spending per capita as % of GDP per capita for the elderly above the age of 70 is higher in the EU14 than in the NMS. The demand for health care is also high at very young ages and during maternity years for women. Consequently, population structure, and ageing in particular, is one of the key drivers of increasing health care expenditure.

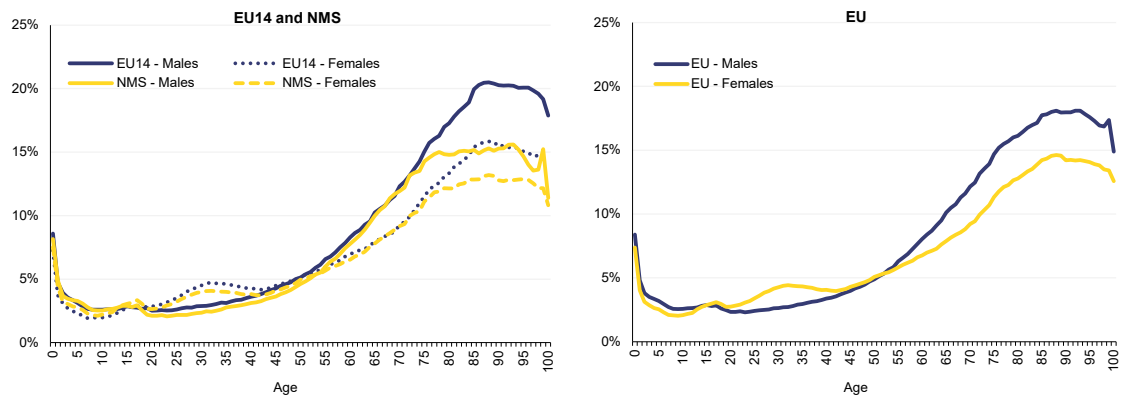
Population ageing may pose a risk for the sustainability of health care financing in two ways. *First*, increased longevity, without an improvement in health status, leads to increased demand for services over a longer period of the lifetime, increasing total lifetime health care expenditure and overall health care spending.⁽³⁹⁾ It is often argued that new medical technologies have been successful in saving lives from a growing number of fatal diseases but have been less successful in keeping people in good health. *Second*, in many EU Member States, public health care is largely financed by social security contributions of the working population. Ageing leads to an increase in the old-age dependency ratio, i.e. fewer contributors to the recipients of services. The old-age dependency ratio is projected to increase from 36.1% in 2022 to 59.1% in 2070.⁽⁴⁰⁾ Consequently, in the future, far fewer

⁽³⁸⁾ The EU14 aggregate includes the profiles of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Sweden. The NMS aggregate includes Bulgaria, Croatia, Czechia, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovakia and Slovenia. Romania did not provide an age-cost profile. It was imputed as the average cost profile of NMS.

⁽³⁹⁾ Breyer et al. (2010).

⁽⁴⁰⁾ See [Volume I of the 2024 Ageing Report](#).

Graph I.2.2: **Age-related expenditure profiles of publicly financed health care provision in 2022 (spending per capita as % of GDP per capita)**



- The graphs report the age-cost profiles at aggregate level (EU14, NMS and EU) for men and women.
- The EU14 aggregate includes the profiles of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Sweden.
- The NMS aggregate includes Bulgaria, Croatia, Czechia, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovakia and Slovenia.
- Romania did not provide an age-cost profile. It was imputed as the average cost profile of NMS.

Source: European Commission, EPC.

people will contribute to finance public health care, while a growing share of older people may require additional health care goods and services.

Longer working lives accompanied by a healthier working population can mitigate the impact of ageing. In addition, many researchers have shown that ageing has contributed much less than widely thought to the observed growth in expenditure and in many Member States an actual reduction in per capita spending at very old age (85+) can be observed. This is because alongside real needs, social, economic and cultural considerations determine the allocation of resources to the sector and use of resources across different age groups. Therefore, ageing should be analysed in conjunction with other determinants of expenditure, such as health status, income, non-demographic factors, legal and institutional settings, and resources, as explained next.

2.2.2. Health status

The impact of increasing longevity on health care expenditure critically depends on the health status of people over the additional lifetime (i.e. whether extra years are spent in good or bad health). As a result of falling mortality rates at all ages, including for older people, life expectancy is increasing. However, in some cases mortality has decreased at the expense of increased morbidity, meaning that more years are spent with chronic illnesses. If increasing longevity goes in line with an increasing number of healthy life years, then ageing may not necessarily translate into rising health care costs. Better health goes along with lower health care needs and may drive down health services use and health expenditure.⁽⁴¹⁾ Therefore, it is crucial to understand if longevity is accompanied by more or less good health.

Projecting the future evolution in the health status of the population is challenging due to the difficulties associated with predicting the changes in morbidity and measuring ill-health. While the evolution in mortality rates and life expectancy can be estimated on the basis of administrative information (censuses, surveys, etc.), epidemiological data is subject to much higher

⁽⁴¹⁾ Rechel et al. (2009); and Cylus et al. (2019).

uncertainty. Three different hypotheses have been put forward to predict a possible future interaction between evolution in life expectancy and changes in the prevalence of disability and ill-health:

- *The 'expansion of morbidity' hypothesis* (Gruenberg, 1977; Verbrugge, 1984; Olshansky et al., 1991) claims that the decline in mortality is largely due to a decreasing fatality rate of diseases, rather than due to a reduction in their prevalence/incidence. Consequently, falling mortality is accompanied by an increase in morbidity and disability.
- *The 'compression of morbidity' hypothesis* (Fries, 1980, 1989) suggests that disability and ill-health is compressed towards the later period of life at a faster pace than mortality. Therefore, people are expected to live not only longer, but also in better health.
- *The 'dynamic equilibrium' hypothesis* (Manton, 1982) suggests counterbalancing effects of two phenomena: decreasing fatality rates of diseases leading to higher life expectancy on the one hand and increasing prevalence of chronic diseases though with reduced severity and rate of progression, on the other.

Recent empirical evidence has not come to a clear conclusion regarding these hypotheses. ⁽⁴²⁾ International evidence is mixed ⁽⁴³⁾ and, while health may continue to improve, some causes of disability may at the same time become more prominent. For example, higher levels of some disabling conditions (dementia, musculoskeletal diseases) go along with decreasing rates of prevalence of others (cardiovascular and chronic respiratory diseases). Consequently, it remains very difficult to predict the levels of morbidity and therefore potential demand for health services, even in the near future.

Moreover, it has been argued by other authors that better health throughout a lifetime can induce savings overall, because proximity to death is a more important determinant of health expenditure than ageing per se. Indeed, a large share of lifelong expenditure on health occurs at the last year before death. Descriptive analysis shows that health care expenditure start increasing ten to fifteen years prior to death. They are significantly higher three years before death and further increasing with proximity to death. ⁽⁴⁴⁾ However, per capita cost of health care for the deceased are on average lower at very old ages than for the deceased in childhood, youth or working ages. ⁽⁴⁵⁾ This is likely to be the case also for excess health costs by chronic diseases as well as excess co-morbidity costs. ⁽⁴⁶⁾ As can be seen in Graph I.2.2 the per capita cost of health care indeed decreases at very old ages also in the average age-cost profiles that include costs for both deceased and survivors.

The reduction in per capita spending at the very old age can be explained by three different phenomena: (1) health care rationing for utilitarian (devoting limited resources to the treatment of younger age cohorts) or professional reasons (less knowledge about the treatment of the elderly); (2) voluntary restraining from receiving health care by older people who find the investment in health will not pay back any more; (3) generation effect which reflects differences in perceived needs, mentality and habits between older and younger generations. However, to achieve savings from living longer - dying at an older age and being healthy for much of a lifetime - the per capita costs of health care at very old ages have to be lower than in childhood, youth or working ages.

⁽⁴²⁾ Heger and Kolodziej (2016).

⁽⁴³⁾ Chatterji et al. (2015); Cutler et al. (2013); and Salomon et al. (2012).

⁽⁴⁴⁾ Carreras et al. (2017); Blakely et al. (2019); and Seshamani et al. (2004).

⁽⁴⁵⁾ Carreras et al. (2017).

⁽⁴⁶⁾ Blakely et al. (2019).

Box 1.2.1: Income elasticity of health care demand, a short literature survey

There is no consensus in the literature on a precise estimate of the income elasticity of health care demand. Time series and cross-country evidence usually suggested income elasticities on health care expenditure above or around one. Older, purely cross-sectional studies find higher income elasticities, such as Newhouse (1977) with a point estimate of around 1.35 for 30 OECD countries or Leu (1986) for 19 OECD countries with an estimate of 1.2. However, studies based on panel data find in general lower income elasticities around or below one, e.g. Gerdtham (1991) and (1995), Mahieu (2000), Bac and Cornilleau (2002), Azizi and Pereira (2005) or, more recently, Xu et al. (2011), Medeiros and Schwierz (2013), Vargas and Shimoga (2017), Baltagi et al. (2017), Rana et al. (2020) and Casas et al. (2021). For an overview, see Clements et al. (2012) and Baltagi et al. (2017).

The increase in health care spending is not determined by income alone but by other factors that happen to be correlated with income. Therefore, a general critique is that the estimated elasticities are likely to be biased when other relevant factors are not included in the model. Moreover, the estimates are probably affected by misspecification and endogeneity problems: health – and therefore also health care spending – is likely to affect economic growth. Acemoglu et al. (2013) attempt to overcome these problems and estimate the causal effect of income on health care expenditure. They find an income elasticity of 0.72 with an upper value of 1.13. Finally, cross-sectional studies on individual income show small or even negative elasticities (Newhouse et al., 1993). For an overview, see Getzen (2000) and Baltagi et al. (2017).

2.2.3. Individual and national income

Another important determinant of health care expenditure is income, although at individual level, the presence of insurance reduces this link. A significant relationship between income and health care spending is observable at both individual and national level. At the individual level, spending on health care depends in particular on whether a health care intervention is covered by public or private insurance and to what extent. If an individual is fully covered by health insurance, health care demand is independent of individual income, i.e. the income elasticity on health care spending is zero. However, if a health care intervention is not or only partially covered by insurance, demand will depend on the individual income. All other things equal, increasing health insurance coverage reduces the sensitivity of changes in demand due to changes in income.

At the national level, spending on health care tends to grow with the increase in countries' GDP per capita, although this relationship is also influenced by policy choices. On the one hand, spending must be covered by revenues at an aggregate level. This is why the correlation between health care spending and income is stronger at the national than at the individual level (in the presence of insurance). On the other hand, policy measures to control spending and political priorities to devote less or more resources to different areas of public spending may reduce the link between public expenditure on health care and national income. Therefore, while it is generally agreed that the growth in per capita income brings about an increase in health spending, it is difficult to precisely pin down the strength of this relationship, i.e. the value of the income elasticity of health services demand, as shown in the empirical literature.

A number of empirical studies attempted to estimate the correlation between income and health expenditure. Most of the earlier studies led to the conclusion that health care is an individual necessity and a national luxury good.⁽⁴⁷⁾ In other words, health spending is highly inelastic at an individual level, but at the national level its elasticity with respect to income exceeds unity. However,

⁽⁴⁷⁾ A luxury good is defined as is a good for which demand increases more than what is proportional as income rises, so that expenditures on the good become a greater proportion of overall spending.

Box I.2.2: Excess cost growth in health care expenditure, a short literature survey

The impact of non-demographic drivers on health care expenditure, sometimes referred to as excess cost growth (Smith et al., 2009), is used in the risk scenario in the 2024 Ageing Report. The literature on excess cost growth estimates the excess of growth in per capita health expenditure over the growth in per capita GDP after controlling for the effect of demographic change. Thus, whereas the income elasticity (see Box I.2.1.) should capture changes in health care expenditure due to changes in income only, excess cost growth estimates may also capture effects due to other factors than income, for instance technological change, health policies, institutional settings and Baumol's cost disease.

The literature generally finds that health care expenditure grows 1-2% faster than GDP per capita. The IMF (2010), for instance, estimate an excess cost growth of 1.2% for 27 advanced economies over the period 1980-2008, while Hagist and Kotlikoff (2009) estimate an excess cost growth of about 1.5% over 1970-2002 for ten OECD countries. See also Medeiros and Schwierz (2013) and OECD (2006). However, excess cost growth rates vary considerably across countries. IMF (2010), for instance, finds excess cost growth rates in Europe that vary between -0.9% (Czechia) and 2.4% (Luxembourg). On average, however, their findings are consistent with the 1.5 elasticity estimate used in this report for the risk scenario.

Innovations in medical technology are generally believed to be the primary driver of health care spending. Recent estimates suggest that medical technology explains 27-48% of health care spending growth since 1960 (Smith et al., 2009). Willemé and Dumont (2015) estimated the contribution of medical technology on past growth of health expenditure for 18 OECD countries over 1980-2009 to be 37% on average, ranging from 19% in Ireland to 56% in Italy. Earlier studies found that technology explained a somewhat larger fraction of the increase, 50-75% (see Newhouse (1992); Cutler (1995); Okunade and Murthy (2002); and Oliveira Martins and de la Maisonneuve (2005)).

the earlier empirical literature is subject to methodological problems and more recent estimates attempt to overcome these problems by estimating the real causal effect of income on demand of health services, better controlling for other factors (Box I.2.1). The general implication, however, remains that as national income or wealth increases, expectations will rise and health spending will rise too, regardless of changes in needs, especially in high-income countries.

2.2.4. Health technology

Health care expenditure has been growing much faster than what is suggested by changes in demographic structure, morbidity and income (see above discussion on income elasticity). Empirical research suggests that health technology has been a major driver of health-care expenditure. Different authors attribute from 27% up to 75% of health expenditure growth in the industrialised countries to technological change (Box I.2.2).

Whether a particular technological development increases or decreases costs depends on its impact on unit cost, its level of use and whether the treatment complements or replaces the existing methods. If technological development leads to a more cost-efficient treatment of previously treated medical conditions, the new technology is likely to replace the old one reducing the unit cost of treatment. This effect is called *the substitution effect*: replacing less by more efficient treatments. If this is also accompanied by no changes in the number of individuals treated, the overall cost is reduced. However, if treatment with the new technology becomes more frequent, expenditure may increase.

If medical innovations allow for treating conditions that were not treated previously, then expenditures may rise. This is called the *expansion or extension mechanism*: extending health care procedures to previously untreated medical conditions for scientific reasons (the methods of treatment

were simply unknown) or economic reasons (previous methods of treatment were known, but not affordable). In other words, the supply of new products matches with previously unmet demand. As such, the health sector is similar to other expanding sectors of the economy, for example those producing ICT-related products.

The currently prevalent view is that technological change is an important driver of health care expenditure. This is despite the measurement problems of technological change on expenditures and health restoring or life-saving effects. It is to be kept in mind that new inventions have been used in areas judged necessary from the societal point of view such as in palliative care, where ethical considerations are of considerable importance.

2.2.5. Legal and institutional setting

On top of the above factors, public expenditure on health care is strongly influenced by the legal setting and institutional arrangements according to which health care is provided and financed. These factors play an important role in delineating provision and use of health care services and therefore health care costs. Institutional settings may or not limit the introduction, coverage and use of services and new technology through the set of incentives patients and providers face. Legal provisions, such as strict spending constraints defined by public authorities may curb the provision and use of health care services.

A number of such variables have been tested in the literature for assessing their impact on health expenditure. These include the role of general practitioners as an independent entity and gatekeeper⁽⁴⁸⁾, the type of remuneration of physicians⁽⁴⁹⁾ or the type of system financing.⁽⁵⁰⁾ Despite such studies, it is not feasible to draw unequivocal conclusions or estimate even approximate correlation coefficients between the qualitative features of the health care system organisation and quantitative measures of public expenditure on health care.

2.2.6. Human and physical capital

The health care sector is highly labour-intensive, more so than many other sectors of society. Health professionals are vital to the provision of health services and goods. As a result, changes associated with the health workforce have an impact on provision and therefore expenditure. For example, the ageing of the workforce could have an impact on expenditure through reducing staff numbers and increasing wages. Similarly, the immense workload on the health workforce during the COVID-19 pandemic has further exacerbated the already existing shortage of health personnel in many Member States and has increased the upward pressure on wages in the health care sector.⁽⁵¹⁾

In addition, human and physical capital resources devoted to the health care sector are determined by policy decisions (e.g. quantitative limits and qualitative requirements on the access to medical schools or professional certificates, decisions on the location of facilities, eHealth and digitalisation, legal regulations on the density of health care staff per capita, etc.). A number of studies have attempted to find statistical correlation between the size of medical staff and health expenditure⁽⁵²⁾, but the results are not conclusive. However, current and anticipated health care

⁽⁴⁸⁾ For systematic literature reviews of general practitioners' gatekeeping effects see Garrido et al. (2011) and Shripa et al. (2019).

⁽⁴⁹⁾ For a structured literature review of effects of provider payment systems on health expenditure growth see Feldhaus and Mathauer (2018).

⁽⁵⁰⁾ For a systematic literature review of effective health care cost-containment policies see Stadhouders et al. (2019).

⁽⁵¹⁾ WHO (2022).

⁽⁵²⁾ For a literature overview on supplier-induced demand studies see Léonard et al. (2009) and Van Dijk et al. (2013).

workforce shortages require additional training, recruitment and retention measures that can lead to a further increase in public health care spending in the next decade. Additional upward pressure on public health care spending can be expected from the investments in and the operation of additional physical resources required to improve the resilience of health care systems as detailed in the next section.

2.2.7. Resilience of health care systems

In the aftermath of the COVID-19 pandemic, there is a broad political consensus that the resilience of health care systems needs to be strengthened. Generally speaking, the resilience of health care systems corresponds to their ability to withstand shocks, such as pandemics or other public health emergencies. Furthermore, it captures the capability of health care systems to adapt, absorb and recover from such shocks.⁽⁵³⁾ The emphasis in this context is not only on concrete preparedness plans for public health crises, but on improving the overall performance of health systems. Among the main policy avenues identified to reach these objectives are the needs to increase investments in health care and to employ sufficient medical personnel. Prioritising health promotion and prevention also in view of ageing populations is key for more resilient health systems. Furthermore, innovation and digitalisation for health care services delivery need to be implemented on a permanent basis, while inefficient processes and treatments are to be further reduced. Finally, efforts to step up supply of mental health services and ensure supply chain resilience for medical goods are deemed to be essential too.⁽⁵⁴⁾ These policy areas represent the majority of the investments funded by the EU Resilience and Recovery Facility that aim to strengthen the resilience of Member States' health care systems in the aftermath of the COVID-19 crisis.

2.2.8. Climate change

Public health care systems may equally be subject to pressures stemming from climate change, notably via its interaction with population ageing (see Box I.2.3).⁽⁵⁵⁾ While recognised as major drivers of macroeconomic and social change, population ageing and climate change have been tackled separately in economic analysis and policy discussions thus far. Yet, a clear empirical interrelationship is recently emerging.⁽⁵⁶⁾ In particular, an ageing population can be seen at the same time as *contributor to* and *casualty of* climate change.⁽⁵⁷⁾

Older people tend to be less aware and concerned about the long-term adverse effects of climate change,⁽⁵⁸⁾ and current carbon emissions are found to be overall positively correlated with ageing.⁽⁵⁹⁾ For instance, according to a recent study⁽⁶⁰⁾, between 2005 and 2015, the contribution of different age groups to the total greenhouse gas (GHG) footprint has changed substantially. In particular, the group 60+ overtook the 30-44 one – with a rising footprint (mostly from spending in carbon-intensive products) in all developed countries within the same time span. The biggest rise has been found in Japan, followed by Eastern Europe, Western Europe, the United States and Australia. In addition, given their relatively shorter planning horizon, current ageing societies may tend to exhibit fewer incentives to bear the costs of climate mitigation and adaptation – since the latter mostly yield benefits in the very distant future.⁽⁶¹⁾ On the contrary, they may favour the provision of public goods generating the highest utility for elderly voters, such as social security and

⁽⁵³⁾ OECD (2023).

⁽⁵⁴⁾ OECD/European Union (2022).

⁽⁵⁵⁾ Box I.2.3 is based on a related DG ECFIN Discussion Paper (Gagliardi et al., 2024 – *forthcoming*).

⁽⁵⁶⁾ Harper (2019).

⁽⁵⁷⁾ Haq et al. (2008).

⁽⁵⁸⁾ Haq (2017).

⁽⁵⁹⁾ Zheng et al. (2022); Menz and Welsch (2012).

⁽⁶⁰⁾ Zheng et al. (2022).

⁽⁶¹⁾ Menz and Welsch (2012).

health care. ⁽⁶²⁾ Recent public perception in the EU seem to point to this direction. ⁽⁶³⁾ Therefore, if not underpinned by more sustainable lifestyles and increased awareness on climate change issues, continued and increased longevity may result in a higher carbon footprint and additional burden on the planet. ⁽⁶⁴⁾

A changing climate poses a danger to public health of an ageing society. Warmer global temperatures are expected to result in more frequent and intense extreme weather events over the coming decades. ⁽⁶⁵⁾ These entail several adverse consequences for the world's population. In particular, immediate, *direct*, effects include death or injuries due to extreme weather events. Additional, *indirect*, effects from climate change, notably related to the induced gradual transformation of the environment, range from temperature-related illnesses, mental health effects, water stress, air pollution and vector-borne diseases. In this context, compared to the rest of the population, older people (due to pre-existing physiological and socio-economic factors) are found to be disproportionately more at risk. ⁽⁶⁶⁾ Indeed, on average, people in old age tend to be *“physically, financially and/or emotionally less resilient to deal with the effects of a changing climate than the rest of the population”*. ⁽⁶⁷⁾

Such adverse effects are likely to be increasingly relevant in the EU context. The expected adverse effects of climate change on public health appear particularly relevant for Europe – where, by the end of this century, around two-thirds of the population could be exposed to a weather-related disaster each year – particularly (although not exclusively) in the form of stronger heatwaves. ⁽⁶⁸⁾ A higher projected exposure and vulnerability of an ageing population in Europe to rising temperatures and weather extremes (in absence of sufficient adaptation and mitigation measures) could cause increased episodes of morbidity, relatively longer periods of life spent in bad health and increased demand for health care services, especially among the elderly, who often suffer from multi-morbidity. Climate-driven excess mortality, especially if preceded by unforeseen additional treatment or other forms of extra health care supply, may be expected to lead to a similar outcome. ⁽⁶⁹⁾ In turn, this might entail higher expected provisions for public health care services, potentially affecting the long-term sustainability of public finances.

⁽⁶²⁾ Andor et al. (2018).

⁽⁶³⁾ Eurobarometer (2021).

⁽⁶⁴⁾ Estiri and Zangheni (2019); Yach (2015); Steffen et al. (2015).

⁽⁶⁵⁾ IPCC (2023).

⁽⁶⁶⁾ Haq (2017); Brunkard et al. (2008).

⁽⁶⁷⁾ Haq (2017), p.8.

⁽⁶⁸⁾ Forzieri et al. (2017).

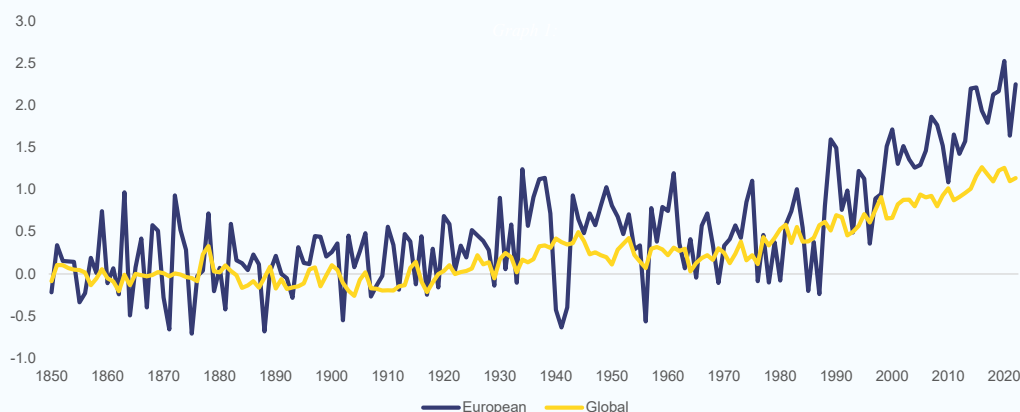
⁽⁶⁹⁾ Mavrodaris et al. (2021).

Box 1.2.3: Climate change and population ageing: A review

The global population is ageing. In the next three decades, due to lower birth rates and increased longevity, the proportion of people aged 65 or over is projected to increase globally, from current levels of 10% to nearly 12% in 2030 and 16% in 2050. Projections indicate that, by 2050, there will be twice as many people aged 65 or older than children under 5 globally (UN, 2022). Advanced economies, notably Europe, have thus far been particularly exposed to such ‘*greying*’ phenomenon (European Commission, 2023), with predominant transitions of their population from intermediate to old-age groups. Recent projections point to significant ageing trends also for both low- and middle-income countries (WHO, 2022). ⁽¹⁾

At the same time, climate change is accelerating. There is nowadays unequivocal evidence that carbon-intensive activities have been responsible for approximately 1.1°C of global warming since 1850-1900, increasing at a rate of 0.2°C per decade since the 1970s (IPCC, 2023). The impact has further intensified over recent years. Global mean near-surface temperature between 2012 and 2021 was 1.11°C to 1.14°C warmer than the pre-industrial level, making it the warmest decade on record. European land temperatures have increased even faster over the same period by 1.94°C to 1.99°C, depending on the dataset used (EEA, 2022a – Graph 1).

Graph 1: Global and European temperatures (°C)



Both temperature series represent the difference (in degree Celsius), compared to pre-industrial levels.
Source: European Environment Agency.

Climate change has increased the risks of *physical hazards*, which will continue to intensify and interact with other risks, endangering both human and other natural systems (IPCC, 2022). This may either occur via a gradual (and, often, irreversible) global warming-driven transformation of the environment (e.g. ecosystem collapse, global sea level rise, and melting ice sheets – so called *chronic physical risks*), or via more intense and frequent extreme weather events (e.g. storms, floods, droughts, heat waves – so called *acute physical risks*). Moreover, the intrinsic uncertainty on the precise timing and pathways of climate change implies that risks of non-linearities and tipping points may further increase the likelihood for catastrophic and additional irreversible outcomes to occur (Lenton et al., 2019).

⁽¹⁾ This Box is based on a related DG ECFIN Discussion Paper (Gagliardi et al., 2024 – *forthcoming*).

(Continued on the next page)

Box (continued)

While recognised as major drivers of macroeconomic and social change, population ageing and climate change have been tackled separately in policy discussions thus far. Yet, clear empirical evidence is emerging about interlinkages of these two phenomena (Harper, 2019). In the first place, an ageing population can be identified as *contributor* to climate change (Haq et al., 2008). Current carbon emissions are found to be overall positively correlated with ageing (Zheng et al., 2022; Menz and Welsch, 2012). Indeed, older people tend to be generally less aware and concerned by the effects of climate change (Eurobarometer, 2021). Hence, a progressively ageing electorate may have lower incentives to support the required climate policy actions - since the latter mostly yield benefits in the very distant future (Menz and Welsch, 2011). ⁽²⁾ Therefore, if not underpinned by more sustainable lifestyles and increased awareness on climate change issues, continued and increased longevity may be expected to result in a higher carbon footprint and additional burden on our planet (Estiri and Zangheni, 2019; Yach, 2015; Steffen et al., 2015).

Moreover, an ageing population can be equally seen as *casualty* of climate change. Warmer global temperatures are expected to result in more frequent and intense extreme weather events over the coming decades (IPCC, 2023). These entail several adverse consequences for the world's population. Immediate, *direct*, effects include death or event-related injuries. Additional, *indirect*, effects from climate change range from temperature-related illnesses, mental health effects, water stress, air pollution and vector-borne diseases. Compared to the rest of the population, older adults are disproportionately more vulnerable to climate change (Haq, 2017). On average, older people are found to be at increased risk from adverse climate-related health outcomes and exposure to extreme weather events. Their vulnerability might be further exacerbated by pre-existing physiological conditions, as well as other social factors commonly associated with ageing (Harper, 2019; Haq and Gutman, 2014). ⁽³⁾

Climate-related health risks for an ageing population

In what follows, we briefly illustrate some instances of how climate change may (*directly* and *indirectly*) affect health risks for older people.

-
- ⁽²⁾ Such findings might equally underlie *cohort effects*. Lower concerns over climate change issues and GHG emissions may not only be influenced by changes in the age structure (*life cycle effects*), but also by shifts in the year-of-birth composition of the workforce (*cohort effects*) (Haq et al., 2008).
- ⁽³⁾ Generally speaking, the adverse health-related consequences of climate change tend to be more pronounced among vulnerable populations, including children and infants, people with pre-existing or chronic illnesses, and socially isolated individuals. In this Box, we mainly focus on the potentially adverse impacts of climate change on older people – since Europe's ageing society makes them particularly vulnerable to such risks.

(Continued on the next page)

Box (continued)

Extreme Heat

Extremely hot temperatures can be particularly dangerous for older people. Based on current projections, climate change is expected to lead to progressively more intense and frequent heatwave episodes and to generally higher temperature throughout the year – particularly in Europe (IPCC, 2023). Exposure to extreme heat can increase the risk of heat-related death and heat-related illnesses, especially among older adults. Age represents the biggest contributor in determining an individual’s ability to dissipate heat (EEA, 2022b; Park et al., 2020). Due to physiological changes that occur with age, older people experience a progressively decreasing thermoregulatory ability. This may lead to instances of severe heat-related illnesses, such as heat stroke – a situation in which the body overheats because of extreme heat, particularly in combination with high humidity. Heat stroke can result in permanent damage of brains and nerves, risk of organ damage, loss of consciousness and, ultimately, death (IPCC, 2014).

Exposure to extreme heat can also be particularly harmful to older people with existing medical and other chronic conditions (e.g. diabetes, cardiovascular diseases, and respiratory disease) that increase sensitivity to heat (Gamble et al., 2013). Social isolation and limited income have also been associated with heat-related illnesses among older people, affecting their possibility to take protective actions on their own due to reduced adaptive capacity. In general, analyses of hospital admissions, emergency room visits, or emergency medical services call point to hot days being associated with increases in heat-related illnesses, especially for older people with heart and lung conditions (Ebi et al., 2018).

Air pollution

Changes in temperature, precipitation, wind, humidity, or solar radiation associated with climate change affect air quality, potentially worsening it. Exposure to air pollution is seen as the most important environmental risk to human health (WHO, 2017). Under a changing climate, higher average temperatures are expected to influence the concentration of ground-level ozone (created when oxygen interacts with other pollutants – typically byproducts of fossil fuel combustion). Higher ground-level ozone concentrations are projected during summer, with the largest increase predicted for the warmest climate scenarios (Fortems-Cheiney et al., 2017). Ground-level ozone typically affects human health by impairing respiratory and cardiovascular function (IPCC, 2014). In particular, short-term exposure to ozone is associated with respiratory symptoms, reduced lung function and airway inflammation, while long-term exposure is associated with aggravated asthma and an increased incidence of strokes. Risks from air pollution are especially high for elderly suffering from pre-existing medical conditions, such as chronic respiratory diseases, and weaker immune systems (Haq and Gutman, 2014).

Such impacts may be further exacerbated by increasing conditions for wildfires, due to more intense heatwaves and droughts (IPCC, 2021). The generated smoke may cause further air pollution in the form of particulate matters release – which, especially in older adults, can increase the likelihood of heart attacks, strokes, and lung diseases. Finally, more carbon dioxide concentration in the atmosphere has been shown to contribute to greater pollen output. In this context, warmer temperature has been lengthening the season during which allergenic pollen can survive. This can increase the risks for allergies, asthma, and asthma hospitalization in older adults (Gisler, 2021; Haq and Gutman, 2014; Andersen et al., 2012).

(Continued on the next page)

Box (continued)

Interaction between climate change and urbanisation

By 2050, people aged 65 or over are expected to reach 1.6 billion worldwide. At the same time, more than two-thirds of the world's population will live in urban areas, up from just over half today (UN, 2022). Among the urban population, older adults are expected to be exposed to higher health risks from climate change than others, especially in the form of heat-stress events and excess deaths during summer (Haq and Gutman, 2014). This is particularly due to the so-called *urban heat island* (UHI) effect – that is, cities experiencing much higher temperatures, compared to surrounding rural environments, due to higher absorption and re-radiation of heat and solar energy from urban land surfaces. Additional sources of urban heat may stem from traffic, power plants, energy used to warm/cool buildings (Huang and Lu, 2015). Risks for older people mainly stem from reduced thermoregulation, compared to younger groups, and further exacerbated by pre-existing conditions – such as cardiovascular or respiratory diseases; particularly if interacted with specific socio-economic conditions (e.g. poor housing, limited means to invest in climate adaptation instruments – Wanka et al., 2014). ⁽⁴⁾ The issue of UHI is expected to become even more serious, as heatwaves become more frequent and intense in the coming decades (IPCC, 2023).

Floods

Climate change is increasing flood risks, particularly in Europe (IPCC, 2014). An intensified water cycle brings more intense and frequent rainfall. Coastal areas are expected to see continued sea level rise, and further warming will amplify the melting of glaciers and ice sheets. In recent years, the number of people exposed to floods has increased and is projected to do so even further in the coming decades (IPCC, 2021). Flooding can affect both physical and mental health – particularly for the elderly. Direct physical health effects include death (via drowning) or injuries. This may significantly affect older people, due to their difficulty to be reached by flood warnings or respond to them due to mobility restrictions (Fielding et al., 2007). The elderly – especially those with chronic health conditions – may further be affected by indirect impacts of flood events, both during and after flooding. The latter include health issues caused by disruption of health care infrastructure or difficulty to access medical treatments; shortages of medical aid, electricity or safe water; and problems with supply chains of food, electricity or sanitation (Paterson et al., 2018).

Infectious diseases

Higher temperatures and changes in precipitation driven by climate change can cause proliferation and changes in the geographical/seasonal distribution of disease-carrying vectors. Weather conditions, such as rainfall, flooding, humidity, and heat waves have well-documented effects on infectious diseases (Polgreen and Polgreen, 2018). Cold-blooded insects (ectotherms) must seek out warmer environments to regulate their body temperature. This is likely to increase the spread of vector-borne diseases – infections transmitted by the bite of arthropods such as mosquitoes or ticks (IPCC, 2014). In turn, this may result in the spread of a number of diseases, including malaria, dengue fever, and Lyme disease. Similarly, climate events such as heavy precipitation can contribute to significant outbreaks of food- and water-borne diseases; particularly

⁽⁴⁾ A specific example pertains to air conditioning. The latter may not be necessarily available for low-income, energy-poor households. At the same time, air conditioning is not to be seen as the ultimate solution to prevent heat-related illnesses either. While representing an effective adaptation tool against heat stress, air conditioning also generates heat outdoors – further increasing urban temperature and the heat island effect. In addition, if obtained via fossil fuel combustion, its extensive use risks exacerbating global warming. This calls for alternative long-term solutions in redesigning cities to adequately adapt to a warmer climate (e.g. *urban greening*).

(Continued on the next page)

Box (continued)

via increased flood risks causing contamination by waterborne and foodborne pathogens via flood waters affecting food crops and sewer run-off (Watts et al., 2021; Haq and Gutman, 2014). In both cases, older people may be particularly vulnerable – due to their pre-existing medical conditions and a higher likelihood of contracting illnesses from contaminated water due to changes in immune systems that occur with ageing (Haq, 2017; Haq and Gutman, 2014).

Mental health effects

Climate change can impact mental health through several pathways. Extreme weather events can cause Post-Traumatic Stress Disorder (PTSD), anxiety and depression. For instance, flooding can have adverse psychological impacts on older people with some experiencing symptoms of posttraumatic stress disorder (PTSD) such as post-flood anxiety and mood changes (Haq, 2022). Extreme temperatures may affect mood, worsen behavioural disorders, increase suicide risk and impact the well-being of those with mental health issues. In addition, distress associated with ongoing or anticipated climate and environmental change can cause climate anxiety. Further impacts relate to changing livelihoods and social cohesion of entire communities (European Climate and Health Observatory, 2022; Paterson et al., 2018; IPCC, 2014). Such mental health effects may interact with pre-existing health status and socio-economic characteristics - diminishing an individual’s overall well-being. In this respect, some individuals, particularly the elderly with pre-existing mental illnesses or those experiencing social isolation and economically disadvantaged conditions, may be relatively more vulnerable (Ebi et al., 2018).

Policy implications

Unless supported by adequate mitigation and adaptation actions, rising population ageing under a changing climate is therefore likely to lead to adverse public health outcomes. Climate change has the potential to affect whether, and to what extent, older people can maintain well-being in later life. On average, people in old age tend to be ‘physically, financially and/or emotionally less resilient to deal with the effects of a changing climate than the rest of the population’ (Haq, 2017). This will increasingly challenge the ability of public health systems to function effectively (European Commission, 2023).

Higher exposure and vulnerability to climate change of an ageing population may engender relatively longer periods of life spent in bad health – due to increased morbidity and disability (Mavrodaris et al., 2021). This effect may be particularly relevant for Europe – where, by the end of this century, around two-thirds of population could be exposed to a weather-related disaster each year – particularly (but not exclusively) in the form of stronger heatwaves (Forzieri et al., 2017). In turn, this might entail higher expected provisions for public healthcare services, potentially affecting the long-term sustainability of public finances.

The need to better understand and address climate change threats to human health is also increasingly reflected in EU policies. Aside from the objective of a climate-neutral EU by 2050 – an economy with net-zero greenhouse gas emissions – the European Green Deal (EGD) also aims ‘to protect the health and well-being of citizens from environment-related risks and impacts’. ⁽⁵⁾ In addition, Article 5 of the *European Climate Law* makes adaptation to climate change a legal obligation for EU institutions and Member States. In particular, adaptation policies should integrate ‘adaptation to climate change in a consistent manner in all policy areas’, and focus ‘in particular,

⁽⁵⁾ COM (2019) 640 final.

(Continued on the next page)

Box (continued)

on the most vulnerable and impacted populations and sectors'.⁽⁶⁾ The recently adopted 'New EU Strategy on Adaptation to Climate Change'⁽⁷⁾ is setting out the European Union to adapt to the unavoidable impacts of climate change and become climate resilient by 2050. It also states the need for a deeper understanding of the climate risks for health and greater capacity to counter them. Key actions under this strategy are the update and expansion of *Climate-ADAPT* as source of knowledge on climate impacts and adaptation, and the establishment of *European Climate and Health Observatory* to better understand, anticipate and minimise the health threats caused by climate change.⁽⁸⁾

⁽⁶⁾ Regulation (EU) 2021/1119 of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('*European Climate Law*').

⁽⁷⁾ COM (2021) 82 final.

⁽⁸⁾ For additional EU initiatives on the health effects of climate change, see EEA (2022b) and the European Climate and Health Observatory website (<https://climate-adapt.eea.europa.eu/en/observatory>).

2.3. SHORT OVERVIEW OF THE PROJECTION METHODOLOGY

2.3.1. Model

Health care projections are run based on a standard macro-simulation model, allowing to capture the impact of some of the key determinants of public spending on health care presented above. The projections are run over the period 2022-2070, starting from the baseline and complemented by a range of alternative scenarios. These alternative scenarios are important given the complexity of health care markets⁽⁷⁰⁾ and the uncertainty surrounding long-term developments.⁽⁷¹⁾ This analysis contributes to inform future policy decisions, including with a view to improving the fiscal sustainability of health care systems.

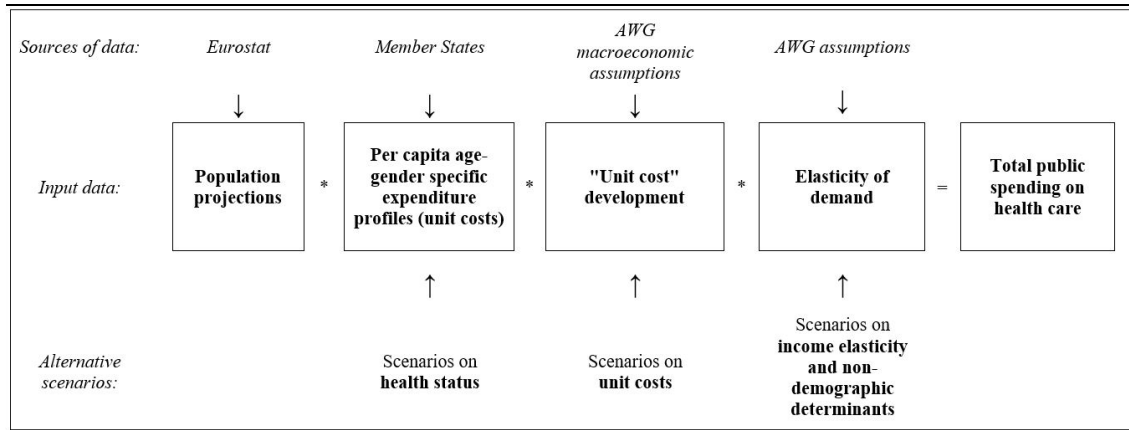
The baseline and alternative scenarios are based on a 'no-policy change' assumption, i.e. reflecting only already enacted legislation. Future health policy reforms and behavioural changes by individuals are not taken into account. In the baseline and alternative scenarios, changes in the *demand* for health care provision, due to changes in population structure, health status or changes in income are assumed to be automatically met by changes in health care *provision*.

The model used to project future expenditure on health care is a standard macro-simulation model, whereby the overall population is disaggregated into a number of groups having a common set of features, such as age and sex. As the number of individuals in each group changes over time, so do the aggregate values of the endogenous variables. The schematic methodology to project health care expenditure is presented in Graph I.2.3. The common elements of all projection scenarios are the labour force and macroeconomic assumptions agreed by the Commission (DG ECFIN) and the EPC-AWG and the 2023-based population projections provided by Eurostat. The age and

⁽⁷⁰⁾ Health care markets may suffer from adverse selection (higher health risks have difficulty in obtaining affordable coverage), moral hazard (insured people have an incentive to over consume health care services as they do not bear the full cost) and asymmetric information (physicians have more information than patients, which could lead to supply-induced demand and economic rents, depending on the type of remuneration of physicians: capitation, fee-for-service, pay-for-performance). These market failures are the economic rationale for public sector involvement (financing and regulations) in health care markets based on efficiency and equity considerations.

⁽⁷¹⁾ Uncertainty relates to three factors. First, public expenditure on health care is determined by an interrelated play of numerous demand and supply-related factors, often not fully observed or quantifiable. Second, ad-hoc policy reforms may change their relevance and impact upon future health care spending. Third, the long-term horizon of the projections increases the uncertainty of the results.

Graph I.2.3: **Schematic presentation of the projection methodology**



Source: European Commission, EPC.

gender-specific per capita public expenditure (on health care) profiles are provided by Member States. They are combined with the demographic projections provided by Eurostat in order to calculate nominal spending on health care in the base year (2022). In a further step, the age-gender cost profiles applied to the population structure are adjusted to add up to the total public expenditure on health care ⁽⁷²⁾ in 2022. The adjustments, reflecting the effects of different factors on health care spending, are applied by correspondingly changing one of three main inputs: (1) the age-related expenditure profiles (capturing unit costs) for assumptions on the evolution of the population's health status; (2) assumptions regarding the development of unit costs over time, as driven by the macroeconomic variables; and (3) assumptions on the elasticity of demand and non-demographic determinants.

The rest of this section describes the baseline and the alternative scenarios (see Table I.2.1 for an overview).

2.3.2. The baseline

The *baseline* (formerly named 'AWG reference scenario') mainly captures the impact of population ageing and a moderate impact of non-demographic determinants. It is based on the baseline population projections provided by Eurostat and assumes that: (1) half of the extra years of life gained through higher life expectancy would be spent in good health and (2) the contribution of non-demographic drivers would equal the effect of income elasticity of demand, which is modelled through a cost sensitivity of 1.1 in 2022 converging to unity by 2070. This scenario is used by the AWG to calculate the overall budgetary impact of ageing in the 2024 projection exercise and in the EU fiscal surveillance analysis. The design of the baseline is unchanged compared with the 2021 Ageing Report.

The neutral assumption on the evolution of health status is a proxy for the evolution of age-cost profiles with proximity to death rather than age per se. Empirical evidence suggests that the volume and prices of medical treatments for deteriorating health and not just age per se determine the shape of the age-cost profiles. ⁽⁷³⁾ Therefore, age-cost profiles that do not take into account proximity to death are likely to overestimate the effect of population ageing on public health

⁽⁷²⁾ Public expenditure on health in this publication is defined as the 'core' health care categories (SHA categories HC.1 to HC.9), excluding the long-term care (health) category (HC.3) but including capital investment in health (COFOG gross capital formation for GF07 excluding GF0705).

⁽⁷³⁾ For an overview of empirical studies, see Raitano (2006) and Breyer and Lorenz (2021).

spending. While death-related cost profiles by age were provided by a number of Member States for the ‘death-related cost scenario’ in previous Ageing Reports, data coverage was insufficient for the purposes of the Ageing Report.⁽⁷⁴⁾ The difficulties to provide death-related cost profiles by age encountered by a number of Member States explain the more pragmatic approach taken since the 2006 Ageing Report to approximate the projection results of death-related costs by using average age/gender-specific per capita shifted by half the change in age-specific life expectancy in the baseline.⁽⁷⁵⁾

Table I.2.1: **Overview of 2024 Ageing Report scenarios for health care**

	Baseline	Risk scenario	Pure demographic scenario	Sector-specific composite indexation scenario	Labour intensity scenario	Healthy ageing scenario	No healthy ageing scenario
	I	II	III	IV	V	VI	VII
Population projection	Eurostat 2023-based population projections	Eurostat 2023-based population projections	Eurostat 2023-based population projections	Eurostat 2023-based population projections	Eurostat 2023-based population projections	Eurostat 2023-based population projections	Eurostat 2023-based population projections
Age-related expenditure profiles	2022 profiles shift by half the change in age-specific life expectancy	2022 profiles shift by half the change in age-specific life expectancy	2022 profiles shift by half the change in age-specific life expectancy	2022 profiles shift by half the change in age-specific life expectancy	2022 profiles shift by half the change in age-specific life expectancy	2022 profiles shift in line with changes in age-specific life expectancy	2022 profiles held constant over the projection period
Unit cost development	GDP per capita	GDP per capita	GDP per capita	GDP per capita	GDP per hours worked	GDP per capita	GDP per capita
Elasticity of demand	Cost sensitivity of 1.1 in 2022, converging to 1 by 2070	Cost sensitivity of 1.5 in 2022, converging to 1 by 2070	1	Input-specific indexation	Cost sensitivity of 1.1 in 2022, converging to 1 by 2070	Cost sensitivity of 1.1 in 2022, converging to 1 by 2070	Cost sensitivity of 1.1 in 2022, converging to 1 by 2070

Source: European Commission, EPC.

2.3.3. Alternative scenarios

Six alternative scenarios are performed around the baseline allowing to capture the impact of changes in the main underlying drivers of health care spending. In particular, these concern the health status of the population, the elasticity of demand for health care higher than one (but always converging to 1 at the end of the projection period) and different patterns of unit cost evolution, notably capturing the influence of macroeconomic factors. These six alternative scenarios can be described as follows.

The ‘risk scenario’ (former ‘AWG risk scenario’) assumes a more dynamic spending growth in the beginning of the projection period, compared with the baseline, in line with past trends for the EU as a whole. In comparison to the baseline, the ‘risk scenario’ captures the full impact of non-demographic cost drivers, i.e. technological changes (e.g. development of new treatments and new diagnostic equipment) and institutional mechanisms (e.g. broadening of the health care services basket, devolution to regions, etc.), which may stimulate expenditure growth in excess of what can be

⁽⁷⁴⁾ Only twelve Member States provided death-related cost profiles by age for the 2021 Ageing Report, while the death-related cost profiles from earlier Ageing Reports were re-used for another five countries.

⁽⁷⁵⁾ Madsen (2004), quoted in Raitano (2006).

expected due to purely demographic factors. ⁽⁷⁶⁾ A proxy for the non-demographic costs with estimated EU average elasticity of 1.5, based on Commission research ⁽⁷⁷⁾ and endorsed by the Ageing Working Group, is used for 2022, which then converges linearly to 1 by the end of the projection period.

The ‘pure demographic scenario’ aims at estimating in isolation the effect of an ageing population on future public health care expenditure. Differently from the baseline, this scenario fully ignores non-demographic drivers, by assuming that ‘unit costs’ – i.e. the health care expenditure per capita for each year of age – evolve only in line with real GDP per capita.

The ‘sector-specific composite indexation scenario’ captures the importance and evolution of various components to health care provision. It is based on the relative importance and different past trends of the three major health care expenditure items: hospital care, outpatient care and pharmaceuticals and therapeutic appliances. Given the special character of the health care sector (high level of government regulation, investment in new technologies, high labour intensity), considering health care sector-specific rather than economy-wide determinants of unit costs is particularly informative. In this scenario, the growth rate of each item is estimated separately, based on past trends, thus creating a sort of composite indexation for ‘unit cost development’. It assumes that future expenditure of the three major health system sub-sectors (hospitals, outpatient care and medical goods) evolve in line with their specific trends in the past 10 years rather than with a commonly applied income elasticity as in the baseline. Affected by the sector-specific indexation are 90% of public expenditure on average in the EU (ranging from 84% in Denmark to 96% in Greece and Portugal). Furthermore, the elasticity indexation was capped at the lower and upper ends and the country-specific values vary between 0.4 and 1.2 in the base year.

The ‘labour intensity scenario’ estimates the evolution in health care expenditure under the assumption that unit costs are driven by changes in labour productivity, rather than growth in the national income, as health care is a highly labour-intensive sector. This scenario is similar to the baseline except that costs are assumed to evolve in line with the evolution of real GDP per worker instead of real GDP per capita. As wages are projected to grow in line with productivity, this scenario provides an insight into the effects of unit costs in the health care sector being driven mostly by increases in wages and salaries.

The ‘healthy ageing scenario’ captures the potential impact of improvements in the health status in line with projected declines in mortality rates and consequent increases in life expectancy. It assumes that the number of years spent in bad health during a lifetime remains constant over the whole projection period, i.e. all future gains in life expectancy are spent in good health (and not only half of them as it is in the baseline). The morbidity rate and therefore the age/gender-specific per capita cost profiles are fully aligned with the decline in the mortality rate. As such, this scenario is in line with the morbidity compression hypothesis discussed above. In practical terms, for each projection year and for relevant age/gender groups ⁽⁷⁸⁾, this scenario progressively shifts the age/gender-specific per capita cost profiles observed in the base year to older age groups. This ‘outward’ shift is in direct proportion to the projected gains in age and gender specific life expectancy as given by the population projections.

⁽⁷⁶⁾ In practice, the effect of demographic changes – captured using econometric analysis – is subtracted from the total increase in expenditure and the remaining part (i.e. the residual) is attributed to the impact of non-demographic determinants.

⁽⁷⁷⁾ Medeiros and Schwierz (2013).

⁽⁷⁸⁾ The method is applied to those age/gender groups where expenditure per capita is growing. For the young and the oldest old, the reference age/gender and therefore age/gender per capita public expenditure profile remains the same over the whole projection period.

The ‘no healthy ageing’ scenario estimates the impact of the expansion of morbidity hypothesis on the health care public spending projections. It assumes that age/gender-specific morbidity rates and the provision structure of health treatments do not change over time. This, in turn, means that age/gender-specific per capita cost profiles can be considered as proxies for the morbidity rates⁽⁷⁹⁾ and remain constant in real terms over the whole projection period. An increase in life expectancy, as projected in Eurostat baseline population projections and no changes in health status as compared to today’s health status mean that all the gains in life expectancy are implicitly assumed to be spent in bad health. In other words, the number of years spent in good health remains constant, which is a more pessimistic assumption than the one in the baseline, where half of the extra years of life gained through higher life expectancy is assumed to be spent in good health.

Some changes to the design of these alternative scenarios were made in this edition of the Ageing Report. In the 2021 Ageing Report and earlier editions, the alternative scenarios were not performed to the baseline but by reference to the former ‘*demographic scenario*’⁽⁸⁰⁾. By contrast, in the 2024 Ageing Report, they were re-anchored to the baseline, resulting in a redefinition of some of the alternative scenarios and a removal of three scenarios (the ‘*high life expectancy*’, the ‘*income elasticity*’ and the ‘*non-demographic determinants*’ scenarios). Furthermore, two additional alternative scenarios used in the 2021 Ageing Report were discontinued, namely the ‘*death-related cost scenario*’ and the ‘*EU27 cost convergence scenario*’. The design of the ‘*risk scenario*’ (already performed around the baseline in past editions) did not change.

2.3.4. COVID-19 and other country-specific policy measures

COVID-19 related measures

The emergence of the COVID-19 pandemic in early 2020 put unprecedented pressure on the health systems in the EU. They had to be urgently reorganised in order to cope with an increased demand for care, in particular in terms of hospital care, diagnostics and prevention. Preventive, curative and rehabilitative care remained in higher than usual demand not only in 2021 but also in 2022. Additionally, health systems faced increased demand for services that were postponed during the COVID-19 pandemic. In order to improve the base year (2022) estimate, the AWG delegates agreed to include temporary and recurrent public spending emerging among others from the COVID-19 pandemic and the increased capital formation supported by EU Recovery and Resilience Fund grants and loans. This decision required additional reporting from Member States.

A distinction is made between one-off (temporary) and permanent fiscal effects of health care policy measures. One-off (temporary) public expenditure only affects the projection results of the respective year(s), while policy measures with permanent fiscal effect also affect the projection results of the subsequent years. One-off policy measures are typically capital investments or bonuses paid to health personnel such as those paid during the COVID-19 crisis. Policy measures with permanent fiscal effects are such as an increase/decrease of salaries in the health sector, change in the reimbursement volumes or basket of health goods and services, operational costs of new hospitals or other health care institutions.

⁽⁷⁹⁾ Strictly speaking, age profiles of expenditure illustrate exclusively public health care spending per person of a given age cohort. As such it is not a measure of health status or morbidity. However, given the lack of a reliable and comparable data on the latter, one can plausibly assume that the shape of the profile follows the evolution of health status over the lifespan, i.e. over time, we assume that the same segments of the curve (early childhood, old age and motherhood) follow the same pattern.

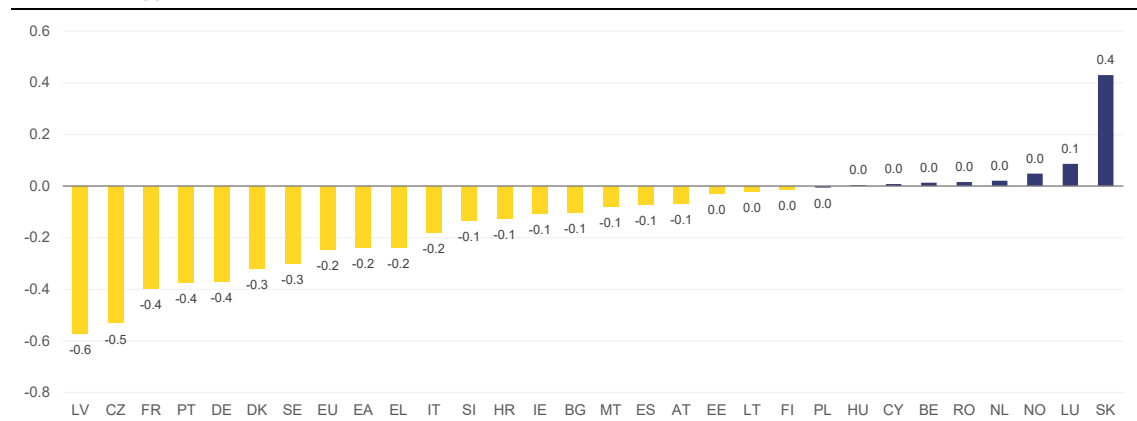
⁽⁸⁰⁾ In the ‘*demographic scenario*’ of previous Ageing Reports the base year age-cost profiles were held constant over the projection period.

As summarised in Table I.2.2, 18 countries reported additional public spending to improve the base year estimate. In the absence of actual data on health care expenditure for year 2022 and 2023 at the time of producing the projection, the 2019 public health care spending as proportion of GDP was used as a starting point for the base year estimate. Member States and Norway were then asked to report on COVID-19 and other extraordinary spending such as additional investments and permanent increase in salaries or health care services. The amounts provided on one-off measures ranged from 1.1% (EE) to 33% (LV) of the initial 2022 estimate (based on the 2019 total public health expenditure as percentage of GDP. Amounts reported on permanent measures affecting not only year 2022 but the overall projections were provided by 10 countries (BE, BG, CZ, EE, EL, FR, LV, PT, SI and SK). The permanent spending ranged from 0.02% (EL) to 22% (LV) of the initial country-specific estimate.

Additionally, the base year estimate of several countries (SK, IT, CY and SI) was (further) adjusted by:

- reducing the spending on hospital care and allocating the respective amount to LTC (health) for SK;
- using the 2022 actual public spending on health care for IT;
- using the 2021 actual public spending on health care for CY as a starting point to include the increase in spending from implementing the reforms on universal coverage from previous years;
- including for SI the impact of the reform on integrating the existing voluntary health insurance scheme into the compulsory health insurance.

Graph I.2.4: **Baseline – difference in health care expenditure between 2023 projection and 2022 estimate (pps of GDP)**



Source: European Commission, EPC.

Graph I.2.4 shows the difference between public health care expenditure projected for 2023 and the base year estimate (2022). In the absence of additionally reported policy measures for the base year, a (slight) increase in expenditure would be expected for all Member States in the subsequent year. Instead, a drop in health care expenditure as % of GDP to a varying degree can be observed for all countries reporting one-off measures in the base year. In some cases, this effect overlaps with the effect of permanent or one-off measures reported in the base year and (or) in year 2023 (i.e. Austria and Slovakia). As illustrated in Graph I.2.4, the effect of both types of reported measures (one-off and permanent) in year 2022 is noticeable. It explains the drop of 0.2 pps of GDP for the EU in 2023 in health care expenditure compared to the base year.

Other health care policy measures

In the past years, many countries have undertaken policy reforms in health care. The fiscal impact of some of those reforms is not always easy to estimate. However, twelve countries estimated the potential budgetary effects on health care spending triggered by some of their legislated health care (reform) measures. In all cases, the impact of reforms was modelled as a percentage change of health care expenditure relative to the base year of projections, upon agreement with the respective Member States. Where possible, the impact of these reforms on expenditure has been distinguished between the different health system sub-sectors, namely: hospitals, outpatient care, pharmaceuticals and therapeutic appliances, preventive care, governance and administration and capital formation. Italy for example has legislated a constant nominal growth path for public health care expenditure until 2026. Wage adjustments have been legislated in Belgium, France, Latvia, Luxembourg, Portugal, Slovenia and Slovakia. Telemedicine and ICT solutions were reinforced in France and Latvia. Nursing personnel is being increased in Belgium and Slovakia. Reforms to improve the accessibility to health care services (including prevention and mental health care) were legislated in Bulgaria, Czechia, Latvia, Luxembourg, Slovenia and Slovakia (Table I.2.2).

Table I.2.2: **Health care policy measures with a direct budget impact used in the projections**

Country	18 countries	Pandemic measures and capital investments (timeline)	12 countries	Legislated policy measures (timeline)
	One-off impact		Permanent impact	
Belgium	X	COVID-19 measures (2022).	X	Increase in salaries of health care personnel, improvement of working conditions, increase in nursing personnel in hospitals (2022).
Bulgaria	X	COVID-19 measures (2022).	X	Improving access to health care prevention, hospital care and medicines (2022-2030).
Czechia	X	COVID-19 and RRP measures; pandemic resilience and health workforce training (2022-2029).	X	Pandemic surveillance (2022). Prevention and psychiatric care (2023-2032).
Denmark	X	COVID-19 measures (2022).		
Germany	X	COVID-19 measures (2022).		
Estonia	X	COVID-19 measures (2022).	X	Personal protective equipment in hospitals (2022).
Ireland	X	COVID-19 measures (2022).		
Greece	X	COVID-19 measures (2022). Increase in remuneration of health workforce for additional duties (2023).	X	COVID-19 testing capacity and vaccines (2022). DRG system development (2022-2023). Establishment of Quality Assurance in Health (ODIPY) (2022-2024).
Spain	X	RRP and REACT investments (2022).		
France	X	COVID-19 measures (2022).	X	Mainly increase in salaries and partly development of telemedicine (2022).
Croatia	X	COVID-19 measures (2022).		
Italy			X	Constant nominal expenditure path (2023-2026).
Cyprus	X	COVID-19 measures (2022).		
Latvia	X	COVID-19 measures (2022-2023).	X	Increase in salaries, improved access to medicines (incl. innovative), screening and medical devices, prevention and ICT solutions (2022-2025).
Luxembourg			X	Increased remuneration of health workforce for additional duties and increase in psychotherapy services (2022-2024).
Malta	X	COVID-19 measures (2022), RRP measures (2022-2025).		
Austria	X	COVID-19 measures (2022-2023).		
Portugal	X	COVID-19 and RRP measures (2022). Prevention, digitalisation, technological modernisation (2023-2026).	X	COVID-19 testing capacity and vaccines, increase in salaries (2022).
Slovenia	X	COVID-19 and RRP measures (2022-2024).	X	Increase in mental health services (2022-2024). Increase in salaries (2022-2024).
Slovakia			X	Increase in reimbursement for outpatient and hospital care, increase in nursing personnel and mental health services (2022). Increase in salaries of health care personnel, additional outpatient care and medicines, savings in governance and administration, improved cost-effectiveness of medicines (2023-2025).
Sweden	X	COVID-19 measures (2022).		

Source: European Commission, EPC.

2.3.5. Accounting for institutional setting specificities

The projections account for some institutional specificities for Germany. In Germany, 89% of the population was insured by social health insurance schemes (SHI) in 2022, with the remainder insured by mandatory substitutional private health insurance schemes (PHI). To account for the existence of a mandatory substitutional PHI, the population projections used in the model are adjusted downwards to equal the number of people insured in SHI in the base year of projections. Similarly, public expenditure projections for Germany includes government and social health insurance schemes expenditure but excludes compulsory private health insurance schemes expenditure.

In addition, it is assumed that ageing will be less pronounced in the projected SHI part of the population than the respective PHI part of it. This approach, applied also in previous Ageing Reports, is based on the younger present age structure of PHI and the current legislative set-up, which heavily restricts opting out from private health insurance to social health insurance. This implies a reduced burden of ageing within the SHI scheme in future. Furthermore, it is assumed that the share of the privately insured among the total population will increase faster than the share of the insured under the public insurance scheme, adding to the estimated reduced ageing effect of the population covered by SHI. Together, these assumptions imply a reduction of the population figures to roughly 89% in 2022 to account only for those covered by SHI and a further relative reduction in older age groups by 2070.

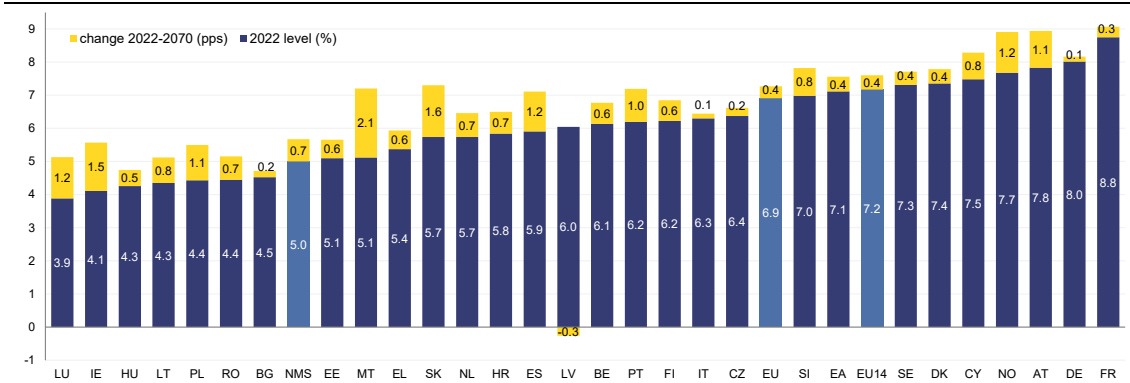
2.4. PROJECTION RESULTS

This section presents the baseline projections, complemented by a range of alternative scenarios and sensitivity tests. Public expenditure on health care includes expenditure on capital formation but excludes the long-term care (health) expenditure. Long-term care (health) expenditure is part of the long-term care expenditure projections (see Chapter 3). The projections of the baseline, used for multilateral budgetary surveillance in the EU, are assessed against six other scenarios with alternative assumptions on health care expenditure determinants. Furthermore, results for additional sensitivity tests run around the baseline are presented.

2.4.1. Baseline projections

According to the baseline, health care expenditure is projected to increase by about 0.4 pps of GDP in the EU by 2070 (Table I.2.3 and Graph I.2.5). Public expenditure on health care in the EU was estimated at 6.9% of GDP in 2022. This was the third year after the outbreak of the COVID-19 pandemic and substantial spending was aimed to prevent and cure COVID-19 as well as investments in more resilient health systems. Part of this spending, however, had a temporary nature and this explains why the projected spending in the subsequent year (2023) is 0.2 pps of GDP lower than in the base year.

Graph I.2.5: **Baseline – projected change in public expenditure on health care (2022-2070; pps of GDP)**

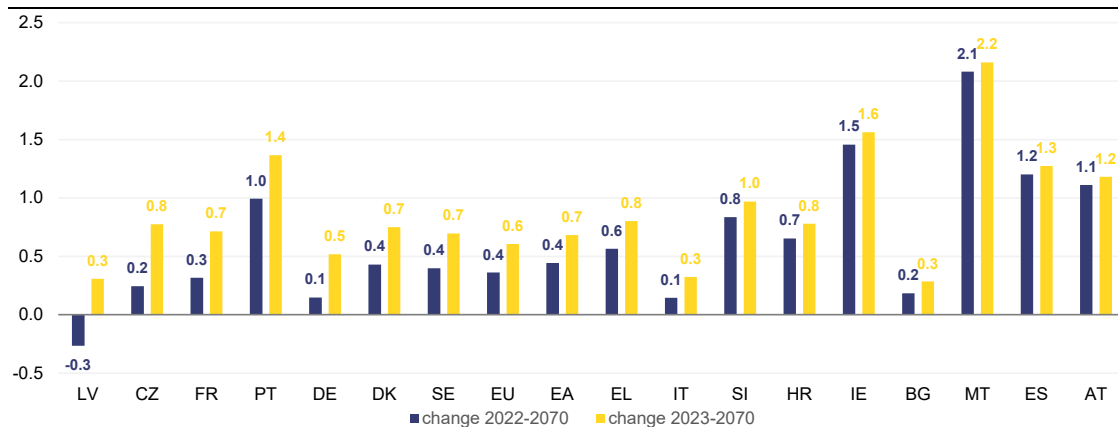


Health care expenditure excludes long-term care (health).

Source: European Commission, EPC.

Individual countries' results in the baseline range between -0.3 pps in Latvia to 2.1 pps of GDP in Malta. The results for Latvia are driven mostly by the temporary COVID-19 measures reported in the base year. When compared to 2023, Latvia has the same projected increase in health care expenditure by 2070 as Bulgaria and Italy (0.3 pps of GDP). This is due to the relatively low age-cost profiles in Latvia and Bulgaria and to the cost containing measures in Italy for the initial projection period (2023-2026). Another important element to be mentioned here is the time profile of the projections. While the peak of public health care expenditure is reached in 2060-2070 for most Member States, spending peaks in the 2050s for Bulgaria (2052), Italy (2055), Greece (2058) and Hungary (2059). The biggest increase is projected for Malta and is explained by the shape of the age-cost profiles (comparatively higher public expenditure for the older population) combined with fast population ageing. In addition, public health care expenditure peaks only in 2070 for Malta.

Graph I.2.6: **Baseline projection for selected countries – change 2022-2070 vs change 2023-2070 (pps of GDP)**



Source: European Commission, EPC.

While temporary COVID-19 expenditure and investments to boost the resilience of health care systems in 16 Member States increased the level of expenditure in the base year 2022, they had no lasting effect on the overall projections. The magnitude of this effect is demonstrated on Graph I.2.6. It compares the changes in the baseline over the projection period starting from the base year 2022 and the subsequent year 2023. The differences in projected increases ranges from 0.1 pp of GDP for several countries (AT, ES, MT, BG, IE and HR) to 0.6 pps of GDP for LV. The EU average is also affected by 0.2 pps of GDP.

Table I.2.3: **Baseline - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070	
											pps	in %
BE	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.3	6.3	6.8	0.6	10%
BG	4.5	4.4	4.5	4.5	4.5	4.6	4.6	4.6	4.6	4.7	0.2	4%
CZ	6.4	5.8	5.9	5.9	5.9	6.0	6.0	6.0	6.0	6.6	0.2	4%
DK	7.4	7.0	7.1	7.1	7.1	7.2	7.2	7.2	7.2	7.8	0.4	6%
DE	8.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	8.2	0.1	2%
EE	5.1	5.1	5.1	5.1	5.1	5.1	5.2	5.2	5.2	5.7	0.6	11%
IE	4.1	4.0	4.1	4.1	4.1	4.2	4.2	4.3	4.3	5.6	1.5	35%
EL	5.4	5.1	5.2	5.2	5.2	5.3	5.3	5.4	5.4	5.9	0.6	11%
ES	5.9	5.8	5.9	5.9	6.0	6.0	6.1	6.1	6.2	7.1	1.2	20%
FR	8.8	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.5	9.1	0.3	4%
HR	5.8	5.7	5.7	5.8	5.8	5.9	5.9	5.9	5.9	6.5	0.7	11%
IT	6.3	6.1	5.8	5.8	5.8	5.8	5.8	5.9	5.9	6.4	0.1	2%
CY	7.5	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.6	8.3	0.8	11%
LV	6.0	5.5	5.3	5.3	5.3	5.3	5.3	5.4	5.4	5.8	-0.3	-4%
LT	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.5	4.5	5.1	0.8	18%
LU	3.9	4.0	4.1	4.1	4.1	4.1	4.2	4.2	4.2	5.1	1.2	32%
HU	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.7	0.5	11%
MT	5.1	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.2	7.2	2.1	41%
NL	5.7	5.8	5.8	5.8	5.8	5.9	5.9	5.9	5.9	6.5	0.7	13%
AT	7.8	7.8	7.7	7.8	7.8	7.9	7.9	7.9	8.0	8.9	1.1	14%
PL	4.4	4.4	4.4	4.5	4.5	4.6	4.6	4.7	4.7	5.5	1.1	24%
PT	6.2	5.8	5.9	6.0	6.0	6.0	6.1	6.1	6.2	7.2	1.0	16%
RO	4.4	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.7	5.2	0.7	16%
SI	7.0	6.9	6.9	6.9	7.0	7.0	7.1	7.1	7.1	7.8	0.8	12%
SK	5.7	6.2	6.1	6.2	6.2	6.3	6.3	6.4	6.4	7.3	1.6	27%
FI	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.8	0.6	10%
SE	7.3	7.0	7.0	7.1	7.1	7.1	7.1	7.2	7.2	7.7	0.4	5%
NO	7.7	7.7	7.8	7.8	7.9	7.9	8.0	8.0	8.0	8.9	1.2	16%
EA	7.1	6.9	6.8	6.9	6.9	6.9	6.9	6.9	7.0	7.6	0.4	6%
EU	6.9	6.7	6.6	6.6	6.6	6.7	6.7	6.7	6.7	7.3	0.4	5%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

- Health care expenditure projections for PL consider future demographic and macroeconomic changes but do not take into account a future convergence of public spending on health care to a threshold of 7% of GDP as included in the Polish law.

- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

- The EA and EU averages for all scenarios are weighted according to GDP.

Source: European Commission, EPC.

2.4.2. Alternative scenarios and sensitivity tests

Alternative scenarios on non-demographic drivers and indexation rules

Under the ‘risk scenario’, public health care spending in the EU would reach 8.1% of GDP in 2070, i.e. an increase of 1.2 pps of GDP relative to 2022 (Table I.2.4). Over the whole projection period, Italy is expected to have the lowest increase with 0.9 pps of GDP, while Malta would experience the biggest increase at 3.2 pps of GDP. On average, the projected increase in public health spending in the EU is three-fold higher than in the baseline.

Table I.2.4: **Risk scenario - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070	
											pps	in %
BE	6.1	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.4	7.5	1.3	22%
BG	4.5	4.4	4.5	4.6	4.7	4.7	4.8	4.9	4.9	5.7	1.2	26%
CZ	6.4	5.8	5.9	6.0	6.0	6.1	6.2	6.2	6.3	7.6	1.2	19%
DK	7.4	7.0	7.1	7.2	7.2	7.2	7.3	7.3	7.4	8.7	1.3	18%
DE	8.0	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.8	9.0	0.9	12%
EE	5.1	5.0	5.1	5.2	5.2	5.3	5.3	5.4	5.4	6.6	1.5	30%
IE	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	6.6	2.5	61%
EL	5.4	5.2	5.3	5.3	5.4	5.5	5.5	5.6	5.7	6.9	1.5	28%
ES	5.9	5.9	5.9	6.0	6.1	6.1	6.2	6.3	6.3	7.9	2.0	34%
FR	8.8	8.4	8.4	8.5	8.5	8.6	8.6	8.6	8.7	9.9	1.1	13%
HR	5.8	5.8	5.9	5.9	6.0	6.1	6.2	6.3	6.3	7.9	2.0	35%
IT	6.3	6.2	5.9	5.9	5.9	5.9	5.9	6.0	6.0	7.2	0.9	14%
CY	7.5	7.5	7.6	7.6	7.7	7.7	7.8	7.9	7.9	9.4	1.9	26%
LV	6.0	5.5	5.4	5.4	5.5	5.6	5.7	5.7	5.8	7.0	1.0	17%
LT	4.3	4.3	4.4	4.5	4.5	4.6	4.7	4.8	4.8	6.2	1.8	42%
LU	3.9	4.0	4.1	4.1	4.2	4.2	4.2	4.2	4.3	5.5	1.7	42%
HU	4.3	4.3	4.3	4.4	4.5	4.5	4.6	4.6	4.7	5.7	1.5	34%
MT	5.1	5.1	5.1	5.2	5.2	5.3	5.4	5.4	5.5	8.3	3.2	62%
NL	5.7	5.8	5.8	5.9	5.9	5.9	6.0	6.0	6.1	7.1	1.4	24%
AT	7.8	7.8	7.8	7.8	7.9	8.0	8.1	8.1	8.2	9.9	2.1	26%
PL	4.4	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.0	6.6	2.2	50%
PT	6.2	5.9	6.0	6.1	6.2	6.2	6.3	6.4	6.4	8.2	2.0	32%
RO	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.0	5.1	6.5	2.0	45%
SI	7.0	6.9	7.0	7.0	7.1	7.2	7.4	7.5	7.6	9.2	2.2	31%
SK	5.7	6.2	6.2	6.3	6.4	6.5	6.6	6.7	6.8	8.6	2.8	49%
FI	6.2	6.2	6.2	6.3	6.3	6.4	6.5	6.5	6.6	7.7	1.5	23%
SE	7.3	7.0	7.0	7.1	7.1	7.2	7.3	7.3	7.3	8.6	1.3	17%
NO	7.7	7.7	7.8	7.9	8.0	8.0	8.1	8.2	8.2	9.8	2.1	28%
EA	7.1	6.9	6.9	6.9	7.0	7.0	7.0	7.1	7.1	8.4	1.3	18%
EU	6.9	6.7	6.7	6.7	6.7	6.8	6.8	6.9	6.9	8.1	1.2	18%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

- Health care expenditure projections for PL consider future demographic and macroeconomic changes but do not take into account a future convergence of public spending on health care to a threshold of 7% of GDP as included in the Polish law.

- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

- The EA and EU averages for all scenarios are weighted according to GDP.

Source: European Commission, EPC.

Under the ‘pure demographic scenario’, public health care expenditure in the EU is projected to increase by 0.2 pps of GDP, i.e. from 6.9% to 7.1% of GDP from 2022 to 2070. This result reflects the pure ageing effect in the projections as all non-demographic drivers are muted in this scenario. The pure ageing effect on health care expenditure until 2070 is projected to be the lowest in Latvia with -0.5 pps of GDP compared to 2022 and the biggest in Malta with 1.8 pps of GDP.

Table I.2.5: **Demographic scenario - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070	
											pps	in %
BE	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.6	0.5	8%
BG	4.5	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	0.0	-1%
CZ	6.4	5.9	5.9	5.9	5.9	5.9	5.9	6.0	6.0	6.4	0.0	0%
DK	7.4	7.0	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.6	0.2	3%
DE	8.0	7.7	7.7	7.7	7.6	7.6	7.6	7.6	7.7	8.0	0.0	0%
EE	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.4	0.3	7%
IE	4.1	4.0	4.0	4.1	4.1	4.1	4.1	4.2	4.2	5.3	1.2	30%
EL	5.4	5.1	5.1	5.2	5.2	5.2	5.3	5.3	5.3	5.7	0.3	6%
ES	5.9	5.8	5.9	5.9	5.9	6.0	6.0	6.1	6.1	6.9	1.0	17%
FR	8.8	8.4	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.9	0.1	1%
HR	5.8	5.7	5.7	5.7	5.8	5.8	5.8	5.8	5.8	6.2	0.4	6%
IT	6.3	6.1	5.8	5.8	5.8	5.8	5.8	5.8	5.9	6.3	0.0	0%
CY	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.6	7.6	8.0	0.5	7%
LV	6.0	5.5	5.2	5.2	5.3	5.3	5.3	5.3	5.3	5.5	-0.5	-9%
LT	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.9	0.5	12%
LU	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.2	4.2	5.0	1.1	30%
HU	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.5	0.3	6%
MT	5.1	5.0	5.1	5.1	5.0	5.0	5.1	5.1	5.1	7.0	1.8	36%
NL	5.7	5.8	5.8	5.8	5.8	5.8	5.9	5.9	5.9	6.3	0.6	10%
AT	7.8	7.8	7.7	7.8	7.8	7.8	7.9	7.9	7.9	8.7	0.9	11%
PL	4.4	4.4	4.4	4.5	4.5	4.5	4.6	4.6	4.6	5.2	0.8	18%
PT	6.2	5.8	5.9	6.0	6.0	6.0	6.0	6.1	6.1	7.0	0.8	12%
RO	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.6	4.9	0.4	9%
SI	7.0	6.8	6.9	6.9	6.9	6.9	7.0	7.0	7.0	7.5	0.5	8%
SK	5.7	6.2	6.1	6.2	6.2	6.2	6.3	6.3	6.4	7.0	1.3	22%
FI	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.3	6.3	6.7	0.4	7%
SE	7.3	7.0	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.5	0.2	3%
NO	7.7	7.7	7.8	7.8	7.8	7.9	7.9	8.0	8.0	8.7	1.0	13%
EA	7.1	6.9	6.8	6.8	6.8	6.9	6.9	6.9	6.9	7.4	0.3	4%
EU	6.9	6.7	6.6	6.6	6.6	6.6	6.7	6.7	6.7	7.1	0.2	2%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

Source: European Commission, EPC.

Under the ‘sector-specific composite indexation scenario’, the projected increase in public health expenditure is 0.1 pp of GDP in the EU on average (Table I.2.6). The variation in results between Member States is pronounced also in this scenario. The change over the projection period ranges from -0.4 pps of GDP for Latvia to 1.9 pps of GDP for Malta.

Table I.2.6: **Sector-specific composite indexation scenario - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070	
											pps	in %
BE	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.2	6.4	0.2	4%
BG	4.5	4.4	4.5	4.5	4.5	4.6	4.6	4.6	4.6	4.8	0.2	5%
CZ	6.4	5.9	5.9	5.9	5.9	5.9	5.9	5.9	6.0	6.3	-0.1	-1%
DK	7.4	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.4	0.0	0%
DE	8.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	8.1	0.1	1%
EE	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.5	0.4	8%
IE	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.9	0.8	18%
EL	5.4	5.1	5.2	5.2	5.2	5.3	5.3	5.4	5.4	6.0	0.6	11%
ES	5.9	5.8	5.8	5.8	5.9	5.9	5.9	6.0	6.0	6.4	0.5	9%
FR	8.8	8.4	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.8	0.1	1%
HR	5.8	5.7	5.7	5.8	5.8	5.8	5.9	5.9	5.9	6.5	0.6	11%
IT	6.3	6.1	5.8	5.8	5.7	5.7	5.8	5.8	5.8	6.0	-0.3	-4%
CY	7.5	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.6	8.3	0.8	10%
LV	6.0	5.5	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.7	-0.4	-6%
LT	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.6	0.2	5%
LU	3.9	4.0	4.1	4.1	4.1	4.1	4.2	4.2	4.2	5.1	1.2	30%
HU	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	0.1	1%
MT	5.1	5.0	5.1	5.1	5.0	5.1	5.1	5.1	5.1	7.1	1.9	38%
NL	5.7	5.8	5.8	5.8	5.8	5.8	5.9	5.9	5.9	6.3	0.6	10%
AT	7.8	7.8	7.7	7.8	7.8	7.9	7.9	8.0	8.0	9.1	1.2	16%
PL	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.6	4.6	5.2	0.8	18%
PT	6.2	5.8	5.8	5.9	5.9	5.9	5.9	6.0	6.0	6.6	0.4	6%
RO	4.4	4.5	4.5	4.6	4.6	4.6	4.7	4.7	4.8	5.4	1.0	22%
SI	7.0	6.8	6.8	6.8	6.9	6.9	6.9	6.9	7.0	7.3	0.3	4%
SK	5.7	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.2	0.5	9%
FI	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.3	6.3	6.7	0.4	7%
SE	7.3	7.0	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.5	0.2	2%
NO	7.7	7.7	7.8	7.8	7.9	7.9	8.0	8.0	8.1	9.0	1.3	17%
EA	7.1	6.9	6.8	6.8	6.8	6.8	6.9	6.9	6.9	7.3	0.2	2%
EU	6.9	6.7	6.6	6.6	6.6	6.6	6.6	6.6	6.7	7.0	0.1	1%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

Source: European Commission, EPC.

Under the ‘*labour intensity scenario*’, there would be an additional public health care spending of **0.3 pps of GDP** relative to the EU average of the baseline (Table I.2.7). In this scenario, the increase in health care expenditure over the projection period (2022-2070) amounts to 0.7 pps of GDP for the EU, ranging from -0.1 pp of GDP for Italy to 3.7 pps of GDP for Malta.

Table I.2.7: **Labour intensity scenario - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070	
											pps	in %
BE	6.1	6.1	6.1	6.1	6.0	6.1	6.1	6.1	6.1	6.8	0.7	11%
BG	4.5	4.4	4.4	4.4	4.5	4.5	4.5	4.6	4.6	5.2	0.7	15%
CZ	6.4	5.9	5.9	5.9	5.9	6.0	6.0	6.0	6.1	7.3	0.9	14%
DK	7.4	7.1	7.2	7.2	7.3	7.4	7.5	7.6	7.6	8.2	0.8	11%
DE	8.0	7.7	7.7	7.7	7.8	7.8	7.8	7.9	7.9	9.0	1.0	12%
EE	5.1	5.1	5.2	5.2	5.2	5.2	5.2	5.3	5.3	5.9	0.8	15%
IE	4.1	3.9	3.9	4.0	4.0	4.1	4.1	4.2	4.2	6.0	1.9	47%
EL	5.4	5.0	5.0	5.0	4.9	4.9	4.9	5.0	5.0	5.6	0.2	4%
ES	5.9	5.8	5.8	5.7	5.7	5.7	5.7	5.8	5.9	7.3	1.4	24%
FR	8.8	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.5	9.2	0.4	5%
HR	5.8	5.6	5.5	5.5	5.5	5.5	5.5	5.6	5.6	6.4	0.6	10%
IT	6.3	6.1	5.7	5.7	5.7	5.8	5.8	5.8	5.9	6.2	-0.1	-2%
CY	7.5	7.4	7.3	7.3	7.4	7.5	7.6	7.6	7.7	8.8	1.4	18%
LV	6.0	5.4	5.1	5.1	5.1	5.2	5.3	5.3	5.4	6.3	0.3	5%
LT	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	6.0	1.7	39%
LU	3.9	3.9	4.0	4.0	3.9	3.9	3.9	3.9	3.9	5.4	1.5	38%
HU	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	5.2	1.0	23%
MT	5.1	5.0	5.0	5.0	5.0	5.0	5.1	5.1	5.1	8.8	3.7	71%
NL	5.7	5.7	5.7	5.7	5.8	5.8	5.8	5.9	5.9	6.5	0.8	13%
AT	7.8	7.8	7.5	7.6	7.6	7.7	7.7	7.7	7.8	9.3	1.5	19%
PL	4.4	4.4	4.4	4.5	4.5	4.6	4.7	4.7	4.8	6.6	2.2	50%
PT	6.2	5.7	5.7	5.8	5.8	5.8	5.9	6.0	6.1	7.6	1.4	23%
RO	4.4	4.4	4.4	4.5	4.5	4.6	4.7	4.7	4.8	5.9	1.5	33%
SI	7.0	6.8	6.9	6.9	7.0	7.1	7.1	7.2	7.2	8.3	1.3	19%
SK	5.7	6.2	6.1	6.2	6.3	6.5	6.6	6.7	6.8	8.5	2.7	48%
FI	6.2	6.3	6.3	6.3	6.3	6.3	6.4	6.4	6.5	7.1	0.9	14%
SE	7.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.7	0.3	5%
NO	7.7	7.8	7.8	7.9	7.9	7.9	8.0	8.1	8.1	9.5	1.9	24%
EA	7.1	6.9	6.8	6.8	6.8	6.9	6.9	6.9	7.0	7.9	0.8	11%
EU	6.9	6.7	6.6	6.6	6.6	6.6	6.7	6.7	6.7	7.6	0.7	11%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

Source: European Commission, EPC.

Alternative scenarios on health status

Under the ‘healthy ageing scenario’, projected increases in public expenditure on health care are significantly lower than those obtained in the baseline. For the EU as a whole, no increase is expected over the projection period with respect to the base year (while 0.2 pps of GDP increase is expected when compared to year 2023) (Table I.2.8). In this scenario, most of the EU Member States would experience an expenditure growth of below 1 pp of GDP and six countries even experience a decrease. Therefore, improvements in health status will be crucial for keeping expenditure on health care under control in the future.

Table I.2.8: **Healthy ageing scenario - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.4	0.2	4%
BG	4.5	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.3	4.3	-0.2	-4%
CZ	6.4	5.8	5.8	5.8	5.8	5.8	5.8	5.9	5.9	6.1	6.1	-0.3	-4%
DK	7.4	7.0	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.4	7.4	0.1	1%
DE	8.0	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.7	7.7	-0.3	-4%
EE	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.3	5.3	0.2	4%
IE	4.1	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.3	5.2	5.2	1.1	28%
EL	5.4	5.1	5.1	5.2	5.2	5.2	5.2	5.3	5.3	5.6	5.6	0.2	4%
ES	5.9	5.8	5.8	5.9	5.9	6.0	6.0	6.0	6.1	6.8	6.8	0.8	14%
FR	8.8	8.3	8.3	8.4	8.4	8.4	8.4	8.4	8.4	8.6	8.6	-0.1	-1%
HR	5.8	5.7	5.7	5.8	5.8	5.8	5.8	5.9	5.9	6.2	6.2	0.4	6%
IT	6.3	6.1	5.8	5.8	5.7	5.7	5.8	5.8	5.8	6.1	6.1	-0.2	-3%
CY	7.5	7.5	7.5	7.5	7.5	7.5	7.6	7.6	7.6	8.1	8.1	0.6	8%
LV	6.0	5.4	5.2	5.2	5.2	5.2	5.2	5.3	5.3	5.4	5.4	-0.7	-11%
LT	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.8	4.8	0.4	10%
LU	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.8	4.8	0.9	24%
HU	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.3	0.0	1%
MT	5.1	5.0	5.0	5.1	5.0	5.0	5.1	5.1	5.1	6.7	6.7	1.5	30%
NL	5.7	5.7	5.8	5.8	5.8	5.8	5.8	5.9	5.9	6.1	6.1	0.4	7%
AT	7.8	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.9	8.4	8.4	0.6	8%
PL	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.6	4.6	5.1	5.1	0.7	16%
PT	6.2	5.8	5.8	5.9	5.9	5.9	5.9	6.0	6.0	6.7	6.7	0.5	8%
RO	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.6	4.8	4.8	0.3	7%
SI	7.0	6.8	6.8	6.8	6.9	6.9	6.9	7.0	7.0	7.3	7.3	0.4	5%
SK	5.7	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.3	6.6	6.6	0.8	15%
FI	6.2	6.2	6.1	6.1	6.2	6.2	6.2	6.2	6.2	6.4	6.4	0.2	3%
SE	7.3	7.0	7.0	7.0	7.1	7.1	7.1	7.1	7.1	7.4	7.4	0.1	1%
NO	7.7	7.7	7.8	7.8	7.8	7.9	7.9	7.9	7.9	8.5	8.5	0.8	10%
EA	7.1	6.9	6.8	6.8	6.8	6.8	6.8	6.8	6.9	7.2	7.2	0.0	1%
EU	6.9	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.9	6.9	0.0	-1%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

Source: European Commission, EPC.

Conversely, in the ‘no healthy ageing scenario’ increases in public expenditure on health care are significantly higher than those obtained in the baseline. The result for the EU as a whole is a 0.8 pps of GDP increase in public health care expenditure over the overall projection period (Table I.2.9), which is twice the increase of the baseline. For most Member States, the expected expenditure growth of the ‘no healthy ageing’ scenario is above 1 pp of GDP. The lowest increase is projected for Latvia with 0.3 pps of GDP and the biggest for Malta with 2.7 pps of GDP.

Table I.2.9: **No healthy ageing scenario - projected public expenditure on health care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070	
											pps	in %
BE	6.1	6.2	6.2	6.2	6.3	6.3	6.3	6.4	6.4	7.4	1.2	20%
BG	4.5	4.5	4.5	4.6	4.6	4.6	4.7	4.7	4.7	5.1	0.6	13%
CZ	6.4	5.9	6.0	6.0	6.0	6.1	6.1	6.2	6.2	7.2	0.9	13%
DK	7.4	7.0	7.1	7.1	7.2	7.2	7.2	7.2	7.3	8.2	0.8	11%
DE	8.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.8	8.7	0.6	8%
EE	5.1	5.1	5.1	5.1	5.2	5.2	5.2	5.2	5.3	6.1	1.0	19%
IE	4.1	4.0	4.1	4.1	4.2	4.2	4.2	4.3	4.4	5.9	1.8	44%
EL	5.4	5.1	5.2	5.2	5.3	5.3	5.4	5.4	5.5	6.3	0.9	17%
ES	5.9	5.9	5.9	6.0	6.0	6.1	6.1	6.2	6.3	7.5	1.6	27%
FR	8.8	8.4	8.4	8.4	8.5	8.5	8.6	8.6	8.6	9.6	0.8	9%
HR	5.8	5.8	5.8	5.8	5.9	5.9	6.0	6.0	6.0	6.9	1.0	18%
IT	6.3	6.1	5.8	5.9	5.8	5.9	5.9	5.9	6.0	6.8	0.5	8%
CY	7.5	7.5	7.5	7.6	7.6	7.6	7.6	7.7	7.7	8.5	1.0	14%
LV	6.0	5.5	5.3	5.3	5.4	5.4	5.5	5.5	5.5	6.4	0.3	5%
LT	4.3	4.3	4.4	4.4	4.4	4.5	4.5	4.6	4.6	5.5	1.2	28%
LU	3.9	4.0	4.1	4.1	4.1	4.2	4.2	4.2	4.2	5.5	1.6	41%
HU	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.5	4.5	5.3	1.1	25%
MT	5.1	5.0	5.1	5.1	5.1	5.1	5.2	5.2	5.2	7.8	2.7	52%
NL	5.7	5.8	5.8	5.8	5.9	5.9	5.9	6.0	6.0	6.8	1.1	19%
AT	7.8	7.8	7.8	7.8	7.9	7.9	8.0	8.0	8.1	9.5	1.7	21%
PL	4.4	4.4	4.5	4.6	4.6	4.7	4.7	4.8	4.8	5.9	1.5	34%
PT	6.2	5.9	6.0	6.1	6.1	6.1	6.2	6.3	6.3	7.7	1.5	25%
RO	4.4	4.5	4.5	4.6	4.6	4.7	4.7	4.7	4.8	5.6	1.2	26%
SI	7.0	6.9	6.9	7.0	7.0	7.1	7.2	7.2	7.3	8.4	1.4	20%
SK	5.7	6.2	6.2	6.3	6.4	6.4	6.5	6.6	6.6	8.1	2.3	40%
FI	6.2	6.2	6.3	6.3	6.4	6.4	6.5	6.5	6.5	7.4	1.2	19%
SE	7.3	7.0	7.0	7.1	7.1	7.1	7.2	7.2	7.2	8.1	0.8	11%
NO	7.7	7.7	7.8	7.8	7.9	8.0	8.0	8.1	8.1	9.4	1.8	23%
EA	7.1	6.9	6.9	6.9	6.9	6.9	7.0	7.0	7.0	8.0	0.9	13%
EU	6.9	6.7	6.7	6.7	6.7	6.7	6.8	6.8	6.8	7.7	0.8	12%

- Public expenditure for DE includes government and social health insurance schemes but excludes compulsory private health insurance schemes.

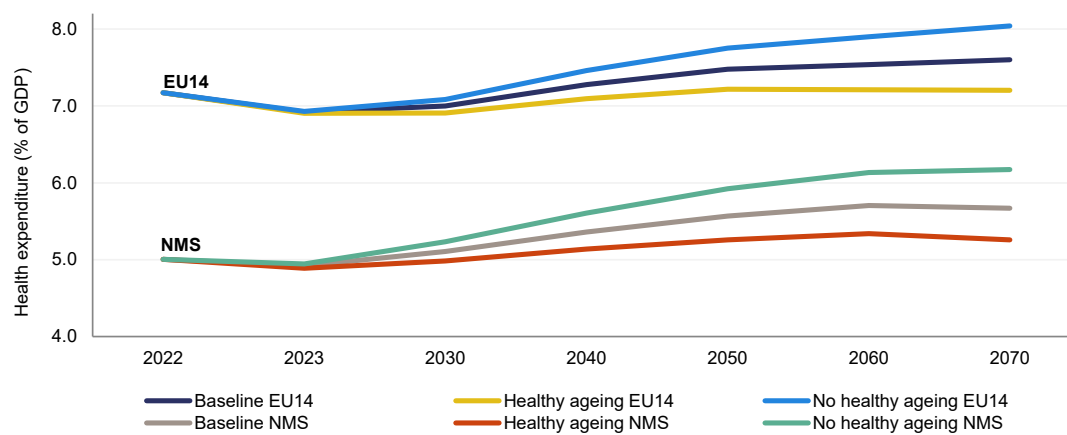
- Public expenditure for SI includes the impact of the reform on integrating the voluntary health insurance scheme into the compulsory social health insurance as of 2022.

Source: European Commission, EPC.

Impact of demographic and health status developments on public health care expenditure

A comparison of the results of selected demographic and health status related scenarios (baseline, healthy ageing and no healthy ageing scenarios) highlights the importance of the on-going demographic transition (ageing of the baby-boom cohorts). Graph I.2.7 shows a comparison of the results of the three scenarios related to the future change of health status and demography. The patterns for all Member States are similar though slightly delayed in time for the New Member States (NMS). The dynamic of the demographic projections leads to a slowdown in the expenditure growth rate after 2050 for EU14 and only after 2060 for NMS.

Graph I.2.7: **Impact of demography and health status - comparison between selected scenarios in EU14 and NMS**



Source: European Commission, EPC.

In fact, the future impact of the demographic trends on health care expenditure relative to GDP depends on three factors: (1) low fertility rates; (2) expected increases in life expectancy; and (3) the demographic transition (ageing of the baby boom cohorts). All these three driving forces are expected to cause relevant changes on the population structure over the projection period in almost all Member States (e.g. increase in the old-age dependency ratio). However, the impact of the demographic transition due to ageing of the baby boom cohorts will have a dominant impact on the population structure over the next 2-3 decades. Only changes in morbidity as displayed by the 'healthy ageing scenario' can mitigate the expected increase during the demographic transition to a certain degree.

Understanding the demographic drivers of health care spending dynamic is essential for policy decisions. This important conceptual distinction not only explains the clear slowdown in the dynamics of health care public expenditure to GDP ratio projected in the last decades of the forecasting period (from 2050 for EU14 MS and from 2060 for NMS), which is linked to the exit period of the baby boom generations. It also helps to explain why the impact of demography on the dynamics of health care expenditure to GDP ratio has not been found particularly significant over the past decades.⁽⁸¹⁾ Indeed, the conceptual distinction of the demographic change drivers can have important policy-making implications, as policy options dealing with the adverse demographic trends on health care expenditure may differ substantially depending on whether they come from a decline in birth rates and increases in longevity or from the ageing of baby boom cohorts.

⁽⁸¹⁾ See Medeiros and Schwierz (2013).

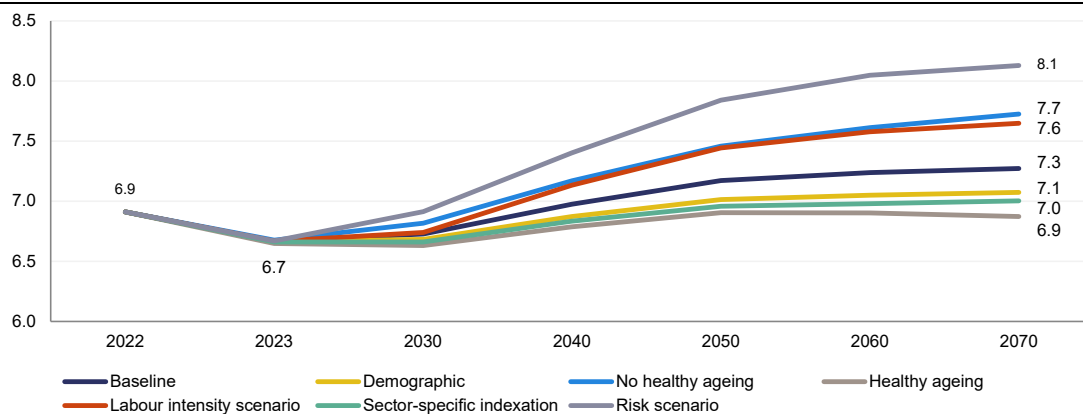
Table I.2.10 provides an overview of the projection results for the baseline and all alternative scenarios. Graph I.2.8 shows the projection results of the baseline and the alternative scenarios for public health care expenditure in the EU.

Table I.2.10: **Overview of scenarios - projected change in public expenditure on health care (2022-2070; pps of GDP)**

	2022 level (% GDP)	Baseline	Risk scenario	Demographic scenario	Sector-specific composite indexation scenario	Labour intensity scenario	Healthy ageing scenario	No healthy ageing scenario	
BE	6.1	0.6	1.3	0.5	0.2	0.7	0.2	1.2	BE
BG	4.5	0.2	1.2	0.0	0.2	0.7	-0.2	0.6	BG
CZ	6.4	0.2	1.2	0.0	-0.1	0.9	-0.3	0.9	CZ
DK	7.4	0.4	1.3	0.2	0.0	0.8	0.1	0.8	DK
DE	8.0	0.1	0.9	0.0	0.1	1.0	-0.3	0.6	DE
EE	5.1	0.6	1.5	0.3	0.4	0.8	0.2	1.0	EE
IE	4.1	1.5	2.5	1.2	0.8	1.9	1.1	1.8	IE
EL	5.4	0.6	1.5	0.3	0.6	0.2	0.2	0.9	EL
ES	5.9	1.2	2.0	1.0	0.5	1.4	0.8	1.6	ES
FR	8.8	0.3	1.1	0.1	0.1	0.4	-0.1	0.8	FR
HR	5.8	0.7	2.0	0.4	0.6	0.6	0.4	1.0	HR
IT	6.3	0.1	0.9	0.0	-0.3	-0.1	-0.2	0.5	IT
CY	7.5	0.8	1.9	0.5	0.8	1.4	0.6	1.0	CY
LV	6.0	-0.3	1.0	-0.5	-0.4	0.3	-0.7	0.3	LV
LT	4.3	0.8	1.8	0.5	0.2	1.7	0.4	1.2	LT
LU	3.9	1.2	1.7	1.1	1.2	1.5	0.9	1.6	LU
HU	4.3	0.5	1.5	0.3	0.1	1.0	0.0	1.1	HU
MT	5.1	2.1	3.2	1.8	1.9	3.7	1.5	2.7	MT
NL	5.7	0.7	1.4	0.6	0.6	0.8	0.4	1.1	NL
AT	7.8	1.1	2.1	0.9	1.2	1.5	0.6	1.7	AT
PL	4.4	1.1	2.2	0.8	0.8	2.2	0.7	1.5	PL
PT	6.2	1.0	2.0	0.8	0.4	1.4	0.5	1.5	PT
RO	4.4	0.7	2.0	0.4	1.0	1.5	0.3	1.2	RO
SI	7.0	0.8	2.2	0.5	0.3	1.3	0.4	1.4	SI
SK	5.7	1.6	2.8	1.3	0.5	2.7	0.8	2.3	SK
FI	6.2	0.6	1.5	0.4	0.4	0.9	0.2	1.2	FI
SE	7.3	0.4	1.3	0.2	0.2	0.3	0.1	0.8	SE
NO	7.7	1.2	2.1	1.0	1.3	1.9	0.8	1.8	NO
EA	7.1	0.4	1.3	0.3	0.2	0.8	0.0	0.9	EA
EU	6.9	0.4	1.2	0.2	0.1	0.7	0.0	0.8	EU

Source: European Commission, EPC.

Graph I.2.8: **Baseline and alternative scenarios - projected public expenditure on health care in the EU (2022-2070; % of GDP)**



Source: European Commission, EPC.

Sensitivity tests

The results of the baseline are further stress tested to changes in key demographic and macroeconomic assumptions. These sensitivity tests are applied consistently to the baseline of all age-related expenditure items in this report.⁽⁸²⁾ As can be seen in Graph I.2.9, the EU health care expenditure projections are more responsive to changes in the demographic assumptions than to the macroeconomic assumptions. Thus, the largest impact on the projected increase in public expenditure on health care as a share of GDP is associated with lower fertility and lower net migration, while higher net migration can mitigate expenditure growth on health care. The country-specific results of the sensitivity tests of the baseline on health care are also shown in Table I.2.11.

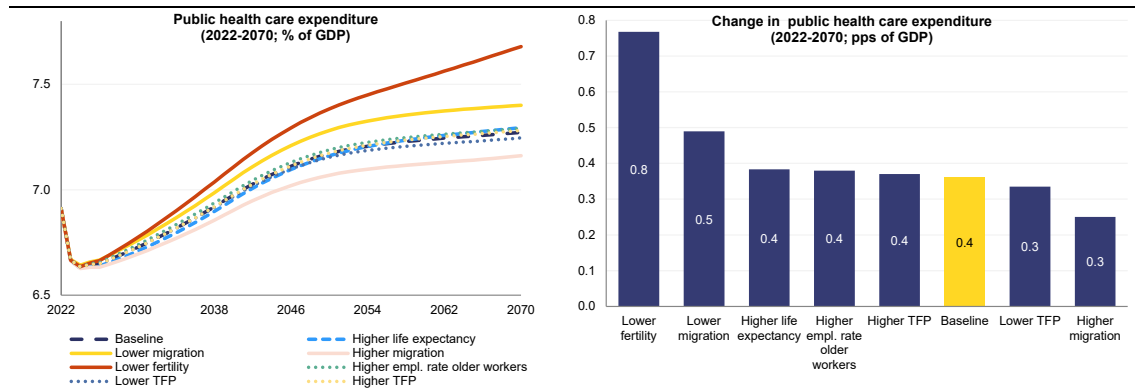
Table I.2.11: **Sensitivity tests of the baseline projections - projected change in public expenditure on health care (2022-2070; pps of GDP)**

	2022 level (% GDP)	Baseline	Higher TFP	Lower TFP	Higher employment rate older workers	Lower fertility	Higher migration	Lower migration	Higher life expectancy	
BE	6.1	0.6	0.6	0.6	0.7	1.1	0.5	0.7	0.6	BE
BG	4.5	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	BG
CZ	6.4	0.2	0.2	0.2	0.3	0.7	0.1	0.4	0.3	CZ
DK	7.4	0.4	0.4	0.4	0.4	0.8	0.3	0.6	0.5	DK
DE	8.0	0.1	0.2	0.1	0.2	0.6	0.0	0.3	0.2	DE
EE	5.1	0.6	0.6	0.5	0.6	0.8	0.5	0.6	0.6	EE
IE	4.1	1.5	1.5	1.4	1.5	1.8	1.3	1.6	1.5	IE
EL	5.4	0.6	0.6	0.5	0.6	0.9	0.4	0.7	0.6	EL
ES	5.9	1.2	1.2	1.2	1.2	1.6	1.0	1.4	1.2	ES
FR	8.8	0.3	0.3	0.3	0.3	0.9	0.2	0.4	0.3	FR
HR	5.8	0.7	0.7	0.6	0.7	1.1	0.6	0.7	0.5	HR
IT	6.3	0.1	0.2	0.1	0.2	0.5	0.0	0.3	0.2	IT
CY	7.5	0.8	0.8	0.8	0.8	1.1	0.7	0.9	0.8	CY
LV	6.0	-0.3	-0.3	-0.3	-0.2	0.1	-0.3	-0.2	-0.2	LV
LT	4.3	0.8	0.8	0.8	0.8	1.0	0.8	0.8	0.8	LT
LU	3.9	1.2	1.3	1.2	1.3	1.5	1.2	1.3	1.2	LU
HU	4.3	0.5	0.5	0.5	0.5	0.8	0.4	0.5	0.5	HU
MT	5.1	2.1	2.1	2.1	2.1	2.4	1.8	2.4	2.1	MT
NL	5.7	0.7	0.7	0.7	0.7	1.0	0.6	0.8	0.8	NL
AT	7.8	1.1	1.1	1.1	1.1	1.6	1.0	1.3	1.2	AT
PL	4.4	1.1	1.1	1.1	1.1	1.4	1.0	1.1	1.1	PL
PT	6.2	1.0	1.0	1.0	1.0	1.5	0.9	1.1	1.1	PT
RO	4.4	0.7	0.7	0.7	0.7	1.0	0.7	0.7	0.8	RO
SI	7.0	0.8	0.8	0.8	0.9	1.3	0.7	1.0	0.9	SI
SK	5.7	1.6	1.6	1.5	1.6	2.1	1.5	1.6	1.6	SK
FI	6.2	0.6	0.6	0.6	0.6	0.9	0.5	0.7	0.6	FI
SE	7.3	0.4	0.4	0.4	0.4	0.8	0.3	0.6	0.4	SE
NO	7.7	1.2	1.2	1.2	1.3	1.7	1.1	1.4	1.2	NO
EA	7.1	0.4	0.5	0.4	0.5	0.9	0.3	0.6	0.5	EA
EU	6.9	0.4	0.4	0.3	0.4	0.8	0.3	0.5	0.4	EU

Source: European Commission, EPC.

⁽⁸²⁾ See Chapter 5 of Part I in [Volume I of the 2024 Ageing Report](#) for detailed explanations.

Graph I.2.9: Sensitivity tests of the baseline projection for the EU (2022-2070; %/pps of GDP)



Source: European Commission, EPC.

2.5. COMPARISON WITH THE 2021 AGEING REPORT

Results of the baseline in this report are compared with the previous edition (the 2021 Ageing Report). The baseline is the point of reference for comparison with the 2021 Ageing Report. Differences across the two rounds of projections may be due to different demographic assumptions (faster/slower population ageing) or changes in the age-gender expenditure profiles. Differences may also stem from a different base-year for starting the projections and updated macroeconomic assumptions resulting in different GDP per capita growth rates, GDP levels for the period under analysis.

A breakdown of the drivers⁽⁸³⁾, quantifying which factors can explain the differences in projected spending between the 2021 and the 2024 projection exercises, is presented in Table I.2.12. The considered drivers next to the already mentioned age-gender cost profiles and projected population are the GDP per capita growth, the base-year and reforms effect, as well as an interaction effect.

At the EU aggregate level, projected health care spending has been revised downward this round compared with the 2021 Ageing Report (-0.4 pps of GDP). Most drivers have contributed to this downward revision: base-year (the 2022 level of public expenditure) and reforms effects diminished projected health care spending in the EU (0.3 pps of GDP lower in the current Ageing Report than in the 2021 projections) mainly due to the impossibility to predict the COVID-19 spending and capital investments in the 2021 Ageing Report projections. The effect of the new *age-cost profiles* has further slightly reduced the spending (by 0.1 pp of GDP). Updated *demographic* projections have no effect on the spending projections on average in the EU, while the updated *GDP per capita growth* projections drove down the EU projection spending (by roughly 0.1 pp of GDP).

⁽⁸³⁾ For the breakdown, departing from the level of expenditure in 2022, each driver's impact is estimated by replacing *ceteris paribus* its current value with the 2021 Ageing Report data. This is done subsequently for the base year and reforms, the age-cost profiles, GDP per capita growth and population data.

Table I.2.12: **Breaking down the difference in spending change (2022-2070) between the 2024 and the 2021 Ageing Reports (pps of GDP)**

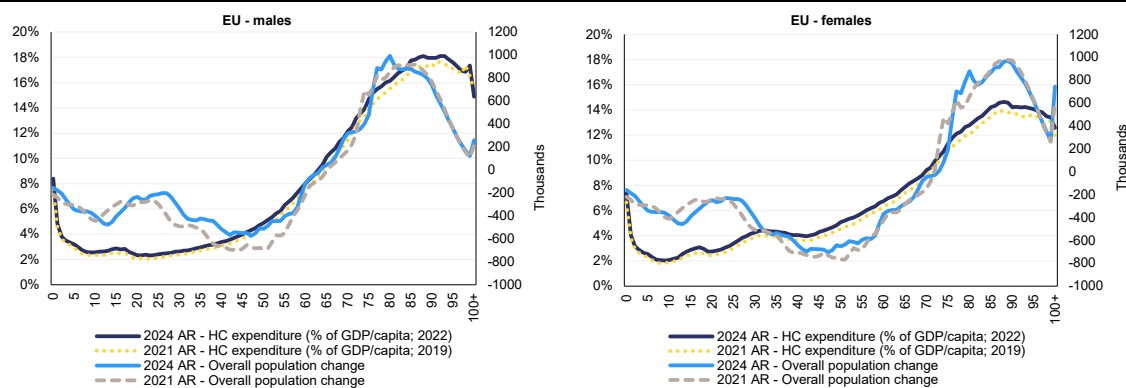
	Difference 2024 AR vs 2021 AR spending growth	Due to:					
		Base-year and reforms effect	Change in age- cost profiles	Change in demographic projections	Change related to GDP growth	Interaction effect ⁽¹⁾	
BE	0.0	0.0	0.0	0.0	0.0	0.0	BE
BG	0.0	0.0	0.0	0.1	0.0	0.0	BG
CZ	-0.6	-0.5	0.0	0.0	-0.1	0.0	CZ
DK	-0.3	-0.3	0.0	0.1	-0.2	0.1	DK
DE	-0.3	-0.3	0.0	0.0	0.0	0.0	DE
EE	-0.2	0.0	-0.1	0.0	-0.2	0.1	EE
IE	0.1	-0.2	0.0	0.2	-0.5	0.5	IE
EL	-0.2	-0.2	0.0	0.1	-0.1	0.0	EL
ES	-0.1	-0.1	0.0	0.1	-0.1	0.0	ES
FR	-0.4	-0.4	0.0	0.1	-0.1	0.0	FR
HR	0.0	-0.2	0.0	-0.1	-0.1	0.3	HR
IT	-0.6	-0.6	0.0	0.0	0.0	0.0	IT
CY	0.5	0.5	-0.2	0.2	-0.2	0.2	CY
LV	-0.5	-0.7	0.3	0.0	0.0	-0.1	LV
LT	0.2	0.0	0.0	0.2	-0.2	0.2	LT
LU	0.3	0.3	0.0	-0.1	-0.2	0.2	LU
HU	-0.3	-0.1	0.0	-0.1	-0.1	0.0	HU
MT	-0.5	-0.4	0.0	-0.1	-0.4	0.3	MT
NL	0.0	0.0	0.0	0.0	-0.1	0.1	NL
AT	0.0	0.0	0.0	0.1	-0.1	0.1	AT
PL	-0.8	-0.6	0.0	-0.1	-0.2	0.1	PL
PT	-0.5	-0.4	0.0	0.0	-0.1	0.1	PT
RO	-0.2	0.0	0.0	-0.2	-0.1	0.1	RO
SI	-0.3	-0.1	-0.1	0.0	-0.2	0.1	SI
SK	-0.3	0.3	-0.3	-0.2	-0.1	0.0	SK
FI	-0.1	0.0	0.0	0.0	-0.1	0.0	FI
SE	-0.3	-0.3	0.0	0.0	-0.1	0.1	SE
NO	0.2	0.1	0.0	0.2	-0.1	0.0	NO
EA	-0.3	-0.3	-0.1	0.1	-0.1	0.1	EA
EU	-0.4	-0.3	-0.1	0.0	-0.1	0.1	EU

The interaction effect is the unexplained difference between the change in all drivers and the sum of the effects of the individual drivers. It is calculated as the difference between column 1 and columns 2, 3, 4 and 5.

Source: European Commission, EPC.

Graph I.2.10 shows the EU age-gender expenditure profiles as percentage of GDP for all ages and their evolution in comparison to the 2021 Ageing Report. In the EU, the cost profiles for males increased slightly for the ages 35 to 95 compared to the 2021 cost profiles. Similarly, the cost profiles for females increased for all ages, but more prominently for the ages between 85 and 95. These changes in the age-cost profiles would have resulted in a larger increase in public expenditure

Graph I.2.10: **Age-gender expenditure profiles and population changes in the 2024 and 2021 Ageing Reports**



Source: European Commission, EPC.

on health care as compared to the 2021 Ageing Report, would they have not been outweighed by the relatively high impact of the temporary spending in the base year estimate and subsequent decrease in age-cost proportions due to revised impact of reforms pointing to the opposite direction for the majority of the countries.

However, there is considerable variation between countries in terms of overall revision and drivers:

- For example, *base-year and reform effects* range from +0.5 pps of GDP in Cyprus to -0.7 pps of GDP in Latvia. The fiscal impact of legislated policy measures has significantly increased the public expenditure projections on health care for Luxembourg and Slovakia.
- Looking at *age-gender costs profiles*, though their aggregate impact is relatively low, a relatively wide range of variation is seen across Member States, from an increase of 0.3 pps of GDP for Latvia, to a decrease of -0.3 pps of GDP for Slovakia. The reason for these changes reflects an improvement in the quality of data used in the construction of the profiles.
- The latest *demographic projections* for Romania and Slovakia worsened the projected health care spending growth, while the changes in projected demographics favourably impact on the projected health care growth for Cyprus, Ireland and Lithuania.
- In terms of revisions to the *GDP growth rates per capita*, the majority of countries seem to be affected by a decrease in the projected health care expenditure growth. Most strongly affected by revisions to GDP projections are Ireland (-0.5 pps of GDP) and Malta (-0.4 pps of GDP).

2.6. CONCLUSIONS

Growing public health care expenditure due to ageing populations in the EU raises concerns about its long-term sustainability. This report takes into account the possibility that alternative scenarios materialise in a context subject to considerable uncertainty. Public health expenditure in EU was at 6.9% of GDP in 2022. ⁽⁸⁴⁾ The baseline projections show that expenditure may grow to 7.3% of GDP in 2070 on accounts of demographic ageing and income growth and to higher levels when other push up factors are accounted for as in other scenarios presented in this report.

The COVID-19 pandemic and its effects on public health care spending added another layer of uncertainty to the health care projections in this report. Base year 2022 contains a significant amount of COVID-19 related expenditure, that are however assumed to be discontinued in the subsequent years. While 12 EU Member States reported increases or savings in public health care spending due to already legislated policy measures, it can be claimed that for most of the EU Member States and Norway, the current projections do not contain any long-term effects from the COVID-19 crisis. Given the necessity to strengthen the resilience of health systems in the aftermath of the pandemic, it is more likely that the projections are rather underestimated for many of the countries.

In effect, the health care projections depend on the extent to which gains in life expectancy are spent in good or bad health and the composition of non-demographic factors accounted for. Consequently, the baseline, with projected public expenditure increase on health care of 0.4 pps of GDP by 2070, may under- or overestimate health spending growth. The alternative scenarios to the baseline, seek to vary the quantifiable determinants of health care expenditure growth in a balanced way to somewhat more or less favourable future developments. The most optimistic results are obtained under the assumption that all future gains in life expectancy will be spent in good health as in the *'healthy ageing scenario'*, for which no increase is expected for the EU as a whole over the projection period. In fact, the more precise interpretation of this result is that the additional cost burden from ageing in the EU over the projection period equals the COVID-19 pandemic related spending in the base year.

In contrast, the highest projection results are expected if past trends in non-demographic factors beyond income elasticity persist as depicted by the *'risk scenario'*. The focus of the *'risk scenario'* is mainly on technological innovations in the health care sector, which have been confirmed in many studies to be crucial in explaining past increases in health care expenditure. In addition, policy decisions to expand access and improve quality to health services especially for older people will inextricably mean that ageing remains at the core of public debates related to health expenditure. The *'risk scenario'* assumes a similar impact of future non-demographic growth on the demand for more and better health care as in the past on the basis of an econometric estimate (i.e. elasticity of 1.5 in the base year that converges to 1 over the projection period). The projected increase for the EU is 1.2 pps of GDP by 2070 for the *'risk scenario'*, which is three times higher than expenditure growth of the baseline.

In conclusion, ageing and non-demographic drivers of health care are expected to continue putting pressure on the long-term sustainability of public finances. All scenarios for almost all Member States point to considerable continuous pressures on public spending from the health care sector – even under conservative assumptions. Therefore, balancing the health care needs of the European populations with spending resources, as well as continuous efforts to increase the efficiency and quality of health service delivery, will continue to be high on the political and economic reform agenda of Member States.

⁽⁸⁴⁾ Public expenditure on health care includes capital formation but excludes long-term care (health).

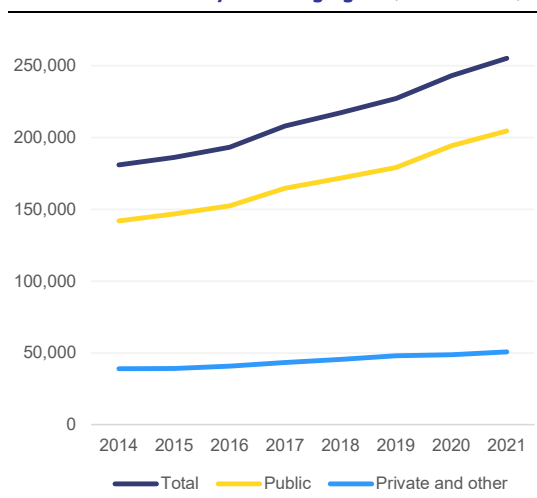
3. LONG-TERM CARE

3.1. INTRODUCTION

The projections for public expenditure on long-term care (LTC) have been run using Commission (DG ECFIN) models on the basis of a methodology and data agreed with the Member States delegates in the EPC-AWG.⁽⁸⁵⁾ The projections cover the period 2022 (the base year) until 2070.

LTC expenditure represents an important and growing amount in nominal terms as well as in share of GDP (Graphs I.3.1 and I.3.2). The public expenditure on long-term care (health)⁽⁸⁶⁾ GDP ratio has been on a slightly upward trend since 2014, moving from 1.2% of GDP in 2014 to 1.4% of GDP in 2021. By contrast, the share of private expenditure on LTC (health) has been fairly stable over the same period. As for health care, future trends are likely to be heavily influenced by population ageing, as well as a range of non-demographic determinants, such as increases in public demand for long-term care as countries become richer, workforce shortages, as well as public health emergencies. Therefore, future developments of public expenditure on LTC are relevant for the long-term sustainability of public finances.

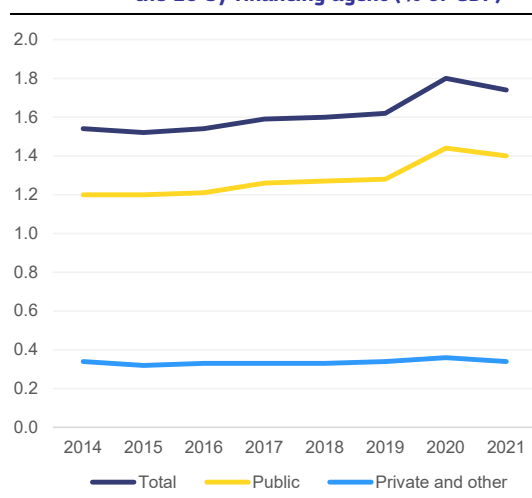
Graph I.3.1: Long-term care (health) expenditure in the EU by financing agent (million euro)



Expenditure based only on the medical care component (HC.3) of System of Health Accounts data.

Source: European Commission, EPC.

Graph I.3.2: Long-term care (health) expenditure in the EU by financing agent (% of GDP)



Expenditure based only on the medical care component (HC.3) of System of Health Accounts data.

Source: European Commission, EPC.

⁽⁸⁵⁾ Data and methodology are briefly summarised in Annex III. The technical methodology for running the long-term expenditure projections is explained in detail in Chapter 3 of Part II in [Volume I of the 2024 Ageing Report](#).

⁽⁸⁶⁾ As explained in Annex III, in the System of Health Accounts expenditure on LTC is split into long term care (health) (HC.3) and long-term care (social) (HC.R.1) component. The second component is only available for 17 Member States and NO and for the purposes of this report the missing social component is estimated for the rest of them. However, for the purposes of Graphs I.3.1 and I.3.2, only HC.3 is used as it is the only element for which there is time series data for every EU Member State.

Long-term care covers a broad range of services. It is usually defined as a set of services required by persons with a reduced degree of functional capacity (whether physical or cognitive) and who, as a consequence of this, are dependent for an extended period of time on help with their Activities of Daily Living (ADL ⁽⁸⁷⁾ (Katz et al., 1963)) and/or their Instrumental Activities of Daily Living (IADL ⁽⁸⁸⁾ (Lawton and Brody, 1969)). These services are often provided in tandem with basic medical services such as nursing care, prevention, rehabilitation or services of palliative care. The definition used in the Ageing Report is in line with that used in European Commission and SPC (2014).

Long-term care can be provided as ‘in-kind’ (home care or institutional care) benefits or via cash benefits. Each care setting is typically provided to a different population with different characteristics. *Home care* refers to long-term care delivered in the private home of the care recipient. It is most appropriate for cases with lower levels of dependency and can slow down the progression of dependency as recipients age. *Institutional care* is delivered in a specialised institution in which the care recipient lives. It is most appropriate for cases with relatively high degrees of dependency with high care needs. In contrast to in-kind care, cash benefits are payments given to care recipients or their families so that they can purchase care directly themselves. EU Member States finance formal LTC as ‘in-kind’ services, i.e. either by paying for or providing directly care for eligible recipients, or via ‘cash benefits’, where recipients are paid money and can purchase services themselves. Cash benefits can also be used to compensate informal carers, such as family members. This report focuses on formal care that is financed, at least in part, by the public sector. Therefore, it does not cover formal care, which is fully privately funded, nor informal care that is provided free of charge by relatives or friends.

The provision of LTC services in EU Member States is fragmented and statistical data is often incomplete. Due to historical and organisational reasons, public financing and organisation of LTC tend to be highly fragmented, with different government authorities being in charge of different care settings. It has also historically been a relatively low priority policy area, which has slowed down the development of statistical data definitions and collections.

Data on overall LTC expenditure and its breakdown by care setting is not available from a single source for every EU Member State. Estimating total public LTC expenditure for the Ageing Report requires combining different international and national-level data sets. Similarly, data on the breakdown of expenditure by care setting is submitted by AWG delegates from national data sources, supplemented with the available ESTAT data collections where necessary.

In terms of coverage of the public LTC systems, a large majority of Member States provide administrative data by care setting (i.e. home care/ institutional care/cash benefits) through their respective AWG delegates for the Ageing Report projections, although overlaps are not always reported. By definition, there is no overlap between the two types of in-kind care, home care and institutional care ⁽⁸⁹⁾, but an overlap between in-kind and cash benefits is possible. For example, a recipient of publicly financed home care in their own home can also receive cash benefits with which they may finance additional care or pay for the co-payments of their home care. However, the data on each type of care tends to be collected and managed separately by different public bodies or government departments and, as a result, people who receive both in-kind and cash benefits may be counted twice if we simply add up the number of recipients of in-kind benefits to the number of recipients of cash benefits. In fact, out of the countries that have cash

⁽⁸⁷⁾ ADL include eating, bathing, washing, dressing, getting in and out of bed, getting to and from the toilet and continence management.

⁽⁸⁸⁾ IADL include shopping, laundry, vacuuming, cooking and performing housework, managing finances and using the telephone.

⁽⁸⁹⁾ Institutional care is provided in a care institution where the recipient resides. Home care is provided in the private home of the care recipient.

benefits, only a minority (DE, ES, LU, FI, SE, BG, HR, SI and SK) have reported data on the extent of the overlaps with in-kind care.

The data collected for the Ageing Report therefore provides an estimate of key characteristics of LTC systems, such as how much public money is spent on LTC, how many dependents are covered and what quantity of benefits is provided to each of them. In this context of incomplete and fragmented publicly available data, this is therefore a critical value added of the Ageing Report projection exercise. This data is then used for analysis of the accessibility, adequacy, quality, coverage and cost-effectiveness of LTC systems in the European Semester, as well as by independent academic researchers. The statistical annex to the report contains projections and base year data for dependents, recipients and expenditure by care setting. Annex III explains the approach used to build this dataset from public data sources as well as the submissions of Ageing Working Group delegates.

Demand for publicly financed LTC is expected to increase over the projection period. In order to project LTC expenditure, two factors need to be taken into account. First, the ageing of the population, if not accompanied by a compensating improvement in health status and reduced disability, leads to an increase in the number of dependent elderly and therefore of LTC needs. Second, LTC systems in EU Member States often rely heavily on informal care provided free of charge by relatives and friends, most often women⁽⁹⁰⁾, of the dependent person. Over time, the availability of this informal care is likely to decline due to societal trends. Finally, as countries become richer, the population becomes more likely to demand better quality and more accessible long-term care.

Anticipating future trends in LTC spending is essential in order to devise appropriate policies, notably to ensure that the increased demand can be met by services that are accessible, of good quality and sustainable over the long term. Improving the efficiency of LTC systems is necessary in order to respond to the increasing need for care. Interventions to achieve this can include improving governance, targeting care at those that need it most and can least afford to pay it, ensuring availability of carers, supporting informal carers, as well as health promotion and rehabilitation.⁽⁹¹⁾

⁽⁹⁰⁾ Women tend to be the main providers of informal LTC. See [Gender Equality Index 2019](#).

⁽⁹¹⁾ See [Joint Report on Health Systems and Long-Term Care systems](#) (2016) for a more in-depth discussion.

3.2. DETERMINANTS OF LONG-TERM CARE EXPENDITURE

3.2.1. Overview

Public expenditure on LTC is dependent on several factors that affect both the demand and supply of these services. They include the dependency status of the population (itself driven by social, epidemiological and demographic factors), the model of LTC provision (organisation and financing of the system, which shape the mix between publicly financed formal care (the focus of this report), privately-financed formal care and informal care) and availability of human resources. Economic growth also plays a role, as does the progress in medical science and the development and use of new technologies.

3.2.2. Demographic structure of the population

The ageing of the population is associated with expected increases in dependency. This is the result of the demographic transition from ageing baby boom cohorts, as well as of the increase in life expectancy and low fertility rates. The increasing number of old and very old people is likely to lead to an increase in the number of people who will need and receive LTC. The prevalence of physical or mental disability increases with age (especially with very old age groups, 80+) and, in many cases, can lead to dependency, as shown on Graph I.3.3. The impact of life expectancy changes on the link between ageing and dependency is explored further in the next section.

The relationship between unit costs of long-term care and age is not straightforward and, as a result, population ageing affects LTC spending mainly through increases in the number of dependent people. LTC costs per recipient have a complex interaction with age. First, the dependent population can be split into the young disabled population (a minority, but in some cases with greater dependency and high costs per head) and the elderly population (the majority, with typically an increase in dependency as age increases), with different care needs. Therefore, the cost of care does not necessarily increase linearly with age across the whole population. Then, the progression in dependency for old age recipients may, in some cases, not be reflected in an increase in the average age-cost profiles for a specific benefit. Rather it may instead be associated with a shift between different care settings (for example from home care to institutional care). Finally, the institutional set-up of LTC systems also has a strong impact on age-cost profiles. LTC systems with very limited coverage generally focus only on those people who have the greatest need, for instance those who are young and heavily disabled. Therefore their age-cost profile may show very high cost for the young and very low cost for the elderly, as the system provides very little LTC for the elderly. In contrast countries with comprehensive LTC systems will provide coverage for both the young disabled and the elderly and may show an age-cost profile that relates more closely to the relative cost of providing care for each age-group. In conclusion, LTC age-cost profiles do not necessarily increase with age and are therefore not the main way in which ageing affects expenditure on long-term care.

3.2.3. Dependency rates - developments in health status

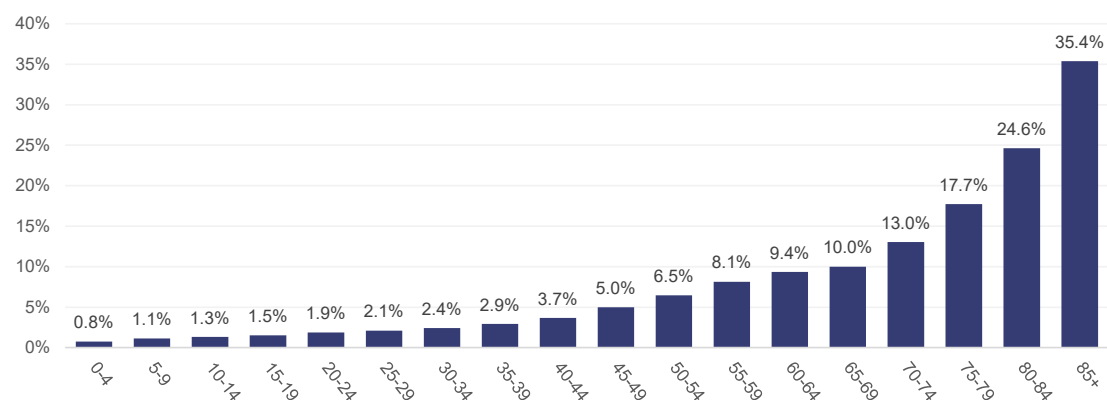
The need for long-term care does not arise from ageing itself, but it is instead a consequence of disability, sickness or frailty⁽⁹²⁾ causing dependency on others. All else being equal, the number of dependent people is expected to increase as the number of elderly people rises. As shown in the previous section, dependency rates are higher for older age groups. Therefore, if dependency rates for each age group stay constant, the number of people with dependency issues increases with the ageing of the population.

⁽⁹²⁾ For an example of the link between frailty and need for LTC, see Campitelli et al. (2016).

It should also be noted that dependency does not equate disability. Disability relates to a functional impairment of an individual. Dependency relates instead to the inability to perform ADLs and IADLs and therefore requiring some external assistance. Disability is the cause of dependency, but not every form of disability leads to dependency. There are many people with some form of disability who can lead completely independent lives without the need for care services. Legislation to make society more inclusive can increase the degree to which this is possible.

For the purpose of these projections, EU-SILC data on “severe self-perceived longstanding limitation in activities because of health problems [for at least the last 6 months]” is used to estimate dependency at different ages. This indicator is considered an adequate measure of dependency and is available for all EU Member States and Norway for people aged 15+ and by age group. To reduce the volatility of the data, a four-year average is used and periods affected by structural breaks are excluded. In addition, data from the ad-hoc 2017 EU-SILC survey focusing on children (featuring an adapted GALI indicator for children and babies, see Eurostat (2017) for more details) is used to supplement this data for age-groups below 16. For those countries that were not covered by this survey (the Netherlands, Denmark, Slovenia, Finland, Sweden and Norway), the same methodology as in the 2021 Ageing Report has been followed and the four-year average dependency rate for the 16-19 age-group has been applied to this younger age-group. As the EU-SILC survey is only sent to private homes, it does not include institutional care recipients. To correct this, in the model the number of care recipients in care homes reported by Ageing Working delegates on the basis of national administrative data are added to the figures shown in Graph I.3.3 to provide a more accurate estimate of the dependent population. The focus on severe disabilities is a way of reducing noise due to this being a self-reported indicator, although it does mean that coverage can occasionally go above 100% for countries that have comprehensive systems that also cover less severe forms of dependency.

Graph I.3.3: Median dependency rates by age group for EU, based on EU-SILC



The dependency rates are based on EU-SILC data on “self-perceived longstanding severe limitation in activities because of health problems [for at least the last 6 months]”. 2016-2019 (base year) average, 2017 values used for ages below 16 where available.

Source: European Commission, EPC.

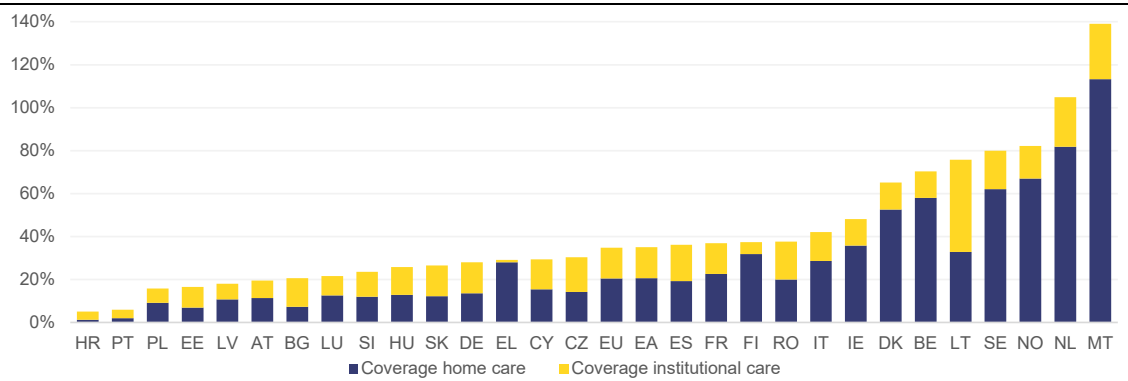
Life expectancy developments affect the extent to which ageing leads to increased dependency in the population. Ageing of the population is the result of both reduced birth rates and increased longevity (i.e. increased life expectancy). If the extension of longevity leads to a delay in the onset of disability, it can be associated with reduced dependency rates for each age group. If however, the extension of longevity is achieved by extending the period spent in disability, it will lead to an increase in disability and dependency. Recent empirical research has not come to a clear conclusion

regarding this question. Some evidence suggests that specific causes of disability may become more prominent with increasing age.⁽⁹³⁾ In contrast, some studies have noted that the increase of life expectancy can lead to a postponement in the incidence of severe disability, leading to a reduction in the prevalence of severe disability for some age-groups.⁽⁹⁴⁾ Finally, these overall trends may mask differential impacts according to socio-economic gradients. A recent paper finds that the extent to which additional years of life result in increased or reduced disability can depend on education levels.⁽⁹⁵⁾

3.2.4. Patterns of long-term care provision

Whether a country relies mainly on formal care or informal care and the setting in which care is provided are determinants of public expenditure on LTC. All EU Member States are involved in either the public provision and/or financing of formal LTC services (delivered by care assistants who are paid under some form of employment contract), although the degree to which this is the case varies across EU Member States.

Graph I.3.4: Coverage of in-kind care by country (% of the estimated dependent population), base year



In-kind care includes home care and institutional care.

Source: European Commission, EPC.

The breadth of coverage of total in-kind care and between home and institutional care varies largely across EU countries. Given the potential overlaps between cash benefits and in-kind benefits (institutional care and home care), the model considers the coverage of each care setting separately. Graphs I.3.4 and I.3.5 show the coverage for in-kind care (institutional care + home care) and cash benefits respectively.⁽⁹⁶⁾ As explained above, the estimated coverage of the dependent population by in-kind care is very high for several EU Member States and even above 100% for Malta and the Netherlands, due to the fact that very comprehensive LTC systems cover not only severe disability but also less severe forms of disability.

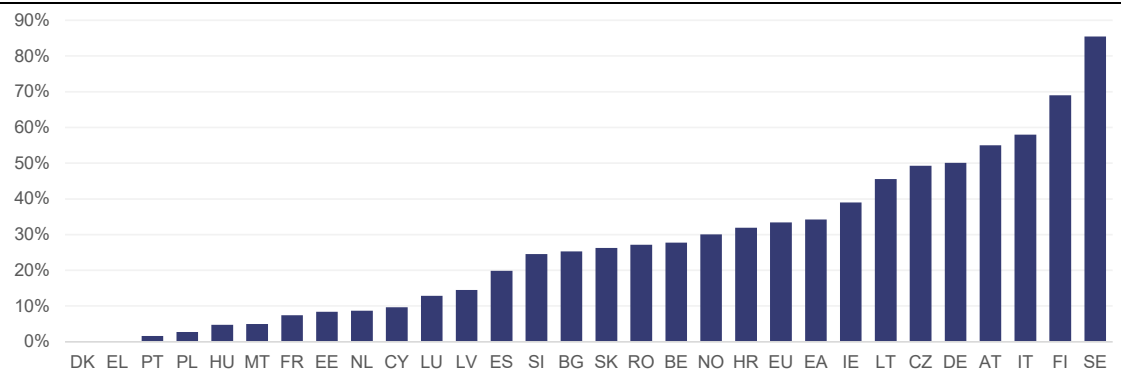
⁽⁹³⁾ Heger and Kolodziej (2016).

⁽⁹⁴⁾ Lindgren (2016).

⁽⁹⁵⁾ Sundberg et al. (2023).

⁽⁹⁶⁾ If we divide the number of recipients for each care setting as a proportion of the dependent population estimated by using EU-SILC, adjusted to include institutional care recipients (as described in the previous section), we can calculate the coverage of the public LTC system.

Graph I.3.5: Coverage of cash benefits by country (% of the dependent population), base year



Source: European Commission, EPC.

The above discussion focuses on coverage of LTC that is at least partly publicly funded. However, a large proportion of LTC in the EU is actually provided by informal carers such as family members and friends – mainly spouses and children. Informal care is in principle not paid and there is no formalised contract, even though an informal caregiver may receive income transfers and, possibly, some payments from the person receiving care. Although it substitutes publicly funded LTC, it should be noted that there are ‘opportunity costs’ derived from informal care: the impact on labour market and productivity, as well as on carers’ health status itself.

3.2.5. Care supply – availability of human resources

This report makes the same technical assumption as in the 2021 Ageing Report as regards the definition of dependent people. In the 2024 Ageing Report, as in previous reports, it is assumed that all those receiving home care, institutional care or cash benefits are dependent and that all persons deemed dependent receive either home care, institutional care, cash benefits or informal care.

Since labour is the main input when providing LTC⁽⁹⁷⁾, we focus on the workforce as a key factor in the projections. The formal care workforce is often associated with low pay and demanding working conditions, which leads to relatively high staff turnover and staff shortages in some countries. In the future, population ageing will mean there will be fewer people of working age and education trends may lead to a decline in the size of the low-skilled workforce (which may be relevant for some home-care services), potentially increasing staff shortages. This workforce scarcity, combined with higher demand for formal provision of LTC may increase wages in the sector. While it is possible that the scarcity of the workforce may also constrain the supply of care, the increase in wages in the sector means that the lack of workers is still likely to be a driver of expenditure. As the cost of LTC is dominated by labour costs, changes in wage rates of LTC workers are likely to strongly influence future costs of LTC.

Member States with more comprehensive LTC service provision have attempted to deal with staff shortages by developing policies to attract migrants. Differences in pay and working conditions among Member States influence the inflow of migrant workers, who are mainly female. However, while this can help mitigate short-term shortages, the extent to which migrants may compensate for staff shortages in the longer term is unclear (particularly if high turnover persists), while they may generate staff shortages elsewhere.

⁽⁹⁷⁾ This may be challenged by digitalisation in the future, although its relatively low current use in the field of LTC makes it difficult to make assumptions about future trends.

Another important factor considered in the projections is developments concerning informal care. The latter influence (formal) long-term care projections, through substitution effects. For those dependents that do not receive (publicly financed) formal care (in kind or in cash), it is assumed that they receive informal care or privately funded care. Two dimensions should be taken into account in this respect: the future availability of potential informal carers and their propensity to provide care.

- *Availability of potential informal caregivers:* The future availability of potential informal carers is determined amongst other factors by the distance between care recipients and their relatives (i.e. co-residence or geographical proximity), as well as the future numbers of people who will be living with their spouse (the spouse tends to be the prime provider of long-term care in many cases) or other potential carers.
- *Propensity to provide care:* The propensity to provide informal care will also be affected by labour market participation (particularly that of women, who tend to be the main carers at present), as well as the ability/willingness of potential carers to provide care.

Following current trends, increasing labour participation by women and new family structures may mean that providing informal care may become more difficult. Similarly, the ability to provide care is likely to decrease due to population ageing as spouses, children and relatives themselves become older and frailer. It should be noted that providing care might have negative consequences for the carer in cases of intensive caring: there may be a negative impact on the carer's health status, reducing their ability to care and to participate in the labour market. ⁽⁹⁸⁾

In summary, the current institutional arrangements for the provision and financing of LTC by the public sector may be under strong pressure in the future, if the availability of informal carers and their propensity to provide care diminish. The impact is nevertheless uncertain and depends on whether informal and home care are complements or substitutes. In case of complementarity, a decreasing supply of informal carers will reduce the demand for home care, increasing the demand for residential care. This is because a lack of informal carers will force dependents to move to institutional care. If informal care is a substitute for formal home care, a shortage of informal carers could lead to an increase in demand for home care. Recent evidence from a group of EU countries suggests that informal care and home care are indeed substitutes, although the extent to which this is the case depends on the country. ⁽⁹⁹⁾

3.2.6. Accounting for country-specific policies

LTC policy reforms may change the projected path of LTC expenditure through a variety of channels. While some of the reforms may have a fiscal impact in the short term already, such as wage increases of care personnel or budget caps, others may have a long-term impact, such as changing care protocols or the eligibility criteria to receive LTC benefits. The impact of these reforms on future LTC expenditure is explicitly modelled in this projection exercise and discussed further in Section 3.3.3. In addition, institutional specificities in France, Germany and Slovenia are an important determinant for projecting LTC expenditure. Their implementation in the projections is described in Section 3.3.4.

⁽⁹⁸⁾ See OECD (2011).

⁽⁹⁹⁾ Bremer P. et al. (2017).

3.3. OVERVIEW OF THE PROJECTION METHODOLOGY

3.3.1. The model

The macro-simulation model used in this projection exercise captures the effect of demographic and non-demographic variables on future public expenditure on long-term care. The model includes many of the described drivers of care, based on data availability considerations.⁽¹⁰⁰⁾ In the 2024 Ageing Report, as in previous editions, baseline projections are run and complemented by a series of alternative scenarios and sensitivity tests, given inherent uncertainty surrounding long-term projections. This sensitivity analysis considers changes to the key drivers of LTC spending, in particular:

- Population projection: the future number of elderly people (through changes in the population projections used);
- Dependency ratio: the future number of dependent elderly people (changes to the prevalence rates of dependency);
- Age-related expenditure profiles: the share/relevance of formal provision (assuming a given shift in demand or exogenous changes in the availability of informal carers); the share/relevance of home care and institutional care within the formal care system;
- Unit cost development: the unit costs of care;
- Elasticity of demand: As countries become richer, they are likely to spend a larger proportion of their GDP on long-term care, in particular those that do not have a comprehensive long-term care system.

This macro-simulation model splits the whole population into groups that are assigned certain characteristics (e.g. age, gender, per capita expenditure, health status, type of care/support). Changes in the (relative) size or features of these groups lead to expenditure changes over time. A schematic presentation of the methodology can be found in Graph I.3.6. A more detailed description can be found in Annex III.

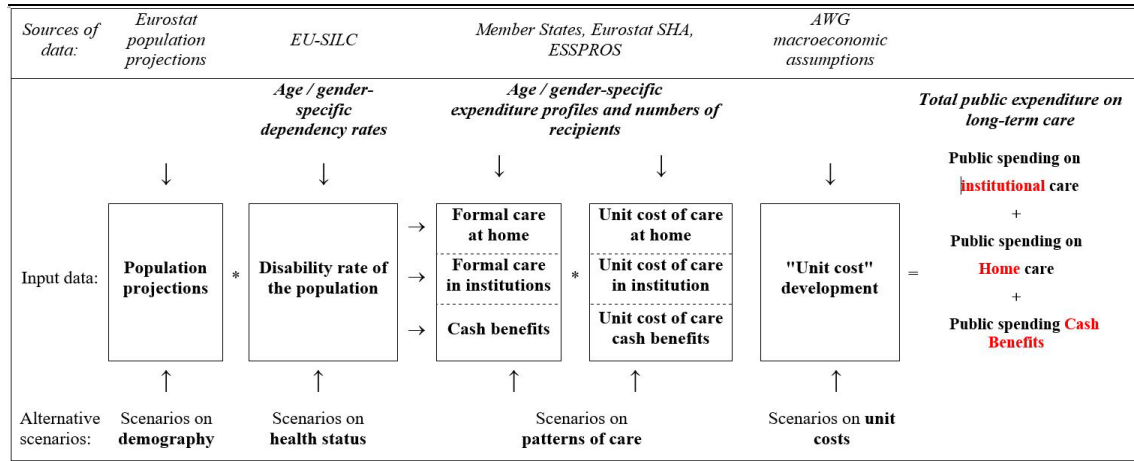
As in past exercises, the baseline⁽¹⁰¹⁾ rests on a plausible set of assumptions regarding underlying variables and is the main output of the projection exercise. The baseline relies on a no-policy change assumption, meaning that only legislated measures are taken into account, while future changes in government policy are not considered.⁽¹⁰²⁾ In other words, any potential future institutional or legal changes to the financing and organisation of long-term care systems are not reflected in the projections, except for policies which (i) are specified in sufficient detail and (ii) have been adopted or at least credibly announced.

⁽¹⁰⁰⁾ The methodology for running the long-term expenditure projections is explained in detail in Chapter 3 of Part II in [Volume I of the 2024 Ageing Report](#).

⁽¹⁰¹⁾ Referred to as 'AWG reference scenario' in previous reports.

⁽¹⁰²⁾ It is implicitly assumed that the eligibility requirements do not change, as the proportion of persons covered is kept constant. Therefore, the supply of LTC will follow any related changes in demand.

Graph I.3.6: **Schematic presentation of the projection methodology**



- As in 2021, the projections need to be viewed in the context of the overall projection exercise. Consequently, the common elements of all scenarios will be the population projections provided by Eurostat and the baseline assumptions on labour force and macroeconomic variables agreed by the Commission and the EPC-AWG. The age and gender-specific per capita public expenditure (on long-term care) profiles are provided by Member States. They are applied to the demographic projections provided by Eurostat to calculate nominal spending on long-term care.

- This schematic representation shows the methodology for projecting long-term care benefits. Total public expenditure on long-term care is the sum of public expenditure on long-term care in-kind benefits plus public expenditure on long-term care cash benefits.

Source: European Commission, EPC.

Table I.3.1: **Overview of 2024 Ageing Report scenarios for long-term care**

	Baseline*	No healthy ageing scenario	Healthy ageing scenario	Coverage convergence scenario	Cost convergence scenario	Risk scenario
	I	II	III	IV	V	VI
Population projection	Eurostat population projections	Eurostat population projections	Eurostat population projections	Eurostat population projections	Eurostat population projections	Eurostat population projections
Dependency status	Half of projected gains in life expectancy are spent without disability	2019-2021 average dependency rates held constant over projection period	All projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability	Half of projected gains in life expectancy are spent without disability
Age-related expenditure profiles	2022 cost profiles	2022 cost profiles	2022 cost profiles	2022 cost profiles	Cost profiles per Member State converge upwards to the EU average by 2070	Cost profiles per Member State converge upwards to the EU average by 2070
Policy setting / Care mix	Probability of receiving each type of care held constant at 2022 level	Probability of receiving each type of care held constant at 2022 level	Probability of receiving each type of care held constant at 2022 level	Probability of receiving in-kind formal care converging until 2070 upwards to the EU average	Probability of receiving each type of care held constant at 2022 level	Probability of receiving in-kind formal care converging until 2070 upwards to the EU average
Unit cost development	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country-specific indexation assumptions**	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country-specific indexation assumptions**	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country-specific indexation assumptions**	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country-specific indexation assumptions**	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country-specific indexation assumptions**	In-kind: GDP per hours worked; cash benefits: GDP per capita. Country-specific indexation assumptions**
Elasticity of demand	1 for top expenditure quartile MS in 2022; for rest 1.1 in 2022, converging to 1 by 2070	1 for top expenditure quartile MS in 2022; for rest 1.1 in 2022, converging to 1 by 2070	1 for top expenditure quartile MS in 2022; for rest 1.1 in 2022, converging to 1 by 2070	1 for top expenditure quartile MS in 2022; for rest 1.1 in 2022, converging to 1 by 2070	1 for top expenditure quartile MS in 2022; for rest 1.1 in 2022, converging to 1 by 2070	1 for top expenditure quartile MS in 2022; for rest 1.1 in 2022, converging to 1 by 2070

*Called 'AWG reference scenario' in previous reports.

**Unit cost development for the baseline also includes different country-specific assumptions for France, Germany and Slovenia.

Source: European Commission, EPC.

3.3.2. Description of the baseline and the alternative scenarios

The scenarios for the Ageing Report 2024 are centred around the baseline. Alternative scenarios then explore the impact of changing different key assumptions on the baseline. Finally, in line with all age-related expenditure items in the Ageing Reports, key demographic and macroeconomic assumptions are also stress-tested. The scenarios for the Ageing Report 2024 are described below.

This is a departure from previous Ageing Reports, in which the baseline and risk scenario were calculated according to the same methodology, but the other scenarios were variations of the ‘base case scenario’ instead of the baseline. The new methodology increases the transparency of the long-term care projections and the consistency with the approach used for other expenditure items (e.g. pension and education spending).

3.3.2.1. The baseline

The baseline is the central scenario and is used for EU fiscal surveillance and the European Semester. The main assumptions are described below:

- *Population projections:* this scenario uses the baseline population projections of Eurostat.
- *Dependency ratio:* It assumes that half of the projected longevity gains up to 2070 would be spent in good health and free of disability/dependency.
- *Age-related expenditure profiles:* age-cost profiles are kept constant over the projection period.
- *Public coverage:* The shares of the older disabled population who receive either informal care, cash benefits, formal care at home or institutional care that is provided or financed by the public sector are kept constant over the projection period.
- *Unit cost development:* Unit costs are indexed according to GDP per hour worked in case of LTC services and to GDP per capita in case of cash benefits. Indeed, there exists a current imbalance of care mix, with a relative deficit of formal care provision. Furthermore, this sector is highly labour-intensive and productivity gains due to technology are difficult to achieve. Therefore, public expenditure on long-term care is expected to be rather more supply- than demand-driven. For that reason, GDP per worker (which is also assumed to reflect wage evolution in all sectors, including in the care sector), rather than GDP per capita was chosen as the main driver of unit costs. Country-specific indexation assumptions were used for Member States with specific legislation on long-term care expenditure, i.e. Germany, France and Slovenia.
- *Elasticity of demand:* As countries become richer, they are likely to spend a larger proportion of their GDP on long-term care (OECD (2011)). This is modelled in the baseline by including the assumption that income elasticity starts at 1.1 in 2022, falling to 1 by the end of the projection period for those countries that were below the first quartile in terms of expenditure on LTC as a proportion of GDP.

3.3.2.2. No healthy ageing scenario

The ‘no healthy ageing scenario’ is identical to the baseline with the exception of its assumption on the dependency status. It assumes that the disability status of the population of a certain age will not improve despite increases in life expectancy. Although life expectancy is expected to improve, this scenario assumes that the proportion of any specific age-group that are disabled will be the same in 2022 as in 2070. This means, for example, that even if life expectancy increases by

two years by 2070, the proportion of 80-year-olds that are disabled will be the same in 2022 as in 2070.

Those constant shares are then applied to the projected changes in the dependent population. ⁽¹⁰³⁾ Since the prevalence of dependency is kept constant over the projection period, the dependent population evolves precisely in line with the total elderly population. This implies that, in practice, none of the gains in life expectancy translate into an improvement of health. Arguably, it is a pessimistic scenario with respect to disability status, since it assumes that average lifetime consumption of LTC services will increase over time. It is otherwise identical to the baseline.

3.3.2.3. *Healthy ageing scenario*

This scenario assumes different trends in the dependency ratio compared with the baseline. Inspired by the so-called '*dynamic equilibrium hypothesis*', it is analogous to the healthy ageing scenario performed in the framework of health care expenditure projections. The age-gender specific dependency rates are shifted in line with changes in life expectancy (e.g. if life expectancy for 80-year-old women has increased by 2 years by year 2070, then the proportion of 80-year-old women with dependency in 2070 will be that of 78-year-old women today). This results in a gradual decrease over time in the prevalence of disability for each age cohort. Lower dependency rates translate in lower demand for and therefore lower expenditure on LTC services for each age group. It is otherwise identical to the baseline.

3.3.2.4. *Coverage convergence scenario*

This scenario illustrates the hypothesis that pressure for increased public provision and financing of LTC services may grow substantially in the coming decades, leading to an expansion in coverage. It assumes that economic convergence across Member States, the exchange of best practices and growing expectations of the populations, will drive an expansion of publicly financed formal care provision into groups of population that have not been covered by the public programmes so far. This is most relevant for Member States where the bulk of LTC is currently provided informally. This is modelled as convergence in the provision of in-kind formal care. This scenario should be considered as a *policy-change scenario*, as it assumes a considerable shift in the current LTC provision policy, while aiming to take into account the high diversity of country-specific current care mix. It is otherwise identical to the baseline.

3.3.2.5. *Cost convergence scenario*

This scenario explores the impact of increased pressure for LTC services on the unit costs of care. Similarly to the level of coverage, there is a great deal of variation in the unit costs of care across Member States, which are a proxy for the variations in the quantity and quality of care provided to recipients. The '*cost convergence scenario*' is meant to capture the possible effect of a convergence in real living standards (which emerges from the macroeconomic assumptions) on LTC spending. It is otherwise identical to the baseline.

3.3.2.6. *Risk scenario*

The risk scenario combines the coverage and cost convergence scenarios. It is intended to capture the impact of cost drivers additional to demography and health status, i.e. the likely effect on LTC expenditure of a convergence in real living standards.

⁽¹⁰³⁾ Of all ages, although the main contrast with the baseline will be in the elderly age-groups where dependency rates are highest.

Table I.3.2: **Reforms and other legislated measures submitted by Member States**

Bulgaria	Expansion of LTC services
Czechia	COVID measures, building residential care homes, buying low-emissions vehicles for carers and increasing capacity of home care
Germany	Reduction in institutional care co-payments
Estonia	Institutional care salary increases to improve recruitment
France	Compensation for inflation and improvement of in-kind benefits
Croatia	Measures to reduce impact of energy price increases and other LTC system reforms
Italy	Constant nominal expenditure path (2023-2026)
Portugal	Expansion of LTC services
Slovenia	New Personal Assistance Act, new long-term care act one-off COVID measures and salary increases
Slovakia	Increase in cash benefits

Source: European Commission, EPC.

3.3.3. Country-specific policy reforms

A number of policy measures in LTC have been adopted over the past years, with a recent acceleration linked to the COVID-19 crisis. In the past years, many countries have undertaken policy reforms in LTC to improve their performance in terms of fiscal sustainability, accessibility and/or quality. Additionally, the COVID-19 crisis has had a significant impact on the LTC sector since 2020. This has required additional investment, for instance to provide Personal Protective Equipment (PPE) to staff, testing of staff and carers, increases in wages and capacity, etc. The impact of the COVID-19 crisis on LTC spending, whether one-off or permanent, is reflected in the projections where possible. It should however be noted that these measures are fewer and typically relatively smaller than for health care, partly because some of these measures may have been financed from health care rather than LTC budgets.

Some Member States have submitted LTC reforms that take place over the projection period. These include, in several countries, an increase in salaries to compensate workers for inflation or energy prices or to improve recruitment due to staff shortages. Several countries (including Bulgaria, Czechia, Germany, France, Portugal, Slovenia and Slovakia) are also planning improvements in the coverage and quality of care. And, finally, Italy has legislated a constant nominal growth path for public long-term care expenditure until 2026.

Table I.3.2 sets out the approved reforms reported by Member States for this report. It shows that 10 countries provided information regarding the budgetary effects of policy reforms. In all cases, the impact of reforms was modelled as a percentage change of long-term care expenditure relative to the base year of projections, differentiated for the areas of institutional care, home care and cash benefits where applicable. One-off expenditures that only apply during a brief period of time (as is the case for many of the COVID-19 reforms) therefore affect the path of expenditure projection for that country in the years in which the measures apply but not the overall long-term projections.

3.3.4. Accounting for institutional specificities

Institutional specificities have been considered for some countries, notably to reflect the presence of mandatory substitutional private health and long-term care insurance. As described in the health care chapter, in Germany, 89% of the population was insured by Social Health Insurance schemes (SHI) in 2022, with the remainder insured by mandatory substitutional Private Health Insurance schemes (PHI). To account for the existence of a mandatory substitutional PHI, the population projections used in the model are adjusted downwards to equal the number of people

insured in SHI in the base year of projections. Similarly, public expenditure projections for Germany include government and social health insurance schemes expenditure but exclude compulsory private health insurance schemes expenditure.

In addition, it is assumed that ageing will be less pronounced in the projected SHI part of the population than the respective PHI part of it. This approach, applied also in previous Ageing Reports, is based on the younger present age structure of PHI and the current legislative set-up, which heavily restricts opting out from private health insurance to social health insurance. This implies a reduced burden of ageing within the SHI scheme in future. Furthermore, it is assumed that the share of the privately insured among the total population will increase faster than the share of the insured under the public insurance scheme, adding to the estimated reduced ageing effect of the population covered by SHI. Together, these assumptions imply a reduction of the population figures to roughly 89% in 2022 to account only for those covered by SHI and a further relative reduction in older age groups by 2070.

Additionally, several EU MS have specific legislation to regulate the indexation of LTC benefits. The impact of country-specific legislation has been taken into account in the Ageing Report baseline.

- *In the case of Germany*, this relates to the impact of German legislation on the ceiling of LTC expenditure. According to the standard assumptions (explained below), unit costs are indexed to GDP per hours worked or GDP per capita. Under current rules in Germany, both in-kind and cash long-term care benefits are indexed to prices. With contribution rates indexed by inflation, LTC expenditure shares would be almost unchanged until 2070. The difference between the amounts financed by the State and the costs of long-term care are either recovered by private insurance or are paid by the beneficiaries themselves. The German government is required by law to check every three years the need and extent of adjusting LTC benefits according to inflation.
- *For France*, this relates to the fact that the majority of cash benefits are legislated to be indexed according to prices.
- *For Slovenia*, this relates to the fact that all cash benefits are legislated to be indexed according to prices.

Although this legislation binds these states to these indexation methodologies, there are limits to the extent to which it can be taken into account in the projection. In an extreme case, indexing all benefits to prices for the duration of the projection period could lead to a noticeable reduction in long-term care expenditure as a share of GDP and in per capita terms compared to the standard assumptions. This would represent a relatively extreme scenario in the sense that it would represent a significant reduction in the public financing of long-term care.

To account for this legislation and the financial precaution principle while preserving the realism of the projections, the following assumptions are used for the baseline projections in the 2024 Ageing Report:

- *For Germany*, 2/3 of in-kind benefit expenditure are indexed in line with the Ageing Report standard assumptions and the remaining 1/3 in line with prices. For cash benefits, 2/3 of expenditure are indexed in line with prices and the remaining 1/3 in line with Ageing Report standard assumptions. This applies for the entire projection period.
- *For France*, price indexation is applied to cash benefit expenditure, with the rest being indexed according to standard assumptions. This applies for the entire projection period.

- For Slovenia, price indexation is applied to cash benefit expenditure, with the rest being indexed according to standard assumptions. This applies for the first 10 years of the projection.

Table I.3.3 shows the quantified impact of these indexation assumptions. It compares the 2024 baseline projections using these country-specific indexation assumptions with alternative projections using standard indexation assumptions.

Table I.3.3: **Projections with country-specific indexation vs standard indexation**

	2022	2070	Change in 2022-2070	
			pps	in %
DE (standard)	1.9	3.0	1.1	60%
DE AR 2024	1.9	2.3	0.5	25%
FR (standard)	1.9	2.6	0.8	40%
FR AR 2024	1.9	2.6	0.7	38%
SI (standard)	1.0	2.0	1.0	100%
SI AR 2024	1.0	2.0	1.0	94%

Source: European Commission, EPC.

3.4. PROJECTION RESULTS

3.4.1. Baseline projections

The EU public expenditure on LTC is projected to increase by 0.8 pps of GDP, from 1.7% of GDP in 2022 to 2.6% of GDP in 2070 in the baseline (see Table I.3.4 and Graph I.3.7). This is equivalent to an increase of expenditure by 48%. The variation in projected expenditures ranges from a stable overall pattern in Greece to an increase of 3.3 pps of GDP in Denmark. Although, as a proportion of GDP, the biggest projected increases tend to be observed in Member States that have the highest levels of expenditure in 2022, the biggest proportional increases are expected in Malta (due mainly to the interaction of fast population ageing and its steeply increasing dependency as people age) and Estonia (mainly due to expenditure-increasing policy reforms to tackle staff shortages in institutional care).

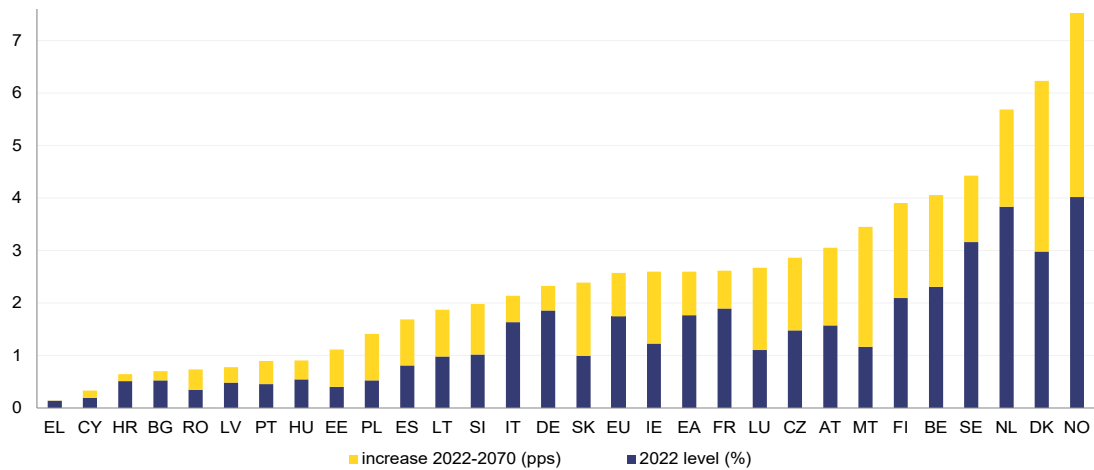
Table I.3.4: Baseline - projected public expenditure on long-term care (2022-2070; % of GDP)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.5	4.1	1.7	76%	BE
BG	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.2	33%	BG
CZ	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	2.9	1.4	93%	CZ
DK	3.0	3.1	3.1	3.2	3.3	3.5	3.7	3.8	3.9	6.2	3.3	109%	DK
DE	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3	0.5	25%	DE
EE	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	1.1	0.7	175%	EE
IE	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	2.6	1.4	112%	IE
EL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	4%	EL
ES	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.7	0.9	108%	ES
FR	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.6	0.7	38%	FR
HR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.1	26%	HR
IT	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.6	2.1	0.5	31%	IT
CY	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	72%	CY
LV	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.3	61%	LV
LT	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.9	0.9	91%	LT
LU	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.7	1.6	142%	LU
HU	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.9	0.4	66%	HU
MT	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	3.4	2.3	195%	MT
NL	3.8	3.8	3.9	3.9	3.9	4.1	4.1	4.2	4.2	5.7	1.9	48%	NL
AT	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	3.1	1.5	94%	AT
PL	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	1.4	0.9	169%	PL
PT	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.9	0.4	97%	PT
RO	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.4	113%	RO
SI	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.2	1.2	2.0	1.0	94%	SI
SK	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	2.4	1.4	140%	SK
FI	2.1	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.5	3.9	1.8	86%	FI
SE	3.2	3.2	3.2	3.2	3.2	3.4	3.4	3.4	3.5	4.4	1.3	40%	SE
NO	4.0	4.1	4.1	4.2	4.2	4.4	4.5	4.6	4.7	7.5	3.5	87%	NO
EA	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.6	0.8	47%	EA
EU	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	2.6	0.8	48%	EU

Source: European Commission, EPC.

The EU and EA averages in all results tables are weighted according to GDP.

Graph I.3.7: **Baseline current and projected levels of public expenditure on long-term care (2022-2070; % of GDP)**



Source: European Commission, EPC.

3.4.2. Health status scenarios

Table I.3.5: **No healthy ageing scenario – projected public expenditure on long-term care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	2.3	2.3	2.3	2.3	2.3	2.5	2.5	2.5	2.5	4.3	2.0	87%	BE
BG	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.8	0.3	50%	BG
CZ	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	3.1	1.6	108%	CZ
DK	3.0	3.1	3.1	3.2	3.3	3.6	3.7	3.8	3.9	6.6	3.6	122%	DK
DE	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.2	2.5	0.6	35%	DE
EE	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	1.2	0.8	192%	EE
IE	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	1.4	2.7	1.5	124%	IE
EL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	12%	EL
ES	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	1.8	1.0	119%	ES
FR	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.7	0.9	45%	FR
HR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.2	40%	HR
IT	1.6	1.6	1.6	1.6	1.5	1.6	1.6	1.6	1.6	2.3	0.7	40%	IT
CY	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	87%	CY
LV	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.4	77%	LV
LT	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	2.0	1.1	109%	LT
LU	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.8	1.7	154%	LU
HU	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.5	83%	HU
MT	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	3.7	2.6	220%	MT
NL	3.8	3.9	3.9	3.9	4.0	4.1	4.2	4.2	4.3	6.1	2.3	59%	NL
AT	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	3.2	1.7	106%	AT
PL	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	1.5	1.0	188%	PL
PT	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.0	0.5	108%	PT
RO	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.5	135%	RO
SI	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.2	1.3	2.1	1.1	107%	SI
SK	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	2.6	1.6	161%	SK
FI	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.5	2.6	4.2	2.1	99%	FI
SE	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.5	3.5	4.7	1.6	50%	SE
NO	4.0	4.1	4.1	4.2	4.3	4.4	4.6	4.7	4.7	8.0	4.0	100%	NO
EA	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.8	1.0	57%	EA
EU	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.7	1.0	58%	EU

Source: European Commission, EPC.

Under the ‘no healthy ageing scenario’, EU public expenditure on LTC is projected to increase by 1 pp of GDP, from 1.7% in 2022 to 2.7% of GDP in 2070 (see Table I.3.5). This is equivalent to an increase of expenditure by 58%. The country variation in projected expenditures ranges from no change in Greece (which already had the smallest expenditure growth in the baseline) to an increase of 3.6 pps in Denmark (which already had the largest expenditure in the baseline) and, outside the EU, 4.0 pps in Norway. This represents higher expenditure than the baseline due to the increased dependency rates in the population leading to greater demand for public LTC services.

Under the ‘healthy ageing scenario’, EU public expenditure on LTC would increase by 0.7 pps of GDP over the period 2022-2070 (see Table I.3.6). This represents a 39% increase over the projection period. This shows that an improved disability status would lead to a considerably lower increase in expenditure in the future compared with the baseline. Expenditure growth differs greatly across Member States, although the ranking across them remains relatively stable, with growth being lower in all countries due to the impact of lower dependency rates.

Table I.3.6: **Healthy ageing scenario - projected public expenditure on long-term care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	2.3	2.3	2.3	2.3	2.3	2.4	2.4	2.5	2.5	3.9	1.6	67%	BE
BG	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.1	20%	BG
CZ	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.7	2.6	1.2	79%	CZ
DK	3.0	3.1	3.1	3.2	3.3	3.5	3.6	3.7	3.8	5.9	2.9	98%	DK
DE	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.1	2.2	0.3	18%	DE
EE	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	1.0	0.6	159%	EE
IE	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	2.5	1.2	101%	IE
EL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-2%	EL
ES	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	0.8	97%	ES
FR	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.5	0.6	32%	FR
HR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.1	13%	HR
IT	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.6	1.6	2.0	0.4	22%	IT
CY	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.1	60%	CY
LV	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.2	48%	LV
LT	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.7	0.8	77%	LT
LU	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.6	1.4	131%	LU
HU	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.8	0.3	52%	HU
MT	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4	3.2	2.0	171%	MT
NL	3.8	3.8	3.9	3.9	3.9	4.0	4.1	4.1	4.2	5.3	1.5	39%	NL
AT	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	2.9	1.3	83%	AT
PL	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.3	0.8	150%	PL
PT	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.8	0.4	85%	PT
RO	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.3	93%	RO
SI	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.9	0.8	83%	SI
SK	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	2.2	1.2	120%	SK
FI	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5	3.7	1.6	74%	FI
SE	3.2	3.2	3.2	3.2	3.2	3.4	3.4	3.4	3.4	4.2	1.0	33%	SE
NO	4.0	4.1	4.1	4.2	4.2	4.4	4.5	4.6	4.6	7.1	3.1	76%	NO
EA	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.4	0.7	39%	EA
EU	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9	2.4	0.7	39%	EU

Source: European Commission, EPC.

3.4.3. Policy changes in cost and coverage

Results of three policy-change scenarios are presented and discussed here. These capture varying assumptions of changing costs and coverage of LTC as described in Section 3.3.2.

Under the ‘coverage convergence scenario’, EU public LTC spending is projected to increase by 1.6 pps of GDP on average in the EU over the period 2022-70 (see Table I.3.7). This much higher projected increase vis-à-vis the baseline is the result of an increased coverage of dependent individuals, especially in countries where the coverage of the dependent population is lowest compared to the EU average, such as Poland and Portugal.

Table I.3.7: **Coverage convergence scenario - projected public expenditure on long-term care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.5	4.1	1.7	76%	BE
BG	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	2.1	1.6	301%	BG
CZ	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.7	2.9	1.4	93%	CZ
DK	3.0	3.1	3.1	3.2	3.3	3.6	3.7	3.8	3.9	6.6	3.6	122%	DK
DE	1.9	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.2	2.4	0.5	27%	DE
EE	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	2.1	1.7	420%	EE
IE	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	2.6	1.4	112%	IE
EL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	109%	EL
ES	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	3.3	2.5	308%	ES
FR	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	4.0	2.1	110%	FR
HR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.0	0.5	89%	HR
IT	1.6	1.6	1.5	1.5	1.5	1.6	1.6	1.6	1.6	2.3	0.6	38%	IT
CY	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	114%	CY
LV	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.2	0.8	157%	LV
LT	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.9	0.9	91%	LT
LU	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	3.7	2.6	235%	LU
HU	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	2.0	1.4	260%	HU
MT	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	3.5	2.3	201%	MT
NL	3.8	3.8	3.9	3.9	3.9	4.1	4.1	4.2	4.2	5.7	1.9	50%	NL
AT	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	3.1	1.5	94%	AT
PL	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	4.4	3.8	730%	PL
PT	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	9.0	8.5	1859%	PT
RO	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.5	132%	RO
SI	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.3	1.3	2.3	1.3	126%	SI
SK	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	2.4	1.4	140%	SK
FI	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5	2.5	4.0	1.9	93%	FI
SE	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.5	3.5	4.7	1.6	49%	SE
NO	4.0	4.1	4.1	4.2	4.2	4.4	4.5	4.6	4.7	7.5	3.5	88%	NO
EA	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	3.2	1.4	81%	EA
EU	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	3.3	1.6	89%	EU

Source: European Commission, EPC.

Under the ‘cost convergence scenario’, EU public expenditure on LTC is projected to increase by 1.8 pps of GDP from 2022 up until 2070 (see Table I.3.8). These results are due to the impact of an increased cost per user of LTC services, assumed to be the result of economic convergence and higher population expectations in terms of care quality and adequacy. In an equivalent way to the ‘coverage convergence scenario’ convergence is particularly strong for countries that have relatively low unit costs, such as Cyprus and Greece.

Table I.3.8: **Cost convergence scenario - projected public expenditure on long-term care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.7	6.2	3.9	169%	BE
BG	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.4	0.8	159%	BG
CZ	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.8	4.4	2.9	199%	CZ
DK	3.0	3.1	3.1	3.2	3.3	3.5	3.7	3.8	3.9	6.3	3.3	110%	DK
DE	1.9	1.9	1.9	2.0	2.1	2.2	2.2	2.3	2.3	3.2	1.4	74%	DE
EE	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	3.5	3.1	768%	EE
IE	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	3.2	2.0	163%	IE
EL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.6	1.4	1033%	EL
ES	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	2.4	1.6	191%	ES
FR	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	3.1	1.2	65%	FR
HR	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.5	1.0	187%	HR
IT	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	3.0	1.3	82%	IT
CY	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	2.7	2.5	1267%	CY
LV	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.9	1.4	298%	LV
LT	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	9.4	8.4	855%	LT
LU	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	3.1	2.0	181%	LU
HU	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	1.8	1.2	222%	HU
MT	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4	6.3	5.1	438%	MT
NL	3.8	3.9	3.9	3.9	4.0	4.2	4.2	4.3	4.4	7.6	3.7	97%	NL
AT	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	4.5	2.9	183%	AT
PL	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	1.6	1.1	208%	PL
PT	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.9	0.5	102%	PT
RO	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	3.2	2.9	834%	RO
SI	1.0	1.0	1.0	1.1	1.2	1.3	1.3	1.3	1.3	3.7	2.7	262%	SI
SK	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	5.4	4.4	443%	SK
FI	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.5	2.6	5.8	3.7	176%	FI
SE	3.2	3.2	3.2	3.2	3.3	3.4	3.4	3.5	3.5	6.0	2.8	89%	SE
NO	4.0	4.1	4.1	4.2	4.3	4.5	4.6	4.7	4.8	8.6	4.6	114%	NO
EA	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	3.6	1.8	104%	EA
EU	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	3.6	1.8	105%	EU

Source: European Commission, EPC.

3.4.4. Risk scenario

Under the ‘risk scenario’, EU public spending on LTC would increase by 2.7 pps of GDP over the period 2022-2070 (see Table I.3.9). This projected increase – significantly higher than the one projected in the baseline – captures the possible effect of a cost and coverage convergence in LTC services across the EU, going beyond the effect of traditional demographic and health status drivers taken into account in the baseline. This has a particularly strong impact on countries that have both relatively low coverage and low expenditure per recipient like Cyprus and Greece.

Table I.3.9: **Risk scenario - projected public expenditure on long-term care (2022-2070; % of GDP)**

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2070	Change 2022-2070		
											pps	in %	
BE	2.3	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.7	6.2	3.9	169%	BE
BG	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	3.0	2.5	470%	BG
CZ	1.5	1.5	1.6	1.6	1.6	1.7	1.7	1.8	1.8	4.4	2.9	199%	CZ
DK	3.0	3.1	3.1	3.2	3.3	3.6	3.7	3.8	3.9	6.6	3.7	123%	DK
DE	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.3	2.3	3.3	1.4	76%	DE
EE	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	6.4	6.0	1473%	EE
IE	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	3.2	2.0	163%	IE
EL	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	3.3	3.1	2252%	EL
ES	0.8	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0	4.5	3.6	448%	ES
FR	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.2	4.8	2.9	151%	FR
HR	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	1.8	1.3	251%	HR
IT	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	3.2	1.5	95%	IT
CY	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	3.8	3.6	1856%	CY
LV	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	3.0	2.6	530%	LV
LT	1.0	1.0	1.0	1.1	1.1	1.2	1.3	1.3	1.4	9.4	8.4	855%	LT
LU	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	4.1	3.0	274%	LU
HU	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	4.0	3.4	625%	HU
MT	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	6.6	5.5	470%	MT
NL	3.8	3.9	3.9	3.9	4.0	4.2	4.2	4.3	4.4	7.6	3.8	99%	NL
AT	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	4.5	2.9	184%	AT
PL	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.8	4.7	4.2	795%	PL
PT	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	8.8	8.3	1816%	PT
RO	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	3.5	3.1	900%	RO
SI	1.0	1.0	1.0	1.1	1.2	1.3	1.3	1.3	1.4	4.2	3.2	313%	SI
SK	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	5.4	4.4	444%	SK
FI	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.6	5.9	3.8	183%	FI
SE	3.2	3.2	3.2	3.3	3.3	3.4	3.5	3.5	3.6	6.3	3.1	99%	SE
NO	4.0	4.1	4.1	4.2	4.3	4.5	4.6	4.7	4.8	8.6	4.6	115%	NO
EA	1.8	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.1	4.4	2.6	146%	EA
EU	1.7	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.0	4.5	2.7	156%	EU

Source: European Commission, EPC.

3.4.5. Sensitivity tests

In addition to the alternative scenarios already presented above, a number of additional sensitivity tests are performed around the baseline. These sensitivity tests⁽¹⁰⁴⁾ are applied consistently for other ageing expenditure items. In particular, Table I.3.10 shows the results of modifying the baseline by making alternative assumptions on factors such as migration, fertility, employment rate, TFP and life expectancy.

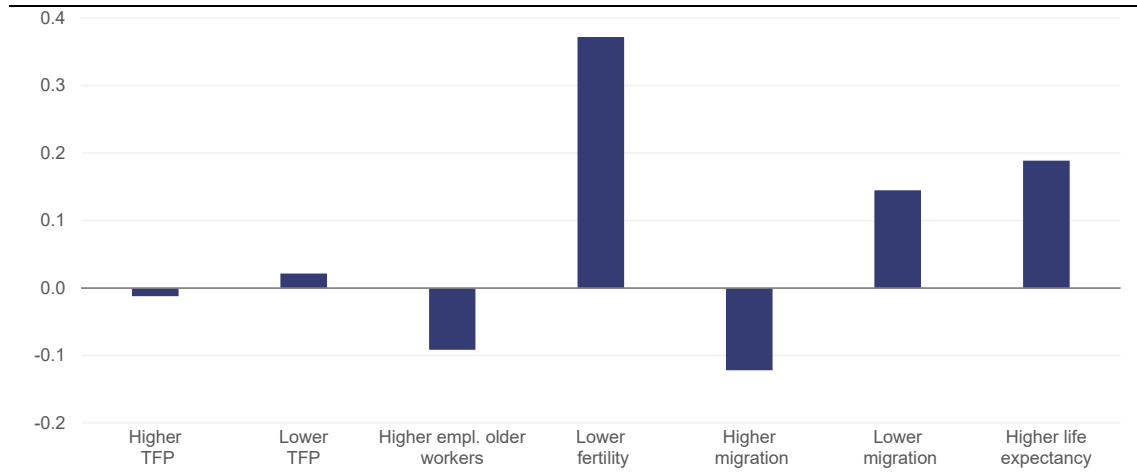
The sensitivity tests introduce a change to a specific variable. For each test, a uniform shock is applied to all Member States. The assessment of the impact of population ageing on the different expenditure items should be made with reference to all projections, meaning baseline plus sensitivity

⁽¹⁰⁴⁾ See Part 1, Chapter 5 of [Volume I of the 2024 Ageing Report](#).

tests. This way the key factors driving the projection results and potential risks to the baseline can be identified. The sensitivity tests include both unfavourable and favourable changes in the underlying assumptions.

These shocks can have a sizable impact on the projections (see Graph I.3.8). Among the macroeconomic scenarios, changes in total factor productivity (TFP) have a marginal impact on the projections (less than +/-0.1 pp of GDP for the EU average). Higher employment for older workers than assumed in the baseline would limit expenditure growth over the projection period by about 0.1 pp of GDP. Among the demographic scenarios, higher migration is associated with lower expenditure growth compared with the baseline, through its impact on population and GDP. On the other hand, higher life expectancy, lower fertility and lower migration increase expenditure growth compared with the baseline (by more than 0.2 pps of GDP in case of higher life expectancy) essentially through population ageing (lower fertility, higher life expectancy) and population size and GDP (lower migration).

Graph I.3.8: **Overview of long-term care expenditure projections – Difference between sensitivity scenario and baseline (2022-2070 pps of GDP change), EU average**



Source: European Commission, EPC.

Table I.3.10: **Sensitivity scenarios - projected change in public expenditure on long-term care (2022-2070; pps of GDP)**

	2022 level (% GDP)	Baseline	Higher TFP	Lower TFP	Higher empl. older workers	Lower fertility	Higher migration	Lower migration	Higher life expectancy	
BE	2.3	1.7	1.7	1.7	1.6	2.1	1.5	2.0	2.1	BE
BG	0.5	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	BG
CZ	1.5	1.4	1.4	1.4	1.3	1.6	1.3	1.5	1.7	CZ
DK	3.0	3.3	3.3	3.3	3.0	3.8	2.8	3.7	3.8	DK
DE	1.9	0.5	0.4	0.6	0.4	0.6	0.4	0.6	0.6	DE
EE	0.4	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	EE
IE	1.2	1.4	1.4	1.4	1.3	1.5	1.2	1.5	1.5	IE
EL	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	EL
ES	0.8	0.9	0.9	0.9	0.8	1.0	0.7	1.1	1.1	ES
FR	1.9	0.7	0.7	0.7	0.6	0.9	0.6	0.8	0.9	FR
HR	0.5	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	HR
IT	1.6	0.5	0.5	0.5	0.5	0.6	0.4	0.6	0.6	IT
CY	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	CY
LV	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.4	LV
LT	1.0	0.9	0.9	0.9	0.8	1.0	0.8	1.0	1.0	LT
LU	1.1	1.6	1.6	1.6	1.4	1.7	1.5	1.6	1.8	LU
HU	0.5	0.4	0.4	0.4	0.3	0.4	0.3	0.4	0.4	HU
MT	1.2	2.3	2.3	2.3	2.1	2.5	2.0	2.7	2.5	MT
NL	3.8	1.9	1.9	1.9	1.7	2.3	1.6	2.1	2.2	NL
AT	1.6	1.5	1.5	1.5	1.4	1.7	1.3	1.6	1.8	AT
PL	0.5	0.9	0.9	0.9	0.8	1.0	0.8	0.9	1.0	PL
PT	0.5	0.4	0.4	0.4	0.4	0.5	0.4	0.5	0.5	PT
RO	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.5	RO
SI	1.0	1.0	1.0	1.0	0.9	1.1	0.8	1.1	1.1	SI
SK	1.0	1.4	1.4	1.4	1.3	1.6	1.4	1.4	1.6	SK
FI	2.1	1.8	1.8	1.8	1.6	2.1	1.6	2.0	2.1	FI
SE	3.2	1.3	1.3	1.3	1.1	1.5	1.0	1.6	1.5	SE
NO	4.0	3.5	3.5	3.5	3.2	4.0	3.1	3.9	4.1	NO
EA	1.8	0.8	0.8	0.9	0.7	1.0	0.7	1.0	1.0	EA
EU	1.7	0.8	0.8	0.9	0.7	1.2	0.7	1.0	1.0	EU

Source: European Commission, EPC.

3.5. COMPARISON WITH THE 2021 AGEING REPORT

As in the case of health care projections, the differences observed between the 2021 Ageing Report and the current projections result from a set of factors (see Graph I.3.9). They include (i) a different initial spending level; (ii) a different base-year for starting the projections; (iii) updated population projections; (iv) updated macroeconomic assumptions resulting in different GDP per capita growth rates and GDP levels for the period under analysis; (v) updated age-gender expenditure profiles; and (vi) changes in scenario assumptions, methodology and quantified policy reforms.

A quantitative breakdown of drivers is proposed (see Table I.3.11). This disaggregation aims at quantifying which factors are driving the differences in projected spending between the 2021 and the 2024 projection exercises in the baseline. The considered drivers are the age-cost profiles, the coverage of beneficiaries, the disability rates, the GDP projections, the population projections, an interaction term, and a residual that includes the base-year effect, reforms and methodological changes. The impact of each driver is estimated by replacing, *ceteris paribus*, its 2024 Ageing Report values with the corresponding 2021 Ageing Report data for that driver.

Table I.3.11: **Breaking down the difference in spending change (2022-2070) between the 2024 and the 2021 Ageing Reports (pps of GDP)**

	Difference 2024 AR vs 2021 AR spending growth	Due to:							
		Change in age-cost profiles	Change in coverage	Change in disability rate	Change related to GDP growth	Change in demographic projections	Interaction effect*	Other drivers**	
BE	-0.3	0.0	0.0	0.0	-0.7	0.2	0.0	0.2	BE
BG	0.0	0.0	-0.2	0.0	-0.1	0.0	0.1	0.2	BG
CZ	-0.2	0.1	0.0	0.0	-0.5	0.1	0.1	0.1	CZ
DK	0.1	0.3	-0.1	0.0	0.1	0.1	0.0	-0.3	DK
DE	0.3	-0.1	0.0	0.0	0.0	0.0	0.0	0.4	DE
EE	0.4	0.0	0.2	0.0	-0.3	0.1	0.1	0.4	EE
IE	-0.4	0.0	0.0	0.0	-0.4	0.0	0.0	0.1	IE
EL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	EL
ES	0.2	0.1	0.0	0.0	-0.1	0.1	0.0	0.0	ES
FR	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	FR
HR	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.1	HR
IT	-0.4	0.0	0.0	0.0	-0.1	0.0	0.0	-0.2	IT
CY	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	CY
LV	0.1	0.0	0.1	0.0	-0.1	0.1	0.1	0.0	LV
LT	0.2	0.1	-0.1	0.0	-0.3	0.2	0.1	0.1	LT
LU	0.2	0.1	0.1	0.0	-0.6	0.3	0.1	0.2	LU
HU	-0.3	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	HU
MT	0.6	0.0	0.3	0.0	-0.8	0.3	-0.1	0.8	MT
NL	-0.6	0.0	-0.2	0.0	-0.7	0.1	0.0	0.2	NL
AT	-0.2	0.0	0.0	0.0	-0.2	0.1	0.0	-0.1	AT
PL	-0.7	-0.1	0.2	0.0	-0.3	0.0	0.0	-0.5	PL
PT	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.2	PT
RO	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	RO
SI	-0.1	-0.3	0.1	0.0	-0.3	0.1	0.0	0.2	SI
SK	-0.6	-0.1	-0.2	0.0	-0.3	0.1	-0.1	0.1	SK
FI	-0.1	0.1	0.0	0.0	-0.2	0.0	0.0	0.0	FI
SE	-0.7	0.0	-0.6	0.0	-0.2	0.0	-0.1	0.2	SE
NO	-0.2	0.0	0.0	0.0	-0.2	0.0	0.0	-0.1	NO
EA	0.0	0.0	0.0	0.0	-0.2	0.1	0.0	0.2	EA
EU	-0.2	0.0	0.0	0.0	-0.2	0.1	0.0	0.0	EU

* The interaction effect is the unexplained difference between replacing the current data with the 2021 Ageing Report data for all drivers at once and replacing the 2024 Ageing Report data one driver at a time.

** The 'Other drivers' effect is the difference between column 1 and the sum of columns 2 to 7. As such, it reflects any further changes, including base year effects, methodology changes and policy reform.

Source: European Commission, EPC.

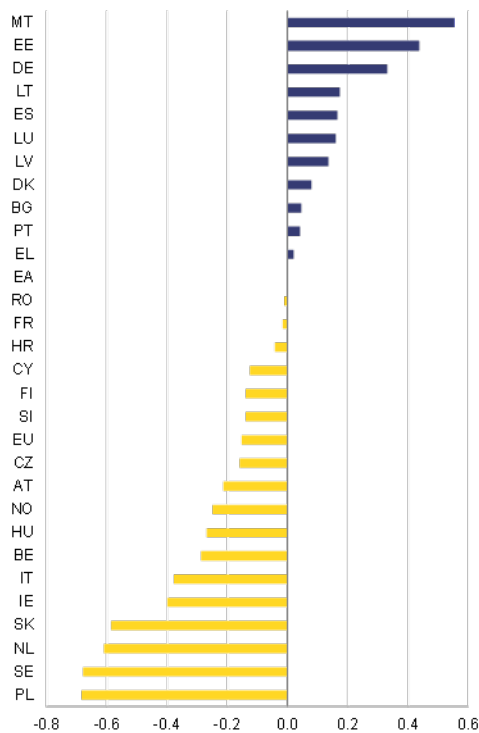
Overall, changes in projected expenditure levels at EU level added up to a decrease of 0.2 pps of GDP. This however masks different impacts at EU Member States' level. As shown in Graph I.3.9, revisions in projected LTC expenditure range from -0.7 pps of GDP in Sweden to more than 0.6 pps of GDP in Malta.

The update in GDP projections contributes negatively to EU projected changes in public LTC expenditure over the projection period (by -0.2 pps of GDP compared with the 2021 Ageing Report). The direction of change is the same across most Member States, with the exceptions of Denmark, Germany, Greece, France, Cyprus and Hungary.

The 2022 changes in the base year level of public expenditure as well as policy reforms, data improvements and methodological changes (all shown under 'Other effects' in Table I.3.11) have an overall neutral impact on projected changes in public LTC spending at EU level. However, this masks large differences for specific countries. The biggest changes are those seen in Malta (an increase of 0.8 pps of GDP) and Poland (a decrease of 0.5 pps of GDP), both mainly due to changes in base year expenditure and improvements in data on the breakdown of expenditure by care setting.

The new population projections have had an overall expenditure-increasing impact of 0.1 pp for the EU aggregate over the projection period. The impact also varies by Member State but leads to increases or small changes in all cases, with the biggest impact expected for Luxembourg and Malta, with an increase of 0.3 pps of GDP due to a more acute projected population ageing in this report compared with the 2021 Ageing Report projections.

Graph I.3.9: **Baseline: differences in the projected change in public expenditure on long-term care in 2022-2070 between the 2024 and 2021 Ageing Reports (pps of GDP)**



Source: European Commission, EPC.

The impact of changes to the age-cost profiles on the projections is close to zero at EU level, but at national level some Member States record significant changes. The largest increase is in Denmark, with an increase of 0.3 pps of GDP, due to steeper age-cost profiles than in the 2021 Ageing Report, which means that the ageing of the population has a greater impact. By contrast, the age-cost profiles for Slovenia are now flatter and therefore the expenditure increase over the projection period is now lower by 0.3 pps of GDP.

Changes in LTC coverage have also had an overall neutral impact on expenditure at EU level, with some differences at country level. Coverage had the largest expenditure-increasing effect in Malta (at 0.3 pps of GDP) due to improved data on coverage that showed a larger proportion of the dependent population receiving benefits than reported in the 2021 Ageing Report). By contrast, it had the most sizeable expenditure-decreasing in Sweden (at -0.6 pps of GDP) due to a flatter age-profile of recipients, which means that the increase in coverage as the population becomes older is smaller in the new projections.

Finally, it should be noted that changes in disability rates seem to be a minor driver of changes in projected expenditure, reflecting their relative stability between reports.

Table I.3.12: Overview of projection results – change in public spending on long-term care (2022–2070; % of GDP)

	Baseline	Risk	Healthy ageing	No healthy ageing	Coverage convergence	Cost convergence	
BE	1.7	3.9	1.6	2.0	1.7	3.9	BE
BG	0.2	2.5	0.1	0.3	1.6	0.8	BG
CZ	1.4	2.9	1.2	1.6	1.4	2.9	CZ
DK	3.3	3.7	2.9	3.6	3.6	3.3	DK
DE	0.5	1.4	0.3	0.6	0.5	1.4	DE
EE	0.7	6.0	0.6	0.8	1.7	3.1	EE
IE	1.4	2.0	1.2	1.5	1.4	2.0	IE
EL	0.0	3.1	0.0	0.0	0.2	1.4	EL
ES	0.9	3.6	0.8	1.0	2.5	1.6	ES
FR	0.7	2.9	0.6	0.9	2.1	1.2	FR
HR	0.1	1.3	0.1	0.2	0.5	1.0	HR
IT	0.5	1.5	0.4	0.7	0.6	1.3	IT
CY	0.1	3.6	0.1	0.2	0.2	2.5	CY
LV	0.3	2.6	0.2	0.4	0.8	1.4	LV
LT	0.9	8.4	0.8	1.1	0.9	8.4	LT
LU	1.6	3.0	1.4	1.7	2.6	2.0	LU
HU	0.4	3.4	0.3	0.5	1.4	1.2	HU
MT	2.3	5.5	2.0	2.6	2.3	5.1	MT
NL	1.9	3.8	1.5	2.3	1.9	3.7	NL
AT	1.5	2.9	1.3	1.7	1.5	2.9	AT
PL	0.9	4.2	0.8	1.0	3.8	1.1	PL
PT	0.4	8.3	0.4	0.5	8.5	0.5	PT
RO	0.4	3.1	0.3	0.5	0.5	2.9	RO
SI	1.0	3.2	0.8	1.1	1.3	2.7	SI
SK	1.4	4.4	1.2	1.6	1.4	4.4	SK
FI	1.8	3.8	1.6	2.1	1.9	3.7	FI
SE	1.3	3.1	1.0	1.6	1.6	2.8	SE
NO	3.5	4.6	3.1	4.0	3.5	4.6	NO
EA	0.8	2.6	0.7	1.0	1.4	1.8	EA
EU	0.8	2.7	0.7	1.0	1.6	1.8	EU

Source: European Commission, EPC.

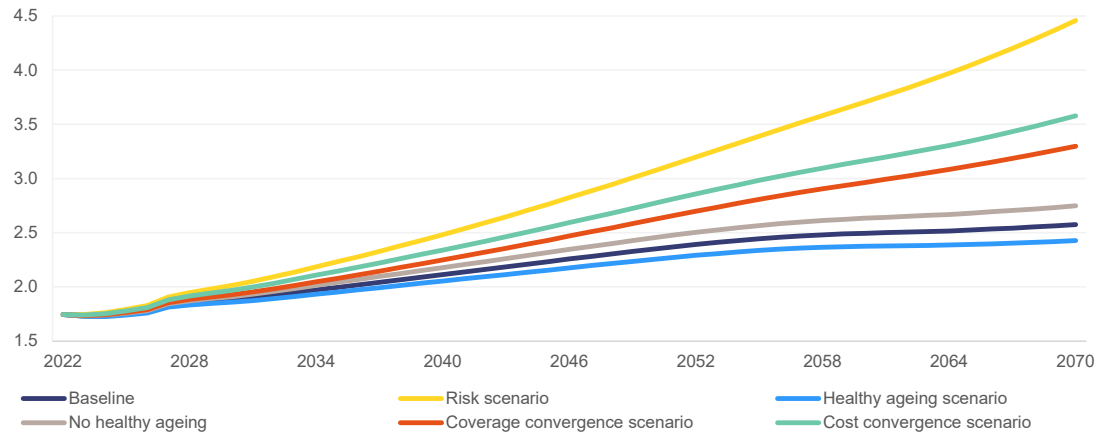
3.6. CONCLUSIONS

LTC systems are likely to face increasing demand over the next half century. This is set to increase financing needs for formal LTC services that are to a high degree financed by public payers. The increase in LTC expenditure can therefore have a significant fiscal impact.

This chapter has presented the expected effects of various demographic and non-demographic drivers on LTC expenditure over a range of plausible scenarios. The range of results is relatively wide (Graph I.3.10 and Table I.3.12) and the risks vary to a large extent for each country and scenario, reflecting the implicit uncertainty surrounding the evolution of key variables in the long term.

The baseline assumes that one half of future gains in life expectancy will be spent in good health and the other half in disability. According to this scenario, used in the multilateral budgetary surveillance at EU level, public LTC expenditure in the EU is projected to increase from 1.7% of GDP in 2022 to 2.6% of GDP in 2070, an increase of 48%.

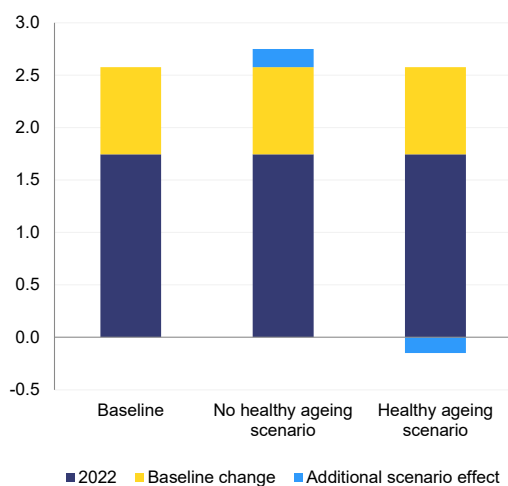
Graph I.3.10: **Projected expenditure in different LTC scenarios for the EU (% of GDP)**



Source: European Commission, EPC.

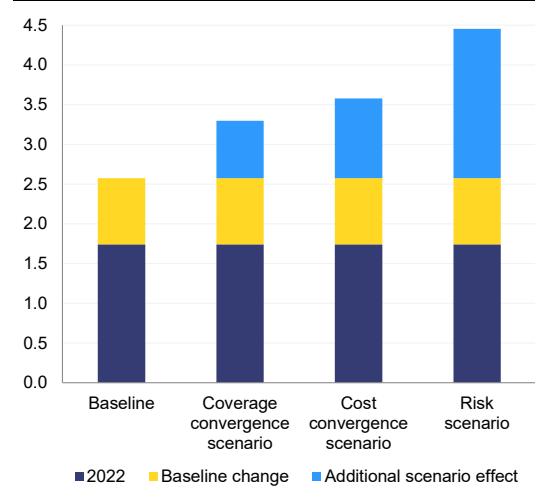
The less pronounced ageing effect as from 2050 only translates into a limited moderation of LTC spending dynamic. From 2050 to 2070, there is an easing of ageing in the Eurostat population projections. However, as can be seen in Graphs I.3.10 and Graph I.3.12, the impact on public LTC spending as a proportion of GDP is relatively subdued, showing slower but still positive expenditure growth from 2050 to 2070 for all scenarios. This is due to the complex link between ageing and public expenditure on LTC as implemented in the model: indeed, although dependency rates increase with age, age-cost profiles are not necessarily the highest for older age groups. Similarly, LTC demand factors, such as the decrease in availability of informal carers or the fact that richer societies are likely to demand higher standards of care, are cost drivers that are not directly linked to population ageing.

Graph I.3.11: **Range of results for scenarios with mainly demographic sensitivity analysis (no policy change scenarios), EU (% of GDP)**



Source: European Commission, EPC.

Graph I.3.12: **Range of results for scenarios with mainly demand-driven sensitivity analysis (policy change scenarios), EU (% of GDP)**



Source: European Commission, EPC.

Changes to the assumptions on the impact of life expectancy on dependency rates moderately affect the projections (Graph I.3.11). If the assumed improvements in health status in the baseline did not materialise (*'No healthy ageing scenario'*), public spending on LTC would be about 0.2 pps of GDP higher. Broadly symmetrical effects are expected if health status improvements fully matched increases in life expectancy (*'Healthy ageing scenario'*).

Cost implications for the EU of changes in the demand for publicly funded long-term care would be substantial if they lead to policy responses (Graph I.3.12). A convergence process, in terms of coverage or costs of LTC for countries which are *below* EU average levels of care in this respect, would imply a substantial additional fiscal risk (*cost and coverage convergence related scenarios*). If there was convergence of both coverage rates of LTC dependents and costs per dependent, reflecting an underlying convergence process of EU economies (as in the *'risk scenario'*), expenditure would increase by up to 2.7% (by 156%) of GDP in the EU.

Ageing and non-demographic drivers of long-term care expenditure are likely to exert a continuous pressure on public finances in the long run, extending even beyond the current trends in population ageing. The need for a broadening of formalised coverage of the European population with long-term care services will thus have to be balanced with the need to ensure the sustainability of public finances. The projections presented in this chapter suggest some possible ways in which this may be achieved. For instance, the healthy and no healthy ageing scenarios show that prevention can help mitigate the impact of ageing on expenditure by reducing the need for long-term care. Moreover, the different impact of ageing on baseline projections across EU Member States suggests that policy variables like the institutional set-up and care organisation can influence the impact of ageing on expenditure.

4. EDUCATION

4.1. INTRODUCTION

Government expenditure on education reflects demographic developments, as well as other drivers. Demographic change is an important driver of spending on education as it determines the size of future cohorts of students. Yet, many other factors also have an important bearing on government education expenditure. These include the involvement of the general government in the education system, the duration of mandatory education, increasing enrolment rates in upper secondary and tertiary education, relative wages in the education sector, the average size of classes, as well as policies such as discretionary saving measures.

Consistent with the other expenditure items projected in this report, the education projections are conducted under a ‘no-policy-change’ assumption. They primarily aim at assessing the impact of demographic change on government education expenditure. The common methodology used is fairly stylised and does therefore not capture the full complexities of Member States’ education systems. It has been set up with a view to (i) use harmonised datasets⁽¹⁰⁵⁾, (ii) ensure equal treatment across countries and (iii) be consistent with the labour market assumptions, particularly on participation rates.⁽¹⁰⁶⁾

The baseline focuses on the impact of demographic factors. The key assumptions underpinning the baseline are a constant students-to-staff ratio, implying an instantaneous adjustment in the number of teaching staff to student levels and expenditure per capita growing in line with labour productivity.⁽¹⁰⁷⁾

Given the inherent uncertainty of the assumptions underpinning long-run projections, a set of sensitivity scenarios is conducted to quantify the responsiveness of the projection results to changes in key underlying assumptions. A specific sensitivity test for the education projections assumes a gradual upward convergence (by 2045) of enrolment rates (for ISCED levels 3-4 and 5-8)⁽¹⁰⁸⁾ towards the best performers. Consistent with what is done for the other expenditure items, the other sensitivity tests simulate a shock to key variables underpinning the baseline projection, namely higher/lower migration, lower fertility and higher/lower TFP growth.⁽¹⁰⁹⁾

⁽¹⁰⁵⁾ UNESCO-UIS/OECD/EUROSTAT (UOE) data collection on Education Statistics, LFS data and the macroeconomic variables described in [Volume I of the 2024 Ageing Report](#).

⁽¹⁰⁶⁾ See Annex IV for details on the methodology used. The base year is constructed using the average of the two latest available years (2019 and 2020, UOE data – 2018 and 2019 UOE data for EL only) uprated to the base year (2022) using COFOG data on education expenditure. In practice, as the COFOG series is only available until 2021, the 2022 data point needed for the uprate is constructed by applying a country-specific growth rate (between 2021 and 2022) of nominal GDP (2022 prices) to the 2021 value of education expenditure reported by COFOG. From 2022 onwards, the projection methodology explained in Chapter 4 of Part II in [Volume I of the 2024 Ageing Report](#) is applied.

⁽¹⁰⁷⁾ See Chapter 4 of Part II in [Volume I of the 2024 Ageing Report](#).

⁽¹⁰⁸⁾ International Standard Classification of Education (ISCED) is the reference international classification for organising education programmes and related qualifications by levels and fields.

⁽¹⁰⁹⁾ See Chapter 5 of Part I in [Volume I of the 2024 Ageing Report](#) for detailed explanations.

4.2. GENERAL CHARACTERISTICS OF NATIONAL EDUCATION SYSTEMS

The methodology used to project future education expenditure is based on a stylised framework that abstracts from country specificities but nevertheless considers main aspects of education systems. These include enrolment rates by age and education level, as well as expenditure categories by education level and type. A detailed breakdown of education system's features (by age and education level) aims at improving the quality of model calibrations.

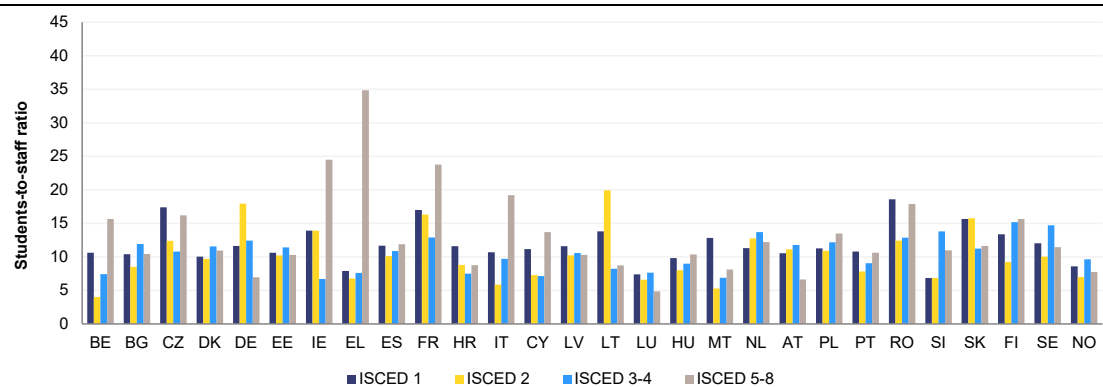
4.2.1. Enrolment rates in EU Member States

The institutional structure of education systems varies considerably across Member States. Although the configuration between compulsory and non-compulsory education is, in general, similar across countries (mandatory education starting between ages 5 to 7 and ending between ages 13 to 16 ⁽¹¹⁰⁾), education pathways of young people differ. Differences in mandatory age bands for a person attending a particular level of education are reflected in cross-country differences in the distribution of actual enrolment ages, raising the issue of cross-country comparability. Country diversity is clearly visible in Annex Table I.AIV.1, which presents average enrolment rates in the base year 2022 by country, age and level of education.

4.2.2. Students-to-staff ratio (average class size)

Average class sizes vary significantly, both across countries and level of education, reflecting specific organisational features of education systems. The size of primary education classes is on average slightly larger than that of secondary education (both lower and upper). In most countries, classes are the largest in tertiary (i.e. university-level) education (see Graph I.4.1), reflecting teaching methods relying more on (outside of class) individual research and library work. The difference is particularly large for some countries such as Greece, Ireland, Italy and France.

Graph I.4.1: **Students-to-staff ratio across ISCED levels (2022)**



ISCED 1 corresponds to primary education; ISCED 2 corresponds to lower secondary education; ISCED 3-4 corresponds to upper secondary education and post-secondary non tertiary education; ISCED 5-8 corresponds to tertiary education.

Source: European Commission, EPC.

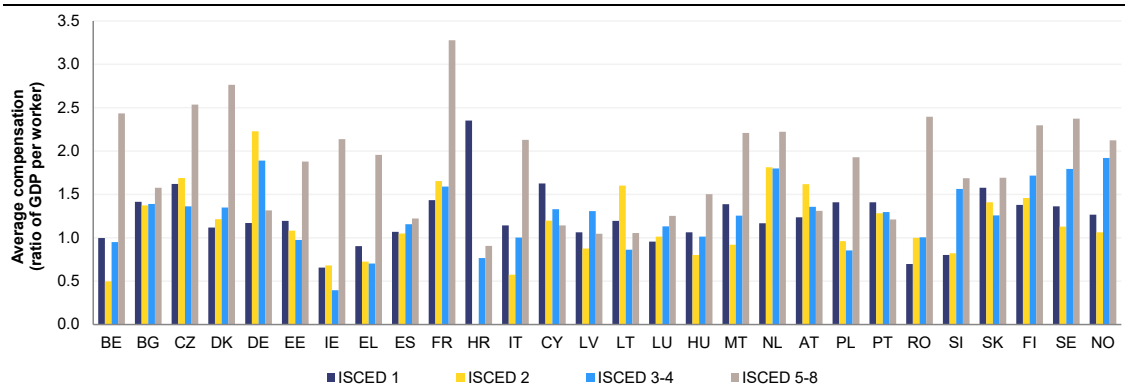
4.2.3. Staff compensation in the education sector

There is also considerable variation across Member States in the wages paid in the education sector. Graph I.4.2 plots average data for base year 2022 for the ratio between

⁽¹¹⁰⁾ In some countries education is mandatory until the age of 18 is reached.

compensation per public employee in the education sector to GDP per worker. Both the wage distribution and the structure of employment in the education sector (i.e. the relative importance of different professional categories, such as professors, assistants and non-teaching staff) play a role in explaining these differences. As expected, on average, wages are higher for the tertiary level of education, reflecting the higher required qualifications. Differences appear significant between Member States and levels of education, for instance in Ireland, Greece and France.

Graph I.4.2: Average compensation per member of staff as ratio of GDP per worker (2022)



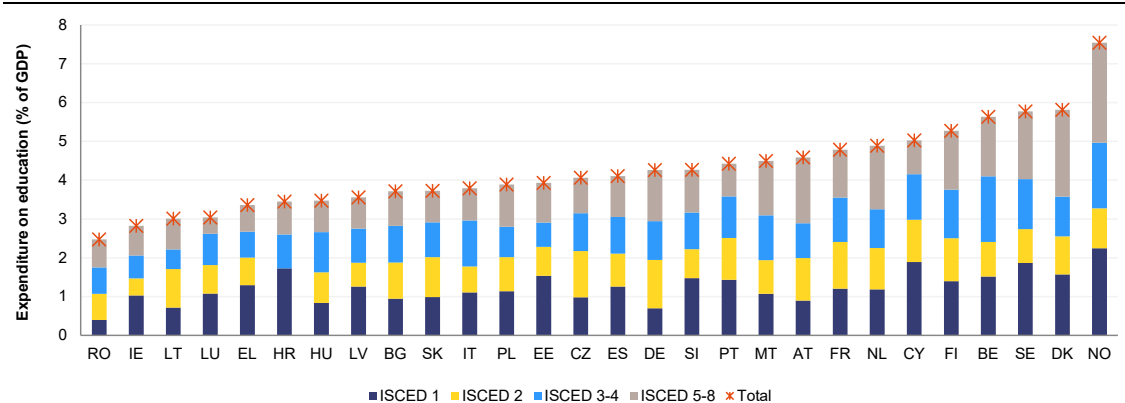
Compensation per public employee in the education sector to GDP per worker, by ISCED level (UOE dataset). The ISCED 2 category is not reported for HR, due to missing data.

Source: European Commission, EPC.

4.2.4. Public expenditure in education: total and by level of education

As a result, a high variability exists in terms of public spending in education as a share of GDP. Graph I.4.3 presents public expenditure on education in 2022 for the four levels of education and in total. Total public expenditure ranges from 2.5% of GDP (Romania) to 7.5% (Norway) (for more details see Tables I.AIV.2 and I.AIV.3 in Annex IV). The same variability also applies across ISCED groups. For instance, in the case of Romania, expenditure for ISCED 1 represented around 15% of the total in 2022, compared to 30% for Norway. Similar differences can be found for all education levels across Member States. Generally speaking, ISCED 3-4 and 5-8 appear to make up most of the expenditure in the base year for countries at the higher end of the expenditure spectrum.

Graph I.4.3: Structure of public expenditure on education as a percentage of GDP (2022)



Source: European Commission, EPC.

4.3. PROJECTION RESULTS

4.3.1. Baseline projections

The baseline applies a ‘no-policy change assumption’ and captures the impact of demographic factors over the long term. A simple macro-simulation model is used to project expenditure on education.⁽¹¹¹⁾ Assuming ‘no-policy-change’ in the provision of education, the baseline captures the ‘pure’ impact of demographic changes on government education expenditure for the 28 countries considered in the projections. In particular, the baseline assumes a fixed student-to-teaching staff ratio. Assuming that staff levels in the education sector adjust instantaneously to student levels might prove a strong assumption and may in fact imply some discretionary action to change staff levels. Alternatively, some lag or inertia in the adjustment could be assumed. However, any mechanism chosen to adjust staff to the number of students would essentially be arbitrary. For this reason, the assumption of a constant student-to-teaching staff ratio is preferred.

Under the baseline, government spending on education is projected to slightly decline in the EU. Table I.4.1 shows the projected change in education expenditure for the baseline, between 2022 and 2070.⁽¹¹²⁾ Government expenditure is expected to decline by 0.5 pps of GDP, to less than 4% of GDP in 2070. This decline is already expected by 2045, with the ratio broadly stable beyond that date. Government expenditure on education is projected to increase in 7 countries and to fall in 21 countries. The projected change ranges from a decline of 1.4 pps of GDP in Norway and 1.1 pps of GDP in Finland to a 0.3 pps of GDP increase in Czechia and Slovakia.

Table I.4.1: **Government expenditure on education, baseline (% of GDP)**

	2022	2045	2070	Change 2022-2070
BE	5.6	4.9	4.8	-0.8
BG	3.7	3.6	3.8	0.1
CZ	4.1	4.2	4.4	0.3
DK	5.8	5.3	4.9	-0.9
DE	4.3	4.4	4.5	0.2
EE	3.9	3.4	3.4	-0.6
IE	2.8	2.2	2.1	-0.7
EL	3.4	3.0	2.9	-0.5
ES	4.1	3.4	3.5	-0.6
FR	4.8	4.1	3.9	-0.9
HR	3.4	2.7	2.7	-0.7
IT	3.8	3.2	3.0	-0.8
CY	5.0	4.6	4.5	-0.5
LV	3.6	3.2	3.4	-0.2
LT	3.0	2.6	2.8	-0.3
LU	3.0	2.7	2.6	-0.4
HU	3.5	3.5	3.6	0.1
MT	4.5	3.8	4.4	-0.1
NL	4.9	4.1	3.9	-1.0
AT	4.6	4.1	4.2	-0.4
PL	3.9	3.7	4.0	0.1
PT	4.4	4.4	4.3	-0.1
RO	2.5	2.5	2.5	0.0
SI	4.3	3.8	4.0	-0.3
SK	3.7	3.8	4.0	0.3
FI	5.3	4.3	4.2	-1.1
SE	5.8	5.2	5.1	-0.6
NO	7.5	6.3	6.2	-1.4
EA	4.3	3.9	3.8	-0.5
EU	4.4	3.9	3.9	-0.5

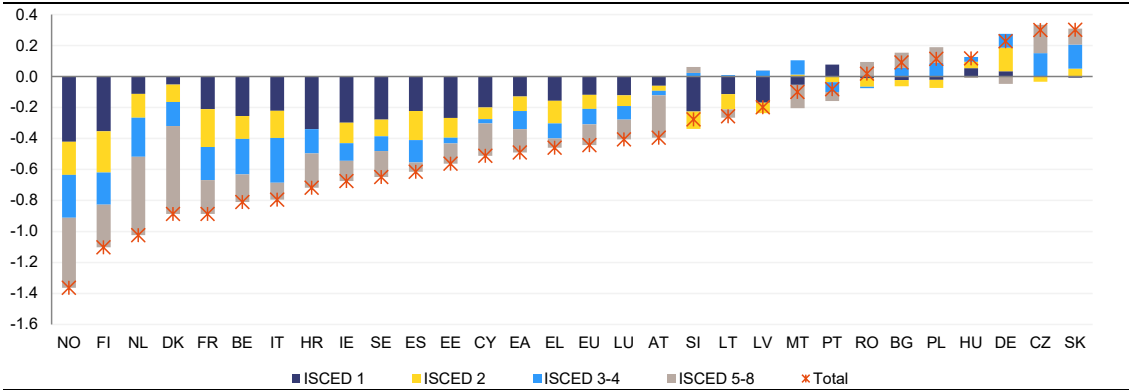
Source: European Commission, EPC.

Projections are further disaggregated by education level. Graph I.4.4 shows the projected changes in expenditure-to-GDP ratios between 2022 and 2070 by country and ISCED level. In those countries for which a reduction in total expenditure between 2022 and 2070 is projected, it is common that primary and secondary education (ISCED levels 1 to 4) contribute the most to the projected fall in total expenditure. At the same time, in most Member States where total education expenditure is projected to rise between 2022 and 2070, tertiary education tends to contribute to the overall increase in expenditure (e.g. Slovakia, Czechia, Poland and Bulgaria).

⁽¹¹¹⁾ For details see Chapter 4 of Part II in [Volume I of the 2024 Ageing Report](#).

⁽¹¹²⁾ See Table I.AIV.4 in Annex IV for projections over the entire projection period.

Graph I.4.4: Change in government expenditure by ISCED level between 2022 and 2070



Source: European Commission, EPC.

Table I.4.2: Breakdown of total variation in expenditure between 2022 and 2070, baseline (%/pps of GDP)

	Expenditure (% GDP)		Change 2070-2022 (pps)	Students effect	Employment effect	Discrepancy
	2022 (1)	2070 (2)	(3) = (2)-(1) (3) = (4)-(5)+(6)	(4)	(5)	(6)=(3)-(4)+(5)
BE	5.6	4.8	-0.8	-0.5	0.4	0.1
BG	3.7	3.8	0.1	-1.1	-1.1	0.0
CZ	4.1	4.4	0.3	-0.2	-0.5	0.1
DK	5.8	4.9	-0.9	-0.7	0.1	-0.1
DE	4.3	4.5	0.2	0.0	-0.2	0.0
EE	3.9	3.4	-0.6	-0.7	-0.2	0.0
IE	2.8	2.1	-0.7	-0.5	0.3	0.1
EL	3.4	2.9	-0.5	-1.1	-0.8	-0.1
ES	4.1	3.5	-0.6	-0.8	-0.2	0.0
FR	4.8	3.9	-0.9	-0.8	0.1	0.0
HR	3.4	2.7	-0.7	-1.3	-0.7	-0.1
IT	3.8	3.0	-0.8	-1.0	-0.2	0.0
CY	5.0	4.5	-0.5	-0.6	0.1	0.1
LV	3.6	3.4	-0.2	-1.5	-1.4	-0.1
LT	3.0	2.8	-0.3	-1.4	-1.2	-0.1
LU	3.0	2.6	-0.4	0.7	1.3	0.1
HU	3.5	3.6	0.1	-0.3	-0.4	0.0
MT	4.5	4.4	-0.1	1.3	1.4	0.0
NL	4.9	3.9	-1.0	-0.7	0.3	0.0
AT	4.6	4.2	-0.4	-0.2	0.1	0.0
PL	3.9	4.0	0.1	-1.1	-1.2	0.0
PT	4.4	4.3	-0.1	-1.0	-0.9	0.0
RO	2.5	2.5	0.0	-0.8	-0.7	0.0
SI	4.3	4.0	-0.3	-0.6	-0.4	0.0
SK	3.7	4.0	0.3	-0.6	-0.8	0.1
FI	5.3	4.2	-1.1	-1.4	-0.4	-0.1
SE	5.8	5.1	-0.6	0.4	1.2	0.2
NO	7.5	6.2	-1.4	-0.6	0.9	0.2
EA	4.3	3.8	-0.5	-0.6	-0.2	0.0
EU	4.4	3.9	-0.5	-0.6	-0.2	-0.1

Students and employment effects are computed as growth rates, between 2022 and 2070, of the number of students and employed, respectively, and weighted by the expenditure-to-GDP ratio in 2022.

Source: European Commission, EPC.

4.3.2. Drivers of education expenditure

The projected change of education spending can be broken down between a student and an employment effect. Table I.4.2 illustrates a breakdown, according to students and employment effects, of the projected change in the public expenditure on education to GDP ratio between 2022 and 2070. In line with the underlying assumptions, this breakdown allows showing the respective contribution of the change in the number of students and of the number of employed people.

In countries with the largest expected decrease in education spending, the projected decrease of the number of students (reflecting demographic developments) is often the most relevant driver. The countries with the largest expected decline in expenditure are Finland, the Netherlands, Denmark and France. Results for these countries are in line with the intuition of the model in that a decrease in the number of students leads to lower education expenditure (see Table I.4.2).

In countries projected to have the largest increase in education expenditure, the projected decrease in employment is an important driver. The countries showing the biggest increase in expenditure are Slovakia and Czechia, followed by Germany, Hungary, Poland and Bulgaria. In the case of Czechia and Slovakia, a decline in the number of students, which would justify a decrease in expenditure, is offset by a large reduction in the number of employed people – fully reflecting demographic developments in the countries. In Germany, a decrease in the number of employed people and a minor change in the number of students drive higher education spending.

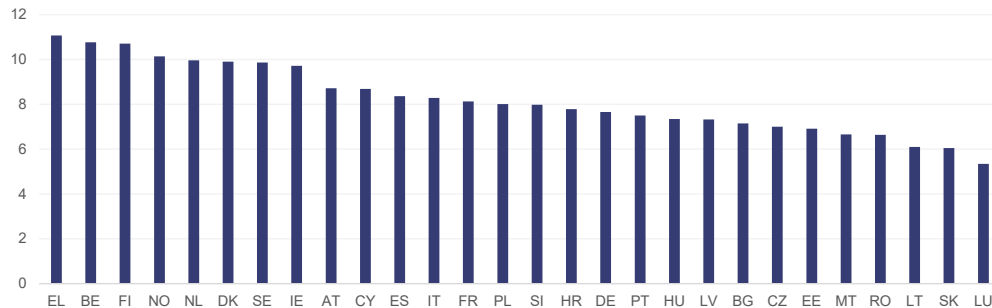
4.3.3. Sensitivity tests

The high enrolment rate scenario

Different sensitivity tests are considered in the 2024 Ageing Report, including a higher enrolment rate scenario. In line with the 2021 Ageing Report, this sensitivity test assumes convergence of enrolment rates towards the average of the three best performing countries in the EU. This scenario can be interpreted as a demand shock that raises enrolment rates in ISCED levels 3-4 and 5-8. In 2022, the three countries with the highest enrolment rates in ISCED levels 3-4 and 5-8 were Greece, Belgium and Finland (see Graph I.4.5). By age bracket (15 years and older) and ISCED level (3-4 and 5-8), countries are assumed to converge linearly from 2022 until 2045 to the average enrolment rate in these three countries. Thereafter, enrolment rates are kept constant, although still considering the impact of participation rates. In practical terms, if the country-specific enrolment rate (by ISCED and age) is lower than the average enrolment rate of the three best performing countries, a convergence to the latter is assumed from 2022 until 2045 - keeping it constant afterwards. On the contrary, if the country-specific enrolment rate (by ISCED and age) is already above the target, the initial enrolment rate is kept constant as of 2022.

Higher enrolment rates would imply an increase of education expenditure over the long term in the EU, against a reduction in the baseline. In 2070, the additional budgetary cost due to higher enrolment rates would imply that spending on education would increase by around +0.4 pps on average in the EU (see Tables I.4.3 and I.AIV.5). Across countries, the projected change in education expenditure varies considerably, ranging from -0.6 pps in Finland to +1.6 pps in Czechia and Slovakia. In 2070, average spending on education would be 0.8 pps of GDP higher than the baseline projection (see Table I.4.4).

Graph I.4.5: **Enrolment rates of base period - ISCED 3-4 and ISCED 5-8**



Enrolment rates are computed as a ratio between the total number of students enrolled in ISCED 3-4 and ISCED 5-8 and the total population.

Source: European Commission, EPC.

Table I.4.3: **Baseline and sensitivity tests (public expenditure-to-GDP ratio) - Change between 2022 and 2070**

	2022	2070	Change 2022-2070						
	Baseline	Baseline	High enrolment	Lower migration	Higher migration	Lower fertility	Higher TFP	Lower TFP	
BE	5.6	4.8	-0.8	0.0	-0.8	-0.8	-1.6	-0.8	-0.8
BG	3.7	3.8	0.1	1.1	0.1	0.1	-0.6	0.1	0.1
CZ	4.1	4.4	0.3	1.6	0.3	0.3	-0.5	0.3	0.3
DK	5.8	4.9	-0.9	0.1	-0.9	-0.9	-1.6	-0.9	-0.9
DE	4.3	4.5	0.2	1.2	0.2	0.2	-0.4	0.2	0.2
EE	3.9	3.4	-0.6	0.5	-0.5	-0.6	-1.2	-0.6	-0.6
IE	2.8	2.1	-0.7	-0.2	-0.7	-0.7	-1.0	-0.7	-0.7
EL	3.4	2.9	-0.5	-0.4	-0.5	-0.5	-1.0	-0.5	-0.5
ES	4.1	3.5	-0.6	0.0	-0.6	-0.6	-1.1	-0.6	-0.6
FR	4.8	3.9	-0.9	0.3	-0.9	-0.9	-1.6	-0.9	-0.9
HR	3.4	2.7	-0.7	-0.4	-0.6	-0.8	-1.3	-0.7	-0.7
IT	3.8	3.0	-0.8	-0.2	-0.8	-0.8	-1.3	-0.8	-0.8
CY	5.0	4.5	-0.5	0.5	-0.4	-0.6	-1.4	-0.5	-0.5
LV	3.6	3.4	-0.2	0.7	-0.1	-0.2	-0.8	-0.2	-0.2
LT	3.0	2.8	-0.3	0.7	-0.2	-0.3	-0.8	-0.3	-0.3
LU	3.0	2.6	-0.4	1.2	-0.4	-0.4	-0.8	-0.4	-0.4
HU	3.5	3.6	0.1	0.9	0.2	0.1	-0.5	0.1	0.1
MT	4.5	4.4	-0.1	1.5	0.0	-0.2	-0.8	-0.1	-0.1
NL	4.9	3.9	-1.0	-0.5	-1.0	-1.0	-1.6	-1.0	-1.0
AT	4.6	4.2	-0.4	0.2	-0.4	-0.4	-1.0	-0.4	-0.4
PL	3.9	4.0	0.1	0.9	0.1	0.1	-0.6	0.1	0.1
PT	4.4	4.3	-0.1	0.4	-0.1	-0.1	-0.9	-0.1	-0.1
RO	2.5	2.5	0.0	1.1	0.0	0.0	-0.5	0.0	0.0
SI	4.3	4.0	-0.3	0.6	-0.2	-0.3	-1.0	-0.3	-0.3
SK	3.7	4.0	0.3	1.6	0.3	0.3	-0.4	0.3	0.3
FI	5.3	4.2	-1.1	-0.6	-1.1	-1.1	-1.7	-1.1	-1.1
SE	5.8	5.1	-0.6	0.3	-0.7	-0.6	-1.3	-0.6	-0.6
NO	7.5	6.2	-1.4	-0.5	-1.4	-1.3	-2.2	-1.4	-1.4
EA	4.3	3.8	-0.5	0.3	-0.5	-0.5	-1.1	-0.5	-0.5
EU	4.4	3.9	-0.5	0.4	-0.5	-0.5	-1.1	-0.5	-0.5

Source: European Commission, EPC.

Additional sensitivity tests

Alongside the high enrolment scenario, the 2024 Ageing Report includes additional sensitivity tests. Consistent with what is done for the other ageing cost items, a uniform shock to the baseline projections is applied for all Member States, assuming higher/lower migration, lower fertility and higher/lower TFP growth.

Table I.4.3 illustrates the projected change between 2022 and 2070 of each sensitivity test. In addition, Table I.4.4 highlights the differences, in year 2070, between the different sensitivity tests and the baseline projections. There are no differences with the baseline for the productivity shocks since no change in the number of students or population is assumed.⁽¹¹³⁾ However, the other sensitivity tests, which have a direct impact on population, deviate from the baseline projection.

As expected, the lower fertility scenario has the largest decreasing impact on the projected education expenditure. In this sensitivity test, the fertility rate is assumed to be 20% lower compared to the baseline over the entire projection period. This assumption generates a reduction in expenditure (-1.1 pps of GDP for the EU compared with -0.5 pps of GDP in the baseline), due to a fall in the number of future students.

Higher and lower migration hypotheses lead to intuitive results, though the impact of the shocks is limited. In particular, a higher and a lower overall population (due to higher and lower net migration flows) engender, respectively, a modest positive and negative variation in education expenditure compared with the baseline across all Member States.

Table I.4.4: **Sensitivity tests and alternative scenarios – Deviation from the baseline in 2070**

	High enrolment	Lower migration	Higher migration	Lower fertility
BE	0.8	0.0	0.0	-0.8
BG	1.1	0.0	0.0	-0.7
CZ	1.3	0.0	0.0	-0.8
DK	1.0	0.0	0.0	-0.7
DE	1.0	0.0	0.0	-0.7
EE	1.1	0.0	0.0	-0.6
IE	0.5	0.0	0.0	-0.3
EL	0.1	0.0	0.0	-0.5
ES	0.6	0.0	0.0	-0.5
FR	1.1	0.0	0.0	-0.7
HR	0.3	0.1	-0.1	-0.6
IT	0.6	0.0	0.0	-0.5
CY	1.0	0.1	-0.1	-0.8
LV	0.9	0.1	0.0	-0.6
LT	0.9	0.1	-0.1	-0.5
LU	1.6	0.0	0.0	-0.4
HU	0.8	0.0	0.0	-0.7
MT	1.6	0.1	-0.1	-0.7
NL	0.5	0.0	0.0	-0.6
AT	0.6	0.0	0.0	-0.6
PL	0.8	0.0	0.0	-0.7
PT	0.5	0.0	0.0	-0.8
RO	1.1	0.0	0.0	-0.5
SI	0.8	0.1	0.0	-0.7
SK	1.3	0.0	0.0	-0.7
FI	0.5	0.0	0.0	-0.6
SE	0.9	0.0	0.0	-0.7
NO	0.9	-0.1	0.1	-0.9
EA	0.8	0.0	0.0	-0.6
EU	0.8	0.0	0.0	-0.6

The sensitivity tests on productivity developments (higher and lower TFP growth) coincide with the baseline.

Source: European Commission, EPC.

⁽¹¹³⁾ Such result is also in line with the underlying assumptions of the model on the expenditure-to-GDP impact.

4.4. COMPARISON WITH THE 2021 AGEING REPORT

Projected education expenditure in the EU is revised slightly downwards in this report compared with the 2021 Ageing Report. Table I.4.5 compares the change of public expenditure on education between the 2021 and 2024 Ageing Reports and provides a breakdown between a base year effect, as well as student and employment effects, the latter components representing the revision of the projected number of students and employed people between the two reports. In particular, the education expenditure-to-GDP ratio at time t , for ISCED levels 1-8, can be expressed as a function of base period ratios and of the ratio between the (average) student and employment indexes at time t .⁽¹¹⁴⁾⁽¹¹⁵⁾ Table I.4.5 shows that, despite considerable cross-country variations, the expenditure-to-GDP ratio for 2070 at EU level is, on average, revised downwards by about 0.1 pp between the 2021 and the 2024 Ageing Report.

Table I.4.5: **Breakdown of revision in expenditure-to-GDP ratio between 2024 and 2021 Ageing Reports (pps of GDP)**

	Expenditure in 2070 (%GDP)		Difference (3) = (2)-(1) (3) = (4)+(5)-(6)+(7)	Revisions			Discrepancy (7) = (3)-(4)-(5)+(6)
	2021 AR (1)	2024 AR (2)		Base (4)	Student index (5) <i>(index %change) x (exp ratio in 2021 AR)</i>	Employment index (6)	
BE	5.1	4.8	-0.3	0.2	0.0	0.3	-0.2
BG	3.3	3.8	0.5	0.9	0.2	0.3	-0.2
CZ	4.1	4.4	0.3	0.6	-0.2	0.1	0.1
DK	5.2	4.9	-0.3	0.2	-0.1	-0.5	-0.8
DE	4.5	4.5	0.0	0.4	-0.1	0.1	-0.2
EE	3.8	3.4	-0.4	-0.1	0.0	0.2	-0.1
IE	3.2	2.1	-1.0	-0.5	-0.9	-0.3	0.0
EL	2.6	2.9	0.3	0.1	-0.2	-0.2	0.1
ES	3.2	3.5	0.3	0.5	-0.3	-0.2	0.0
FR	3.9	3.9	0.0	0.4	-0.3	0.0	-0.1
HR	4.6	2.7	-1.8	-1.2	0.2	0.6	-0.1
IT	3.1	3.0	-0.1	0.4	-0.2	0.2	-0.1
CY	4.6	4.5	-0.1	0.0	-0.9	-1.0	-0.1
LV	3.6	3.4	-0.2	-0.1	0.1	0.2	0.0
LT	2.9	2.8	-0.1	0.1	0.1	0.0	-0.4
LU	2.2	2.6	0.4	0.2	0.4	-0.1	-0.3
HU	3.3	3.6	0.3	0.2	0.2	0.0	-0.1
MT	4.1	4.4	0.3	0.3	0.1	-0.5	-0.5
NL	4.4	3.9	-0.5	0.2	-0.1	0.3	-0.4
AT	4.5	4.2	-0.4	0.1	-0.1	0.0	-0.3
PL	3.8	4.0	0.2	0.2	0.7	0.2	-0.5
PT	4.1	4.3	0.2	0.4	0.2	0.2	-0.3
RO	2.4	2.5	0.1	0.0	0.5	0.3	-0.2
SI	3.9	4.0	0.1	0.4	-0.2	0.2	0.0
SK	3.8	4.0	0.3	0.5	0.3	0.3	-0.2
FI	4.4	4.2	-0.2	0.1	0.0	0.1	-0.1
SE	5.4	5.1	-0.3	0.0	-0.7	-0.3	0.2
NO	6.7	6.2	-0.5	0.3	-0.8	-0.3	-0.3
EA	3.9	3.8	-0.1	0.1	-0.1	0.0	-0.2
EU	4.0	3.9	-0.1	0.2	0.0	0.0	-0.2

- Base is the percentage increase between the 2024 and the 2021 Ageing Reports in the total expenditure-to-GDP ratio in base year 2022, multiplied by expenditure-to-GDP in 2070 from the 2021 Ageing Report.

- Students (Employment) index is given by the ratio of the number of students (employed) in 2070 and in base year 2022.

Source: European Commission, EPC.

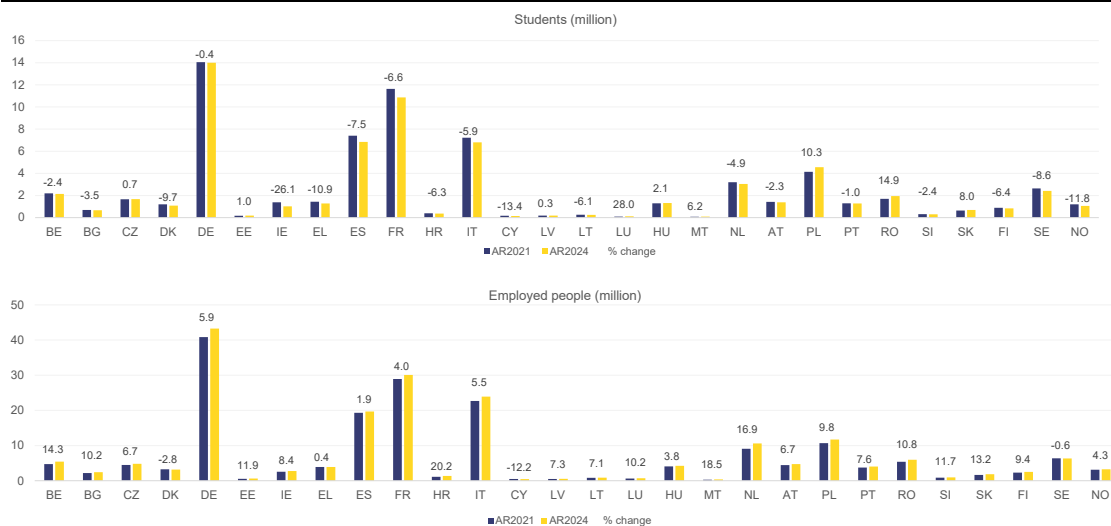
Cross-country results show a high variability in terms of revisions. A country-level investigation highlights a remarkable downward revision of the expenditure-to-GDP ratio projected in 2070 in Croatia (-1.8 pps of GDP) and Ireland (-1 pp of GDP, see Table I.4.5). Such results are upheld by Graph I.4.6, that provides a comparison of the number of students and employed people between the current and previous Ageing Report. For Croatia, the downward effect can be mostly explained by a

⁽¹¹⁴⁾ See Equation (4.6) in Chapter 4 of Part II in [Volume I of the 2024 Ageing Report](#).

⁽¹¹⁵⁾ Assuming a constant students-to-staff ratio. Student and Employment indexes are averaged across all ISCED levels.

decline in base period values of the expenditure-to-GDP ratio (-1.2 pps of GDP).⁽¹¹⁶⁾ Concerning Ireland, the substantial decline in the projected number of students in 2070 is the major driver behind the overall downward revision (contribution of -0.9 pps of GDP), although accompanied by a non-negligible reduction in base year values (-0.5 pps of GDP). The former can also be seen in Graph I.4.6.

Graph I.4.6: **Comparison of students and employed in the 2021 and 2024 Ageing Reports (2070)**



Source: European Commission, EPC.

⁽¹¹⁶⁾ In the case of Croatia, due to a previous lack of data, the two latest available years to build the base year projections in the 2021 Ageing Report were 2013 and 2014. For the 2024 Ageing Report, more recent data (2019 and 2020) have become available. This factor contributes to explaining the base year revision between the 2021 and 2024 Ageing Reports.

5. TOTAL COST OF AGEING

5.1. INTRODUCTION

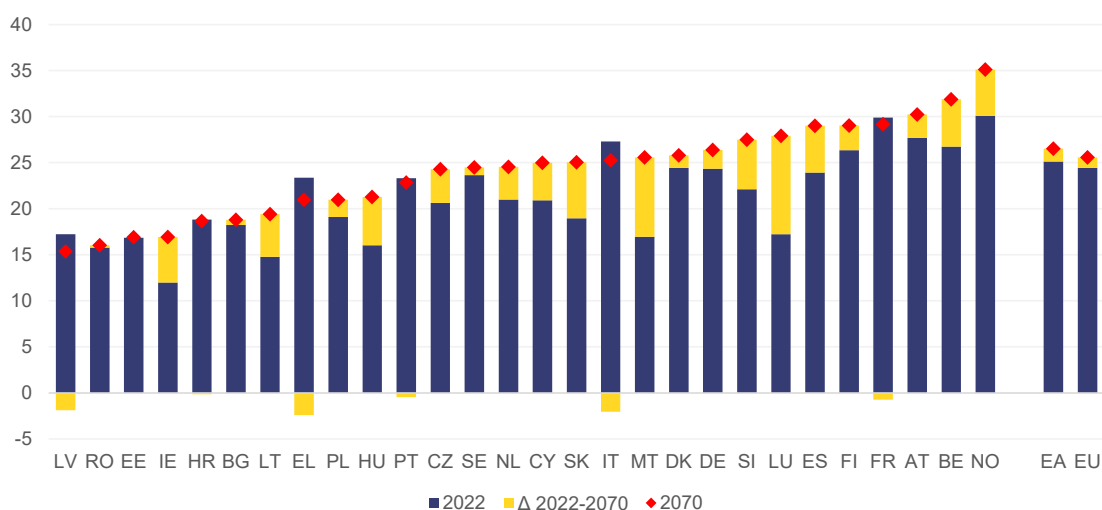
The total cost of ageing is a critical indicator that represents the fiscal burden of an ageing population on a country's economy. It encompasses pension, health care, long-term care and education expenditure. This chapter describes the projections of the total cost of ageing for each Member State throughout the projection period from 2022 to 2070. It also examines the contribution of each component to changes in the total cost of ageing. The expenditure-to-GDP ratios exhibit significant variation across countries and spending items. In the last section of the chapter, the baseline projections of the 2024 Ageing Report are compared with the baseline projections of the 2021 Ageing Report.

5.2. PROJECTION RESULTS

5.2.1. Baseline projections

The baseline projections of the total cost of ageing combine the baseline projections of pension, health care, long-term care and education spending relative to GDP under the 'no-policy-change' assumption. This implies that the changes are largely influenced by the underlying demographic and macroeconomic assumptions. The projected total cost of ageing also incorporates the future impact of already legislated reforms.

Graph I.5.1: **Baseline: total cost of ageing 2022-2070 (in % of GDP)**



Countries are ranked by total cost of ageing in 2070.

Source: European Commission, EPC.

For most Member States, the total cost of ageing is expected to rise between 2022-2070, while for six Member States (Croatia, France, Greece, Latvia, Italy and Portugal) costs are projected to slightly decrease over the projection period (see Graph I.5.1). For the EU as a whole, the cost of ageing is expected to increase by 1.2 pps, from 24.4% of GDP in 2022 to 25.6% in 2070. A similar increase is projected for the euro area. Graph I.5.1 further shows that there is a considerable variation in the change between 2022-2070 across countries, with spending ratios already differing widely in the base year. Ireland had the lowest total cost of ageing in 2022 (at 12% of GDP), while this ratio stood at 30% of GDP in Norway. In 2070, Latvia is projected to have the lowest total cost of

ageing (at 15.4% of GDP), while Norway again is projected to have the highest cost of ageing (at 35.1% of GDP). For the EU, the country with the highest cost of ageing in 2022 is France (at 29.9% of GDP). In 2070, Belgium is projected to be the EU Member State with the highest cost of ageing (at 31.9% of GDP).

The timing of the projected change in the total cost of ageing differs across Member States (see Table I.5.1). For the EU and the euro area aggregates, the projected increase in 2022-2030 amounts to 0.2 pps of GDP. This increase would accelerate in the 2030s to 0.6 pps and 0.8 pps respectively for the EU and the euro area. Afterwards, the increase in the total cost of ageing would slow down, to 0.3 pps of GDP in 2040-2050. In the remaining two decades, the total cost of ageing would stabilise at the EU aggregate level. The country with the largest projected increase over 2022-2070 in the total cost of ageing is Luxembourg, with an increase of 10.7 pps of GDP. It is expected to see an accelerating increase in the cost of ageing over the projection period because the underlying demographic assumptions push up pension spending in the later decades. The largest decrease is projected in Greece, with a fall of 2.4 pps of GDP, which happens in the next decade and towards the end of the projection period and is driven by lower pension expenditure.

Table I.5.1: **Baseline: total cost of ageing and change by decade (in pps of GDP)**

	2022	2070	Δ 2022 -2070	of which in:					
				Δ 2022-2030	Δ 2030-2040	Δ 2040-2050	Δ 2050-2060	Δ 2060-2070	
BE	26.8	31.9	5.1	0.9	1.0	1.0	1.0	1.1	BE
BG	18.2	18.8	0.6	0.9	-0.8	0.4	0.5	-0.5	BG
CZ	20.6	24.3	3.7	-0.6	1.7	2.0	1.1	-0.6	CZ
DK	24.4	25.8	1.4	1.3	0.5	-0.6	-0.4	0.5	DK
DE	24.3	26.4	2.0	0.7	0.8	0.1	0.2	0.4	DE
EE	16.8	16.9	0.0	0.5	-0.3	0.2	0.4	-0.8	EE
IE	12.0	16.9	4.9	0.4	1.2	1.7	1.1	0.6	IE
EL	23.4	21.0	-2.4	-2.2	1.3	0.7	-1.3	-1.0	EL
ES	23.9	29.0	5.1	1.1	2.2	1.9	0.0	-0.2	ES
FR	29.9	29.2	-0.7	-0.7	0.0	0.0	-0.2	0.1	FR
HR	18.8	18.7	-0.2	0.8	-0.5	-0.4	-0.1	0.0	HR
IT	27.3	25.3	-2.0	0.3	0.7	-1.0	-1.6	-0.4	IT
CY	20.9	25.0	4.1	1.1	1.4	0.3	1.2	0.1	CY
LV	17.2	15.4	-1.9	-0.8	-0.4	0.1	0.3	-1.0	LV
LT	14.8	19.4	4.6	1.9	1.4	0.9	0.9	-0.3	LT
LU	17.2	27.9	10.7	0.5	2.0	1.9	3.0	3.2	LU
HU	16.0	21.3	5.2	-0.1	1.8	1.9	1.1	0.6	HU
MT	16.9	25.6	8.6	-0.9	0.1	1.6	3.8	4.0	MT
NL	21.0	24.5	3.5	0.7	1.5	0.4	0.2	0.8	NL
AT	27.7	30.2	2.6	1.4	0.3	0.1	0.4	0.3	AT
PL	19.1	21.0	1.9	1.4	-0.4	0.7	0.6	-0.5	PL
PT	23.3	22.8	-0.5	1.1	2.0	0.6	-2.7	-1.5	PT
RO	15.8	16.0	0.2	2.3	0.2	0.6	-0.8	-2.1	RO
SI	22.1	27.5	5.4	1.2	1.6	2.0	0.7	-0.2	SI
SK	19.0	25.0	6.1	2.9	1.3	1.4	1.4	-0.8	SK
FI	26.4	29.0	2.7	0.7	-0.4	-0.2	1.1	1.4	FI
SE	23.6	24.5	0.8	0.2	-0.3	0.1	0.7	0.2	SE
NO	30.1	35.1	5.0	1.6	0.7	0.7	1.1	1.0	NO
EA	25.1	26.5	1.4	0.2	0.8	0.3	-0.1	0.2	EA
EU	24.4	25.6	1.2	0.2	0.6	0.3	0.0	0.0	EU

Source: European Commission, EPC.

5.2.2. Drivers of change in the total cost of ageing

The projected increase in the total cost of ageing can be broken down into changes in spending on pensions, health care, long-term care and education. Table I.5.2 provides a detailed breakdown of the contribution of each component to the overall cost of ageing, dividing the projected change into two time periods: the first half of the projection period from 2022-2045 and the second half from 2046-2070.

Table I.5.2: **Baseline: change of components in total cost of ageing (in pps of GDP)**

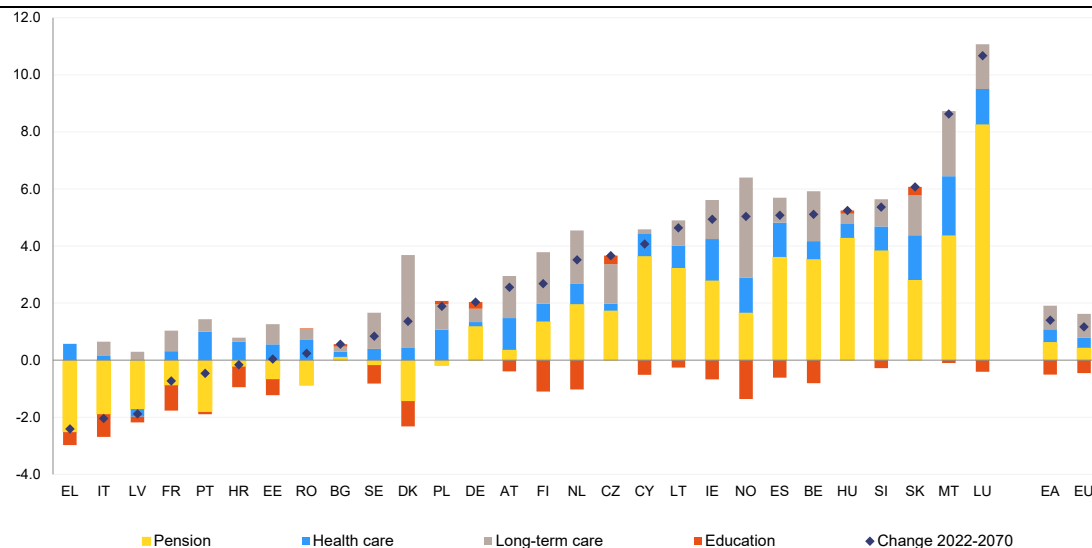
	Pensions			Health care			Long-term care			Education		
	2022	Δ2022-45	Δ2046-70	2022	Δ2022-45	Δ2046-70	2022	Δ2022-45	Δ2046-70	2022	Δ2022-45	Δ2046-70
BE	12.7	1.9	1.6	6.1	0.4	0.2	2.3	0.9	0.8	5.6	-0.8	0.0
BG	9.5	-0.1	0.3	4.5	0.4	-0.2	0.5	0.1	0.0	3.7	-0.1	0.2
CZ	8.7	1.3	0.4	6.4	0.1	0.2	1.5	0.7	0.7	4.1	0.1	0.2
DK	8.3	0.0	-1.5	7.4	0.1	0.3	3.0	2.0	1.3	5.8	-0.5	-0.4
DE	10.2	0.8	0.4	8.0	0.0	0.1	1.9	0.5	0.0	4.3	0.2	0.0
EE	7.4	0.1	-0.8	5.1	0.4	0.2	0.4	0.4	0.3	3.9	-0.6	0.0
IE	3.8	1.7	1.1	4.1	0.8	0.7	1.2	0.6	0.8	2.8	-0.6	0.0
EL	14.5	-0.5	-2.0	5.4	0.6	0.0	0.1	0.0	0.0	3.4	-0.4	-0.1
ES	13.1	3.8	-0.2	5.9	1.0	0.2	0.8	0.4	0.5	4.1	-0.7	0.1
FR	14.4	-0.5	-0.3	8.8	0.1	0.2	1.9	0.4	0.3	4.8	-0.7	-0.2
HR	9.0	0.3	-0.5	5.8	0.4	0.3	0.5	0.1	0.1	3.4	-0.7	0.0
IT	15.6	0.9	-2.8	6.3	0.1	0.0	1.6	0.3	0.2	3.8	-0.6	-0.2
CY	8.2	2.7	1.0	7.5	0.5	0.3	0.2	0.1	0.1	5.0	-0.4	-0.1
LV	7.2	-0.8	-0.9	6.0	-0.3	0.0	0.5	0.2	0.1	3.6	-0.4	0.2
LT	6.4	3.1	0.1	4.3	0.5	0.2	1.0	0.4	0.4	3.0	-0.4	0.2
LU	9.2	2.6	5.7	3.9	0.7	0.5	1.1	0.5	1.1	3.0	-0.4	0.0
HU	7.7	2.4	1.8	4.3	0.4	0.1	0.5	0.2	0.2	3.5	0.0	0.1
MT	6.2	-0.5	4.9	5.1	0.5	1.6	1.2	0.6	1.7	4.5	-0.7	0.6
NL	6.5	1.4	0.6	5.7	0.5	0.2	3.8	1.2	0.6	4.9	-0.7	-0.3
AT	13.7	0.5	-0.1	7.8	0.8	0.3	1.6	0.8	0.7	4.6	-0.5	0.1
PL	10.2	0.4	-0.5	4.4	0.7	0.4	0.5	0.4	0.5	3.9	-0.2	0.3
PT	12.2	2.9	-4.7	6.2	0.7	0.3	0.5	0.3	0.1	4.4	0.0	0.0
RO	8.5	2.1	-3.0	4.4	0.6	0.1	0.3	0.2	0.2	2.5	0.0	0.0
SI	9.8	3.0	0.9	7.0	0.7	0.1	1.0	0.6	0.4	4.3	-0.4	0.2
SK	8.5	2.7	0.1	5.7	1.3	0.3	1.0	0.7	0.7	3.7	0.1	0.2
FI	12.8	-0.4	1.8	6.2	0.4	0.3	2.1	1.1	0.7	5.3	-0.9	-0.2
SE	7.4	-0.4	0.2	7.3	0.1	0.3	3.2	0.6	0.7	5.8	-0.5	-0.1
NO	10.8	1.2	0.5	7.7	0.8	0.5	4.0	1.8	1.7	7.5	-1.2	-0.1
EA	11.9	0.9	-0.2	7.1	0.2	0.2	1.8	0.5	0.3	4.3	-0.4	-0.1
EU	11.4	0.7	-0.3	6.9	0.2	0.2	1.7	0.5	0.3	4.4	-0.4	0.0

Source: European commission, EPC.

The projections reveal a discernible trend in the change of the total cost of ageing, primarily influenced by demographic shifts. It is evident that the rise in pension expenditure relative to GDP is predominantly concentrated in the first half of the projection period, with Luxembourg and Malta being notable exceptions due to their migration-driven demographic projections. This pattern can be attributed to the increasing retirement of the ‘baby boomer’ generation. Over the course of the projection period, this generation slowly exits from the demographic statistics. Conversely, a similar but inverse pattern is observed in education spending, with most Member States witnessing a decrease in education expenditure as fewer children enter school. Fertility rates are projected to undergo a slight recovery over the projection period, resulting in a stabilisation in education expenditure.

Changes in pension expenditure are the largest contributor to the overall change in the total cost of ageing for Member States, followed by the increases in spending on long-term care and then health care. Changes in education expenditure are of lesser magnitude. Graph I.5.2 shows the change over the period 2022-2070 of the total cost of ageing divided into its components, facilitating a visual comparison of the significance of each spending driver in the overall change. Graph I.5.3 shows the same breakdown over the period 2022-2045. Once more, the significant contribution of the change in pension expenditure is evident and there is also a more pronounced decrease in education spending.

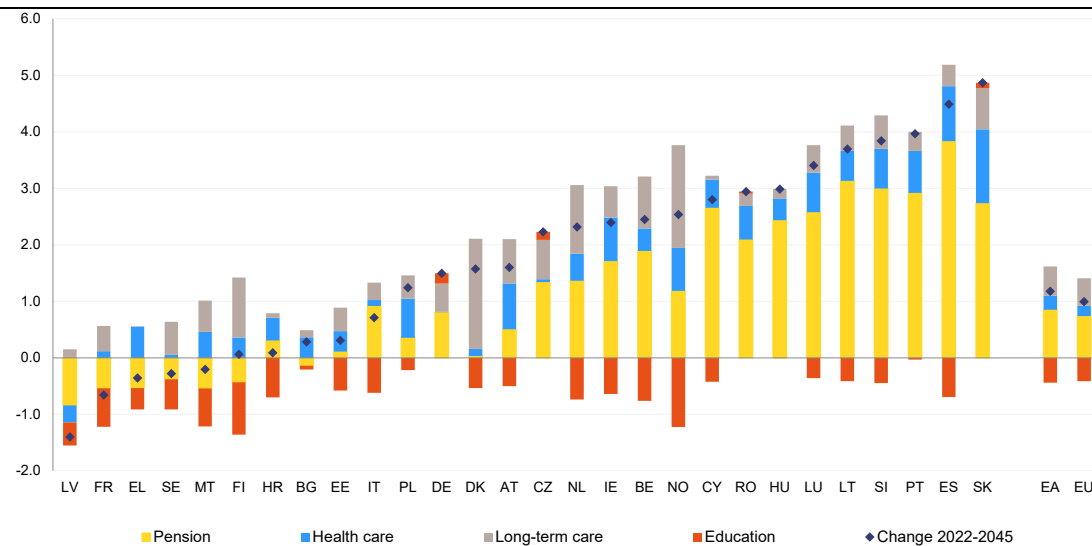
Graph I.5.2: **Baseline: change in cost of ageing 2022-2070 by component (in pps of GDP)**



Countries are ranked by change in total cost of ageing between 2022-2070.

Source: European Commission, EPC.

Graph I.5.3: **Baseline: change in cost of ageing 2022-2045 by component (in pps of GDP)**



Countries are ranked by change in total cost of ageing between 2022-2045.

Source: European commission, EPC.

5.2.3. Sensitivity tests and alternative scenarios

Different sensitivity tests and scenarios are considered in the 2024 Ageing Report to account for possible upside or downside risks. Table I.5.3 shows a selection of the most relevant ones and their additional effect on the change in the total cost of ageing compared with the baseline

projections. In the first column, the baseline change in the total cost of ageing between 2022 and 2070 is shown. The following columns show the additional impact from the change in assumptions.

Table I.5.3: **Difference to baseline change in 2022-2070 for the sensitivity tests and alternative scenarios**
(in pps of GDP)

	Baseline: Δ 2022-2070 (%GDP)	Additional impact of unfavourable scenarios (pps of GDP)						Additional impact of favourable scenarios (pps of GDP)			
		Higher life expectancy	Lower migration	Lower fertility	Lower TFP growth	Constant ret. age	Risk scenario	Higher migration	Higher empl. 55-74	Higher TFP growth	Link to life expectancy
BE	5.1	1.2	0.9	1.3	1.1	1.1	2.9	-0.7	-1.3	-0.6	-1.6
BG	0.6	0.6	0.5	0.5	0.2	0.3	3.3	-0.5	-0.4	-0.1	-0.9
CZ	3.7	1.0	0.7	0.6	0.3	1.2	2.5	-0.6	-0.1	-0.2	-1.4
DK	1.4	0.8	0.9	0.7	0.7	2.0	1.3	-0.8	-0.4	-0.4	
DE	2.0	0.5	0.9	0.5	0.1	0.4	1.7	-0.8	-0.2	-0.1	-0.9
EE	0.0	0.6	-0.1	-0.2	0.1	2.4	6.2	0.1	0.0	-0.1	
IE	4.9	0.5	0.6	0.6	0.0	0.1	1.7	-0.5	-0.3	0.0	-1.2
EL	-2.4	0.0	1.3	0.6	0.7	1.0	4.1	-1.1	-0.1	-0.3	
ES	5.1	1.0	1.7	1.0	1.0	2.1	3.5	-1.3	-1.2	-0.5	-1.9
FR	-0.7	0.8	0.9	1.2	0.7	0.9	3.0	-0.7	-0.6	-0.4	-1.0
HR	-0.2	0.5	0.4	0.7	0.2	0.2	2.5	-0.3	-0.7	-0.3	-1.3
IT	-2.0	0.0	1.0	0.6	0.6	1.2	1.8	-0.8	0.2	-0.4	
CY	4.1	0.2	2.0	0.2	0.4	2.5	4.6	-1.3	-0.3	-0.1	
LV	-1.9	0.2	0.1	0.0	0.1	0.1	3.5	-0.1	0.0	-0.1	-0.2
LT	4.6	0.3	0.5	0.0	0.4	0.2	8.6	0.0	0.0	-0.2	-0.2
LU	10.7	0.8	0.3	1.1	0.7	0.0	1.9	-0.2	-0.4	-0.5	-2.2
HU	5.2	0.8	1.1	0.7	0.5	0.2	4.0	-0.4	-0.4	-0.3	-2.3
MT	8.6	0.8	1.6	0.4	0.5	0.2	4.3	-1.9	-0.6	-0.3	-0.7
NL	3.5	0.4	0.6	0.8	0.0	1.1	2.6	-0.5	-0.2	0.0	-0.1
AT	2.6	1.1	0.7	0.7	0.1	1.1	2.4	-0.6	-0.5	-0.1	-2.0
PL	1.9	0.5	0.3	0.5	0.3	0.2	4.4	-0.2	-0.3	-0.2	-1.1
PT	-0.5	0.7	0.6	0.7	0.8	1.9	8.9	-0.6	-0.4	-0.4	-0.1
RO	0.2	0.7	0.4	0.5	0.4	0.2	4.0	-0.4	-0.3	-0.2	-0.6
SI	5.4	1.1	1.3	1.0	0.2	1.0	3.6	-1.0	-0.7	-0.2	-1.6
SK	6.1	0.4	0.1	1.1	0.4	1.5	4.3	-0.1		-0.2	
FI	2.7	0.3	0.8	1.1	0.5	1.0	2.9	-0.7	-0.3	-0.4	
SE	0.8	0.0	0.9	0.6	0.0	0.9	2.7	-0.8	-0.4	0.0	-0.1
NQ	5.0	0.9	1.0	1.1	0.2	0.2	2.0	-0.9	-0.8	-0.2	-0.6
EA	1.4	0.6	0.9	0.8	0.4	0.9	2.6	-0.8	-0.4	-0.3	
EU	1.2	0.6	0.8	0.9	0.4	1.0	2.7	-0.7	-0.4	-0.2	

- The risk scenario is only relevant for health care and long-term care. It assumes a higher elasticity of demand for health care and that for long-term care the cost and coverage converge to the EU average.

- The link to life expectancy scenario is only conducted for countries that do not already have a full link legislated.

Source: European Commission, EPC.

The 2024 Ageing Report first explores a series of shocks that could have an adverse impact on the total cost of ageing. The 'higher life expectancy' assumption affects expenditure by increasing pension spending due to a longer retirement period and higher health care and long-term care costs. For the EU and the euro area aggregates, the projected change in total costs of ageing is 0.6 pps of GDP higher relative to the baseline. The 'lower migration' and the 'lower TFP growth' tests increase the total cost of ageing ratio compared with the baseline mainly through a denominator effect, i.e., by reducing the GDP projections. Lower migration by a reduction in labour supply, lower TFP - mostly mechanically - through lower GDP growth, which in turn increases the expenditure-to-GDP ratio.⁽¹¹⁷⁾ Under the 'lower fertility' sensitivity test, GDP is projected to grow considerably less compared with the baseline.⁽¹¹⁸⁾ This effect outweighs the lower costs on education, pension, health care and long-term care spending due to a smaller population in the long term. For the EU and the euro area, spending is projected to be 0.9 pps and 0.8 pps of GDP higher than in the baseline in 2070. The 'constant retirement age scenario' shows future pension spending developments if the Member States would keep the statutory retirement age, as well as career requirements, constant over the projection horizon at its 2023 level. For the EU as a whole, the total cost of ageing would be 1 pp of GDP higher in this scenario compared with the baseline. The 'risk scenario' would have the biggest impact on future expenditure developments. This scenario, which only affects health care and long-term care spending, assumes (i) that the cost and the coverage of long-term care converge to the EU average levels and, (ii) for health care spending, a higher income elasticity of demand, representing the impact of non-

⁽¹¹⁷⁾ There are second round effects in the calculation of the pension expenditure in case of these scenarios. Especially, if spending on pension is linked to wages, which in the projections develop in line with GDP. For more details, see Chapter 1.

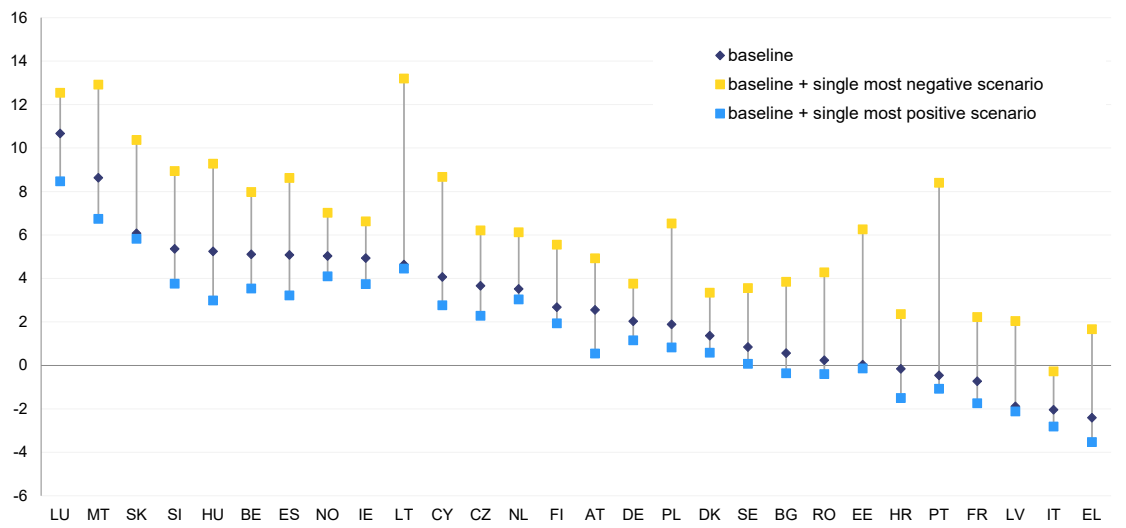
⁽¹¹⁸⁾ See Chapter 5 in Part I in [Volume I of the 2024 Ageing Report](#).

demographic factors. This leads to much larger expenditure increases than in the baseline, especially in Member States with the lowest long-term care cost profiles and coverage ratios in 2022.

The 2024 Ageing Report also considers several favourable tests and scenarios, which could lead to a lower total cost of ageing over the projection period compared with the baseline.

In case of ‘higher migration’, expenditure would be lower than in the baseline due to an increase in the projected work force mirroring the effects of the ‘lower migration’ test. Under the ‘higher TFP growth’ sensitivity test, the total cost of ageing is projected to be lower than in the baseline, primarily due to higher GDP projections. The difference compared to the baseline is relatively smaller in absolute terms than for the ‘lower TFP’ test, as these shocks are constructed slightly asymmetrically.⁽¹¹⁹⁾ The ‘higher employment rate for older workers’ test looks at the effects of an increase of 10 pps in the employment rate of the age group 55-74 compared with the baseline. In general, the sensitivity test leads to a decrease in the total cost of ageing with respect to the baseline projections. The decreases are driven by two factors: (i) the increase in employment leads directly to a higher GDP growth and (ii) the higher effective retirement age assumed decreases pension expenditure further reducing the expenditure-to-GDP ratio. These effects outweigh in most countries the higher pension costs due to the additional pension rights accrued over the longer careers. Notable exceptions are Estonia, Italy and Lithuania, where the cost of ageing increases in this sensitivity test. The ‘link of retirement age to life expectancy scenario’ leads to a reduced projected change in the total cost of ageing, compared with the baseline, as older people work longer over the projection period. The increase in the labour force increases the GDP projections while the higher effective retirement age reduces pension expenditure. Graph I.5.4 gives an overview of the range of possible changes in the total cost of ageing for each Member State, showing the single most favourable and the single most adverse scenario over the projection period 2022-2070.

Graph I.5.4: Range of change in total cost of ageing between 2022-2070 (in pps of GDP)



Countries are ranked by change in baseline between 2022-2070.

Source: European Commission, EPC.

⁽¹¹⁹⁾ While the higher and lower TFP growth assumptions have the same distance from the baseline in 2070 (+/- 0.2 pps), the anchor points in 2040 and 2048 are asymmetrical. For the 2040 anchor point, the difference between the higher/lower TFP growth tests and the baseline are 0.0 pp and -0.2 pps respectively. For the 2048 anchor point, the difference between the higher/lower TFP growth assumption and the baseline are +0.1 pp and -0.2 pps respectively. For more details see Chapter 3 in Part I in [Volume I of the 2024 Ageing Report](#).

In the *'lower TFP growth'* sensitivity test, the higher projected change in the total cost of ageing compared with the baseline varies among Member States depending on indexation rules and by decade as the lower TFP growth assumptions change the GDP projections the strongest in 2040-2060 (see Table I.5.4). As GDP growth drives wage growth in the Ageing Report projections, countries where the pension benefit is linked to wage growth will have projections close to the baseline. In contrast, countries linking pension benefits to inflation report larger differences in the total cost of ageing when assuming lower TFP growth. As the expenditure for health care, long-term care and education is mostly linked to GDP growth, these spending components are projected to be less affected by changes in GDP and therefore do not differ significantly from the baseline projections. Table I.5.4 further illustrates the more unfavourable developments in the *'lower TFP growth'* test over the decades. In the period 2022-2030, there are little differences as there are no relevant changes in the pension expenditure projections. In the decade 2030-2040, the total cost of ageing increases by 0.9 pps of GDP for the EU and 0.7 pps of GDP for the euro area, which is 0.1 pp of GDP more than under the baseline. In the period 2040-2050, the increase in the total cost of ageing is 0.5 pps for the EU and the euro area, which is 0.2 pps more than in the baseline. In the decade 2060-2070, differences are smaller. The total cost of ageing increase by 0.1 and 0.2 pps of GDP for the EU and the euro area respectively compares to 0.0 pp of GDP and 0.2 pps of GDP in the baseline.

Table I.5.4: **Lower TFP growth: difference in total cost of ageing vs baseline (in %/pps of GDP)**

	Lower TFP sensitivity test			Difference between lower TFP test and baseline of which in:						
	2022	2070	Δ 2022 -2070	Δ 2022-70	Δ 2022-30	Δ 2030-40	Δ 2040-50	Δ 2050-60	Δ 2060-70	
BE	26.8	32.9	6.2	1.1	0.0	0.1	0.3	0.3	0.3	BE
BG	18.2	19.0	0.8	0.2	0.0	0.1	0.1	0.1	0.0	BG
CZ	20.6	24.6	4.0	0.3	0.0	0.1	0.1	0.1	0.0	CZ
DK	24.4	26.5	2.1	0.7	0.0	0.1	0.2	0.2	0.2	DK
DE	24.3	26.5	2.1	0.1	0.0	0.0	0.0	0.1	0.0	DE
EE	16.8	17.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	EE
IE	12.0	17.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	IE
EL	23.4	21.6	-1.7	0.7	0.0	0.1	0.3	0.2	0.1	EL
ES	23.9	30.0	6.1	1.0	0.0	0.2	0.4	0.3	0.1	ES
FR	29.9	29.8	0.0	0.7	0.0	0.1	0.2	0.2	0.1	FR
HR	18.8	18.9	0.0	0.2	0.0	0.0	0.1	0.1	0.1	HR
IT	27.3	25.8	-1.4	0.6	0.0	0.2	0.3	0.1	0.0	IT
CY	20.9	25.4	4.5	0.4	0.0	0.1	0.1	0.1	0.1	CY
LV	17.2	15.5	-1.8	0.1	0.0	0.1	0.0	0.0	0.0	LV
LT	14.8	19.8	5.1	0.4	-0.1	0.0	0.1	0.2	0.2	LT
LU	17.2	28.6	11.4	0.7	0.0	0.1	0.2	0.2	0.2	LU
HU	16.0	21.8	5.8	0.5	0.0	0.1	0.2	0.1	0.1	HU
MT	16.9	26.0	9.1	0.5	0.0	0.0	0.1	0.1	0.2	MT
NL	21.0	24.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	NL
AT	27.7	30.4	2.7	0.1	0.0	0.0	0.2	0.0	-0.1	AT
PL	19.1	21.3	2.2	0.3	0.0	0.1	0.1	0.1	0.0	PL
PT	23.3	23.6	0.3	0.8	0.0	0.2	0.4	0.2	0.1	PT
RO	15.8	16.4	0.6	0.4	0.0	0.1	0.2	0.0	0.0	RO
SI	22.1	27.7	5.6	0.2	0.0	0.1	0.1	0.0	0.0	SI
SK	19.0	25.4	6.4	0.4	0.0	0.1	0.1	0.1	0.0	SK
FI	26.4	29.6	3.2	0.5	0.0	0.1	0.2	0.1	0.1	FI
SE	23.6	24.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	SE
NO	30.1	35.3	5.3	0.2	0.0	0.0	0.1	0.1	0.1	NO
EA	25.1	27.0	1.8	0.4	0.0	0.1	0.2	0.1	0.0	EA
EU	24.4	26.0	1.6	0.4	0.0	0.1	0.2	0.1	0.0	EU

Source: European Commission, EPC.

The large differences between the baseline and the *'risk scenario'* are entirely driven by higher expenditure in health care and long-term care (see Table I.5.5). The increased spending compared with the baseline comes from the assumptions (i) that the cost and the coverage of long-term care converge to the EU average levels and (ii) of a higher income elasticity of demand for health care spending.⁽¹²⁰⁾ These assumptions lead to large increases in the total cost of ageing in 2022-2070. For the EU, the difference in increase in the total cost of ageing is high with 2.7 pps. While the total cost of ageing increases by 1.2 pps in the baseline, the increase in the *'risk scenario'* is 3.9 pps:

⁽¹²⁰⁾A detailed description of the risk scenario for health care and long-term care can be found in the respective Chapters 2 for health care and Chapter 3 for long-term care.

from 24.4% of GDP in 2022 to 28.3% in 2070. For the euro area the total cost of ageing increases by 2.6 pps more than in the baseline between 2022-2070 from 25.1% to 29.1%, an increase of 4.0 pps. The differences in the total cost of ageing are also exponentially more prominent at the end of the projection period as is evident when looking at Table I.5.5. The difference in the change for the EU and the euro area is 0.3 pps higher between 2022-2030 while being 0.5 pps of GDP higher between 2030-2040. This trend accelerates as the total cost of ageing is projected to be 0.6 pps of GDP higher in the 'risk scenario' than in the baseline for the EU and the euro area between 2040-2050 and the period 2050-2060. In the years 2060-2070, the difference between the 'risk scenario' and the baseline is projected to be 0.7 pps and 0.6 pps of GDP for the EU and the euro area.

The variations across Member States are mostly driven by the differential in the impact of the long-term care assumptions. Countries with a large informal care sector and lower cost profiles show the largest increase under this scenario. Differences to the baseline also come from differences from health care expenditure but variation across countries is smaller.

Table I.5.5: Risk scenario: change in total cost of ageing by decade (in pps of GDP)

	Risk scenario			Difference between risk scenario and baseline of which in:						
	2022	2070	Δ 2022-2070	Δ 2022-70	Δ 2022-30	Δ 2030-40	Δ 2040-50	Δ 2050-60	Δ 2060-70	
BE	26.8	34.7	8.0	2.9	0.3	0.5	0.6	0.6	0.8	BE
BG	18.2	22.1	3.9	3.3	0.4	0.6	0.6	0.8	0.9	BG
CZ	20.6	26.8	6.2	2.5	0.3	0.5	0.5	0.6	0.6	CZ
DK	24.4	27.1	2.7	1.3	0.2	0.3	0.4	0.2	0.2	DK
DE	24.3	28.1	3.8	1.7	0.3	0.4	0.5	0.3	0.3	DE
EE	16.8	23.1	6.3	6.2	0.5	0.8	1.1	1.5	2.3	EE
IE	12.0	18.6	6.6	1.7	0.5	0.3	0.3	0.3	0.3	IE
EL	23.4	25.0	1.7	4.1	0.3	0.3	0.6	1.0	1.8	EL
ES	23.9	32.5	8.6	3.5	0.3	0.5	0.8	1.0	0.9	ES
FR	29.9	32.1	2.2	3.0	0.3	0.5	0.7	0.7	0.7	FR
HR	18.8	21.2	2.4	2.5	0.5	0.5	0.5	0.5	0.5	HR
IT	27.3	27.0	-0.3	1.8	0.2	0.3	0.5	0.4	0.3	IT
CY	20.9	29.6	8.7	4.6	0.3	0.5	0.6	0.9	2.2	CY
LV	17.2	18.9	1.6	3.5	0.5	0.7	0.7	0.8	0.9	LV
LT	14.8	28.0	13.2	8.6	0.6	1.0	1.4	2.2	3.3	LT
LU	17.2	29.8	12.5	1.9	0.2	0.3	0.4	0.5	0.6	LU
HU	16.0	25.3	9.3	4.0	0.4	0.6	0.7	1.0	1.4	HU
MT	16.9	29.9	12.9	4.3	0.4	0.5	0.5	0.9	2.1	MT
NL	21.0	27.1	6.1	2.6	0.3	0.4	0.6	0.6	0.7	NL
AT	27.7	32.6	4.9	2.4	0.3	0.5	0.6	0.5	0.5	AT
PT	19.1	25.4	6.3	4.4	0.5	0.7	0.8	1.0	1.4	PT
PL	23.3	31.7	8.4	8.9	0.5	0.9	1.6	2.4	3.4	PL
RO	15.8	20.1	4.3	4.0	0.6	0.6	0.7	1.0	1.2	RO
SI	22.1	31.1	8.9	3.6	0.6	0.8	0.7	0.8	0.8	SI
SK	19.0	29.3	10.4	4.3	0.5	0.8	0.9	1.1	1.1	SK
FI	26.4	31.9	5.6	2.9	0.3	0.5	0.5	0.6	0.9	FI
SE	23.6	27.2	3.6	2.7	0.3	0.4	0.5	0.6	0.9	SE
NO	30.1	37.1	7.0	2.0	0.3	0.4	0.5	0.4	0.4	NO
EA	25.1	29.1	4.0	2.6	0.3	0.5	0.6	0.6	0.6	EA
EU	24.4	28.3	3.9	2.7	0.3	0.5	0.6	0.6	0.7	EU

Source: European Commission, EPC.

5.3. COMPARISON WITH THE 2021 AGEING REPORT

The comparison of the total cost of ageing between the 2024 Ageing Report and the 2021 Ageing Report gives a mixed picture. In half of the Member States, projected changes over the period 2022-2070 are higher this round compared with the 2021 Ageing Report, while in the other half, projected developments are lower than expected in the previous update (see Table I.5.6). For the EU, the difference is a 0.1 pp larger change in the total cost of ageing over the projection period between the 2024 Ageing Report and the 2021 Ageing Report. Looking at the different decades, expenditure grows in the years 2022-2030 by 0.3 pps of GDP less for the EU. In the decade from 2030-2040, this change is 0.2 pps lower. Afterwards, the trend reverses with a higher change in spending between 2040-2050 by 0.1 pp of GDP compared to the 2021 Ageing report in the same period. These larger changes compared to the 2021 Ageing Report continue in the following decades, leading to a 0.2 pps and 0.4 pps of GDP difference in the change of the total cost of ageing in the EU

in the years 2050–2060 and 2060–2070. This pattern is due to lower expenditure projections for health care and education in the medium term compared to the 2021 Ageing Report. In the long term, the higher pension projections in the 2024 Ageing Report lead to a higher projected total cost of ageing compared to the 2021 Ageing Report.

Table I.5.6: **Baseline: difference in total cost of ageing between 2024 and 2021 Ageing Reports (in pps of GDP)**

	2022	2070	Δ 2022-2070	of which in:					
				Δ 2022-30	Δ 2030-40	Δ 2040-50	Δ 2050-60	Δ 2060-70	
BE	0.5	0.9	0.5	-0.4	-0.5	-0.1	0.5	0.9	BE
BG	1.4	0.6	-0.8	1.1	-1.0	-0.6	-0.1	-0.1	BG
CZ	0.4	-0.4	-0.8	-0.9	0.0	-0.2	0.0	0.3	CZ
DK	-0.7	-1.1	-0.4	0.8	-0.2	-0.7	-0.6	0.3	DK
DE	0.6	-0.2	-0.8	-0.4	-0.3	-0.4	-0.1	0.4	DE
EE	-0.3	1.3	1.5	1.0	0.2	0.3	0.4	-0.3	EE
IE	-1.9	-2.5	-0.6	-0.9	-0.3	0.3	0.4	0.0	IE
EL	0.1	1.1	1.0	-0.5	1.2	0.9	0.2	-0.7	EL
ES	0.6	7.1	6.5	1.9	1.3	1.0	1.0	1.3	ES
FR	-0.5	0.5	1.0	-1.1	0.1	0.6	0.6	0.9	FR
HR	-3.0	-2.6	0.5	0.5	0.0	-0.1	-0.1	0.2	HR
IT	-0.5	-1.1	-0.6	-0.8	-0.4	-0.1	0.3	0.4	IT
CY	2.9	5.7	2.8	1.0	1.0	0.6	0.5	-0.3	CY
LV	0.7	0.1	-0.6	-0.5	0.1	0.1	0.2	-0.4	LV
LT	-1.1	2.5	3.6	1.2	0.7	0.7	0.7	0.3	LT
LU	-0.3	0.6	0.8	-0.8	0.0	-0.5	0.7	1.4	LU
HU	-1.4	-1.3	0.1	0.2	0.0	0.0	-0.1	0.0	HU
MT	-1.2	-0.3	0.9	-0.6	-0.5	-0.3	0.6	1.7	MT
NL	-0.6	-1.8	-1.2	-0.8	-0.8	-0.1	0.0	0.4	NL
AT	0.0	-0.3	-0.3	0.0	-0.5	-0.4	0.2	0.4	AT
PL	-2.8	-3.1	-0.4	1.1	-0.4	-0.1	-0.5	-0.4	PL
PT	0.0	1.1	1.1	-0.4	1.0	1.6	-0.8	-0.4	PT
RO	-4.8	-3.9	0.9	2.8	-1.4	-0.4	0.1	-0.3	RO
SI	0.7	-2.1	-2.7	0.0	-1.6	-0.9	-0.2	0.0	SI
SK	-1.2	-4.1	-2.9	1.2	-1.1	-1.4	-0.9	-0.7	SK
FI	-0.9	-0.8	0.1	0.1	0.2	-0.2	0.0	0.0	FI
SE	-1.1	-1.9	-0.8	0.6	-0.4	-0.4	-0.4	-0.4	SE
NO	0.1	-1.2	-1.4	0.1	-0.7	-0.3	-0.3	-0.1	NO
EA	-0.2	0.2	0.5	-0.5	-0.1	0.1	0.3	0.6	EA
EU	-0.5	-0.4	0.1	-0.3	-0.2	0.1	0.2	0.4	EU

Source: European commission, EPC.

Differences between the 2024 and the 2021 Ageing Report projections are driven by changes in different assumptions and policy measures, depending on the expenditure component. Table I.5.7 identifies the drivers in the differences in change between 2022 and 2070 more in detail. The change in pension spending over the projection period is higher in the 2024 Ageing Report for all countries except Bulgaria (-0.6 pps of GDP), Germany (-0.5 pps), Slovenia and Slovakia (both -1.9 pps) and Norway (-0.5 pps). For Bulgaria and Slovakia, the downward revision is driven by policy measures, while for Germany the difference is due to changes in the underlying assumptions. For Slovenia, the difference comes from a modification in the interpretation of the unchanged policy assumption. The largest upward revisions are for Spain (+6.6 pps of GDP; driven by policy measures), Lithuania (+3.5 pps; driven by changes in the assumptions) and Cyprus (+2.5 pps of GDP; driven by changes in the assumptions). For health care, differences between the two reports are mostly driven by changes in the implemented reforms and the base-year effects with Poland (-0.8 pps), Czechia (-0.6 pps of GDP), Italy (-0.6 pps) and Latvia, Malta and Portugal (-0.5 pps) having the largest downward revisions. For long-term care, the drivers of the differences between the 2024 and 2021 Ageing Reports are more divers. For the EU and euro area level, differences come mainly from a revision in the GDP projections and base-year effects while the largest downward corrections at country-level are observed for Poland (-0.7 pps of GDP; base-year effects), Sweden (-0.7 pps; change in coverage), the Netherlands (-0.6 pps; change in GDP assumptions) and Slovakia (-0.6 pps; change in GDP assumptions). Section 3.5 in Chapter 3 explains the details of these difference at country-level. For education spending, differences are mainly driven by the change in the underlying demographic assumptions.

Table I.5.7: **Baseline: difference with 2021 Ageing Report (2022-2070; pps of GDP)**

	<i>Pensions</i>			<i>Health care</i>			<i>Long-term care</i>			<i>Education</i>			<i>Total cost of ageing</i>			
	2022	$\Delta 2022-45$	$\Delta 2022-70$	2022	$\Delta 2022-45$	$\Delta 2022-70$	2022	$\Delta 2022-45$	$\Delta 2022-70$	2022	$\Delta 2022-45$	$\Delta 2022-70$	2022	$\Delta 2022-45$	$\Delta 2022-70$	
BE	-0.2	-0.3	1.3	0.4	-0.1	0.0	0.0	-0.2	-0.3	0.2	-0.4	-0.5	0.5	-1.0	0.5	BE
BG	0.5	-0.1	-0.6	-0.1	0.0	0.0	0.2	0.0	0.0	0.8	-0.2	-0.2	1.4	-0.3	-0.8	BG
CZ	-0.6	-0.1	0.1	0.6	-0.7	-0.6	-0.1	-0.1	-0.2	0.5	-0.1	-0.2	0.4	-1.0	-0.8	CZ
DK	-0.7	1.2	0.3	0.6	-0.4	-0.3	-0.7	-0.2	0.1	0.2	-0.3	-0.5	-0.7	0.3	-0.4	DK
DE	-0.6	-0.6	-0.5	0.6	-0.4	-0.3	0.3	0.2	0.3	0.3	-0.2	-0.3	0.6	-0.9	-0.8	DE
EE	-0.3	1.5	1.6	0.1	-0.2	-0.2	0.0	0.3	0.4	-0.1	-0.2	-0.3	-0.3	1.4	1.5	EE
IE	-1.3	-0.4	0.3	0.0	0.0	0.1	-0.1	-0.3	-0.4	-0.5	-0.5	-0.5	-1.9	-1.2	-0.6	IE
EL	-1.0	1.2	1.0	0.9	-0.1	-0.2	0.0	0.0	0.0	0.2	0.2	0.1	0.1	1.3	1.0	EL
ES	-0.1	3.8	6.6	0.1	-0.2	-0.1	0.0	0.0	0.2	0.5	-0.2	-0.2	0.6	3.5	6.5	ES
FR	-0.8	0.1	1.8	0.0	-0.5	-0.4	-0.1	0.0	0.0	0.4	-0.3	-0.4	-0.5	-0.7	1.0	FR
HR	-1.7	0.9	1.1	-0.1	-0.1	0.0	0.1	0.0	0.0	-1.3	-0.4	-0.6	-3.0	0.4	0.5	HR
IT	-0.8	-0.1	0.9	0.0	-0.7	-0.6	-0.1	-0.3	-0.4	0.4	-0.3	-0.5	-0.5	-1.4	-0.6	IT
CY	-1.5	2.1	2.5	4.6	0.3	0.5	-0.2	-0.1	-0.1	0.0	0.0	-0.1	2.9	2.4	2.8	CY
LV	-0.5	0.5	0.0	1.2	-0.7	-0.5	0.0	0.0	0.1	-0.1	-0.2	-0.2	0.7	-0.3	-0.6	LV
LT	-1.3	2.6	3.5	0.1	0.0	0.2	0.0	0.0	0.2	0.1	-0.3	-0.3	-1.1	2.3	3.6	LT
LU	-0.8	-1.3	0.3	0.2	0.1	0.3	0.1	0.0	0.1	0.2	0.2	0.2	-0.3	-1.0	0.8	LU
HU	-0.9	0.3	0.5	-0.6	-0.2	-0.3	0.0	-0.1	-0.3	0.2	0.1	0.1	-1.4	0.1	0.1	HU
MT	-1.2	-0.4	0.8	-0.3	-0.7	-0.5	-0.1	-0.1	0.6	0.3	-0.1	0.0	-1.2	-1.3	0.9	MT
NL	-0.8	-0.3	0.2	0.0	-0.1	0.0	0.0	-0.6	-0.6	0.3	-0.6	-0.8	-0.6	-1.7	-1.2	NL
AT	-0.6	-0.1	0.3	0.8	-0.1	0.0	-0.3	-0.2	-0.2	0.1	-0.3	-0.4	0.0	-0.7	-0.3	AT
PL	-1.4	1.5	1.0	-1.2	-0.5	-0.8	-0.3	-0.3	-0.7	0.2	0.0	0.1	-2.8	0.6	-0.4	PL
PT	-0.8	2.3	1.7	0.4	-0.5	-0.5	0.0	0.1	0.0	0.4	-0.1	-0.2	0.0	1.7	1.1	PT
RO	-5.2	1.1	1.0	0.4	-0.1	-0.2	0.0	0.0	0.0	0.0	0.2	0.1	-4.8	1.2	0.9	RO
SI	-0.4	-1.6	-1.9	0.7	-0.3	-0.3	-0.1	-0.1	-0.2	0.4	-0.3	-0.4	0.7	-2.3	-2.7	SI
SK	-1.0	-0.2	-1.9	-0.6	0.0	-0.3	0.0	-0.2	-0.6	0.4	-0.1	-0.2	-1.2	-0.5	-2.9	SK
FI	-0.9	0.6	0.6	0.0	-0.2	-0.1	-0.1	-0.2	-0.1	0.1	-0.2	-0.3	-0.9	0.1	0.1	FI
SE	-0.8	0.8	0.5	0.1	-0.4	-0.3	-0.4	-0.3	-0.7	0.0	-0.1	-0.2	-1.1	0.1	-0.8	SE
NO	-0.6	0.0	-0.5	0.5	0.1	0.2	-0.2	-0.2	-0.3	0.4	-0.7	-0.8	0.1	-0.8	-1.4	NO
EA	-0.8	0.2	1.2	0.2	-0.4	-0.3	0.0	0.0	0.0	0.3	-0.3	-0.4	-0.2	-0.5	0.5	EA
EU	-0.9	0.3	1.0	0.1	-0.4	-0.4	0.0	-0.1	-0.2	0.3	-0.3	-0.4	-0.5	-0.5	0.1	EU

Source: European Commission, EPC.

ANNEX I

Overview of pension systems

Table I.A1.1: Pension schemes in EU Member States and projection coverage

	scheme type	Public pensions ⁽³⁾					Private pension scheme		
		minimum pension ⁽⁴⁾	old-age pension	early retirement pension	disability pension	survivor pension	occupational pension scheme	mandatory private individual	voluntary private individual
BE	DB	MT - SA	ER	ER	ER priv FR self-emp	ER	M* priv ⁽⁸⁾ V* self-emp	X	yes*
BG	DB	MT - SA	ER	ER	ER	ER	V*	quasi M*	yes*
CZ	flat rate + DB	FR & ER	ER	ER	ER	ER	X	X	yes*
DK	flat rate + DB	FR & MT suppl.	FR & MT suppl.	V	FR	FR	quasi M	X	yes
DE	PS	MT - SA*	ER	ER	ER	ER	V*	X	yes*
EE	flat rate + PS	MT - SA	ER	ER	ER	ER	V*	quasi M	yes*
IE	flat rate + DB	MT - FR & SA	FR	X	FR - MT	FR - MT	M pub V* priv	X	yes*
EL ⁽¹⁾	flat rate + DB + NDC	MT - FR	FR - ER	FR - ER	FR - ER	FR - ER	V*	yes	yes*
ES	DB	MT	ER	ER	ER	ER	V	X	yes
FR ⁽²⁾	DB + PS	MT - SA	ER	ER	ER	ER	V*	X	yes*
HR	PS	ER	ER	ER	ER	ER	X	yes	yes*
IT	NDC	MT - SA	ER	ER	ER	ER	V*	X	yes*
CY	PS	MT & ER	ER	ER	ER	ER	M* pub V* priv	X	yes*
LV	NDC	FR - SA	ER	ER	ER	ER	X	yes	yes*
LT	flat rate + PS	SA	ER	ER	ER	ER	X	quasi M	yes*
LU	DB	FR ⁽⁵⁾	ER	ER	ER	ER	V*	X	yes*
HU	DB	MT - SA ⁽⁶⁾	ER	ER	ER	ER	V*	X	yes*
MT	flat rate + DB	MT - SA	FR & ER	FR & ER	FR & ER	FR & ER	V*	X	yes*
NL	flat rate + DB	SA	FR	X	ER	FR	M	X	yes*
AT	DB	MT - SA	ER	ER	ER	ER	V*	X	yes*
PL	NDC	ER	ER	ER	ER	ER	V*	yes*	yes*
PT	DB	MT - SA ⁽⁷⁾	ER	ER	ER	ER	quasi M V ⁽⁹⁾	X	yes*
RO	PS	SA	ER	ER	ER	ER	X	yes	yes
SI	DB	MT - SA*	ER	ER	ER	ER	V*	X	yes*
SK	PS	MT - SA	ER	ER	ER	ER	X	quasi M	yes*
FI	DB	MT	ER	ER	ER	ER	V*	X	yes*
SE	NDC	MT	ER	ER	ER	ER	quasi M	yes	yes
NO	NDC	FR	ER	X	ER	X	M*	X	yes*

(1) The public supplementary pension fund is NDC since 2015. From 2022 onwards, the supplementary pensions of new labour market entrants are covered by a funded DC scheme (treated as a mandatory private individual scheme in the projections). (2) Point system refers to the complementary ARRCO and AGIRC schemes. (3) Public pension expenditure includes all public expenditure on pensions and equivalent cash benefits granted for a long period, see Annex 5 for details on the coverage of the public pension expenditure projections. (4) Minimum pensions correspond to minimum pensions and other social allowances for older people not included elsewhere. (5) The minimum pension constitutes an integral part of the pension, guaranteed for members that have contributed at least 20 years. It is included in the projections. Elder people who do not qualify for a minimum pension can receive the means-tested social inclusion income, which is not included in the projections. (6) Aside from the old-age allowance, which is not included in the pension system, there is an earnings-related minimum pension under the state pension system. Both are included in the projections. (7) Includes all pensions of the non-earning-related scheme such as old-age, disability and survivor pensions and the social supplement. (8) Participation in an occupational scheme is mandatory for employees if their company is subject to a collective agreement that provides for a second pillar. (9) Occupational pension schemes established under collective bargaining agreements are mandatory for employers, with the possibility to opt-out for employees, others are voluntary.

DB	defined benefit
PS	point system
NDC	notional defined contribution
MT	Means-tested
FR	Flat rate
ER	Earnings-related
SA	Social allowance/assistance
X	Does not exist
V	Voluntary participation in the scheme
M	Mandatory participation in the scheme
*	Not covered in the projections

Source: European Commission, EPC.

Table I.A1.2: **Main indexation and valorisation parameters for old-age pensions**

	Pensionable earnings reference	General valorisation variable(s)	General indexation variable(s)
BE	Full career	Prices	Prices and living standard
BG	Full career	Wages	Prices and wages
CZ	Full career	Wages	Prices and wages
DK	Years of residence	Not applicable	Wages
DE	Full career	Wages	Wages
EE	Full career	Prices and social taxes	Prices and social taxes
IE	Flat rate	Not applicable	No fixed rule
EL	Full career	Prices and wages	Prices and GDP (max 100% prices)
ES	324 best months in last 348	Prices	Prices
FR	25 best years (CNAVTS)	Prices	Prices
HR	Full career	Prices and wages	Prices and wages
IT	Full career	GDP	Prices
CY	Full career	Wages	Prices and wages
LV	Full career	Contribution wage sum index	Prices and wage sum
LT	Full career	Wage sum	Wage sum
LU	Full career	Prices and wages	Prices and wages
HU	Full career	Wages	Prices
MT	10 best of last 41 years	Cost of living	Prices and wages
NL	Years of residence	Not applicable	Wages
AT	Full career	Wages	Prices
PL	Full career	NDC 1st: Wages, NDC 2nd: GDP	Prices and wages
PT	Full career up to a limit of 40y	Prices and wages	Prices and GDP
RO	Full career	Prices and wages	Prices and wages
SI	Best consecutive 24 years	Wages	Prices and wages
SK	Full career	Wages	Prices
FI	Full career	Prices and wages	Prices and wages
SE	Full career	Wages	Wages
NO	Full career	Prices and wages	Prices and wages

BG – Pensionable earnings reference is full career back to 2000.

CZ – Pensionable earnings reference is full career back to 1986.

IE – A price and wage indexation rule has been assumed in the projections.

EL – Pensionable earnings reference is full career, considering wages/income from 2002 onwards.

ES – Pensionable earnings reference is last 25 years as of 2022.

FR – The pensionable earnings reference is full career in AGIRC and ARRCO; CNAVTS: Caisse nationale de l'assurance vieillesse des travailleurs salariés. Valorisation rule and indexation of 1% in both AGIRC and ARRCO.

LT – Pensionable earnings reference is full career back to 1994. Pensions are indexed to the seven-year average of the wage sum growth over the current, previous three and next three years. The index is applied in case of a balanced budget of the Pension Social Security System in two consecutive years and contingent on positive GDP or wage sum growth.

LU – Indexation rule is wages if sufficient financial resources are available, otherwise only cost of living indexation.

HU – Pensionable earnings reference is full career back to 1988.

MT – Pensionable earnings reference rule applies to people born as of 1969.

PT – Pensionable earnings reference is full career as of 2002. Price and wage valorisation applies to earnings recorded from 2002 onwards.

SK – Pensionable earnings reference is full career back to 1984.

SE – Indexation rule is wage growth minus 1.6 pps.

Source: European Commission, EPC.

Table I.A1.3: **Automatic adjustment mechanisms**

	Automatic balancing mechanism	Sustainability factor (benefit linked to life expectancy)⁽⁵⁾	Retirement age linked to life expectancy
CY			X
DE	X		
DK ⁽¹⁾			X
FR ⁽²⁾		X	
FI		X	X
EL ⁽³⁾			X
EE			X
IT		X	X
LV		X	
LT	X		
LU	X		
NL ⁽⁴⁾			X
PL		X	
PT ⁽⁴⁾		X	X
SK			X
SE ⁽⁴⁾	X	X	X
NO		X	

(1) Subject to Parliamentary decision.

(2) Pension benefits evolve in line with life expectancy through the 'proratisation' coefficient; it has been legislated until 2028.

(3) An automatic balancing mechanism is applied in the auxiliary pension system.

(4) Subject to Parliamentary decision. The Government is obliged to provide Parliament, at least every five years, with recommendations to keep a stable proportion between the contribution period and life expectancy at retirement.

(5) The legal retirement age is linked to two thirds of the increase in life expectancy.

(6) In NDC systems, the benefit is linked to changes in life expectancy through the annuity factor.

Source: European Commission, EPC.

Table I.AI.4: Contribution rates to the public pension system

	Contribution rate: employer	Contribution rate: employee	Contribution rate		State contributions		Contribution rate: self-employed
						Other provisions	
BE	24.92% (for all Social Security schemes)	13.07% (for all Social Security schemes)	-	-	Social security spending is also funded by State subsidies (around 19% of total revenue) and alternative funding (around 16% of total revenue), mainly VAT revenues.	-	In 2023, 20.5% for revenues up to EUR 70.858 and 14.16% for revenues between EUR 70.858 and EUR 104.722.
BG	8.22% when born after 1959; 11.02% when born before 1960	6.58% when born after 1959; 8.78% when born before 1960	-	-	State commitment to cover the deficit on an annual basis	-	Born before 1960: 19.8% of declared covered earnings in the preceding year; born after 1959: 14.8% of declared covered earnings.
CZ	21.5%	6.5%	-	-	Balance of pension system is part of general government budget	-	28%
DK	-	-	-	-	-	-	-
DE	9.3%	9.3%	-	-	State subsidies with annual indexation. 'Sustainability fund' fluctuates between 20% and 150% of monthly pension expenditures. The contribution rate is set so that this requirement is met.	-	18.6%
EE	20% (if not participating to 2nd pillar); 16% (if participating to 2nd pillar)	-	-	-	-	-	20%
IE	varies	varies	-	-	Social Insurance Fund and Social Assistance Fund (to finance other, non-pension social benefits). Shortfalls are met by the Exchequer.	-	4% of covered income
EL	Main pensions 13.33%; auxiliary pensions 3%	Main pensions 6.67%; auxiliary pensions 3%	-	-	National budget/other sources	-	Contributions are based on insurance classes. Corresponding insurable base is derived taking into account contribution rate of 20%.
ES	Private sector: 23.6% + contribution to Intergenerational Equity Mechanism (0.5% in 2023, rising to 1% in 2029)	Private sector: 4.7% + contribution to Intergenerational Equity Mechanism (0.1% in 2023, rising to 0.2% in 2029)	-	-	Pension Reserve Fund. If needed, annual funding gaps are covered through central government transfers.	-	29.5% (including 1.2% to Intergenerational Equity Mechanism)
FR	Private sector (CNAV): 10.45% up to the Social Security Ceiling (SSC) and 1.9% above	Private sector (CNAV): 7.3% up to the social security ceiling (SSC) and 0.4% above.	-	-	Pensions Reserve Fund, Old-age solidarity fund, specific taxes and external transfers	-	17.75% up to the SSC and 0.6% above.
HR	4.86% to 17.58% for employees in arduous and hazardous occupations	20% (public PAYG scheme participants only); 15% (participants in both public PAYG scheme and mandatory fully-funded DC scheme)	-	-	Government is committed to cover deficits	-	20% (public PAYG scheme participants only); 15% (participants in both public PAYG scheme and mandatory fully-funded DC scheme)
IT	23.81%	9.19%	-	-	Residual funding by the State (pension expenditure exceeding contributions)	-	24%
CY	8.3%	8.3%	4.9%	-	Reserve fund	-	15.6% of insurable income
LV	Total contribution rate for old-age pension capital (employer and employee): 20% (if no participant of 2nd tier) or 16% (if participant of 2nd tier), with 4% contribution to the 2nd tier	-	-	-	-	-	Contribution rate for old-age pension capital: 20% (if no participant of 2nd tier) or 16% (if participant of 2nd tier) with 4% contribution to the 2nd tier.
LT	0.0%	8.72%	-	-	State provides funds from the national budget to cover the general pension part of public pension scheme	-	8.72% - based on 50% of declared earnings (90% when engaged in an individual activity)
LU	8%	8%	8%	-	Buffer fund of at least 1.5 times the amount of annual pension expenditure	-	16%
HU	11.8% in 2020, 11.1% in 2021, 9.3% in 2022 (part of social contribution tax paid into Pension Insurance Fund)	10%	-	-	-	-	10% of declared monthly earnings and 9.3% of declared monthly earnings in the form of a social contribution tax
MT	10%	10%	10%	-	-	-	15% of the annual income, subject to the same ceiling as for employees
NL	-	17.9%	-	-	Government supplements shortfall between expenditure and funds raised by the 17.9% tax levy	-	17.9%
AT	12.55%	10.25%	-	For farmers, self employed and liberal professions, the difference with the standard contribution rate of 22.8% is borne by federal transfers	Federal budget covers the deficits in public pension schemes	-	17% for farmers, 18.5% for self-employed and 20% for liberal professions
PL	9.76%	9.76%	-	-	Demographic Reserve Fund	-	19.52%
PT	23.75%	11%	-	-	Social Security Trust Fund	-	Employee: 21.4% or 25.2%; employer: 10%, if economic dependence is higher than 80%, or 7% if economic dependence is between 50% and 80%.
RO	Between 0% and 8%: 0% (normal working conditions); 4% (difficult working conditions) and 8% (special working conditions)	25%	-	-	State provides funds from the national budget to cover the public pension system deficit	-	25%
SI	8.85%	15.5%	-	-	State provides funds from the national budget and other sources to cover shortfalls	-	24.35%
SK	21.75% of gross wage (including disability insurance contribution) if one does not participate in the 2nd pillar; otherwise 5.50% is sent to the second pillar in 2023 (rising to 6% by 2027)	7% of gross wage (including disability insurance contribution)	-	-	Government makes contributions for people insured by the state (e.g. maternity leave) and covers special benefits (e.g. 13. pension, minimum pension). Otherwise, social security system deficits are covered by state transfers.	-	28.75% (including disability insurance contribution) if only covered in the 1st pillar; otherwise 5.50% is sent to the second pillar in 2023 (rising to 6% by 2027)
FI	17.39% for private sector, including the 0.44% repayment installment of the employer's contribution reduction; 16.84% for local government (in 2023).	7.15% (17-52y and +63y); 8.65% (53-62y)	17.11% for State pensions	-	National and guarantee pensions are fully funded by the State. Part of farmers', self-employed persons' and seafarers' pensions are funded by the State. 25% of private sector pension is prefunded.	-	24.1% (17-52y and +63y); 25.6% (53-62y)
SE	10.21% (including Premium Pension)	7% (including Premium Pension)	Employer contribution for social insurance	-	Buffer funds	-	17.21%
NO	7.9%	14.1% in 2022 (temporary increase in 2023 by 5% for wages exceeding NOK 750.000)	-	-	State Pension Fund contributes to financing government expenditures (pension and other)	-	11.1%

When several schemes exist, the information refers to the main (general regime) pension scheme.

Source: European Commission, EPC.

ANNEX II

Input data used to project health care expenditure

Data collection

The data required to run long-term public expenditure projections in the field of health care ⁽¹²¹⁾ includes:

- population by age and sex;
- per capita public expenditure on health care by age and sex cohorts (age/sex specific expenditure profiles) ⁽¹²²⁾;
- total public expenditure on health care; and
- fiscal impact of recently legislated policy reforms and COVID-19 related expenditure in the health care area;
- health sector-specific expenditure shares and their relative growth rates in the past 10 years (for the sector-specific indexation scenario).

The data collection procedure involves two steps. First, the Commission (DG ECFIN) pre-fills data on the basis of existing international databases managed by international organisations (Eurostat, OECD). Next, the questionnaire is circulated to the Member States and Norway, to endorse the pre-filled figures and complement these with data from national sources if no data was available from international sources. The completed data questionnaires are then used for conducting the projections.

Age/sex-specific per capita public expenditure on health care is not available in any common international databases. Therefore, they were provided exclusively by AWG delegates and are based on national sources and methodology.

Table I.All.1 presents an overview of the data used for the health care projections. It shows that most of the countries have provided the full data set necessary to run the projection exercise. The only missing health care age-gender specific cost profiles, for Romania, have been imputed as the simple average age cost profiles of New Member States. Moreover, the age-gender expenditure profiles were adjusted to the total public expenditure provided according to System of Health Accounts 2011 (SHA 2011) / COFOG, i.e. upward or downward adjustment without modifying the age specific distribution for all countries. Quantification of recently legislated measures, as well as COVID-19 related spending and increased capital formation supported by EU Recovery and Resilience Fund grants and loans were submitted by 20 countries in the base year and 11 countries for follow-up years up to 2032. Brief methodological notes explaining how the age cost profiles were calculated were provided by 24 countries. National data sources used for the computation of the country-specific age cost profiles were provided by 25 countries.

⁽¹²¹⁾ As explained below, this definition of healthcare excludes SHA expenditure category HC.3, which is included in the long-term care expenditure category.

⁽¹²²⁾ The age-gender cost profiles are accepted for use based on a plausible description of the underlying national methodology.

Table I.AII.1: **Overview of the health care data provided for and used in the 2024 Ageing Report**

	Source of total expenditure data (base year)	Age-cost profiles	Methodological notes (age-cost profiles)	Data sources (age-cost profiles)	COVID-19 and other measures in 2022	Quantified legislated measures 2023-2032	
BE	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		BE
BG	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X		BG
CZ	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X	X	CZ
DK	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		DK
DE	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		DE
EE	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		EE
IE	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X		IE
EL	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X	X	EL
ES	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X		ES
FR	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		FR
HR	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		HR
IT	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X	X	IT
CY	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 10-year age group	X	X	X		CY
LV	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X	X	LV
LT	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X			LT
LU	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X		X	LU
HU	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age		X			HU
MT	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X	X	MT
NL	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X			NL
AT	SHA ⁽¹⁾ & COFOG ⁽²⁾	by 5-year age group	X	X	X	X	AT
PL	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age					PL
PT	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X	X	PT
RO	SHA ⁽¹⁾ & COFOG ⁽²⁾	imputed	NA	NA			RO
SI	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X	X	SI
SK	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X	X	SK
FI	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age					FI
SE	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X	X		SE
NO	SHA ⁽¹⁾ & COFOG ⁽²⁾	by single age	X	X			NO
Total	28 countries	27 country-specific profiles	24 country-specific methodological notes	25 country-specific data sources	20 countries	11 countries	Total

(1) Total current public health expenditure excluding LTC (health).

(2) Public expenditure on capital formation excluding capital formation for R&D health.

Source: European Commission, EPC.

Data used for calculating total public expenditure on health care

To calculate total public expenditure on health care, the sum of the following two components is used:

- Public current expenditure on health care** – computed as the sum of all “core” health care SHA 2011 functions/expenditure categories HC.1 to HC.9, excluding HC.3 (Long-Term Care (health)). In more detail, the following SHA categories have been used to calculate public current expenditure on health care: Inpatient curative care (HC.1); and Rehabilitative care (HC.2); Ancillary services (HC.4); Medical goods (HC.5); Preventive care (HC.6); Governance, and health system and financing administration (HC.7); Other health care services not elsewhere classified (HC.9).
- Public expenditure on capital formation in health** – computed from COFOG’s gross capital formation for the GF07 “Health” function excluding the GF0705 “R&D Health” category. In order to smooth the volatility inherent to capital formation, the average value for four years is used.

Data used for calculating the sector-specific composite indexation

In the “sector-specific composite indexation scenario” the importance and evolution of various components to health care provision is captured. This scenario looks at each of these components separately and indexes each of them in a separate way, creating a sort of composite indexation for ‘unit cost development’. The components are: (1) inpatient care, (2) outpatient care and ancillary services, (3) pharmaceuticals and therapeutic appliances, (4) preventive care, (5) governance and administration and (6) capital investment. They broadly reflect the different sectors of the health system and correspond to the categories of the System of Health Accounts (SHA).

First, the respective share in public expenditure on health care of each component is calculated. For this, SHA data for the latest year available is normally used, except for the capital formation component, for which COFOG data on gross capital formation on health excluding R&D health is used (see Table I.AII.2). These shares are then applied to the age-specific per capita expenditure and by so doing each age-specific per capita expenditure is divided into six sub-items of expenditure.

Next, the past evolution of public expenditure on each of those components is calculated as average annual growth rate for the past 10 years. Due to current data limitations for building 10-year time series from data based on the SHA 2011 classification, data from COFOG categories in correspondence to the SHA 2011 health care functions are used for the calculation of the average annual expenditure growth rate for each component.

Lastly, the ratio of each of these growth rates to the growth rate of GDP is built. Due to high volatility in the relative growth rates for prevention, capital formation and governance and administration, these items were excluded from the indexation. Moreover, similarly to the approach undertaken in the 2021 Ageing Report, the relative growth rates of the other three components (hospitals, outpatient care and medical goods) were capped at their respective 25th and 75th percentiles.

Table I.AII.2: **Data sources for the health care sector-specific indexation components**

Sector-specific indexation component		Inpatient care (curative and rehabilitative care)	Outpatient care (curative and rehabilitative care) + Ancillary services	Medical goods (pharmaceuticals and therapeutic appliances)	Preventive care	Governance and administration	Capital formation
Latest available share of public expenditure	<i>Classification</i>	SHA	SHA	SHA	SHA	SHA	COFOG
	<i>Categories</i>	HC.1.1 + HC.1.2 + HC.2.1 + HC.2.2	(HC.1.3 + HC.1.4 + HC.2.3 + HC.2.4) + HC.4	HC.5	HC.6	HC.7 + HC.9	Gross capital formation P5 for GF 07 05 "R&D Health"
	<i>Data source</i>	Eurostat or OECD	Eurostat or OECD	Eurostat or OECD	Eurostat or OECD	Eurostat or OECD	Eurostat
Average annual growth rate over the last 10 years (in EUR)	<i>Classification</i>	COFOG	COFOG	COFOG	COFOG	COFOG	COFOG
	<i>Categories</i>	Total general government expenditure for GF 07 03 "Hospital services"	Total general government expenditure for GF 07 02 "Outpatient services"	Total general government expenditure for GF 07 01 "Medical products, appliances and equipment"	Total general government expenditure for GF 07 04 "Public health services"	Total general government expenditure for GF 07 06 "Health n.e.c."	Gross capital formation P5 for GF "Health" excl. P5 GF 07 05 "R&D Health"
	<i>Data source</i>	Eurostat	Eurostat	Eurostat	Eurostat	Eurostat	Eurostat

- COFOG categories from the GF07 "Health" function in correspondence with the respective SHA 2011 functions are used for building the 10-year time series for the six components (2010-2019).

- The relative average growth rates are calculated as a ratio of the average annual growth rates to the average GDP growth rates.

Source: European Commission, EPC.

ANNEX III

Input data used to project long-term care expenditure

Introduction

The Ageing Report's expenditure projections for long-term care (LTC) require building a rich data set that includes:

- public expenditure on LTC;
- per user (also called beneficiary or recipient) public expenditure on LTC by gender and single age or five-year age cohorts (so-called "age-related expenditure profiles");
- disaggregation of total public spending on LTC into spending on services in kind and spending on cash benefits for LTC, by gender and single age or five-year age cohorts;
- disaggregation of total public spending on services in kind into spending on services provided in the institutions and services provided at home, by gender and single age or five-year age cohorts;
- number of beneficiaries of LTC services provided (i) at home and (ii) in institutions, and recipients of cash benefits for LTC, by gender and single age or five-year age cohorts;
- information on the possible overlapping between the recipients of cash benefits related to LTC and the recipients of LTC services (legal possibility and numbers);
- EU-SILC dependency rates by gender and five-year age cohorts (as a measure of demand for LTC);
- Policy reforms in the LTC area.

Data submitted by Member States

For the 2024 Ageing Report the EU Member States and Norway were invited to complete a data questionnaire. Outstanding issues were discussed with the Commission on a bilateral basis and national figures were accepted for use in the report on the basis of a plausible explanation of national methodology.

Table I.A.III.1 below presents an overview of the data provided by the Ageing Working Group delegates. Almost all countries were able to submit data, although only a minority reported complete data for every category. The table can be summarised as follows:

- Full expenditure data was reported by every Member State and Norway with the exception of BG, DE, IE, HR, IT, HU, MT, AT, PL and SK, who did not report H.C.R.1. For those countries, ESSPROS and/or national data were used to build a proxy of H.C.R.1.
- For the split of expenditure by care setting, national data was used for 23 EU Member States and NO. For the rest SHA, ESSPROS and/or national data was used to derive this breakdown.
- 10 countries provided information on reforms related to LTC.
- A majority of Member States reported age-specific expenditure and the number of recipients per care setting. In 14 Member States this data was complete for all care settings and no imputation was necessary. On the basis of this data as well as the figures on recipients it was possible to construct age-cost profiles for at least one care setting for 22 countries.

Table I.AIII.1: Availability of input data for long-term care expenditure projections

	Source expenditure data	Care setting expenditure breakdown	Reforms	Detailed expenditure by type of care				Detailed numbers of recipients by type of care				Age cost profiles		
				LTC services ("in-kind") expenditure	LTC services in institutions expenditure	LTC services at home expenditure	LTC-related cash benefits expenditure	LTC services ("in-kind") recipients	In institutions recipients	At home recipients	Cash benefits recipients	2024 Ageing Report	2021 Ageing Report	
AT	SHA & ESSPROS	National data		Imputed	Imputed	Imputed	X	X	X	X	X	X	X	AT
BE	SHA	National data		X	X	X	Imputed	X	X	X	Imputed	X	X	BE
BG	SHA & ESSPROS	National data	X	X	X	X	X	X	X	X	X	X	X	BG
HR	SHA & ESSPROS	National data	X	Imputed	Imputed	Imputed	Imputed	X	X	X	X	X	X	HR
CY	SHA	SHA/ESSPROS/Nat		Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	CY
CZ	SHA	National data	X	X	X	X	X	X	X	X	X	X	X	CZ
DK	SHA	National data		X	X	X	NA	X	X	X	NA	X	X	DK
EE	SHA	National data	X	X	X	X	Imputed	X	X	X	X	X	X	EE
FI	SHA	National data		X	X	X	X	X	X	X	X	X	X	FI
FR	SHA	National data	X	X	X	X	X	X	X	X	X	X	X	FR
DE	SHA & ESSPROS	National data	X	Imputed	Imputed	Imputed	Imputed	X	X	X	X	Imputed	X	DE
EL	SHA	National data		Imputed	Imputed	Imputed	NA	Imputed	X	Imputed	NA	Imputed	Imputed	EL
HU	SHA & ESSPROS	National data		X	X	X	Imputed	X	X	X	X	X	X	HU
IE	SHA & ESSPROS	SHA/Nat		X	Imputed	Imputed	Imputed	X	Imputed	Imputed	Imputed	X	X	IE
IT	SHA & ESSPROS	SHA/ESSPROS/Nat	X	X	X	X	X	X	X	X	X	X	X	IT
LV	SHA	National data		Imputed	Imputed	X	X	X	X	X	X	X	Imputed	LV
LT	SHA	National data		X	X	X	X	X	X	X	X	X	X	LT
LU	SHA	National data		X	X	X	X	X	X	X	X	X	X	LU
MT	SHA & ESSPROS	National data		Imputed	Imputed	Imputed	Imputed	X	X	X	X	Imputed	Imputed	MT
NL	SHA	National data		X	X	X	X	X	X	X	X	X	X	NL
PL	SHA & ESSPROS	National data		X	X	X	Imputed	X	X	X	X	X	X	PL
PT	SHA	National data	X	X	X	X	X	X	X	X	X	X	X	PT
RO	SHA	ESSPROS		Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	Imputed	RO
SK	SHA & ESSPROS	National data	X	X	X	X	X	X	X	X	X	X	X	SK
SI	SHA	National data	X	X	X	X	X	X	X	X	X	X	X	SI
ES	SHA	National data		X	X	X	X	X	X	X	X	X	X	ES
SE	SHA	National data		X	X	X	X	X	X	X	X	X	X	SE
NO	SHA	National data		X	X	X	X	X	X	X	X	X	X	NO

Source: European Commission, EPC.

Table I.AIII.2: **Combinations of data sources for estimating long-term care expenditure**

Countries that report both SHA variables HC.3 and HC.R.1. (all countries except those below)

Total LTC expenditure		Expenditure breakdown by care setting
LTC (health)	LTC (social)	
HC.3	HC.R.1	National data (preferred source). If not available, then breakdown according to SHA, ESSPROS or SHA + ESSPROS proportions

Countries that report SHA variable HC.3 but do not report HC.R.1 (BG, DE, IE, HR, IT, HU, MT, AT, PL and SK)

Total LTC expenditure		Expenditure breakdown by care setting
LTC (health)	LTC (social)	
HC.3	Proxy based on expenditure from ESSPROS variables- a) "Disability" function: <ul style="list-style-type: none"> • "Accommodation" • "Home help/assistance in carrying out daily tasks" • "Periodic care allowance" • "Lump sum care allowance" b) "Old age" function: <ul style="list-style-type: none"> • "Accommodation" • "Home help/assistance in carrying daily, tasks" • "Periodic care allowance" This proxy is then adjusted to reduce the potential for double-counting and validated/amended by AWG delegates and national statisticians.	National data (preferred source). If not available, then breakdown according to SHA, ESSPROS or SHA + ESSPROS proportions

Source: European Commission, EPC.

It should be recalled that the AWG has decided to define viable solutions for important data limitations regarding reporting of LTC expenditure. Missing data was imputed in a number of ways. In particular:

- Expenditure on long-term care is defined in the Ageing Report as the sum of the System of Health Accounts (SHA) variables HC.3 (long-term care related to health care) and HC.R.1 (long-term care related to social care). The AWG agreed to preserve the accounting methodology from the 2021 Ageing Report of calculating a proxy for LTC (social) for those countries that did not report this category in the System of Health Accounts, defined so as to minimise any issues of double counting of expenditure, which may arise in this case. The methodology to calculate the proxy was updated and it was agreed to base the split by care setting on national-level data, supplemented where necessary by the breakdowns derived from the System of Health and ESSPROS. These estimates were then validated bilaterally by the AWG delegates (Table I.AIII.2). As a result of this accounting exercise, the reported levels of spending represent total LTC public expenditure and may deviate from the partial LTC expenditure figures derived from the System of Health accounts, as reported by ESTAT or OECD. The resulting spending levels are shown by the source of expenditure in Table I.AIII.3.
- The breakdown of expenditure by care setting is not available in a complete and reliable way from existing ESTAT-published data. SHA does not include a breakdown for cash benefits as part of the HC.3 variable (only home care and institutional care) and for HC.R.1 there is an incomplete breakdown by care setting into HC.R.1.1 (in-kind care: institutional and home care) and HC.R.1.2 (cash benefits) that is furthermore not yet reported by Member States. The ESSPROS variables that represent long-term care expenditure can be used to split expenditure by all three settings. However, given the focus of ESSPROS on other types of social protection expenditure, these breakdowns are not always reliable. As a result, for the Ageing Report projections, Member States were asked to provide a breakdown of expenditure by care setting on the basis of national

budgetary figures. When these were not available, SHA and/or ESSPROS figures have been used to estimate the breakdown.

- When the number of users of institutional and home care and the number of cash beneficiaries were not available by age and sex group but only in total, they have been computed by age and sex on the basis of the share of dependents (EU-SILC dependency rates) by respective age and sex group.
- When a country provided the total number of users of home care by age and sex but only the total number of users of institutional care, the allocation of institutional care users to each age and sex group was done on the basis of the distribution of home care users.
- Missing LTC age-gender specific cost profiles have been replaced by the simple average of individual countries' LTC age-gender specific expenditure profiles expressed as % of GDP per capita and as calculated for either EU14 or new Member States aggregates; the averages have been calculated using all available data.
- Missing LTC age-gender specific number of recipients of either home, institutional care or cash benefits have been replaced by the corresponding simple average of individual countries' LTC age-gender specific number of recipients expressed as % of disabled for either EU14 or new Member States aggregates; the averages have been calculated using all available data.
- Missing detailed spending in home, institutional care and cash benefits has been proxied by the average share of those items in total LTC spending.

Table I.AIII.3: **Long-term care expenditure in base year 2022 according to data source used**

	LTC total	LTC (health) HC.3	LTC (social) HC.R.1	LTC (social) proxy
BE	2.3	2.3	0.0	
BG	0.5	0.0		0.5
CZ	1.5	1.0	0.5	
DK	3.0	2.0	1.0	
DE	1.9	1.7		0.1
EE	0.4	0.4	0.1	
IE	1.2	1.2		0.0
EL	0.1	0.1	0.0	
ES	0.8	0.7	0.1	
FR	1.9	1.3	0.6	
HR	0.5	0.2		0.3
IT	1.6	0.7		1.0
CY	0.2	0.1	0.0	
LV	0.5	0.3	0.2	
LT	1.0	0.5	0.5	
LU	1.1	0.9	0.2	
HU	0.5	0.2		0.3
MT	1.2	1.1		0.0
NL	3.8	2.7	1.2	
AT	1.6	1.1		0.4
PL	0.5	0.4		0.1
PT	0.5	0.3	0.2	
RO	0.3	0.3	0.1	
SI	1.0	0.9	0.1	
SK	1.0	0.1		0.9
FI	2.1	1.3	0.8	
SE	3.2	2.7	0.5	
NO	4.0	3.4	0.7	

These figures have been adjusted to match the base year, reforms reported by Member States have been included and any overlaps identified have been corrected. Therefore, the variables HC.3 and HC.R.1 reported here may differ from the published values.

Source: European Commission, EPC.

Dependency rates

As in the 2021 Ageing Report, data from the EU-SILC survey question on whether individuals face severe "Limitations in activities because of health problems [for at least the last 6 months]" has been used. This is considered an adequate estimate of dependency with a high degree of data availability and comparability. Indeed, it is available for the 27 EU Member States and Norway, by age-gender group for people aged 15+. A moving average of 2016-2019 (to avoid contamination from pandemic years) of data available (excluding data points affected by methodological breaks) has been constructed and used for the projections, as in previous Ageing Reports.

In addition, data from the ad-hoc 2017 EU-SILC survey (as set out in Eurostat (2017), to be repeated every three years) focusing on children is used to supplement this data for age-groups below 16. For those countries that were not covered by this survey (the Netherlands, Denmark, Slovenia, Finland, Sweden and Norway), the same methodology as in the 2021 Ageing Report has been followed and the four-year average dependency rate for the 16-19 age-group has been applied to this younger age-group.

Table I.AIII.4: **Dependency rates (EU-SILC)**

	0-4 (2017)	5-9 (2017)	10-15 (2017)	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
BE	1.4	0.9	2.1	2.5 (2019)	3.2 (2019)	6.2 (2019)	9.4 (2019)	13.4 (2019)	12.3 (2019)	16.9 (2019)	31.5 (2019)
BG	0.1	0.3	1.3	0.8	0.8	1.1	1.8	3.9	5.5	12.5	26.1
CZ	0.9	0.9	1.6	1.2	1.7	3.2	5.7	9.7	10.8	19.3	36.1
DK	2.1	2.1	2.1	2.1	3.8	5.1	7.3	8.4	6.4	8.8	15.1
DE	0.5	0.4	1.3	1.8	2.1	3.7	6.9	10.9	10.0	13.9	29.5
EE	0.3	1.6	1.1	3.4	4.4	4.4	7.7	13.7	18.7	29.1	45.7
IE	0.9	1.6	2.1	2.1	1.8	2.9	4.8	7.2	7.8	13.2	24.2
EL	0.4	0.4	1.1	1.3	2.4	3.4	4.9	9.2	16.9	28.9	51.3
ES	0.3	0.9	0.7	0.8	1.1	1.6	2.7	4.2	5.0	12.7	24.6
FR	0.4	0.5	2.3	2.2	3.0	5.0	8.5	9.8	13.5	23.3	39.5
HR	0.1	0.7	1.5	1.8	2.6	3.5	7.0	11.2	17.9	32.5	47.3
IT	0.1	0.3	0.5	0.8	1.3	1.4	2.8	4.3	7.1	16.2	30.9
CY	0.9	0.9	0.6	1.7	2.0	3.2	5.5	8.8	12.8	26.3	44.2
LV	0.5	1.2	1.2	1.5	1.9	3.3	5.6	9.4	15.2	28.9	45.6
LT	0.6	1.8	0.1	1.6	1.4	2.1	2.9	6.4	10.8	20.5	44.1
LU	0.4	2.3	2.9	2.7	3.4	4.7	10.3	10.9	12.9	21.2	33.5
HU	0.3	2.2	0.4	1.2	1.8	2.5	4.5	9.3	12.8	23.7	34.8
MT	0.7	1.2	0.7	0.3	0.9	1.2	2.0	3.3	4.2	8.5	19.4
NL	1.1	1.1	1.1	1.6	2.1	3.2	5.7	8.4	6.2	12.0	17.4
AT	1.6	1.2	1.6	3.0	2.7	3.8	7.9	11.3	12.9	25.2	49.4
PL	0.6	0.8	1.5	1.9	2.3	3.2	5.2	8.6	12.6	23.4	35.6
PT	0.2	0.5	1	1.9	2.9	3.0	5.2	8.4	13.1	23.0	36.4
RO	0	0.1	0.2	0.9	1.2	1.6	3.2	7.6	10.0	23.3	39.0
SI	2.0	2.0	2.0	2.5	2.6	4.7	8.6	11.5	14.5	22.9	39.5
SK	0.3	1.3	1.1	2.3	2.5	3.9	5.9	12.1	18.8	35.3	54.0
FI	2.1	2.1	2.1	2.9	4.2	4.0	5.5	7.7	9.0	18.1	30.9
SE	1.1	1.1	1.1	1.2	2.0	2.2	5.0	5.7	5.5	7.2	18.1
NO	1.4	1.4	1.4	1.7	3.3	5.5	6.7	7.2	6.9	9.0	14.1

Figures in red come from the EU-SILC one-off 2017 survey focusing on children. Other figures are an average of 2016-2019 dependency rates excluding methodology breaks. For Belgium, 2019 figures are used for ages 16-85+.

Source: European Commission, EPC.

As defined in EU-SILC, dependency does increase by age, as would be expected and, on average, is more prevalent among women than among men. Table I.AIII.4 shows the dependency rates per age group, for each Member State and Norway. Differences across Member States may be affected by the self-reported nature of the data.

ANNEX IV

Input data used to project education expenditure

Methodology

Expenditure data are presented in terms of GDP ratios and 2022 is the base year for the projections, using data for enrolment rates and education expenditure. ⁽¹²³⁾

Besides requiring the definition of a base period, the methodology used to project education expenditure requires calculating indexes for students, education staff and employment, together with participation rate data by single age.

Total expenditure on education is broken down into four components: (i) staff compensation (gross wages and salaries of teaching and non-teaching staff); (ii) other current expenditure; (iii) capital expenditure; and (iv) transfers (e.g. scholarships and public subsidies to private education institutions).

For details on the projection methodology, see [Volume I of the 2024 Ageing Report](#).

Data

Tables I.AIV.1 to I.AIV.6 provide useful complementary results to the projections presented in Part I, Chapter 4. Respectively, they illustrate enrolment rates (by country, age and ISCED level) for each country in base year 2022; expenditure-to-GDP ratios in the base period (broken down by expenditure component and ISCED level); expenditure-to-GDP ratios for the base period and the high enrolment scenario; and total expenditure on education (in levels and as percentage of GDP) for both data sources of reference (COFOG and UOE).

⁽¹²³⁾ The base year is constructed using the average of the two latest available years (2019 and 2020, UOE data), uprated to the base year (2022) using COFOG data. For Greece, the two latest available years correspond to 2018 and 2019 (UOE data).

Table I.A.IV.1: Base enrolment rates by country, age and ISCED level

Age	ISCED Level																												
	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	NO	
ISCED 1	0-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	0.01	0.00	0.00	0.01	0.00	0.00	1.01	0.00	0.00	0.01	0.00	0.07	0.01	0.00	0.00	0.05	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	0.96	0.05	0.47	0.93	0.58	0.01	1.05	0.94	0.98	1.02	0.20	0.98	0.81	0.04	0.08	0.94	0.40	0.92	1.01	0.57	0.02	0.86	0.72	0.88	0.50	0.00	0.01	0.99
	7	0.98	0.83	0.95	0.99	0.96	0.76	1.04	0.99	0.97	1.02	0.94	0.98	1.02	0.88	0.96	0.98	0.92	0.93	0.99	0.95	0.97	1.03	0.82	0.98	0.94	0.97	0.98	0.99
	8	0.99	0.87	1.01	1.01	0.98	0.98	1.03	1.01	1.01	1.02	1.00	1.00	1.02	0.97	1.00	0.96	0.97	0.97	1.01	0.99	1.02	1.05	0.90	1.01	0.98	1.00	1.00	1.00
	9	0.99	0.85	1.00	1.00	0.97	1.00	1.03	0.99	0.99	1.01	0.98	0.98	0.97	0.95	1.00	0.97	0.94	0.96	1.01	0.98	0.99	1.04	0.89	0.98	0.93	0.99	0.99	0.99
	10	0.99	0.84	1.02	1.03	0.47	1.01	1.01	1.02	0.99	0.99	0.79	0.91	1.02	1.00	1.00	0.96	0.68	0.95	1.01	0.50	0.84	1.03	0.85	1.00	0.50	0.99	1.01	1.00
	11	0.96	0.03	0.52	0.99	0.05	0.98	1.01	1.00	0.99	0.07	0.05	0.03	0.97	1.03	0.03	0.80	0.09	0.04	0.97	0.06	0.03	1.00	0.16	0.97	0.08	0.98	0.98	1.00
	12	0.17	0.01	0.04	0.99	0.00	0.97	0.68	0.07	0.13	0.01	0.00	0.00	0.08	0.98	0.00	0.20	0.02	0.00	0.28	0.00	0.01	0.22	0.03	0.11	0.03	0.98	0.98	0.98
	13	0.01	0.00	0.01	0.11	0.00	0.23	0.03	0.02	0.01	0.00	0.00	0.00	0.01	0.12	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.05	0.01	0.02	0.01	0.06	0.03	0.00
	14	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.00
	ISCED 2	10	0.00	0.06	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.02	0.31	0.08	0.00	0.00	0.04	0.03	0.30	0.00	0.00	0.06	0.00	0.48	0.00	0.00	0.00	0.00	0.00
		11	0.02	0.90	0.48	0.00	0.92	0.00	0.00	0.00	0.00	0.93	1.04	0.95	0.02	0.00	1.00	0.17	0.90	0.96	0.03	0.92	0.96	0.01	0.72	0.00	0.88	0.00	0.00
12		0.81	0.87	0.95	0.02	0.99	0.01	0.33	0.93	0.86	0.99	1.06	0.98	0.92	0.05	0.99	0.77	0.95	0.98	0.72	0.99	0.95	0.82	0.83	0.88	0.91	0.00	0.01	0.00
13		0.94	0.82	0.96	0.88	0.98	0.74	0.97	0.95	0.94	0.98	1.03	0.89	1.00	0.85	0.98	0.91	0.94	0.96	0.97	0.98	0.92	0.96	0.83	0.93	0.92	0.92	0.95	0.98
14		0.24	0.06	0.95	1.00	0.97	0.94	0.97	0.97	0.96	0.96	0.80	0.07	1.03	0.95	1.01	0.83	0.73	0.05	0.98	0.53	0.77	1.01	0.66	0.94	0.92	0.99	0.99	1.00
15		0.08	0.02	0.52	0.97	0.81	0.95	0.66	0.08	0.23	0.14	0.06	0.01	0.10	0.92	1.00	0.38	0.11	0.01	0.65	0.11	0.05	0.28	0.10	0.10	0.48	0.97	0.96	0.98
16		0.05	0.01	0.04	0.56	0.45	0.25	0.05	0.04	0.07	0.01	0.01	0.01	0.02	0.14	0.94	0.17	0.03	0.02	0.32	0.02	0.02	0.12	0.03	0.01	0.10	0.10	0.05	0.00
17		0.05	0.00	0.01	0.10	0.17	0.04	0.02	0.02	0.03	0.00	0.00	0.00	0.00	0.04	0.06	0.07	0.01	0.01	0.11	0.01	0.01	0.05	0.01	0.00	0.04	0.02	0.00	0.00
18		0.04	0.00	0.01	0.10	0.07	0.02	0.01	0.01	0.04	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.00	0.01	0.04	0.00	0.01	0.02	0.01	0.00	0.02	0.01	0.00	0.00
ISCED 3-4	14	0.74	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.22	0.91	0.02	0.00	0.00	0.12	0.21	0.94	0.02	0.47	0.16	0.01	0.19	0.01	0.03	0.00	0.00	0.00	
	15	0.90	0.83	0.45	0.01	0.21	0.01	0.35	0.87	0.72	0.83	0.97	0.96	0.90	0.05	0.01	0.56	0.82	0.99	0.35	0.84	0.89	0.74	0.71	0.85	0.50	0.00	0.01	0.00
	16	0.93	0.82	0.91	0.39	0.53	0.70	0.99	0.90	0.88	0.94	0.98	0.97	0.96	0.79	0.07	0.74	0.88	0.82	0.68	0.89	0.92	0.88	0.75	0.95	0.81	0.86	0.94	0.95
	17	0.91	0.78	0.92	0.83	0.74	0.87	0.95	0.90	0.87	0.90	0.95	0.92	0.87	0.92	0.93	0.76	0.86	0.79	0.78	0.74	0.93	0.96	0.75	0.94	0.82	0.93	0.97	0.95
	18	0.46	0.72	0.86	0.88	0.64	0.86	0.59	0.11	0.32	0.26	0.63	0.81	0.16	0.85	0.90	0.66	0.68	0.28	0.55	0.46	0.92	0.43	0.56	0.92	0.79	0.92	0.94	0.91
	19	0.25	0.05	0.45	0.56	0.45	0.32	0.18	0.14	0.18	0.10	0.06	0.18	0.02	0.37	0.27	0.39	0.35	0.12	0.36	0.22	0.46	0.20	0.15	0.29	0.39	0.30	0.28	0.40
	20	0.13	0.02	0.12	0.26	0.35	0.14	0.12	0.14	0.11	0.05	0.00	0.06	0.02	0.14	0.12	0.23	0.15	0.07	0.24	0.12	0.13	0.09	0.09	0.13	0.08	0.16	0.20	0.21
	21	0.07	0.01	0.06	0.17	0.25	0.09	0.09	0.07	0.03	0.00	0.02	0.01	0.06	0.06	0.12	0.08	0.03	0.16	0.08	0.08	0.04	0.07	0.08	0.03	0.14	0.20	0.11	0.11
	22	0.05	0.01	0.04	0.14	0.17	0.07	0.08	0.06	0.05	0.02	0.00	0.01	0.01	0.04	0.03	0.07	0.05	0.02	0.10	0.05	0.06	0.03	0.04	0.07	0.01	0.11	0.14	0.08
	23	0.04	0.01	0.02	0.11	0.11	0.06	0.06	0.04	0.05	0.02	0.00	0.01	0.00	0.03	0.02	0.05	0.04	0.01	0.07	0.04	0.05	0.02	0.04	0.08	0.01	0.10	0.12	0.06
	24	0.03	0.01	0.02	0.10	0.07	0.05	0.05	0.03	0.04	0.01	0.00	0.01	0.00	0.02	0.02	0.03	0.03	0.01	0.05	0.03	0.04	0.02	0.02	0.07	0.01	0.09	0.10	0.04
25	0.03	0.01	0.01	0.08	0.05	0.04	0.04	0.03	0.03	0.01	0.00	0.01	0.00	0.02	0.01	0.02	0.02	0.00	0.04	0.02	0.03	0.02	0.02	0.05	0.01	0.08	0.09	0.04	
ISCED 5-8	17	0.01	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.03	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.10	0.14	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	
	18	0.41	0.04	0.02	0.01	0.09	0.01	0.26	0.56	0.44	0.53	0.12	0.05	0.23	0.04	0.05	0.02	0.06	0.32	0.30	0.31	0.03	0.39	0.09	0.01	0.02	0.01	0.01	0.00
	19	0.55	0.45	0.27	0.06	0.23	0.25	0.55	0.58	0.53	0.58	0.51	0.40	0.35	0.32	0.48	0.07	0.25	0.42	0.43	0.33	0.34	0.49	0.36	0.58	0.23	0.17	0.18	0.22
	20	0.57	0.47	0.47	0.18	0.32	0.35	0.56	0.57	0.53	0.52	0.51	0.43	0.37	0.49	0.53	0.10	0.34	0.45	0.49	0.34	0.46	0.51	0.40	0.62	0.38	0.28	0.26	0.37
	21	0.53	0.45	0.44	0.33	0.33	0.36	0.52	0.55	0.50	0.42	0.48	0.41	0.36	0.48	0.52	0.10	0.34	0.34	0.47	0.34	0.45	0.43	0.38	0.56	0.35	0.36	0.30	0.45
	22	0.45	0.42	0.41	0.46	0.34	0.33	0.39	0.51	0.40	0.37	0.45	0.35	0.30	0.44	0.43	0.10	0.31	0.26	0.45	0.33	0.43	0.36	0.33	0.50	0.33	0.41	0.32	0.44
	23	0.32	0.29	0.36	0.50	0.34	0.28	0.21	0.43	0.33	0.27	0.40	0.33	0.27	0.38	0.29	0.09	0.26	0.15	0.39	0.31	0.39	0.25	0.27	0.39	0.28	0.42	0.32	0.42
	24	0.21	0.21	0.29	0.45	0.30	0.23	0.14	0.37	0.25	0.18	0.30	0.26	0.23	0.30	0.22	0.07	0.20	0.10	0.31	0.29	0.27	0.17	0.19	0.32	0.20	0.37	0.29	0.34
	25	0.14	0.13	0.21	0.38	0.28	0.16	0.12	0.32	0.19	0.12	0.19	0.19	0.20	0.23	0.15	0.05	0.14	0.08	0.23	0.24	0.17	0.12	0.11	0.23	0.12	0.31	0.24	0.26
	26	0.10	0.09	0.12	0.28	0.22	0.13	0.10	0.30	0.16	0.09	0.14	0.15	0.18	0.18	0.11	0.04	0.10	0.07	0.17	0.21	0.11	0.10	0.08	0.15	0.07	0.25	0.20	0.21
	27	0.07	0.07	0.08	0.20	0.18	0.10	0.09	0.27	0.13	0.06	0.10	0.12	0.15	0.15	0.09	0.04	0.08	0.05	0.13	0.17	0.08	0.08	0.06	0.09	0.05	0.20	0.17	0.17

Table I.AIV.2: **Expenditure-to-GDP ratio in the base period - Breakdown by component**

	Capital expenditure	Staff	Other current expenditure	Transfers	Total
	(1)	(2)	(3)	(4)	(5)=(1)+(2)+(3)+(4)
BE	0.2	2.1	0.5	2.7	5.6
BG	0.2	2.7	0.3	0.6	3.7
CZ	0.4	3.0	0.5	0.2	4.1
DK	0.3	3.3	0.7	1.5	5.8
DE	0.1	2.8	0.6	0.8	4.3
EE	0.0	3.3	0.5	0.2	3.9
IE	0.2	2.2	0.0	0.4	2.8
EL	0.5	2.5	0.4	0.0	3.4
ES	0.2	2.8	0.4	0.7	4.1
FR	0.4	3.2	0.7	0.6	4.8
HR	0.0	3.4	0.0	0.1	3.4
IT	0.2	2.9	0.4	0.3	3.8
CY	0.2	4.5	0.2	0.2	5.0
LV	0.5	2.2	0.3	0.6	3.6
LT	0.3	2.3	0.3	0.2	3.0
LU	0.3	2.3	0.3	0.2	3.0
HU	0.3	2.0	0.5	0.7	3.5
MT	0.5	2.6	0.5	0.9	4.5
NL	0.0	3.7	0.5	0.6	4.9
AT	0.3	3.4	0.5	0.4	4.6
PL	0.2	3.0	0.4	0.3	3.9
PT	0.0	3.7	0.3	0.4	4.4
RO	0.1	2.2	0.0	0.2	2.5
SI	0.2	3.4	0.3	0.4	4.3
SK	0.2	2.5	0.6	0.4	3.7
FI	0.6	3.1	0.9	0.7	5.3
SE	0.2	3.3	1.0	1.3	5.8
NO	0.8	4.4	0.9	1.4	7.5

For the definition of the variables, see Part I, Chapter 4.
Source: European Commission, EPC.

Table I.AIV.3: **Expenditure-to-GDP ratio in the base period - Breakdown by ISCED levels**

	ISCED 1	ISCED 2	ISCED 3-4	ISCED 5-8	ISCED 1-8
BE	1.5	0.9	1.7	1.5	5.6
BG	0.9	0.9	0.9	0.9	3.7
CZ	1.0	1.2	1.0	0.9	4.1
DK	1.6	1.0	1.0	2.2	5.8
DE	0.7	1.2	1.0	1.3	4.3
EE	1.5	0.8	0.6	1.0	3.9
IE	1.0	0.4	0.6	0.8	2.8
EL	1.3	0.7	0.7	0.7	3.4
ES	1.3	0.8	0.9	1.1	4.1
FR	1.2	1.2	1.1	1.2	4.8
HR	1.7	0.0	0.9	0.9	3.4
IT	1.1	0.7	1.2	0.8	3.8
CY	1.9	1.1	1.2	0.9	5.0
LV	1.3	0.6	0.9	0.8	3.6
LT	0.7	1.0	0.5	0.8	3.0
LU	1.1	0.7	0.8	0.4	3.0
HU	0.8	0.8	1.0	0.8	3.5
MT	1.1	0.9	1.2	1.4	4.5
NL	1.2	1.1	1.0	1.6	4.9
AT	0.9	1.1	0.9	1.7	4.6
PL	1.1	0.9	0.8	1.1	3.9
PT	1.4	1.1	1.1	0.8	4.4
RO	0.4	0.7	0.7	0.7	2.5
SI	1.5	0.7	0.9	1.1	4.3
SK	1.0	1.0	0.9	0.8	3.7
FI	1.4	1.1	1.3	1.5	5.3
SE	1.9	0.9	1.3	1.7	5.8
NO	2.2	1.0	1.7	2.6	7.5

Source: European Commission, EPC.

Table I.AIV.4: **Results of the baseline (public education expenditure as % of GDP)**

	2022	2023	2030	2040	2050	2060	2070
BE	5.6	5.6	5.3	4.9	4.9	4.9	4.8
BG	3.7	3.8	3.7	3.6	3.8	4.0	3.8
CZ	4.1	4.2	4.3	4.2	4.3	4.5	4.4
DK	5.8	5.7	5.4	5.4	5.1	4.9	4.9
DE	4.3	4.3	4.4	4.5	4.4	4.4	4.5
EE	3.9	3.9	3.7	3.4	3.4	3.6	3.4
IE	2.8	2.8	2.5	2.2	2.3	2.3	2.1
EL	3.4	3.3	3.0	2.9	3.1	3.0	2.9
ES	4.1	4.1	3.7	3.3	3.5	3.6	3.5
FR	4.8	4.7	4.4	4.1	4.1	4.0	3.9
HR	3.4	3.3	3.1	2.8	2.7	2.8	2.7
IT	3.8	3.8	3.4	3.1	3.2	3.1	3.0
CY	5.0	5.0	4.9	4.9	4.4	4.4	4.5
LV	3.6	3.6	3.6	3.3	3.3	3.6	3.4
LT	3.0	3.0	2.9	2.7	2.6	2.7	2.8
LU	3.0	3.0	2.7	2.7	2.6	2.6	2.6
HU	3.5	3.4	3.3	3.4	3.5	3.6	3.6
MT	4.5	4.4	4.0	3.8	3.8	4.1	4.4
NL	4.9	4.7	4.2	4.2	4.1	3.9	3.9
AT	4.6	4.5	4.3	4.2	4.1	4.2	4.2
PL	3.9	3.9	3.9	3.7	3.8	4.1	4.0
PT	4.4	4.3	4.1	4.3	4.4	4.3	4.3
RO	2.5	2.5	2.5	2.5	2.6	2.6	2.5
SI	4.3	4.2	4.2	3.8	4.0	4.2	4.0
SK	3.7	3.8	4.0	3.9	3.9	4.2	4.0
FI	5.3	5.2	4.8	4.4	4.3	4.3	4.2
SE	5.8	5.7	5.6	5.3	5.2	5.2	5.1
NO	7.5	7.3	6.9	6.4	6.3	6.2	6.2
EA	4.1	4.1	3.9	3.7	3.7	3.7	3.7
EU	4.1	4.1	3.9	3.8	3.8	3.8	3.8

Source: European Commission, EPC.

Table I.AIV.5: **Results of the High enrolment rate scenario (public education expenditure as % of GDP)**

	2022	2023	2030	2040	2050	2060	2070
BE	5.6	5.6	5.5	5.1	5.1	5.2	5.1
BG	3.7	3.7	4.2	4.2	4.5	4.7	4.6
CZ	4.1	4.1	4.7	4.9	5.2	5.4	5.3
DK	5.8	5.7	5.8	6.0	6.3	5.9	5.9
DE	4.3	4.2	4.6	5.2	5.3	5.3	5.4
EE	3.9	3.9	4.3	4.1	4.2	4.4	4.2
IE	2.8	2.7	2.7	2.4	2.5	2.5	2.4
EL	3.4	3.3	3.0	3.0	3.1	3.2	3.0
ES	4.1	4.1	4.0	3.7	3.8	4.0	3.9
FR	4.8	4.8	4.7	4.6	4.8	4.7	4.6
HR	3.4	3.3	3.0	2.9	2.9	2.9	2.9
IT	3.8	3.8	3.7	3.4	3.5	3.5	3.4
CY	5.0	5.0	5.3	5.7	5.6	5.4	5.5
LV	3.6	3.5	4.0	4.0	4.0	4.4	4.2
LT	3.0	2.9	3.4	3.3	3.2	3.4	3.4
LU	3.0	3.0	3.0	3.5	3.9	3.8	3.8
HU	3.5	3.4	3.4	3.7	4.0	4.1	4.1
MT	4.5	4.4	4.2	4.4	4.8	5.1	5.5
NL	4.9	4.7	4.4	4.4	4.5	4.3	4.2
AT	4.6	4.5	4.5	4.6	4.6	4.7	4.8
PL	3.9	3.8	4.2	4.1	4.2	4.5	4.5
PT	4.4	4.3	4.2	4.4	4.7	4.6	4.6
RO	2.5	2.5	2.8	3.1	3.3	3.3	3.2
SI	4.3	4.3	4.5	4.3	4.4	4.7	4.5
SK	3.7	3.7	4.2	4.6	4.8	5.1	5.0
FI	5.3	5.2	5.3	4.9	4.9	4.9	4.8
SE	5.8	5.7	5.9	6.0	6.1	6.2	6.1
NO	7.5	7.4	7.3	7.0	7.2	7.2	7.1
EA	4.1	4.1	4.1	4.1	4.2	4.3	4.3
EU	4.1	4.1	4.2	4.2	4.4	4.5	4.4

Source: European Commission, EPC.

Table I.AIV.6: **Total expenditure on education, in levels (million euro) and as % of GDP**

		UOE		COFOG data	
		Level	% of GDP	Level	% of GDP
BE	2019 & 2020	27082	4.9%	2022	30941 5.6%
BG	2019 & 2020	2093	2.5%	2022	3140 3.7%
CZ	2019 & 2020	8794	3.2%	2022	11245 4.1%
DK	2019 & 2020	19140	5.1%	2022	21862 5.8%
DE	2019 & 2020	148270	3.8%	2022	164679 4.3%
EE	2019 & 2020	1171	3.2%	2022	1423 3.9%
IE	2019 & 2020	11451	2.3%	2022	14185 2.8%
EL	2018 & 2019	6023	2.9%	2022	6993 3.4%
ES	2019 & 2020	46272	3.5%	2022	54445 4.1%
FR	2019 & 2020	114512	4.3%	2022	126519 4.8%
HR	2019 & 2020	1869	2.8%	2022	2309 3.4%
IT	2019 & 2020	65302	3.4%	2022	72343 3.8%
CY	2019 & 2020	1158	4.3%	2022	1358 5.0%
LV	2019 & 2020	1117	2.9%	2022	1390 3.6%
LT	2019 & 2020	1626	2.4%	2022	2009 3.0%
LU	2019 & 2020	2073	2.7%	2022	2375 3.0%
HU	2019 & 2020	4559	2.7%	2022	5911 3.5%
MT	2019 & 2020	615	3.6%	2022	758 4.5%
NL	2019 & 2020	39632	4.2%	2022	45987 4.9%
AT	2019 & 2020	17950	4.0%	2022	20526 4.6%
PL	2019 & 2020	21244	3.2%	2022	25505 3.9%
PT	2019 & 2020	9050	3.8%	2022	10581 4.4%
RO	2019 & 2020	6154	2.2%	2022	7067 2.5%
SI	2019 & 2020	2015	3.4%	2022	2518 4.3%
SK	2019 & 2020	3637	3.3%	2022	4084 3.7%
FI	2019 & 2020	12870	4.8%	2022	14068 5.3%
SE	2019 & 2020	29058	5.2%	2022	32163 5.8%
NO	2019 & 2020	22355	6.3%	2022	26630 7.5%

- UOE: UNESCO\OECD\EUROSTAT

- COFOG: Classification of the functions of the government

- The base year is constructed using the average of the two latest available years (2019 and 2020, UOE data), uprated to the base year (2022) using COFOG data. For EL, the two latest available years correspond to 2018 and 2019.

Source: European Commission, EPC.

Part II

Statistical Annex – Cross-country tables

The full dataset with annual data for 2022-2070 is available online.

Main demographic and macroeconomic assumptions

Table II.1.1: Fertility rate	173
Table II.1.2: Life expectancy at birth - Men	173
Table II.1.3: Life expectancy at birth - Women	174
Table II.1.4: Life expectancy at 65 - Men	174
Table II.1.5: Life expectancy at 65 - Women	175
Table II.1.6: Net migration (thousand)	175
Table II.1.7: Net migration as % of population in t-1	176
Table II.1.8: Population (million)	176
Table II.1.9: Share of prime-age population (25-54y) as % of total population	177
Table II.1.10: Share of working-age population (20-64y) as % of total population	177
Table II.1.11: Share of elderly population (+65y) as % of total population	178
Table II.1.12: Share of very elderly population (+80y) as % of total population	178
Table II.1.13: Share of very elderly population (+80y) as % of elderly population (+65y)	179
Table II.1.14: Potential GDP (growth rate)	179
Table II.1.15: Employment (15-74y; growth rate)	180
Table II.1.16: Labour input: hours worked (growth rate)	180
Table II.1.17: Labour productivity per hour (growth rate)	181
Table II.1.18: Total factor productivity (TFP) (growth rate)	181
Table II.1.19: Capital deepening (contribution to labour productivity growth)	182
Table II.1.20: Potential GDP per capita (growth rate)	182
Table II.1.21: Potential GDP per worker (growth rate)	183
Table II.1.22: HICP (growth rate)	183
Table II.1.23: Nominal interest rate (%)	184
Table II.1.24: Working-age population (20-64y; thousands)	184
Table II.1.25: Working-age population (20-64y; growth rate)	185
Table II.1.26: Labour force (20-64y; thousands)	185
Table II.1.27: Participation rate (20-64y)	186
Table II.1.28: Participation rate (20-74y)	186
Table II.1.29: Participation rate young (20-24y)	187
Table II.1.30: Participation rate prime-age (25-54y)	187
Table II.1.31: Participation rate older (55-64y)	188
Table II.1.32: Participation rate oldest (65-74y)	188
Table II.1.33: Participation rate (20-64y) - female	189
Table II.1.34: Participation rate (20-74y) - female	189
Table II.1.35: Participation rate young (20-24y) - female	190
Table II.1.36: Participation rate prime-age (25-54y) - female	190
Table II.1.37: Participation rate older (55-64y) - female	191
Table II.1.38: Participation rate oldest (65-74y) - female	191
Table II.1.39: Participation rate (20-64y) - male	192
Table II.1.40: Participation rate (20-74y) - male	192
Table II.1.41: Participation rate young (20-24y) - male	193
Table II.1.42: Participation rate prime-age (25-54y) - male	193
Table II.1.43: Participation rate older (55-64y) - male	194
Table II.1.44: Participation rate oldest (65-74y) - male	194
Table II.1.45: Average labour market exit age (Total)	195
Table II.1.46: Average labour market exit age (Male)	195
Table II.1.47: Average labour market exit age (Female)	196

Table II.1.48: Employment rate (20-64y)	196
Table II.1.49: Employment rate (20-74y)	197
Table II.1.50: Unemployment rate (20-64y)	197
Table II.1.51: Unemployment rate (20-74y)	198
Table II.1.52: Employment (20-64y; millions)	198
Table II.1.53: Employment (20-74y; millions)	199
Table II.1.54: Share of young (20-24y) in total employment (20-74y)	199
Table II.1.55: Share of prime-age (25-54y) in total employment (20-74y)	200
Table II.1.56: Share of older (55-64y) in total employment (20-74y)	200
Table II.1.57: Share of oldest (65-74y) in total employment (20-74y)	201
Table II.1.58: Share of older population (55-64) in population (20-64)	201
Table II.1.59: Old-age dependency ratio (65+ / 20-64)	202
Table II.1.60: Total dependency ratio ((0-19 & 65+) / (20-64))	202
Table II.1.61: Total economic dependency ratio (total inactive population / employment)	203
Table II.1.62: Economic old-age dependency ratio (inactive population 65+ / employment 20-64)	203
Table II.1.63: Economic old-age dependency ratio (inactive population 65+ / employment 20-74)	204

Pension expenditure projections

Table II.1.64: Public pensions, gross expenditure as % of GDP	204
Table II.1.65: Old-age and early pensions, gross expenditure as % of GDP	205
Table II.1.66: Disability pensions, gross expenditure as % of GDP	205
Table II.1.67: Survivors' pensions, gross expenditure as % of GDP	206
Table II.1.68: Other pensions, gross expenditure as % of GDP	206
Table II.1.69: Earnings-related public pensions (old-age and early pensions), gross	207
Table II.1.70: Private occupational pensions, gross expenditure as % of GDP	207
Table II.1.71: Private individual pensions (mandatory), gross expenditure as % of GDP	208
Table II.1.72: New pensions (old-age and early pensions), gross expenditure as % of GDP	208
Table II.1.73: Public pensions, contributions as % of GDP	209
Table II.1.74: Balance of the pension system (contributions - gross expenditure) as % of GDP	209
Table II.1.75: Public pension scheme, tax revenues as % of GDP	210
Table II.1.76: Pensioners (public, in thousands)	210
Table II.1.77: Public pensioners aged 65+ (in thousands)	211
Table II.1.78: Share of public pensioners below age 65 as % of all public pensioners	211
Table II.1.79: Benefit ratio (total public pensions, gross, %)	212
Table II.1.80: Gross replacement rate at retirement (old-age earnings-related public pensions, %)	212
Table II.1.81: Average accrual rate (new earnings-related public pensions, %)	213
Table II.1.82: Average contributory period (new earnings-related public pensions, years)	213
Table II.1.83: Contributors (public pensions, in thousands)	214
Table II.1.84: Support ratio (contributors/100 pensioners, public pensions)	214
Table II.1.85: Public pensions, gross expenditure as % of GDP - High life expectancy (+2 years)	215
Table II.1.86: Public pensions, gross expenditure as % of GDP - Higher migration (+33%)	215
Table II.1.87: Public pensions, gross expenditure as % of GDP - Lower migration (-33%)	216
Table II.1.88: Public pensions, gross expenditure as % of GDP - Lower fertility (-20%)	216

Table II.1.89: Public pensions, gross expenditure as % of GDP - Higher employment rate of older workers (+10 pps)	217
Table II.1.90: Public pensions, gross expenditure as % of GDP - Higher TFP growth (+0.2 pps)	217
Table II.1.91: Public pensions, gross expenditure as % of GDP - Lower TFP growth (-0.2 pps)	218
Table II.1.92: Public pensions, gross expenditure as % of GDP - Retirement age linked to increases in life expectancy	218
Table II.1.93: Public pensions, gross expenditure as % of GDP - Constant retirement age scenario	219
Table II.1.94: Public pensions, gross expenditure as % of GDP - Constant benefit ratio scenario	219
Table II.1.95: Public pensions, gross expenditure as % of GDP - pps change from 2022	220
Table II.1.96: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to dependency ratio	220
Table II.1.97: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio	221
Table II.1.98: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio - old-age effect	221
Table II.1.99: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio - early age effect	222
Table II.1.100: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio - cohort effect	222
Table II.1.101: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to benefit ratio	223
Table II.1.102: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio	223
Table II.1.103: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio - employment rate	224
Table II.1.104: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio - labour intensity	224
Table II.1.105: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio - career shift	225
Table II.1.106: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to interaction effect (residual)	225

Health care

Table II.1.107: Health care spending as % of GDP - Baseline	226
Table II.1.108: Health care spending as % of GDP - Risk scenario	226
Table II.1.109: Health care spending as % of GDP - Demographic scenario	227
Table II.1.110: Health care spending as % of GDP - Healthy ageing scenario	227
Table II.1.111: Health care spending as % of GDP - No healthy ageing scenario	228
Table II.1.112: Health care spending as % of GDP - Labour intensity scenario	228
Table II.1.113: Health care spending as % of GDP - Sector-specific composite indexation scenario	229

Long-term care

Table II.1.114: Long-term care spending as % of GDP - Baseline	229
Table II.1.115: Long-term care spending as % of GDP on institutional care - Baseline	230
Table II.1.116: Long-term care spending as % of GDP on home care - Baseline	230
Table II.1.117: Long-term care spending as % of GDP on cash benefits - Baseline	231
Table II.1.118: Long-term care spending as % of GDP - Risk scenario	231
Table II.1.119: Long-term care spending as % of GDP - Healthy ageing scenario	232
Table II.1.120: Long-term care spending as % of GDP - No healthy ageing scenario	232
Table II.1.121: Long-term care spending as % of GDP - Coverage convergence scenario	233
Table II.1.122: Long-term care spending as % of GDP - Cost convergence scenario	233
Table II.1.123: Number of dependent people (in thousands) - Baseline	234
Table II.1.124: Number of dependent people (in thousands) - Recipients: receiving institutional care - Baseline	234
Table II.1.125: Number of dependent people (in thousands) - Recipients: receiving home care - Baseline	235
Table II.1.126: Number of dependent people (in thousands) - Recipients: receiving cash benefits - Baseline	235
Table II.1.127: Number of dependent people (in thousands) - Aged 65 or more - Baseline	236
Table II.1.128: Number of dependent people (in thousands) - Recipients: receiving institutional care - Aged 65 or more - Baseline	236
Table II.1.129: Number of dependent people (in thousands) - Recipients: receiving home care - Aged 65 or more - Baseline	237
Table II.1.130: Number of dependent people (in thousands) - Recipients: receiving cash benefits - Aged 65 or more - Baseline	237

Education

Table II.1.131: Education spending as % of GDP - Baseline	238
Table II.1.132: Number of students (in thousands)	238
Table II.1.133: Number of students as % of population 5-24	239
Table II.1.134: Education spending as % of GDP - High enrolment rate scenario	239

Total cost of ageing

Table II.1.135: Total cost of ageing as % of GDP - Baseline	240
Table II.1.136: Total cost of ageing as % of GDP - Risk scenario (health care & long-term care)	240
Table II.1.137: Total cost of ageing as % of GDP - High life expectancy (+2 years)	241
Table II.1.138: Total cost of ageing as % of GDP - Higher migration (+33%)	241
Table II.1.139: Total cost of ageing as % of GDP - Lower migration (-33%)	242
Table II.1.140: Total cost of ageing as % of GDP - Lower fertility (-20%)	242
Table II.1.141: Total cost of ageing as % of GDP - Higher employment rate of older workers (+10 pps)	243
Table II.1.142: Total cost of ageing as % of GDP - Higher TFP growth (+0.2 pps)	243
Table II.1.143: Total cost of ageing as % of GDP - Lower TFP growth (-0.2 pps)	244

Country-specific notes

DE: (i) Under current rules in Germany, both in-kind and cash long-term care benefits are indexed to prices. With contribution rates indexed by inflation, LTC expenditure shares would be almost unchanged until 2070. (ii) Public expenditure on health care and long-term care includes governmental and social health insurance spending but excludes private health insurances. The coverage corresponds to approx. 90% of the population.

EE: Projections include the *work ability allowance* (covered under 'disability pensions').

IE: (i) The gross public pensions expenditure projections include the Public Social Security (PSS) scheme that provides flat rate Social Insurance and Social Assistance pensions, as well as the Private Occupational Public Service (POPS) scheme which provides pensions to public servants. Earnings and non-earnings-related pension expenditure projections are based on PSS expenditure only.

(ii) The projections of the number of pensioners refer only to PSS recipients (i.e they do not include pensioners under the POPS scheme). (iii) The sensitivity tests concern only the PSS projections .

EL: (i) The values of the gross replacement rate at retirement (new pensions, earnings-related), the average accrual rates (new pensions, earnings-related) and the average contributory period (new pensions, earnings-related) are for 2023. (ii) The average accrual rates (new pensions, earnings-related) correspond to the main scheme and include both contributory and flat rate components.

AT: Projections include the *Ausgleichszulage* and *Rehabilitationsgeld* (covered under 'other pensions').

PL: Health care expenditure projections for PL consider future demographic and macroeconomic changes but do not take into account a future convergence of public spending on health care to a threshold of 7% of GDP as included in the Polish law.

SI: Spending from Voluntary Health Insurances is included in public spending on health care as of year 2022.

Table II.1.1: Fertility rate

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.11	1.53	1.54	1.55	1.57	1.58	1.59	1.60	1.61	1.62	1.63	1.64
BG	0.13	1.56	1.58	1.60	1.62	1.64	1.65	1.66	1.67	1.68	1.69	1.69
CZ	0.04	1.72	1.72	1.73	1.74	1.74	1.75	1.75	1.75	1.75	1.75	1.75
DK	0.05	1.68	1.68	1.69	1.70	1.71	1.71	1.72	1.72	1.72	1.73	1.73
DE	0.09	1.53	1.54	1.55	1.56	1.57	1.58	1.59	1.60	1.61	1.62	1.63
EE	0.15	1.57	1.60	1.64	1.67	1.69	1.70	1.71	1.72	1.72	1.73	1.73
IE	0.09	1.60	1.60	1.62	1.63	1.64	1.65	1.66	1.66	1.67	1.68	1.69
EL	0.14	1.41	1.42	1.44	1.45	1.47	1.48	1.50	1.51	1.52	1.54	1.55
ES	0.23	1.19	1.20	1.23	1.26	1.29	1.31	1.33	1.36	1.38	1.40	1.42
FR	-0.03	1.82	1.82	1.81	1.80	1.80	1.80	1.80	1.80	1.79	1.79	1.79
HR	0.11	1.49	1.49	1.51	1.52	1.53	1.54	1.55	1.56	1.57	1.58	1.59
IT	0.21	1.24	1.26	1.28	1.31	1.33	1.35	1.37	1.39	1.41	1.43	1.45
CY	0.15	1.37	1.38	1.40	1.41	1.43	1.44	1.46	1.47	1.49	1.50	1.51
LV	0.16	1.53	1.55	1.59	1.61	1.63	1.65	1.66	1.68	1.68	1.69	1.70
LT	0.21	1.44	1.46	1.49	1.52	1.55	1.57	1.59	1.61	1.62	1.64	1.65
LU	0.19	1.38	1.40	1.42	1.45	1.47	1.49	1.51	1.52	1.54	1.55	1.56
HU	0.10	1.62	1.64	1.67	1.69	1.70	1.71	1.71	1.71	1.72	1.72	1.72
MT	0.33	1.15	1.19	1.25	1.29	1.33	1.37	1.40	1.43	1.45	1.47	1.49
NL	0.10	1.53	1.54	1.55	1.56	1.58	1.59	1.60	1.61	1.61	1.62	1.63
AT	0.13	1.44	1.45	1.46	1.48	1.49	1.51	1.52	1.53	1.55	1.56	1.57
PL	0.22	1.39	1.42	1.45	1.49	1.51	1.54	1.56	1.57	1.59	1.60	1.61
PT	0.14	1.41	1.42	1.44	1.45	1.47	1.48	1.50	1.51	1.52	1.54	1.55
RO	-0.03	1.81	1.80	1.80	1.79	1.79	1.78	1.78	1.78	1.78	1.78	1.77
SI	0.10	1.59	1.60	1.62	1.64	1.65	1.66	1.67	1.68	1.68	1.69	1.69
SK	0.06	1.60	1.60	1.61	1.62	1.62	1.63	1.63	1.64	1.65	1.65	1.66
FI	0.14	1.39	1.40	1.42	1.44	1.45	1.47	1.48	1.49	1.51	1.52	1.53
SE	0.08	1.68	1.70	1.73	1.74	1.75	1.75	1.76	1.76	1.76	1.76	1.76
NO	0.13	1.47	1.48	1.49	1.51	1.52	1.54	1.55	1.56	1.57	1.58	1.60
EA	0.12	1.48	1.49	1.50	1.52	1.53	1.54	1.55	1.57	1.58	1.59	1.60
EU	0.12	1.50	1.51	1.53	1.54	1.56	1.57	1.58	1.59	1.60	1.61	1.62

Table II.1.2: Life expectancy at birth - Men

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.9	79.5	80.0	80.8	81.6	82.4	83.1	83.8	84.5	85.2	85.8	86.4
BG	12.3	70.5	72.0	73.4	74.7	76.0	77.3	78.5	79.6	80.7	81.8	82.8
CZ	8.9	75.9	76.9	77.9	78.8	79.8	80.7	81.6	82.4	83.3	84.1	84.8
DK	6.5	79.9	80.1	80.9	81.7	82.4	83.2	83.8	84.5	85.1	85.8	86.4
DE	7.0	79.0	79.3	80.1	81.0	81.8	82.6	83.3	84.0	84.7	85.4	86.0
EE	9.8	74.3	74.9	76.0	77.2	78.3	79.4	80.4	81.4	82.3	83.2	84.1
IE	6.1	80.8	81.0	81.7	82.5	83.2	83.8	84.5	85.1	85.7	86.3	86.9
EL	7.7	78.8	79.5	80.5	81.3	82.2	83.0	83.7	84.5	85.2	85.8	86.5
ES	6.3	80.8	81.4	82.1	82.8	83.5	84.2	84.8	85.4	86.0	86.6	87.1
FR	7.0	79.7	80.2	81.1	81.9	82.7	83.4	84.1	84.8	85.5	86.1	86.7
HR	9.3	74.9	75.6	76.7	77.8	78.8	79.8	80.8	81.7	82.6	83.4	84.2
IT	6.0	81.1	81.8	82.4	83.1	83.7	84.4	85.0	85.5	86.1	86.6	87.1
CY	6.3	80.5	81.1	81.8	82.5	83.2	83.8	84.4	85.1	85.6	86.2	86.8
LV	12.2	70.3	71.1	72.6	74.0	75.4	76.7	78.0	79.2	80.4	81.5	82.5
LT	12.0	70.8	71.8	73.3	74.6	76.0	77.2	78.5	79.6	80.8	81.8	82.8
LU	6.2	80.7	80.8	81.6	82.4	83.1	83.8	84.5	85.1	85.7	86.3	86.9
HU	11.1	72.5	73.4	74.7	76.0	77.2	78.4	79.5	80.6	81.6	82.6	83.6
MT	6.1	80.9	81.1	81.9	82.7	83.4	84.1	84.7	85.3	85.9	86.5	87.0
NL	6.4	80.3	80.8	81.6	82.3	83.0	83.7	84.3	84.9	85.5	86.1	86.7
AT	6.8	79.5	80.0	80.8	81.6	82.4	83.1	83.8	84.5	85.1	85.7	86.3
PL	10.9	73.2	74.4	75.7	76.9	78.1	79.2	80.3	81.3	82.3	83.2	84.1
PT	7.3	79.6	81.2	81.9	82.6	83.3	83.9	84.6	85.2	85.8	86.3	86.9
RO	12.4	70.9	72.2	73.7	75.1	76.4	77.7	79.0	80.1	81.3	82.3	83.3
SI	7.5	78.5	79.1	80.0	80.8	81.7	82.4	83.2	83.9	84.6	85.3	86.0
SK	10.7	73.4	74.5	75.8	77.0	78.1	79.2	80.3	81.3	82.3	83.3	84.1
FI	7.1	79.0	79.6	80.5	81.3	82.0	82.8	83.5	84.2	84.9	85.5	86.1
SE	5.5	81.5	81.7	82.4	83.0	83.6	84.2	84.8	85.4	86.0	86.5	87.0
NO	5.2	82.1	82.2	82.8	83.5	84.1	84.7	85.2	85.8	86.3	86.8	87.3
EA	6.9	79.6	80.2	81.0	81.8	82.6	83.3	84.0	84.6	85.3	85.9	86.5
EU	7.7	78.4	79.0	80.0	80.9	81.7	82.5	83.3	84.0	84.8	85.4	86.1

Table II.1.3: Life expectancy at birth - Women

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	5.9	84.6	84.7	85.5	86.2	86.9	87.5	88.2	88.8	89.4	89.9	90.5
BG	10.0	77.7	79.0	80.1	81.2	82.3	83.3	84.2	85.1	86.0	86.9	87.7
CZ	7.3	81.9	82.6	83.5	84.3	85.1	85.8	86.6	87.3	87.9	88.6	89.2
DK	6.5	83.6	84.1	84.9	85.6	86.3	87.0	87.7	88.3	88.9	89.5	90.1
DE	6.2	83.8	84.0	84.7	85.5	86.2	86.9	87.6	88.2	88.8	89.4	90.0
EE	6.8	83.0	83.5	84.3	85.0	85.8	86.5	87.2	87.9	88.5	89.2	89.8
IE	6.0	84.6	84.8	85.6	86.3	87.0	87.7	88.3	88.9	89.5	90.1	90.6
EL	6.2	84.2	84.7	85.5	86.2	86.8	87.5	88.1	88.7	89.3	89.9	90.4
ES	5.0	86.5	87.0	87.5	88.1	88.6	89.2	89.7	90.1	90.6	91.1	91.5
FR	5.4	85.9	86.2	86.9	87.6	88.2	88.8	89.3	89.8	90.4	90.8	91.3
HR	7.7	81.2	82.0	82.9	83.7	84.5	85.3	86.1	86.8	87.5	88.2	88.9
IT	5.5	85.5	86.1	86.8	87.4	87.9	88.5	89.0	89.6	90.1	90.6	91.0
CY	5.7	84.6	85.1	85.8	86.4	87.0	87.6	88.1	88.7	89.2	89.8	90.3
LV	8.6	79.8	80.4	81.5	82.5	83.4	84.4	85.2	86.1	86.9	87.7	88.4
LT	8.4	80.5	81.5	82.4	83.3	84.2	85.1	85.9	86.7	87.5	88.2	88.9
LU	5.8	85.0	85.3	86.0	86.7	87.4	88.0	88.6	89.2	89.8	90.3	90.8
HU	9.2	79.3	80.2	81.2	82.3	83.3	84.2	85.2	86.1	86.9	87.7	88.5
MT	6.2	84.6	84.8	85.6	86.4	87.1	87.8	88.5	89.1	89.7	90.2	90.8
NL	6.4	83.6	84.0	84.8	85.5	86.2	86.9	87.6	88.2	88.8	89.4	90.0
AT	6.0	84.2	84.6	85.3	86.0	86.7	87.3	88.0	88.6	89.1	89.7	90.2
PL	8.2	81.3	82.3	83.2	84.1	85.0	85.8	86.6	87.4	88.1	88.8	89.5
PT	5.4	85.0	85.3	86.0	86.6	87.2	87.8	88.3	88.9	89.4	89.9	90.4
RO	9.9	78.6	79.7	80.9	82.0	83.0	84.1	85.0	86.0	86.8	87.7	88.5
SI	6.1	84.4	85.0	85.7	86.4	87.0	87.6	88.2	88.8	89.4	89.9	90.5
SK	8.7	80.4	81.4	82.4	83.4	84.3	85.2	86.0	86.9	87.7	88.4	89.1
FI	6.3	84.1	85.0	85.7	86.4	87.0	87.6	88.2	88.8	89.4	89.9	90.4
SE	5.3	85.4	85.5	86.2	86.8	87.4	88.0	88.6	89.2	89.7	90.2	90.7
NO	5.6	85.1	85.4	86.1	86.7	87.3	87.9	88.5	89.1	89.6	90.1	90.7
EA	5.8	84.8	85.2	85.9	86.6	87.3	87.9	88.5	89.1	89.6	90.2	90.7
EU	6.4	84.0	84.5	85.3	86.0	86.7	87.4	88.0	88.7	89.3	89.8	90.4

Table II.1.4: Life expectancy at 65 - Men

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.9	18.7	19.2	19.7	20.2	20.7	21.2	21.7	22.2	22.7	23.1	23.6
BG	7.8	13.5	14.6	15.4	16.2	17.0	17.7	18.5	19.2	19.9	20.6	21.3
CZ	6.5	15.9	16.8	17.4	18.1	18.8	19.4	20.0	20.7	21.3	21.8	22.4
DK	4.7	18.7	18.9	19.5	20.0	20.5	21.0	21.5	22.0	22.5	23.0	23.4
DE	5.0	18.3	18.5	19.1	19.7	20.2	20.8	21.3	21.8	22.3	22.8	23.3
EE	6.4	15.8	16.2	16.9	17.6	18.3	19.0	19.7	20.4	21.0	21.6	22.2
IE	4.5	19.4	19.5	20.1	20.6	21.1	21.6	22.1	22.6	23.0	23.5	23.9
EL	5.2	18.7	19.3	19.8	20.4	20.9	21.5	22.0	22.5	23.0	23.5	23.9
ES	4.6	19.5	20.0	20.5	21.0	21.5	22.0	22.4	22.9	23.3	23.7	24.1
FR	4.4	19.7	20.1	20.6	21.0	21.5	22.0	22.4	22.9	23.3	23.7	24.1
HR	6.4	15.6	16.2	16.9	17.6	18.2	18.9	19.5	20.2	20.8	21.4	22.0
IT	4.5	19.5	20.0	20.5	21.0	21.4	21.9	22.3	22.8	23.2	23.6	24.0
CY	4.6	19.1	19.4	19.9	20.4	20.9	21.4	21.9	22.3	22.8	23.2	23.7
LV	7.4	14.1	14.7	15.5	16.3	17.1	17.9	18.6	19.4	20.1	20.8	21.5
LT	7.3	14.4	15.1	15.9	16.7	17.5	18.2	18.9	19.6	20.3	21.0	21.7
LU	4.5	19.4	19.6	20.2	20.7	21.1	21.6	22.1	22.5	23.0	23.4	23.9
HU	7.3	14.5	15.2	16.0	16.7	17.5	18.3	19.0	19.8	20.5	21.2	21.8
MT	4.5	19.5	19.8	20.3	20.8	21.3	21.7	22.2	22.7	23.1	23.5	24.0
NL	4.8	18.8	19.3	19.8	20.3	20.8	21.3	21.7	22.2	22.7	23.1	23.6
AT	4.9	18.6	19.0	19.5	20.1	20.6	21.1	21.6	22.1	22.6	23.0	23.5
PL	7.0	15.4	16.4	17.1	17.8	18.5	19.2	19.9	20.6	21.2	21.8	22.4
PT	5.1	18.9	20.0	20.5	21.0	21.5	21.9	22.4	22.8	23.2	23.6	24.0
RO	7.8	14.2	15.2	16.0	16.8	17.6	18.4	19.2	19.9	20.6	21.3	22.0
SI	5.5	17.8	18.3	18.9	19.5	20.1	20.7	21.2	21.7	22.3	22.8	23.3
SK	7.1	15.1	16.0	16.7	17.5	18.2	18.9	19.6	20.3	21.0	21.6	22.2
FI	5.1	18.3	18.9	19.5	20.0	20.5	21.0	21.6	22.0	22.5	23.0	23.4
SE	4.2	19.7	19.9	20.4	20.8	21.3	21.7	22.2	22.6	23.0	23.5	23.9
NO	4.0	20.2	20.3	20.8	21.2	21.7	22.1	22.5	23.0	23.4	23.8	24.2
EA	4.8	18.9	19.3	19.9	20.4	20.9	21.4	21.9	22.4	22.8	23.3	23.7
EU	5.3	18.2	18.7	19.3	19.9	20.4	21.0	21.5	22.0	22.5	23.0	23.5

Table II.1.5: Life expectancy at 65 - Women

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.6	22.3	22.5	23.0	23.6	24.1	24.6	25.1	25.5	26.0	26.4	26.9
BG	7.1	17.5	18.4	19.1	19.9	20.6	21.3	22.0	22.7	23.3	24.0	24.6
CZ	6.0	19.7	20.4	21.0	21.7	22.3	22.9	23.5	24.1	24.6	25.2	25.7
DK	5.2	21.3	21.7	22.3	22.9	23.4	24.0	24.5	25.0	25.5	26.0	26.5
DE	4.9	21.5	21.7	22.3	22.8	23.4	23.9	24.4	25.0	25.4	25.9	26.4
EE	5.4	20.9	21.3	21.9	22.5	23.1	23.7	24.2	24.8	25.3	25.8	26.3
IE	4.9	22.1	22.3	22.9	23.4	24.0	24.5	25.0	25.6	26.0	26.5	27.0
EL	5.0	21.7	22.2	22.7	23.3	23.8	24.3	24.8	25.3	25.8	26.3	26.7
ES	4.1	23.6	24.1	24.5	24.9	25.4	25.8	26.2	26.6	26.9	27.3	27.7
FR	3.9	23.8	24.1	24.5	25.0	25.4	25.8	26.2	26.6	27.0	27.4	27.7
HR	6.0	19.3	19.9	20.5	21.2	21.8	22.4	23.0	23.6	24.2	24.8	25.3
IT	4.5	22.7	23.2	23.7	24.2	24.7	25.1	25.5	26.0	26.4	26.8	27.2
CY	4.6	21.8	22.1	22.6	23.1	23.6	24.1	24.6	25.0	25.5	26.0	26.4
LV	6.4	19.0	19.6	20.3	21.0	21.7	22.3	23.0	23.6	24.2	24.8	25.4
LT	6.2	19.5	20.2	20.9	21.5	22.2	22.8	23.4	24.0	24.6	25.1	25.7
LU	4.6	22.5	22.8	23.3	23.8	24.3	24.8	25.3	25.8	26.2	26.7	27.1
HU	7.0	18.4	19.0	19.8	20.6	21.3	22.0	22.7	23.4	24.1	24.7	25.4
MT	4.6	22.5	22.8	23.4	23.9	24.4	24.9	25.3	25.8	26.3	26.7	27.1
NL	5.1	21.3	21.7	22.3	22.8	23.4	23.9	24.4	24.9	25.4	25.9	26.4
AT	4.8	21.8	22.1	22.6	23.2	23.7	24.2	24.7	25.2	25.6	26.1	26.6
PL	6.3	19.8	20.7	21.3	22.0	22.7	23.3	23.9	24.5	25.0	25.6	26.1
PT	4.4	22.3	22.5	23.0	23.5	24.0	24.4	24.9	25.4	25.8	26.2	26.7
RO	7.3	18.1	19.0	19.7	20.5	21.3	22.0	22.7	23.4	24.1	24.8	25.4
SI	5.0	21.7	22.3	22.8	23.3	23.9	24.4	24.9	25.3	25.8	26.3	26.7
SK	6.8	19.0	19.9	20.6	21.3	22.0	22.7	23.4	24.0	24.6	25.2	25.8
FI	5.2	21.6	22.5	23.0	23.5	24.0	24.5	25.0	25.4	25.9	26.3	26.8
SE	4.4	22.5	22.7	23.2	23.7	24.2	24.7	25.2	25.6	26.1	26.5	26.9
NO	4.6	22.3	22.6	23.1	23.6	24.1	24.6	25.1	25.5	26.0	26.4	26.9
EA	4.6	22.4	22.8	23.3	23.8	24.3	24.8	25.2	25.7	26.1	26.6	27.0
EU	5.0	21.8	22.2	22.8	23.3	23.9	24.4	24.9	25.4	25.9	26.3	26.8

Table II.1.6: Net migration (thousand)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-86.8	115.7	39.5	37.2	39.1	36.2	34.8	32.5	31.9	30.1	29.5	28.9
BG	-144.3	160.1	-5.3	-2.9	9.2	11.5	11.9	12.9	13.6	12.4	14.2	15.8
CZ	-445.9	470.8	-16.2	-1.8	25.4	29.7	27.4	26.2	25.6	23.8	24.1	24.8
DK	-41.8	55.1	13.6	12.4	12.8	12.5	12.2	12.4	13.8	14.4	13.9	13.3
DE	-1395.5	1631.3	355.0	249.6	280.1	263.0	266.4	266.2	272.1	253.6	247.5	235.7
EE	-41.5	45.4	0.9	1.0	3.7	3.8	3.9	4.1	4.1	3.6	3.7	3.9
IE	-81.3	93.2	15.2	17.0	19.3	17.8	16.7	13.7	12.0	11.2	11.6	11.9
EL	-2.0	21.5	-4.2	-4.3	1.2	5.2	8.2	8.2	9.9	12.6	15.9	19.5
ES	-483.5	677.2	324.5	221.2	234.1	231.7	216.2	196.2	188.2	185.9	190.7	193.7
FR	-176.6	275.1	98.9	80.0	92.4	80.8	86.8	83.2	84.6	85.2	96.8	98.5
HR	-4.4	14.5	-1.3	2.0	3.3	4.8	6.2	6.8	7.4	8.3	9.1	10.1
IT	-108.3	348.5	230.8	270.2	278.1	270.8	250.3	239.8	236.4	233.8	238.5	240.1
CY	-15.9	18.2	1.3	0.0	0.9	1.0	1.3	1.7	1.9	2.1	2.1	2.3
LV	-31.0	32.9	-7.3	-7.4	-3.5	-2.4	-1.5	-0.4	0.2	0.2	0.9	1.9
LT	-76.2	81.8	-2.4	-7.7	-1.5	-0.5	1.0	2.8	4.0	4.3	4.8	5.5
LU	-11.2	15.0	8.7	7.6	7.0	6.2	5.6	5.1	4.7	4.4	4.1	3.9
HU	-22.0	47.6	18.6	19.4	23.7	27.6	25.3	24.6	25.5	25.4	24.8	25.7
MT	-7.5	11.5	9.9	9.4	8.4	7.5	6.7	6.0	5.6	5.1	4.5	4.0
NL	-192.7	234.9	68.0	45.3	50.6	44.3	43.1	42.4	44.8	44.3	45.6	42.1
AT	-69.0	103.7	23.5	36.1	39.5	37.3	37.2	37.0	36.9	35.9	34.9	34.7
PL	-931.4	1000.9	-71.0	-44.5	24.9	43.5	56.1	62.5	60.7	57.5	60.4	69.5
PT	-43.1	81.6	16.3	16.2	22.6	25.9	26.7	27.3	29.9	32.7	36.7	38.5
RO	-50.6	78.7	-36.8	-37.5	-12.6	-4.8	1.3	5.7	10.6	13.1	19.9	28.2
SI	-8.6	14.6	5.9	6.1	6.4	6.7	6.8	6.4	5.9	5.8	5.9	6.0
SK	-88.5	96.2	-5.6	-0.7	5.4	7.6	8.3	8.5	8.0	6.8	6.8	7.7
FI	-64.0	77.3	15.9	10.7	13.2	13.3	13.4	13.6	13.9	13.6	13.2	13.4
SE	-66.6	98.8	48.7	49.9	50.2	47.5	44.8	42.0	40.3	36.9	34.5	32.2
NO	-9.1	35.5	15.2	27.4	28.9	28.2	27.7	27.2	26.9	26.5	26.6	26.4
EA	-2987.5	3989.9	1193.6	989.5	1100.2	1061.1	1038.1	1001.2	1002.4	979.4	1002.9	1002.4
EU	-4690.0	5901.8	1145.2	984.6	1233.7	1228.6	1217.1	1187.5	1192.5	1162.9	1194.6	1211.8

Table II.1.7: Net migration as % of population in t-1

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.8	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
BG	-2.0	2.3	-0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3
CZ	-4.2	4.4	-0.1	0.0	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2
DK	-0.7	0.9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DE	-1.7	2.0	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
EE	-3.1	3.4	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IE	-1.7	1.9	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
EL	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
ES	-1.0	1.4	0.7	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
FR	-0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HR	0.0	0.4	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
IT	-0.1	0.6	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
CY	-1.8	2.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
LV	-1.6	1.7	-0.4	-0.4	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.1	0.1
LT	-2.6	2.9	-0.1	-0.3	-0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.3
LU	-2.0	2.4	1.3	1.0	0.9	0.8	0.6	0.6	0.5	0.5	0.4	0.4
HU	-0.2	0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MT	-1.7	2.2	1.8	1.6	1.3	1.1	0.9	0.8	0.7	0.6	0.6	0.5
NL	-1.1	1.3	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
AT	-0.8	1.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PL	-2.4	2.7	-0.2	-0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
PT	-0.4	0.8	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4
RO	-0.2	0.4	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.2
SI	-0.4	0.7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SK	-1.6	1.8	-0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2
FI	-1.1	1.4	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3
SE	-0.7	0.9	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
NO	-0.2	0.7	0.3	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
EA	-0.9	1.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
EU	-1.0	1.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Table II.1.8: Population (million)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.0	11.7	11.8	12.0	12.2	12.4	12.5	12.6	12.6	12.6	12.7	12.7
BG	-1.6	6.9	6.8	6.5	6.3	6.1	6.0	5.8	5.7	5.6	5.4	5.3
CZ	-0.2	10.7	11.0	10.8	10.7	10.7	10.7	10.7	10.7	10.7	10.6	10.6
DK	0.3	5.9	6.0	6.1	6.1	6.1	6.1	6.2	6.2	6.2	6.2	6.2
DE	0.3	83.9	85.3	85.3	85.2	85.2	85.0	84.8	84.5	84.3	84.2	84.2
EE	0.0	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
IE	1.0	5.1	5.3	5.4	5.6	5.8	5.9	6.0	6.1	6.1	6.1	6.1
EL	-2.7	10.4	10.3	10.0	9.7	9.5	9.2	8.9	8.6	8.3	8.0	7.8
ES	0.0	47.7	48.7	49.3	49.8	50.3	50.5	50.4	49.9	49.2	48.4	47.7
FR	1.6	68.0	68.7	69.5	70.1	70.6	70.7	70.6	70.4	70.1	69.8	69.7
HR	-0.8	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.1	3.0
IT	-5.8	59.0	58.9	58.8	58.6	58.5	58.1	57.4	56.4	55.2	54.1	53.3
CY	0.1	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
LV	-0.6	1.9	1.9	1.7	1.7	1.6	1.5	1.5	1.4	1.4	1.3	1.3
LT	-0.8	2.8	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.0
LU	0.3	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	1.0	1.0
HU	-0.7	9.7	9.6	9.5	9.4	9.3	9.3	9.2	9.2	9.1	9.1	9.0
MT	0.3	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
NL	1.0	17.7	18.1	18.4	18.6	18.7	18.8	18.7	18.7	18.7	18.7	18.7
AT	0.5	9.0	9.1	9.2	9.3	9.4	9.5	9.5	9.5	9.5	9.5	9.5
PL	-6.2	38.1	38.3	37.3	36.4	35.8	35.2	34.6	34.0	33.3	32.6	31.8
PT	-1.4	10.4	10.4	10.2	10.1	10.0	9.8	9.6	9.4	9.3	9.1	9.0
RO	-4.0	19.0	18.8	18.2	17.6	17.2	16.8	16.4	16.0	15.7	15.3	15.0
SI	-0.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0
SK	-0.7	5.5	5.5	5.4	5.4	5.3	5.2	5.2	5.1	5.0	4.9	4.8
FI	-0.3	5.6	5.6	5.6	5.6	5.6	5.5	5.5	5.4	5.3	5.3	5.2
SE	2.4	10.5	10.7	11.0	11.3	11.6	11.9	12.2	12.4	12.6	12.7	12.9
NO	1.1	5.4	5.5	5.7	5.8	6.0	6.1	6.2	6.3	6.4	6.4	6.5
EA	-7.2	348.2	352.0	353.1	354.0	354.6	354.1	352.5	349.7	346.5	343.5	341.1
EU	-17.2	449.1	453.2	452.6	452.0	451.5	450.1	447.6	443.9	439.6	435.4	431.9

Table II.1.9: Share of prime-age population (25-54y) as % of total population

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-4.0	39.0	38.6	38.1	38.2	38.2	37.7	37.1	36.6	36.2	35.6	35.0
BG	-8.1	41.2	40.0	37.8	36.0	34.8	33.2	32.8	33.2	33.5	33.3	33.1
CZ	-6.6	41.8	41.0	38.4	36.6	35.9	35.4	35.1	35.5	35.7	35.3	35.2
DK	-3.6	38.3	38.1	37.4	37.4	37.4	37.0	36.1	35.4	35.2	34.8	34.6
DE	-2.8	38.3	37.6	37.3	37.2	36.7	36.2	36.0	35.8	35.8	35.7	35.5
EE	-7.0	40.7	40.0	38.8	38.4	37.3	35.5	34.7	34.9	34.8	34.1	33.7
IE	-7.5	41.2	40.9	40.1	39.4	38.6	38.1	37.5	36.4	35.5	34.4	33.6
EL	-7.1	39.7	38.1	35.7	33.7	32.1	31.7	31.9	32.2	32.4	32.2	32.5
ES	-8.5	41.5	40.3	38.4	36.8	36.1	35.8	35.3	34.8	34.1	33.4	33.0
FR	-3.5	36.7	36.2	35.6	35.6	35.3	34.8	34.6	34.4	34.0	33.6	33.2
HR	-4.5	38.3	38.1	37.4	36.8	36.0	35.7	35.7	35.1	34.8	34.2	33.8
IT	-5.5	38.6	37.3	35.7	35.2	35.3	35.2	34.9	34.5	34.0	33.4	33.1
CY	-7.8	43.7	43.5	42.5	41.6	40.4	38.7	37.5	36.9	36.8	36.4	35.9
LV	-6.7	39.5	38.4	36.5	35.8	34.6	33.1	32.3	33.2	33.5	33.1	32.8
LT	-8.5	40.2	39.8	38.4	37.6	36.7	34.9	33.1	32.5	32.5	32.2	31.7
LU	-10.0	45.5	45.2	44.4	43.4	42.3	40.7	39.0	37.7	36.9	36.2	35.5
HU	-7.6	42.6	41.7	39.7	37.5	36.6	36.1	35.3	35.2	35.1	34.9	35.0
MT	-12.3	46.4	47.6	48.2	47.6	46.2	43.8	40.6	38.1	36.5	35.3	34.2
NL	-3.6	38.4	38.0	38.0	38.2	38.2	37.6	36.9	36.3	35.6	35.2	34.9
AT	-5.9	40.9	39.6	38.6	38.3	37.6	36.9	36.1	35.8	35.6	35.4	35.0
PL	-9.9	42.8	42.4	40.7	38.9	36.5	35.1	33.9	33.6	33.7	33.1	32.9
PT	-6.0	38.9	38.2	36.5	34.6	33.5	33.1	32.9	32.6	32.4	32.5	32.9
RO	-7.7	41.8	39.6	37.4	35.7	34.9	33.8	33.8	34.2	34.5	34.2	34.1
SI	-6.2	40.2	39.2	37.5	36.2	35.4	34.8	34.8	34.7	34.8	34.4	34.0
SK	-10.2	43.7	42.8	40.3	37.6	35.5	34.2	33.4	33.3	33.6	33.6	33.5
FI	-4.4	37.7	37.8	38.2	38.5	38.4	37.6	36.4	35.7	35.1	34.2	33.3
SE	-3.7	39.0	38.5	37.9	38.3	38.5	37.9	36.8	36.6	36.4	35.8	35.3
NO	-5.4	40.6	40.0	39.4	39.7	39.7	39.0	38.1	37.3	36.6	35.8	35.2
EA	-4.9	38.8	38.0	37.0	36.5	36.1	35.7	35.3	35.0	34.7	34.3	33.9
EU	-5.5	39.5	38.6	37.5	36.8	36.2	35.6	35.1	34.9	34.7	34.2	34.0

Table II.1.10: Share of working-age population (20-64y) as % of total population

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-5.1	58.1	57.6	56.8	56.3	55.7	55.2	54.7	54.2	53.8	53.5	53.0
BG	-7.8	59.0	58.3	57.8	57.1	55.6	53.4	51.6	49.7	49.4	50.4	51.2
CZ	-5.3	58.4	58.0	57.8	57.6	56.1	54.1	52.9	51.8	51.4	52.4	53.2
DK	-6.3	57.7	57.3	56.2	54.7	53.9	54.0	54.6	54.4	53.3	52.1	51.4
DE	-6.8	59.2	58.2	55.8	54.0	54.2	54.5	54.4	53.6	53.1	52.5	52.4
EE	-6.2	58.1	57.5	57.5	57.4	56.8	55.6	53.8	51.5	50.9	51.5	51.9
IE	-6.2	58.7	58.8	59.3	59.3	58.1	55.8	53.8	53.0	53.1	53.0	52.5
EL	-8.5	58.5	57.8	56.6	54.4	52.0	49.5	47.7	47.6	48.3	49.4	50.0
ES	-9.3	60.6	60.3	59.5	57.8	55.4	52.6	51.3	51.1	51.4	51.7	51.4
FR	-4.5	55.3	54.8	54.1	53.4	52.3	51.9	51.4	51.2	51.3	51.3	50.7
HR	-6.3	58.2	57.2	56.3	55.7	55.2	54.5	53.4	52.9	52.6	52.1	51.9
IT	-7.2	58.6	58.3	57.0	55.2	53.1	51.6	51.1	51.2	51.7	51.9	51.4
CY	-9.4	62.1	61.2	59.6	58.9	58.4	58.2	57.3	55.7	53.9	52.8	52.6
LV	-6.8	58.0	56.9	55.8	55.4	54.9	53.7	51.6	48.9	48.2	49.9	51.2
LT	-11.1	60.4	59.1	57.4	56.4	55.7	54.8	53.5	51.2	49.3	48.7	49.2
LU	-11.4	64.1	63.6	62.4	61.0	60.0	59.1	58.1	56.8	55.2	53.7	52.7
HU	-7.4	59.7	59.3	59.4	58.3	56.7	54.6	53.9	53.1	52.2	52.2	52.3
MT	-11.8	63.2	63.1	63.3	64.1	64.2	63.3	61.7	59.0	55.7	53.0	51.5
NL	-6.7	58.7	58.3	56.8	55.3	54.5	54.7	55.0	54.9	54.3	53.3	52.0
AT	-8.7	61.1	60.0	57.9	56.1	55.5	55.3	54.6	53.8	53.0	52.6	52.4
PL	-9.8	60.3	58.7	58.5	58.5	57.9	55.7	52.9	50.7	49.5	49.7	50.5
PT	-8.8	58.4	57.7	56.2	54.3	52.1	50.3	49.5	49.6	49.8	49.7	49.6
RO	-6.5	58.6	57.9	58.3	56.3	54.9	52.8	51.8	50.4	50.8	51.6	52.1
SI	-6.7	59.1	57.9	56.8	56.2	55.3	53.4	51.8	50.9	51.2	51.8	52.4
SK	-10.9	61.5	60.0	58.6	58.1	56.9	54.7	52.3	50.2	49.1	49.6	50.6
FI	-4.7	56.1	55.9	55.6	55.9	56.1	55.6	54.8	54.0	52.8	52.2	51.5
SE	-3.4	56.4	56.2	56.0	55.9	55.8	55.7	55.3	54.2	53.2	53.2	53.1
NO	-5.8	58.9	58.6	58.4	57.7	56.8	56.4	55.9	55.2	54.5	53.9	53.2
EA	-6.9	58.5	57.9	56.5	55.1	54.0	53.1	52.5	52.1	52.0	51.9	51.6
EU	-7.0	58.6	57.9	56.8	55.6	54.5	53.5	52.6	52.0	51.8	51.8	51.6

Table II.1.11: Share of elderly population (+65y) as % of total population

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	8.5	19.6	20.5	22.1	23.4	24.2	24.8	25.3	26.0	26.8	27.4	28.1
BG	9.2	21.6	22.0	23.2	24.6	26.5	28.6	30.2	32.0	32.4	31.5	30.8
CZ	7.0	20.4	20.4	21.5	22.3	24.3	26.4	27.3	28.2	28.6	27.9	27.4
DK	8.6	20.4	21.0	22.5	23.8	24.8	25.2	25.3	25.9	27.1	28.3	29.0
DE	6.7	22.1	22.7	24.8	26.6	26.8	26.8	27.1	27.7	28.0	28.5	28.8
EE	9.5	20.3	20.8	22.2	23.2	24.5	25.7	27.2	29.4	30.2	29.9	29.8
IE	14.0	15.1	16.0	17.8	19.6	21.5	23.7	25.6	26.7	27.3	28.2	29.2
EL	10.2	22.8	23.9	26.1	28.9	31.5	34.0	35.5	35.5	34.9	33.8	33.0
ES	12.9	20.2	21.2	23.7	26.4	29.1	31.6	32.7	32.9	32.9	32.8	33.1
FR	8.2	21.1	22.0	23.7	25.1	26.2	26.7	27.4	28.0	28.3	28.6	29.3
HR	9.7	22.6	23.8	25.6	26.9	27.8	28.9	30.0	30.7	31.1	31.9	32.3
IT	9.8	23.9	24.9	27.4	30.0	32.3	33.5	33.7	33.6	33.4	33.3	33.7
CY	12.6	16.6	17.4	19.1	20.4	21.5	22.6	24.1	26.0	27.8	28.9	29.2
LV	10.3	20.9	21.9	23.9	25.6	27.3	28.6	30.3	32.5	33.3	32.1	31.2
LT	15.7	20.0	21.1	23.8	26.1	28.0	29.4	31.0	33.3	35.1	35.9	35.6
LU	14.4	14.8	15.4	17.0	18.6	20.0	21.4	22.9	24.7	26.5	28.1	29.2
HU	7.8	20.6	20.9	21.0	22.0	23.8	26.0	26.9	27.6	28.5	28.5	28.4
MT	14.4	19.3	19.6	19.6	19.2	19.6	20.8	22.8	25.8	29.3	32.0	33.6
NL	9.1	20.1	21.0	22.9	24.6	25.3	25.3	25.5	26.1	26.9	28.0	29.3
AT	10.3	19.5	20.5	22.9	25.1	26.2	26.8	27.6	28.3	29.1	29.5	29.9
PL	13.0	19.2	20.4	22.0	23.0	24.5	26.7	29.3	31.4	32.7	32.8	32.2
PT	9.8	23.8	24.9	27.0	29.0	31.2	33.1	34.0	33.9	33.8	33.7	33.6
RO	9.5	19.6	20.5	21.0	23.5	25.5	27.6	28.7	30.1	30.0	29.5	29.1
SI	8.8	21.3	22.5	24.5	26.2	27.5	29.1	30.3	31.0	30.9	30.6	30.1
SK	12.7	17.5	18.6	20.6	21.9	23.9	26.5	28.6	30.4	31.3	31.0	30.2
FI	9.0	23.1	23.8	25.2	26.1	26.1	26.6	27.5	28.7	30.2	31.3	32.1
SE	6.4	20.3	20.6	21.4	22.2	22.7	23.0	23.4	24.6	25.9	26.3	26.7
NO	10.6	18.4	19.4	20.9	22.5	23.7	24.3	25.0	26.0	27.1	28.1	28.9
EA	9.2	21.6	22.4	24.5	26.4	27.8	28.7	29.4	29.8	30.0	30.3	30.7
EU	9.3	21.2	22.0	23.9	25.7	27.1	28.2	29.0	29.7	30.0	30.2	30.5

Table II.1.12: Share of very elderly population (+80y) as % of total population

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	5.8	5.5	5.6	6.4	7.1	8.1	9.1	9.7	10.0	10.3	10.7	11.3
BG	9.0	4.7	4.9	5.9	6.8	7.5	8.1	9.0	10.4	11.8	12.7	13.7
CZ	7.6	4.3	4.7	6.1	7.1	7.4	7.7	8.1	9.7	11.3	11.7	11.9
DK	5.8	5.1	5.8	7.0	7.5	8.0	8.8	9.7	10.3	10.4	10.3	10.9
DE	4.4	7.3	7.1	6.9	7.5	8.6	10.2	11.2	10.8	10.5	10.8	11.7
EE	7.3	6.0	5.7	6.2	7.1	8.0	8.7	9.1	9.9	10.7	11.8	13.3
IE	8.7	3.6	4.0	4.8	5.5	6.4	7.3	8.2	9.4	10.8	12.0	12.3
EL	9.1	7.1	7.1	8.0	9.0	10.4	11.7	13.5	15.0	16.4	16.9	16.2
ES	8.8	6.1	6.3	7.1	7.9	9.1	10.6	12.2	13.8	15.2	15.4	14.9
FR	6.5	6.0	6.1	7.5	8.6	9.5	10.3	11.0	11.6	11.7	12.1	12.6
HR	7.6	5.5	5.4	6.3	7.8	9.1	9.9	10.4	10.8	11.7	12.6	13.1
IT	6.9	7.6	7.8	8.7	9.4	10.3	12.0	13.7	15.0	15.3	14.9	14.5
CY	7.8	4.0	4.2	5.1	5.9	6.8	7.7	8.3	8.7	9.3	10.4	11.8
LV	8.9	6.0	6.0	6.3	7.1	8.5	9.7	10.5	11.3	12.0	13.3	15.0
LT	9.6	5.6	5.6	6.0	6.8	8.5	10.2	11.3	12.0	12.5	13.5	15.2
LU	7.2	3.9	3.9	4.3	4.8	5.6	6.7	7.7	8.4	9.1	10.0	11.1
HU	6.8	4.7	4.9	5.6	6.7	7.2	7.2	7.9	9.3	10.9	11.2	11.5
MT	8.1	4.3	4.8	6.0	6.5	6.9	7.0	7.0	7.5	8.7	10.3	12.4
NL	6.1	4.9	5.2	6.5	7.3	8.2	9.2	10.2	10.4	10.2	10.3	10.9
AT	6.3	5.9	6.0	6.4	6.8	7.9	9.5	10.8	11.1	11.0	11.4	12.1
PL	10.7	4.3	4.2	5.4	7.2	8.7	9.0	9.1	10.0	11.8	13.8	15.0
PT	7.8	6.9	7.3	8.4	9.5	10.6	11.8	12.9	14.2	15.2	15.3	14.8
RO	8.6	4.4	4.5	5.3	6.6	7.7	7.7	9.3	10.6	11.9	12.3	13.1
SI	8.1	5.6	5.8	6.7	8.1	9.3	10.2	10.9	11.6	12.7	13.5	13.8
SK	10.5	3.4	3.7	4.7	6.1	7.3	8.0	8.5	9.8	11.6	13.0	13.9
FI	7.3	5.9	6.2	8.1	9.2	9.9	10.4	10.7	10.6	11.2	12.2	13.2
SE	5.3	5.4	6.1	7.1	7.4	7.6	8.0	8.7	9.1	9.4	9.8	10.7
NO	6.9	4.5	5.0	6.2	7.0	7.7	8.4	9.3	10.0	10.2	10.6	11.3
EA	6.5	6.5	6.6	7.3	8.1	9.1	10.4	11.6	12.2	12.5	12.8	13.0
EU	7.0	6.1	6.2	7.0	7.9	8.9	10.0	11.0	11.7	12.2	12.6	13.0

Table II.1.13: Share of very elderly population (+80y) as % of elderly population (+65y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	12.1	28.1	27.4	28.7	30.5	33.4	36.6	38.2	38.5	38.4	39.0	40.2
BG	22.5	21.9	22.3	25.6	27.6	28.2	28.3	29.7	32.4	36.4	40.4	44.5
CZ	22.5	21.0	23.2	28.5	32.0	30.6	29.1	29.7	34.3	39.4	41.8	43.5
DK	12.8	24.8	27.7	31.1	31.5	32.2	35.1	38.4	39.8	38.5	36.5	37.5
DE	7.7	33.0	31.3	28.0	28.2	32.0	38.0	41.5	39.2	37.5	37.9	40.7
EE	15.4	29.3	27.3	28.2	30.6	32.6	33.7	33.4	33.6	35.3	39.5	44.7
IE	18.2	23.9	24.7	26.7	28.3	29.6	30.7	31.9	35.1	39.6	42.5	42.1
EL	17.7	31.3	29.9	30.6	31.1	32.9	34.5	37.9	42.2	47.0	50.1	49.0
ES	14.9	30.0	29.9	29.9	29.8	31.3	33.7	37.4	42.0	46.3	46.9	45.0
FR	14.3	28.5	27.9	31.6	34.4	36.3	38.6	40.0	41.3	41.6	42.4	42.8
HR	16.2	24.3	22.9	24.7	28.9	32.7	34.3	34.6	35.3	37.5	39.5	40.5
IT	11.1	32.0	31.2	31.9	31.2	32.1	35.8	40.7	44.7	45.9	44.8	43.1
CY	16.5	23.9	24.1	26.5	28.9	31.7	34.2	34.3	33.3	33.4	36.1	40.4
LV	19.0	28.9	27.2	26.5	27.9	31.2	34.0	34.5	34.8	36.1	41.4	47.9
LT	14.6	28.2	26.6	25.1	26.0	30.4	34.7	36.3	36.0	35.5	37.5	42.8
LU	11.4	26.6	25.6	25.3	25.8	27.9	31.1	33.5	34.0	34.3	35.4	37.9
HU	17.8	22.6	23.6	26.6	30.4	30.3	27.6	29.5	33.8	38.4	39.4	40.4
MT	14.7	22.2	24.6	30.7	33.8	35.3	33.8	30.5	29.1	29.5	32.1	36.9
NL	13.2	24.2	24.9	28.5	29.9	32.4	36.5	39.8	40.0	37.8	36.7	37.4
AT	10.6	30.1	29.4	28.0	27.2	30.2	35.6	39.2	39.1	37.7	38.7	40.7
PL	24.4	22.4	20.6	24.7	31.3	35.3	33.7	30.9	31.8	36.0	42.2	46.7
PT	14.8	29.2	29.4	30.9	32.7	34.1	35.8	38.0	41.7	45.1	45.5	44.0
RO	22.3	22.7	21.9	25.1	28.0	30.0	27.7	32.5	35.2	39.7	41.8	45.0
SI	19.2	26.5	26.0	27.3	31.1	33.8	35.2	36.1	37.5	41.1	44.2	45.7
SK	26.6	19.5	19.7	22.6	28.0	30.4	30.3	29.7	32.2	36.9	41.8	46.0
FI	15.4	25.6	26.3	32.1	35.4	37.9	39.1	38.7	36.9	37.0	38.9	41.0
SE	13.3	26.8	29.8	33.5	33.5	33.4	35.0	36.9	37.2	36.2	37.1	40.1
NO	14.9	24.4	26.0	29.9	31.1	32.4	34.4	37.1	38.4	37.8	37.8	39.2
EA	12.3	30.1	29.3	29.8	30.6	32.9	36.3	39.4	40.9	41.6	42.1	42.4
EU	14.2	28.6	28.0	29.2	30.6	32.8	35.4	37.8	39.4	40.8	41.8	42.7

Table II.1.14: Potential GDP (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.7	1.8	1.6	1.1	1.2	1.7	1.5	1.3	1.3	1.2	1.2	1.1
BG	-1.2	2.2	2.0	1.7	1.5	1.4	1.3	1.1	1.1	1.3	1.3	1.0
CZ	-0.9	2.1	1.8	1.3	1.4	1.6	1.7	1.6	1.5	1.6	1.6	1.2
DK	-1.1	2.2	1.2	0.9	1.3	1.6	1.7	1.6	1.5	1.2	1.0	1.1
DE	0.7	0.5	1.0	0.7	1.0	1.6	1.5	1.3	1.1	1.1	1.2	1.2
EE	-1.0	2.4	1.5	1.4	1.7	2.0	1.8	1.6	1.4	1.3	1.5	1.4
IE	-6.4	7.3	5.5	3.3	1.8	1.7	1.3	1.2	1.3	1.3	1.1	0.9
EL	0.7	0.4	1.4	0.6	0.6	1.1	1.2	1.1	1.2	1.3	1.3	1.0
ES	-0.3	1.1	1.5	0.8	1.0	1.6	1.4	1.3	1.3	1.3	1.1	0.8
FR	-0.2	1.1	0.8	0.6	0.8	1.5	1.4	1.3	1.3	1.3	1.1	0.9
HR	-2.6	3.2	2.5	1.5	1.4	1.7	1.5	1.4	1.2	1.1	0.9	0.7
IT	0.1	0.9	1.0	0.6	0.8	1.4	1.4	1.4	1.4	1.3	1.2	1.1
CY	-2.3	3.5	2.4	1.6	1.6	1.9	1.8	1.5	1.2	1.1	1.2	1.3
LV	-0.8	1.7	2.1	1.4	1.5	1.2	0.8	0.4	0.4	0.9	1.1	0.9
LT	-2.8	3.5	2.6	1.5	1.4	1.2	1.0	0.6	0.3	0.3	0.6	0.7
LU	-1.0	2.2	2.3	1.6	1.7	2.2	2.1	1.8	1.5	1.4	1.3	1.2
HU	-2.3	3.4	2.5	2.1	1.8	1.6	1.7	1.7	1.5	1.4	1.3	1.1
MT	-5.1	5.9	3.9	3.8	3.2	2.5	1.9	1.3	0.9	0.7	0.8	0.8
NL	-1.2	2.2	1.5	0.8	1.0	1.6	1.7	1.6	1.4	1.2	1.1	1.0
AT	-0.3	1.4	1.4	1.3	1.3	1.6	1.4	1.2	1.1	1.1	1.2	1.1
PL	-2.6	3.4	2.4	2.2	2.1	1.4	1.0	0.9	0.9	1.0	1.1	0.8
PT	-0.7	1.8	1.6	0.7	0.7	1.2	1.3	1.4	1.5	1.4	1.2	1.1
RO	-1.9	2.9	2.7	2.3	2.0	1.4	1.3	1.3	1.4	1.4	1.3	0.9
SI	-2.0	3.1	2.7	2.2	2.0	1.5	1.1	1.0	1.1	1.3	1.3	1.1
SK	-0.6	1.9	1.6	1.6	1.7	1.5	1.4	1.3	1.1	1.2	1.4	1.3
FI	-0.7	1.6	1.1	1.0	1.2	1.5	1.3	1.1	1.0	0.9	0.9	0.9
SE	-0.3	1.8	1.7	1.5	1.7	2.0	1.8	1.6	1.6	1.4	1.4	1.5
NO	-0.4	1.6	1.6	1.5	1.4	1.8	1.7	1.6	1.5	1.4	1.3	1.2
EA	-0.3	1.3	1.3	0.9	1.0	1.5	1.4	1.3	1.2	1.2	1.1	1.0
EU	-0.4	1.5	1.4	1.0	1.1	1.5	1.4	1.3	1.3	1.2	1.2	1.1

Table II.1.15: Employment (15-74y; growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-1.7	1.5	1.0	0.5	0.3	0.2	0.0	0.0	-0.1	-0.1	-0.1	-0.2
BG	-0.3	0.0	-0.5	-1.2	-1.0	-1.0	-1.0	-1.1	-0.8	-0.4	-0.2	-0.3
CZ	-1.5	1.5	0.5	-0.3	-0.4	-0.7	-0.5	-0.4	-0.3	0.0	0.1	0.0
DK	-1.4	1.2	-0.1	-0.1	0.1	0.1	0.2	0.3	0.2	-0.1	-0.2	-0.2
DE	-0.1	0.1	0.4	-0.5	-0.3	0.1	0.0	-0.1	-0.2	-0.2	-0.1	0.0
EE	-1.7	1.8	0.1	-0.4	-0.1	0.0	-0.1	-0.3	-0.4	-0.2	0.1	0.2
IE	-3.4	3.1	1.4	0.6	0.4	0.1	-0.2	-0.1	0.0	0.0	-0.1	-0.3
EL	0.1	-0.3	0.4	-0.8	-0.9	-0.9	-0.9	-0.8	-0.6	-0.3	-0.2	-0.2
ES	-1.5	1.1	1.0	0.0	-0.1	-0.2	-0.5	-0.4	-0.3	-0.2	-0.2	-0.4
FR	-1.2	0.9	0.5	0.3	0.2	0.0	0.0	-0.1	-0.1	0.0	-0.2	-0.3
HR	-1.8	1.3	0.6	-0.5	-0.5	-0.6	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6
IT	-0.5	0.3	0.2	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	-0.1	-0.2
CY	-1.9	1.9	0.6	-0.2	0.0	0.2	0.2	0.0	-0.2	-0.2	-0.1	0.0
LV	0.1	-0.4	-0.2	-1.6	-1.2	-1.0	-1.3	-1.6	-1.4	-0.7	-0.3	-0.3
LT	-2.1	1.5	0.0	-1.5	-1.2	-1.0	-1.1	-1.3	-1.5	-1.2	-0.9	-0.6
LU	-2.9	2.9	2.6	1.2	0.9	0.8	0.6	0.4	0.2	0.1	0.0	0.0
HU	-1.5	1.3	0.6	-0.3	-0.6	-0.7	-0.5	-0.4	-0.4	-0.3	-0.1	-0.1
MT	-4.8	4.4	2.4	1.9	1.4	0.9	0.4	-0.1	-0.5	-0.6	-0.5	-0.4
NL	-2.3	2.1	0.9	0.0	0.0	0.1	0.3	0.2	0.1	-0.1	-0.2	-0.2
AT	-1.2	1.1	0.8	0.3	0.1	0.1	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
PL	-0.9	0.5	-0.7	-0.9	-0.8	-0.9	-1.1	-1.2	-0.9	-0.6	-0.4	-0.4
PT	-0.9	0.7	0.0	-0.9	-0.9	-0.8	-0.8	-0.5	-0.3	-0.2	-0.2	-0.2
RO	-0.1	-0.2	-0.8	-1.2	-1.0	-1.0	-1.0	-0.9	-0.6	-0.3	-0.2	-0.3
SI	-1.2	1.1	0.2	-0.1	-0.1	-0.3	-0.6	-0.6	-0.3	-0.1	0.0	-0.2
SK	-0.7	0.8	-0.4	-0.8	-0.7	-0.7	-0.7	-0.8	-0.7	-0.4	-0.1	0.1
FI	-1.9	1.6	0.3	-0.3	-0.1	0.0	-0.2	-0.3	-0.3	-0.4	-0.3	-0.3
SE	-0.5	0.8	0.9	0.6	0.6	0.5	0.4	0.2	0.3	0.1	0.1	0.3
NO	-4.0	3.9	0.2	0.6	0.4	0.3	0.3	0.2	0.1	0.1	0.0	-0.1
EA	-0.9	0.7	0.5	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2
EU	-0.9	0.7	0.3	-0.3	-0.2	-0.2	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2

Table II.1.16: Labour input: hours worked (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-1.7	1.6	1.2	0.5	0.3	0.2	0.0	0.0	-0.1	-0.1	-0.1	-0.2
BG	-0.1	-0.2	-0.4	-1.2	-1.0	-1.0	-1.0	-1.1	-0.8	-0.4	-0.2	-0.3
CZ	-1.6	1.6	0.8	-0.2	-0.4	-0.7	-0.5	-0.4	-0.3	0.0	0.1	0.0
DK	-1.3	1.2	0.0	-0.1	0.1	0.1	0.2	0.3	0.2	-0.1	-0.2	-0.2
DE	0.4	-0.4	0.2	-0.5	-0.3	0.1	0.0	-0.1	-0.2	-0.2	-0.1	0.0
EE	-2.2	2.4	0.2	-0.4	-0.1	0.0	-0.1	-0.3	-0.4	-0.2	0.1	0.2
IE	-3.1	2.7	1.5	0.6	0.4	0.1	-0.2	-0.1	0.0	0.0	-0.1	-0.3
EL	0.3	-0.5	0.4	-0.8	-0.9	-0.9	-0.9	-0.8	-0.6	-0.3	-0.2	-0.2
ES	-1.4	1.0	1.2	0.1	-0.1	-0.2	-0.5	-0.4	-0.3	-0.2	-0.2	-0.4
FR	-1.3	1.1	0.6	0.3	0.1	0.0	0.0	-0.1	-0.1	0.0	-0.2	-0.3
HR	-2.0	1.5	0.7	-0.5	-0.5	-0.6	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6
IT	-0.6	0.4	0.4	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	-0.1	-0.2
CY	-2.2	2.2	1.0	-0.2	0.0	0.2	0.2	0.0	-0.2	-0.2	-0.1	0.0
LV	-0.1	-0.2	-0.2	-1.7	-1.3	-1.0	-1.3	-1.6	-1.4	-0.7	-0.3	-0.3
LT	-1.9	1.3	0.2	-1.5	-1.2	-1.0	-1.1	-1.3	-1.5	-1.2	-0.9	-0.6
LU	-3.0	2.9	2.8	1.2	0.9	0.8	0.6	0.4	0.2	0.1	0.0	0.0
HU	-0.9	0.8	0.1	-0.4	-0.6	-0.7	-0.5	-0.4	-0.4	-0.3	-0.1	-0.1
MT	-3.7	3.3	1.8	1.9	1.4	0.9	0.4	-0.1	-0.5	-0.6	-0.5	-0.4
NL	-2.3	2.0	1.0	0.0	0.0	0.1	0.3	0.2	0.1	-0.1	-0.2	-0.2
AT	-0.7	0.6	0.7	0.2	0.1	0.1	0.0	-0.2	-0.2	-0.2	-0.1	-0.1
PL	-1.2	0.8	-0.6	-0.9	-0.8	-0.9	-1.1	-1.2	-0.9	-0.6	-0.4	-0.4
PT	-0.5	0.3	0.2	-0.8	-0.8	-0.8	-0.8	-0.5	-0.3	-0.2	-0.2	-0.2
RO	-0.3	0.0	-0.8	-1.3	-1.0	-1.0	-1.0	-0.9	-0.6	-0.3	-0.2	-0.3
SI	-1.3	1.2	0.4	-0.1	-0.1	-0.3	-0.6	-0.6	-0.3	-0.1	0.0	-0.2
SK	-0.2	0.3	-0.5	-0.9	-0.7	-0.7	-0.7	-0.8	-0.7	-0.4	-0.1	0.1
FI	-1.4	1.0	0.1	-0.3	-0.1	0.0	-0.2	-0.3	-0.3	-0.4	-0.3	-0.3
SE	-0.5	0.8	1.0	0.6	0.6	0.5	0.4	0.2	0.3	0.1	0.1	0.3
NO	-4.0	3.9	0.6	0.6	0.4	0.3	0.3	0.2	0.1	0.1	0.0	-0.1
EA	-0.8	0.6	0.6	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2
EU	-0.8	0.6	0.4	-0.3	-0.3	-0.2	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2

Table II.1.17: Labour productivity per hour (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.0	0.2	0.4	0.6	0.9	1.5	1.4	1.4	1.3	1.3	1.3	1.2
BG	-1.1	2.4	2.4	2.9	2.5	2.4	2.3	2.2	2.0	1.7	1.5	1.2
CZ	0.7	0.5	1.0	1.6	1.8	2.3	2.2	2.0	1.8	1.6	1.4	1.2
DK	0.3	1.0	1.2	1.1	1.2	1.5	1.4	1.4	1.3	1.3	1.3	1.2
DE	0.3	0.9	0.8	1.2	1.3	1.5	1.4	1.4	1.3	1.3	1.3	1.2
EE	1.2	0.1	1.3	1.8	1.8	2.0	2.0	1.9	1.7	1.6	1.4	1.2
IE	-3.3	4.5	4.0	2.7	1.4	1.6	1.4	1.4	1.3	1.3	1.3	1.2
EL	0.3	0.9	1.0	1.3	1.5	2.1	2.1	2.0	1.8	1.6	1.4	1.2
ES	1.1	0.1	0.3	0.8	1.1	1.8	1.8	1.8	1.6	1.5	1.4	1.2
FR	1.1	0.1	0.3	0.3	0.7	1.5	1.4	1.4	1.3	1.3	1.3	1.2
HR	-0.5	1.8	1.8	2.1	1.9	2.2	2.2	2.1	1.9	1.7	1.5	1.2
IT	0.7	0.5	0.6	0.7	1.0	1.6	1.6	1.5	1.4	1.4	1.3	1.2
CY	0.0	1.3	1.4	1.8	1.6	1.8	1.6	1.5	1.5	1.4	1.3	1.2
LV	-0.7	1.9	2.2	3.1	2.7	2.2	2.1	2.0	1.8	1.6	1.4	1.2
LT	-0.9	2.1	2.5	3.0	2.6	2.2	2.0	1.9	1.8	1.6	1.4	1.2
LU	2.0	-0.7	-0.5	0.4	0.8	1.5	1.4	1.4	1.3	1.3	1.3	1.2
HU	-1.4	2.6	2.4	2.5	2.3	2.3	2.2	2.1	1.9	1.7	1.4	1.2
MT	-1.3	2.6	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.3	1.3	1.2
NL	1.1	0.1	0.5	0.8	1.0	1.5	1.4	1.4	1.3	1.3	1.3	1.2
AT	0.5	0.8	0.7	1.0	1.2	1.5	1.4	1.4	1.3	1.3	1.3	1.2
PL	-1.3	2.6	3.0	3.2	2.8	2.3	2.2	2.0	1.8	1.6	1.4	1.2
PT	-0.2	1.5	1.4	1.5	1.5	2.0	2.0	2.0	1.8	1.6	1.4	1.2
RO	-1.7	2.9	3.5	3.6	3.1	2.4	2.3	2.2	2.0	1.7	1.5	1.2
SI	-0.7	1.9	2.3	2.3	2.1	1.8	1.7	1.6	1.5	1.4	1.3	1.2
SK	-0.4	1.6	2.2	2.5	2.4	2.2	2.1	2.0	1.8	1.6	1.4	1.2
FI	0.6	0.6	1.0	1.3	1.3	1.5	1.4	1.4	1.3	1.3	1.3	1.2
SE	0.2	1.0	0.6	0.9	1.1	1.5	1.4	1.4	1.3	1.3	1.3	1.2
NO	1.3	-0.1	1.2	0.9	0.9	1.5	1.4	1.4	1.3	1.3	1.3	1.2
EA	0.5	0.7	0.8	1.0	1.1	1.6	1.6	1.5	1.4	1.4	1.3	1.2
EU	0.4	0.9	1.1	1.3	1.4	1.8	1.7	1.6	1.5	1.4	1.3	1.3

Table II.1.18: Total factor productivity (TFP) (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.6	0.2	0.3	0.4	0.7	1.0	0.9	0.9	0.9	0.8	0.8	0.8
BG	-1.2	2.0	1.7	1.5	1.5	1.5	1.5	1.4	1.3	1.1	1.0	0.8
CZ	0.4	0.4	0.6	0.9	1.2	1.5	1.4	1.3	1.2	1.1	0.9	0.8
DK	0.6	0.2	0.5	0.7	0.8	1.0	0.9	0.9	0.9	0.8	0.8	0.8
DE	0.3	0.5	0.6	0.8	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8
EE	1.0	-0.2	0.4	1.0	1.2	1.3	1.3	1.2	1.1	1.0	0.9	0.8
IE	-4.2	5.0	3.9	1.9	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8
EL	0.1	0.7	0.9	0.8	1.0	1.4	1.4	1.3	1.2	1.0	0.9	0.8
ES	0.6	0.2	0.3	0.4	0.7	1.2	1.2	1.1	1.1	1.0	0.9	0.8
FR	0.9	-0.1	0.0	0.1	0.5	1.0	0.9	0.9	0.9	0.8	0.8	0.8
HR	-0.7	1.5	1.2	1.1	1.2	1.5	1.5	1.4	1.2	1.1	0.9	0.8
IT	0.5	0.3	0.4	0.4	0.7	1.1	1.0	1.0	0.9	0.9	0.8	0.8
CY	-0.1	0.9	0.7	0.7	0.8	1.1	1.1	1.0	0.9	0.9	0.8	0.8
LV	-0.2	1.0	1.3	1.8	1.7	1.4	1.4	1.3	1.2	1.0	0.9	0.8
LT	-0.1	0.9	1.1	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8
LU	1.2	-0.4	-0.3	0.1	0.5	1.0	0.9	0.9	0.9	0.8	0.8	0.8
HU	-0.7	1.5	1.4	1.4	1.5	1.5	1.4	1.4	1.2	1.1	0.9	0.8
MT	-0.3	1.1	1.1	1.2	1.2	1.0	0.9	0.9	0.9	0.8	0.8	0.8
NL	0.6	0.2	0.3	0.4	0.7	1.0	0.9	0.9	0.9	0.8	0.8	0.8
AT	0.4	0.4	0.4	0.6	0.8	1.0	0.9	0.9	0.9	0.8	0.8	0.8
PL	-0.8	1.6	1.6	1.8	1.7	1.4	1.4	1.3	1.2	1.1	0.9	0.8
PT	-0.7	1.5	1.2	0.9	1.0	1.3	1.3	1.3	1.2	1.0	0.9	0.8
RO	-0.5	1.3	1.6	2.1	1.9	1.5	1.5	1.4	1.3	1.1	1.0	0.8
SI	-0.8	1.6	1.6	1.6	1.5	1.2	1.1	1.0	1.0	0.9	0.9	0.8
SK	-0.3	1.1	1.2	1.5	1.6	1.4	1.4	1.3	1.2	1.1	0.9	0.8
FI	0.5	0.3	0.5	0.7	0.9	1.0	0.9	0.9	0.9	0.8	0.8	0.8
SE	0.4	0.4	0.4	0.6	0.8	1.0	0.9	0.9	0.9	0.8	0.8	0.8
NO	0.3	0.5	0.8	0.7	0.6	1.0	0.9	0.9	0.9	0.8	0.8	0.8
EA	0.3	0.5	0.6	0.6	0.8	1.1	1.0	1.0	0.9	0.9	0.8	0.8
EU	0.2	0.6	0.7	0.8	0.9	1.2	1.1	1.1	1.0	0.9	0.9	0.8

Table II.1.19: Capital deepening (contribution to labour productivity growth)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.4	0.0	0.1	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4
BG	0.0	0.4	0.7	1.4	1.1	0.9	0.8	0.8	0.7	0.6	0.5	0.4
CZ	0.3	0.1	0.4	0.6	0.6	0.8	0.8	0.7	0.6	0.6	0.5	0.4
DK	-0.3	0.7	0.7	0.4	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4
DE	0.1	0.4	0.2	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4
EE	0.2	0.2	0.9	0.8	0.6	0.7	0.7	0.7	0.6	0.5	0.5	0.4
IE	0.9	-0.5	0.1	0.8	0.5	0.6	0.5	0.5	0.5	0.5	0.4	0.4
EL	0.2	0.2	0.1	0.5	0.5	0.7	0.7	0.7	0.6	0.6	0.5	0.4
ES	0.4	0.0	0.0	0.4	0.3	0.6	0.6	0.6	0.6	0.5	0.5	0.4
FR	0.2	0.2	0.3	0.1	0.2	0.5	0.5	0.5	0.5	0.5	0.4	0.4
HR	0.2	0.2	0.6	0.9	0.7	0.8	0.8	0.8	0.7	0.6	0.5	0.4
IT	0.2	0.2	0.2	0.2	0.3	0.5	0.6	0.5	0.5	0.5	0.5	0.4
CY	0.1	0.4	0.7	1.1	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4
LV	-0.5	0.9	0.9	1.4	1.0	0.8	0.7	0.7	0.6	0.6	0.5	0.4
LT	-0.8	1.2	1.4	1.5	1.1	0.8	0.7	0.7	0.6	0.6	0.5	0.4
LU	0.7	-0.3	-0.2	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4
HU	-0.7	1.1	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.5	0.4
MT	-1.0	1.5	0.9	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4
NL	0.5	-0.1	0.2	0.4	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4
AT	0.1	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4
PL	-0.5	0.9	1.4	1.3	1.1	0.9	0.8	0.7	0.6	0.6	0.5	0.4
PT	0.5	0.0	0.2	0.6	0.5	0.7	0.7	0.7	0.6	0.6	0.5	0.4
RO	-1.2	1.6	1.9	1.5	1.2	0.9	0.8	0.8	0.7	0.6	0.5	0.4
SI	0.2	0.3	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.4
SK	-0.1	0.5	1.0	1.0	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.4
FI	0.2	0.3	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
SE	-0.2	0.6	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4
NO	1.0	-0.6	0.4	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.4
EA	0.2	0.2	0.2	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.4
EU	0.2	0.3	0.3	0.5	0.4	0.6	0.6	0.6	0.5	0.5	0.5	0.4

Table II.1.20: Potential GDP per capita (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.0	1.0	1.2	0.9	1.0	1.4	1.3	1.2	1.2	1.2	1.1	1.0
BG	-0.6	2.0	2.9	2.5	2.2	1.9	1.8	1.6	1.6	1.9	1.8	1.4
CZ	0.5	0.9	2.1	1.6	1.5	1.6	1.6	1.6	1.5	1.8	1.7	1.3
DK	-0.3	1.4	0.8	0.7	1.2	1.6	1.7	1.6	1.5	1.2	1.0	1.1
DE	1.5	-0.3	0.9	0.7	1.0	1.6	1.5	1.3	1.2	1.2	1.2	1.2
EE	0.7	0.8	1.7	1.7	1.8	2.0	1.9	1.6	1.4	1.5	1.7	1.5
IE	-4.6	5.6	4.9	2.7	1.2	1.1	0.8	1.0	1.2	1.3	1.2	0.9
EL	0.0	1.6	1.9	1.1	1.2	1.7	1.8	1.8	1.9	2.1	2.0	1.6
ES	0.6	0.5	1.0	0.6	0.8	1.5	1.3	1.4	1.6	1.6	1.4	1.1
FR	0.3	0.7	0.6	0.4	0.7	1.4	1.4	1.4	1.4	1.3	1.2	1.0
HR	-4.2	5.7	3.1	2.1	1.3	1.9	1.9	1.9	1.9	1.8	1.7	1.5
IT	0.3	1.1	1.1	0.6	0.8	1.4	1.6	1.7	1.8	1.8	1.6	1.4
CY	-0.5	1.8	1.8	1.3	1.4	1.8	1.7	1.4	1.1	1.0	1.1	1.3
LV	-0.1	1.7	3.2	2.6	2.5	2.1	1.6	1.2	1.1	1.8	1.9	1.5
LT	-0.8	2.1	3.2	2.4	2.2	2.0	1.7	1.4	1.1	1.1	1.3	1.3
LU	0.9	0.0	0.6	0.2	0.5	1.3	1.3	1.2	1.0	1.0	1.0	1.0
HU	-2.4	3.6	2.8	2.3	2.0	1.8	1.9	1.8	1.6	1.5	1.4	1.2
MT	-3.5	4.2	2.0	2.1	1.9	1.5	1.1	0.6	0.3	0.3	0.5	0.7
NL	-0.2	1.2	1.0	0.5	0.7	1.5	1.7	1.6	1.4	1.2	1.0	1.0
AT	0.5	0.6	1.3	1.0	1.1	1.4	1.3	1.2	1.1	1.1	1.2	1.1
PL	-1.2	2.5	2.8	2.8	2.5	1.8	1.4	1.2	1.3	1.5	1.5	1.3
PT	0.0	1.3	1.8	0.9	0.9	1.5	1.6	1.9	1.9	1.8	1.6	1.3
RO	-2.1	3.3	3.3	3.0	2.6	1.9	1.8	1.8	1.8	1.9	1.7	1.3
SI	-1.6	2.9	2.7	2.2	2.0	1.6	1.1	1.1	1.4	1.5	1.5	1.3
SK	0.4	1.3	1.9	1.9	1.9	1.7	1.6	1.5	1.4	1.6	1.8	1.7
FI	0.2	1.0	1.0	1.1	1.3	1.7	1.5	1.3	1.2	1.1	1.1	1.1
SE	0.4	0.9	1.0	1.0	1.2	1.5	1.4	1.2	1.3	1.1	1.2	1.3
NO	0.1	0.9	1.2	0.9	0.8	1.3	1.3	1.3	1.2	1.1	1.0	0.9
EA	0.3	0.8	1.2	0.8	1.0	1.5	1.5	1.4	1.4	1.4	1.3	1.2
EU	0.2	1.0	1.4	1.1	1.1	1.6	1.5	1.5	1.4	1.4	1.3	1.2

Table II.1.21: Potential GDP per worker (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.9	0.3	0.6	0.6	0.9	1.5	1.4	1.4	1.3	1.3	1.3	1.2
BG	-0.9	2.2	2.5	2.9	2.6	2.4	2.3	2.2	2.0	1.7	1.5	1.2
CZ	0.6	0.6	1.3	1.6	1.8	2.3	2.2	2.0	1.8	1.6	1.4	1.2
DK	0.3	0.9	1.3	1.1	1.2	1.5	1.4	1.4	1.3	1.3	1.3	1.2
DE	0.8	0.5	0.6	1.2	1.3	1.5	1.4	1.4	1.3	1.3	1.3	1.2
EE	0.6	0.6	1.4	1.8	1.8	2.0	2.0	1.9	1.7	1.6	1.4	1.2
IE	-2.9	4.2	4.1	2.7	1.4	1.6	1.4	1.4	1.3	1.3	1.3	1.2
EL	0.6	0.7	1.0	1.3	1.5	2.1	2.1	2.0	1.8	1.6	1.4	1.2
ES	1.2	0.0	0.5	0.8	1.1	1.8	1.8	1.8	1.6	1.5	1.4	1.2
FR	1.0	0.2	0.4	0.3	0.7	1.5	1.4	1.4	1.3	1.3	1.3	1.2
HR	-0.3	1.9	1.9	2.0	1.3	1.9	2.1	2.1	2.0	2.0	1.8	1.7
IT	0.6	0.6	0.8	0.7	1.0	1.6	1.6	1.5	1.5	1.4	1.3	1.2
CY	-0.4	1.6	1.8	1.8	1.6	1.8	1.6	1.5	1.5	1.4	1.3	1.2
LV	-0.9	2.1	2.2	3.1	2.8	2.2	2.1	2.0	1.8	1.6	1.4	1.2
LT	-0.7	1.9	2.6	3.0	2.6	2.2	2.1	2.0	1.8	1.6	1.4	1.2
LU	1.9	-0.7	-0.3	0.4	0.8	1.5	1.4	1.4	1.3	1.3	1.3	1.2
HU	-0.8	2.1	1.9	2.4	2.4	2.3	2.2	2.1	1.9	1.7	1.4	1.2
MT	-0.2	1.5	1.5	1.8	1.8	1.6	1.4	1.4	1.3	1.3	1.3	1.2
NL	1.1	0.1	0.6	0.8	1.0	1.5	1.4	1.4	1.3	1.3	1.3	1.2
AT	0.9	0.3	0.6	1.0	1.2	1.5	1.4	1.4	1.3	1.3	1.3	1.2
PL	-1.6	2.9	3.1	3.2	2.8	2.3	2.2	2.1	1.8	1.6	1.4	1.2
PT	0.2	1.0	1.7	1.5	1.5	2.0	2.1	2.0	1.8	1.6	1.4	1.2
RO	-1.9	3.1	3.5	3.6	3.1	2.4	2.3	2.2	2.0	1.7	1.5	1.2
SI	-0.8	2.0	2.5	2.3	2.1	1.8	1.7	1.6	1.5	1.4	1.3	1.2
SK	0.1	1.1	2.1	2.5	2.4	2.2	2.1	2.0	1.8	1.6	1.4	1.2
FI	1.2	0.0	0.8	1.3	1.3	1.5	1.4	1.4	1.3	1.3	1.3	1.2
SE	0.3	1.0	0.8	0.9	1.1	1.5	1.4	1.4	1.3	1.3	1.3	1.2
NO	3.4	-2.2	1.3	0.9	0.9	1.5	1.4	1.4	1.3	1.3	1.3	1.2
EA	0.6	0.6	0.8	1.0	1.2	1.6	1.6	1.5	1.4	1.4	1.3	1.2
EU	0.5	0.8	1.1	1.3	1.4	1.7	1.7	1.6	1.5	1.4	1.3	1.2

Table II.1.22: HICP (growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-8.3	10.3	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
BG	-11.0	13.0	3.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CZ	-12.8	14.8	2.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
DK	-6.5	8.5	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
DE	-6.7	8.7	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
EE	-17.4	19.4	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
IE	-6.1	8.1	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
EL	-7.3	9.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ES	-6.3	8.3	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
FR	-3.9	5.9	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
HR	-8.7	10.7	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
IT	-6.7	8.7	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CY	-6.1	8.1	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LV	-15.2	17.2	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LT	-16.9	18.9	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
LU	-6.2	8.2	2.4	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
HU	-12.3	15.3	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
MT	-4.1	6.1	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
NL	-9.6	11.6	2.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
AT	-6.6	8.6	3.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PL	-10.7	13.2	4.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
PT	-6.1	8.1	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
RO	-9.5	12.0	3.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
SI	-7.3	9.3	3.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
SK	-10.1	12.1	4.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
FI	-5.2	7.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
SE	-6.1	8.1	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
NO	-4.2	6.2	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
EA	-6.4	8.4	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
EU	-7.2	9.2	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Table II.1.23: Nominal interest rate (%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.3	1.7	3.1	3.6	3.8	3.9	3.9	4.0	4.0	4.0	4.0	4.0
BG	2.5	1.5	2.8	2.6	2.7	3.1	3.5	3.8	4.0	4.0	4.0	4.0
CZ	-0.3	4.3	4.6	4.7	4.6	4.4	4.3	4.1	4.0	4.0	4.0	4.0
DK	2.5	1.5	2.5	2.6	2.9	3.2	3.5	3.9	4.0	4.0	4.0	4.0
DE	2.9	1.1	2.4	2.5	2.8	3.1	3.5	3.9	4.0	4.0	4.0	4.0
EE	1.7	2.3	3.7	3.4	3.4	3.6	3.7	3.9	4.0	4.0	4.0	4.0
IE	2.3	1.7	3.0	3.5	3.8	3.8	3.9	4.0	4.0	4.0	4.0	4.0
EL	0.5	3.5	4.3	4.5	4.4	4.3	4.2	4.1	4.0	4.0	4.0	4.0
ES	1.8	2.2	3.6	4.2	4.4	4.3	4.2	4.0	4.0	4.0	4.0	4.0
FR	2.3	1.7	3.0	3.5	3.8	3.8	3.9	4.0	4.0	4.0	4.0	4.0
HR	1.3	2.7	4.0	4.5	4.6	4.4	4.2	4.1	4.0	4.0	4.0	4.0
IT	0.8	3.2	4.3	4.5	4.5	4.4	4.2	4.1	4.0	4.0	4.0	4.0
CY	1.0	3.0	4.3	4.6	4.6	4.4	4.2	4.1	4.0	4.0	4.0	4.0
LV	1.7	2.3	3.7	3.6	3.7	3.8	3.9	4.0	4.0	4.0	4.0	4.0
LT	3.4	0.6	2.9	2.9	3.1	3.4	3.6	3.9	4.0	4.0	4.0	4.0
LU	2.3	1.7	2.9	3.2	3.4	3.6	3.7	3.9	4.0	4.0	4.0	4.0
HU	-2.6	7.6	7.9	7.3	6.7	6.2	5.7	5.2	5.0	5.0	5.0	5.0
MT	1.6	2.4	3.8	4.2	4.4	4.2	4.1	4.0	4.0	4.0	4.0	4.0
NL	2.6	1.4	2.7	2.7	3.0	3.3	3.6	3.9	4.0	4.0	4.0	4.0
AT	2.3	1.7	3.0	3.1	3.3	3.5	3.7	3.9	4.0	4.0	4.0	4.0
PL	-1.6	6.1	6.2	6.4	6.1	5.7	5.2	4.7	4.5	4.5	4.5	4.5
PT	1.8	2.2	3.4	3.9	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
RO	-3.0	7.5	7.6	8.7	8.4	7.3	6.1	5.0	4.5	4.5	4.5	4.5
SI	2.1	1.9	3.6	4.0	4.2	4.1	4.1	4.0	4.0	4.0	4.0	4.0
SK	1.9	2.1	3.6	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
FI	2.3	1.7	3.0	3.1	3.3	3.5	3.7	3.9	4.0	4.0	4.0	4.0
SE	2.5	1.5	2.3	2.4	2.6	3.0	3.4	3.8	4.0	4.0	4.0	4.0
NO	:	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
EA	2.2	1.8	3.1	3.4	3.6	3.7	3.8	4.0	4.0	4.0	4.0	4.0
EU	1.9	2.2	3.4	3.6	3.8	3.9	3.9	4.0	4.0	4.0	4.0	4.0

Table II.1.24: Working-age population (20-64y; thousands)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-60	6,786	6,819	6,829	6,864	6,888	6,893	6,873	6,834	6,792	6,768	6,726
BG	-1,353	4,063	3,979	3,781	3,604	3,411	3,199	3,015	2,835	2,749	2,733	2,710
CZ	-659	6,275	6,380	6,268	6,180	6,016	5,802	5,684	5,565	5,505	5,570	5,616
DK	-224	3,402	3,430	3,406	3,347	3,313	3,318	3,358	3,349	3,287	3,219	3,178
DE	-5,511	49,652	49,601	47,586	46,013	46,174	46,365	46,089	45,327	44,767	44,261	44,141
EE	-106	786	792	780	772	762	746	722	689	676	680	680
IE	183	3,006	3,102	3,224	3,320	3,348	3,300	3,235	3,220	3,232	3,225	3,189
EL	-2,215	6,106	5,946	5,667	5,294	4,925	4,559	4,266	4,109	4,019	3,965	3,891
ES	-4,432	28,933	29,395	29,332	28,813	27,853	26,591	25,848	25,513	25,295	25,027	24,501
FR	-2,270	37,604	37,681	37,578	37,427	36,915	36,678	36,321	36,041	35,981	35,811	35,333
HR	-682	2,244	2,174	2,072	1,995	1,923	1,847	1,764	1,702	1,653	1,600	1,562
IT	-7,209	34,605	34,333	33,519	32,360	31,034	29,981	29,354	28,917	28,539	28,078	27,396
CY	-43	568	577	572	570	569	569	563	550	535	526	525
LV	-451	1,094	1,054	975	915	867	815	753	687	652	648	643
LT	-723	1,713	1,686	1,565	1,474	1,400	1,326	1,246	1,147	1,065	1,014	990
LU	95	419	441	465	484	501	514	523	525	522	517	514
HU	-1,065	5,786	5,713	5,649	5,490	5,294	5,067	4,972	4,877	4,773	4,741	4,721
MT	84	333	352	386	418	442	456	461	455	440	426	417
NL	-650	10,396	10,550	10,440	10,278	10,206	10,257	10,301	10,265	10,144	9,967	9,747
AT	-516	5,514	5,473	5,343	5,237	5,231	5,246	5,200	5,133	5,057	5,018	4,999
PL	-6,868	22,946	22,489	21,821	21,316	20,711	19,597	18,301	17,212	16,491	16,200	16,078
PT	-1,616	6,055	5,979	5,748	5,488	5,200	4,933	4,766	4,683	4,609	4,520	4,438
RO	-3,337	11,163	10,868	10,580	9,938	9,441	8,871	8,489	8,078	7,945	7,892	7,826
SI	-199	1,247	1,228	1,204	1,188	1,166	1,124	1,083	1,055	1,048	1,048	1,048
SK	-931	3,367	3,311	3,191	3,114	3,014	2,861	2,706	2,562	2,467	2,439	2,436
FI	-438	3,131	3,155	3,131	3,128	3,115	3,062	2,988	2,911	2,822	2,757	2,693
SE	918	5,930	6,035	6,190	6,337	6,481	6,620	6,718	6,711	6,689	6,779	6,848
NO	256	3,210	3,233	3,315	3,369	3,404	3,449	3,479	3,482	3,478	3,476	3,466
EA	-27,690	203,560	203,650	199,607	195,152	191,533	188,123	185,063	182,324	180,313	178,293	175,870
EU	-40,279	263,125	262,545	257,303	251,364	246,200	240,597	235,600	230,953	227,753	225,427	222,846

Table II.1.25: Working-age population (20-64y; growth rate)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.6	0.4	0.0	0.0	0.1	0.1	-0.1	0.0	-0.2	-0.1	-0.1	-0.2
BG	0.0	-0.2	-1.2	-0.8	-1.0	-1.3	-1.2	-1.2	-1.1	-0.3	-0.2	-0.3
CZ	-0.5	0.5	-0.5	-0.4	-0.2	-0.8	-0.6	-0.4	-0.4	0.0	0.3	0.1
DK	-0.9	0.6	0.1	-0.3	-0.2	-0.2	0.2	0.2	-0.2	-0.5	-0.4	-0.2
DE	-0.4	0.4	-0.5	-0.9	-0.4	0.2	0.0	-0.2	-0.4	-0.2	-0.2	0.0
EE	-1.4	1.3	-0.5	-0.1	-0.2	-0.3	-0.5	-0.8	-0.9	-0.1	0.1	-0.1
IE	-1.9	1.6	0.6	0.8	0.4	0.0	-0.5	-0.3	0.0	0.1	-0.1	-0.3
EL	0.6	-1.0	-1.0	-1.0	-1.4	-1.5	-1.6	-1.1	-0.6	-0.4	-0.3	-0.4
ES	-0.9	0.4	0.3	-0.2	-0.4	-0.9	-0.8	-0.4	-0.2	-0.1	-0.3	-0.5
FR	-0.5	0.2	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	-0.2	-0.3
HR	3.0	-3.6	-1.1	-0.8	-0.7	-0.7	-1.0	-0.9	-0.6	-0.6	-0.6	-0.5
IT	-0.3	-0.3	-0.3	-0.6	-0.7	-0.9	-0.5	-0.4	-0.3	-0.2	-0.4	-0.6
CY	-1.5	1.5	0.0	-0.1	0.0	0.1	-0.1	-0.3	-0.5	-0.5	-0.2	0.0
LV	0.2	-0.4	-1.8	-1.5	-1.0	-1.2	-1.3	-1.7	-1.7	-0.5	-0.1	-0.3
LT	-1.6	1.1	-1.3	-1.3	-1.0	-1.1	-1.0	-1.5	-1.7	-1.2	-0.8	-0.4
LU	-2.1	2.0	1.4	0.9	0.8	0.6	0.5	0.3	0.0	-0.2	-0.2	-0.1
HU	0.5	-0.6	-0.4	-0.3	-0.6	-1.1	-0.6	-0.3	-0.4	-0.4	-0.1	-0.1
MT	-1.7	1.3	1.8	1.8	1.5	0.8	0.5	0.1	-0.5	-0.7	-0.5	-0.4
NL	-1.3	0.9	0.1	-0.3	-0.4	0.0	0.1	0.0	-0.2	-0.3	-0.5	-0.4
AT	-0.4	0.3	-0.5	-0.5	-0.2	0.0	0.0	-0.2	-0.3	-0.2	-0.1	-0.1
PL	-0.1	-0.1	-1.1	-0.4	-0.4	-0.8	-1.2	-1.4	-1.1	-0.6	-0.2	-0.2
PT	-0.2	-0.1	-0.6	-0.8	-0.9	-1.2	-0.9	-0.5	-0.3	-0.3	-0.5	-0.3
RO	1.1	-1.4	-0.9	-0.4	-1.3	-1.2	-1.1	-0.9	-0.8	-0.2	-0.1	-0.3
SI	0.6	-0.6	-0.6	-0.3	-0.2	-0.5	-0.8	-0.7	-0.4	-0.1	0.0	-0.1
SK	0.2	-0.3	-0.9	-0.6	-0.4	-0.9	-1.1	-1.2	-1.0	-0.5	-0.1	-0.1
FI	-1.0	0.5	-0.1	-0.1	0.1	-0.3	-0.4	-0.5	-0.6	-0.6	-0.4	-0.5
SE	-0.6	0.7	0.5	0.4	0.6	0.4	0.4	0.2	-0.2	0.1	0.3	0.1
NO	-0.6	0.5	0.2	0.5	0.3	0.2	0.2	0.1	-0.1	0.0	0.0	-0.1
EA	-0.5	0.2	-0.2	-0.5	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.3	-0.3
EU	-0.3	0.1	-0.3	-0.4	-0.4	-0.5	-0.5	-0.4	-0.4	-0.2	-0.2	-0.3

Table II.1.26: Labour force (20-64y; thousands)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	231	5,167	5,271	5,323	5,418	5,489	5,509	5,506	5,481	5,452	5,433	5,398
BG	-1,034	3,215	3,104	2,944	2,812	2,672	2,528	2,393	2,274	2,224	2,207	2,181
CZ	-635	5,214	5,231	5,133	5,052	4,870	4,714	4,627	4,544	4,521	4,566	4,579
DK	-47	2,843	2,882	2,883	2,861	2,849	2,864	2,910	2,915	2,875	2,826	2,796
DE	-3,742	41,343	41,077	39,644	38,749	39,013	39,149	38,945	38,415	38,036	37,678	37,601
EE	-56	680	682	675	670	668	660	644	622	616	621	623
IE	285	2,452	2,559	2,688	2,797	2,841	2,822	2,791	2,787	2,792	2,776	2,737
EL	-1,495	4,606	4,508	4,321	4,086	3,823	3,575	3,375	3,265	3,198	3,161	3,111
ES	-3,028	23,032	23,445	23,654	23,459	22,821	21,874	21,260	20,938	20,716	20,448	20,005
FR	-134	29,923	30,179	30,577	30,867	30,803	30,745	30,561	30,409	30,373	30,190	29,790
HR	-413	1,681	1,671	1,628	1,595	1,548	1,491	1,436	1,389	1,345	1,303	1,268
IT	-3,487	24,377	24,387	24,079	23,547	22,914	22,431	22,114	21,880	21,636	21,325	20,890
CY	-21	473	482	480	481	480	479	474	466	457	452	452
LV	-369	905	868	806	756	717	676	624	573	548	543	536
LT	-598	1,442	1,417	1,321	1,245	1,187	1,124	1,054	975	910	868	845
LU	78	325	346	366	382	395	403	407	407	405	404	403
HU	-727	4,817	4,819	4,797	4,679	4,515	4,371	4,299	4,214	4,139	4,113	4,089
MT	86	277	301	338	369	390	401	402	394	381	371	363
NL	-69	8,881	9,033	9,004	8,960	8,992	9,076	9,152	9,163	9,104	8,975	8,812
AT	-210	4,463	4,441	4,403	4,398	4,428	4,441	4,410	4,354	4,301	4,273	4,253
PL	-5,401	18,156	17,996	17,466	16,944	16,259	15,333	14,396	13,656	13,198	12,976	12,755
PT	-1,172	4,994	4,955	4,787	4,601	4,374	4,174	4,056	3,993	3,940	3,875	3,822
RO	-2,326	8,044	7,930	7,592	7,198	6,835	6,465	6,179	5,936	5,852	5,798	5,718
SI	-121	1,015	1,009	993	988	981	957	927	907	899	898	895
SK	-684	2,751	2,710	2,613	2,534	2,437	2,333	2,233	2,139	2,079	2,065	2,066
FI	-315	2,619	2,618	2,584	2,599	2,608	2,579	2,525	2,464	2,398	2,352	2,304
SE	898	5,205	5,286	5,436	5,578	5,740	5,867	5,945	5,961	5,957	6,033	6,103
NO	266	2,663	2,683	2,750	2,812	2,862	2,908	2,936	2,943	2,942	2,939	2,929
EA	-15,234	161,408	161,960	160,283	158,502	156,910	154,896	152,894	151,019	149,586	148,011	146,173
EU	-24,556	208,903	209,208	206,534	203,566	200,563	196,972	193,580	190,474	188,310	186,488	184,347

Table II.1.27: Participation rate (20-64y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.1	76.1	77.3	77.9	78.9	79.7	79.9	80.1	80.2	80.3	80.3	80.3
BG	1.3	79.1	78.0	77.9	78.0	78.3	79.0	79.4	80.2	80.9	80.7	80.5
CZ	-1.6	83.1	82.0	81.9	81.7	81.0	81.2	81.4	81.6	82.1	82.0	81.5
DK	4.4	83.6	84.0	84.6	85.5	86.0	86.3	86.6	87.0	87.5	87.8	88.0
DE	1.9	83.3	82.8	83.3	84.2	84.5	84.4	84.5	84.8	85.0	85.1	85.2
EE	5.1	86.5	86.1	86.5	86.9	87.6	88.4	89.3	90.3	91.0	91.3	91.7
IE	4.3	81.6	82.5	83.4	84.2	84.9	85.5	86.3	86.5	86.4	86.1	85.8
EL	4.5	75.4	75.8	76.3	77.2	77.6	78.4	79.1	79.5	79.6	79.7	79.9
ES	2.0	79.6	79.8	80.6	81.4	81.9	82.3	82.2	82.1	81.9	81.7	81.6
FR	4.7	79.6	80.1	81.4	82.5	83.4	83.8	84.1	84.4	84.4	84.3	84.3
HR	6.2	74.9	76.9	78.6	80.0	80.5	80.7	81.4	81.6	81.3	81.5	81.2
IT	5.8	70.4	71.0	71.8	72.8	73.8	74.8	75.3	75.7	75.8	75.9	76.3
CY	3.0	83.2	83.5	84.0	84.3	84.3	84.1	84.2	84.7	85.4	85.9	86.1
LV	0.6	82.7	82.4	82.7	82.6	82.7	82.9	82.8	83.4	84.1	83.8	83.3
LT	1.2	84.2	84.1	84.4	84.4	84.8	84.8	84.6	85.0	85.4	85.6	85.4
LU	0.8	77.6	78.6	78.8	79.0	78.9	78.4	77.8	77.5	77.7	78.2	78.4
HU	3.4	83.2	84.3	84.9	85.2	85.3	86.3	86.5	86.4	86.7	86.8	86.6
MT	3.8	83.3	85.5	87.7	88.3	88.2	87.8	87.2	86.5	86.6	87.0	87.0
NL	5.0	85.4	85.6	86.2	87.2	88.1	88.5	88.8	89.3	89.7	90.0	90.4
AT	4.1	80.9	81.1	82.4	84.0	84.6	84.7	84.8	84.8	85.0	85.2	85.1
PL	0.2	79.1	80.0	80.0	79.5	78.5	78.2	78.7	79.3	80.0	80.1	79.3
PT	3.6	82.5	82.9	83.3	83.8	84.1	84.6	85.1	85.3	85.5	85.7	86.1
RO	1.0	72.1	73.0	71.8	72.4	72.4	72.9	72.8	73.5	73.7	73.5	73.1
SI	4.0	81.4	82.2	82.5	83.2	84.2	85.1	85.6	85.9	85.8	85.7	85.4
SK	3.1	81.7	81.9	81.9	81.4	80.9	81.5	82.5	83.5	84.3	84.7	84.8
FI	1.9	83.7	83.0	82.5	83.1	83.7	84.2	84.5	84.6	85.0	85.3	85.6
SE	1.3	87.8	87.6	87.8	88.0	88.6	88.6	88.5	88.8	89.1	89.0	89.1
NO	1.5	83.0	83.0	82.9	83.5	84.1	84.3	84.4	84.5	84.6	84.6	84.5
EA	3.8	79.3	79.5	80.3	81.2	81.9	82.3	82.6	82.8	83.0	83.0	83.1
EU	3.3	79.4	79.7	80.3	81.0	81.5	81.9	82.2	82.5	82.7	82.7	82.7

Table II.1.28: Participation rate (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.5	65.4	66.0	66.2	67.1	68.1	68.6	68.6	68.3	68.0	67.9	67.9
BG	0.9	67.3	66.6	66.0	65.6	64.8	64.1	63.9	64.2	65.3	67.4	68.1
CZ	-0.9	70.9	70.2	70.3	70.1	68.1	66.4	66.8	67.8	68.3	69.5	70.0
DK	4.9	73.1	73.3	73.3	73.6	74.6	75.8	77.1	77.9	77.7	77.4	78.0
DE	0.2	72.4	71.2	69.9	69.7	71.4	73.0	72.7	72.0	71.8	72.2	72.6
EE	4.3	77.3	75.7	75.0	75.6	76.2	76.5	77.1	77.1	77.6	80.0	81.6
IE	0.1	72.9	73.6	73.9	74.2	74.0	73.3	73.0	73.6	74.4	74.0	73.0
EL	4.9	64.7	64.7	63.9	63.8	63.4	63.6	64.3	66.1	68.1	69.1	69.7
ES	0.5	69.1	69.1	69.2	69.1	69.0	68.6	68.8	69.9	70.5	70.2	69.6
FR	3.2	67.3	67.7	68.4	69.2	70.0	70.6	71.0	70.8	71.1	71.1	70.6
HR	4.8	62.0	63.3	64.7	66.2	67.0	66.9	66.7	66.9	67.3	67.1	66.7
IT	7.1	60.3	60.7	60.8	60.8	61.4	62.8	64.5	65.8	66.5	67.0	67.4
CY	0.6	74.4	74.2	73.6	73.6	74.0	73.8	73.3	72.8	72.8	73.6	75.0
LV	-1.6	73.0	70.9	69.1	68.9	68.9	68.6	67.7	66.2	66.9	70.0	71.4
LT	-4.4	74.6	73.0	70.8	70.5	70.9	70.8	70.2	68.6	67.6	68.5	70.2
LU	-5.1	69.4	69.8	68.9	68.2	67.9	67.3	66.2	65.0	64.2	64.0	64.3
HU	2.5	70.8	71.9	73.6	73.6	71.9	71.0	71.5	72.6	72.4	72.8	73.3
MT	-2.5	72.8	74.6	77.0	78.7	78.6	76.9	74.7	72.2	70.1	69.5	70.3
NL	4.0	74.6	74.5	74.2	74.4	75.5	77.2	78.3	78.4	78.3	78.4	78.6
AT	0.4	70.7	70.1	69.2	69.3	70.5	71.7	71.6	70.8	70.6	70.7	71.1
PL	-0.6	67.6	67.8	68.4	68.9	67.5	65.3	63.7	63.5	64.7	66.2	67.0
PT	2.8	70.7	70.7	70.5	70.3	70.0	69.7	70.5	72.1	73.1	73.4	73.5
RO	1.9	60.5	61.2	61.5	61.4	59.9	60.0	59.9	60.5	61.1	62.5	62.4
SI	2.7	68.9	68.8	68.7	69.1	69.6	69.4	69.1	69.7	70.8	71.7	71.7
SK	3.5	70.3	69.9	69.9	69.7	68.7	67.5	67.4	68.3	69.7	71.8	73.8
FI	2.8	70.9	70.6	70.2	70.8	72.2	72.8	72.4	72.2	72.3	72.7	73.7
SE	1.9	77.4	77.1	77.3	77.0	77.9	78.4	78.5	78.5	78.0	78.2	79.3
NO	-1.5	74.2	73.7	73.0	72.7	72.8	73.4	73.7	73.3	72.8	72.7	72.7
EA	2.7	68.3	68.2	67.9	68.1	68.9	69.7	70.1	70.4	70.7	70.9	71.0
EU	2.4	68.3	68.2	68.2	68.3	68.7	69.1	69.4	69.7	70.1	70.6	70.7

Table II.1.29: Participation rate young (20-24y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.8	48.4	50.8	50.9	51.3	51.3	51.2	51.1	51.0	51.0	51.1	51.2
BG	1.8	41.6	43.0	42.7	43.3	43.5	43.5	43.4	43.2	43.2	43.3	43.4
CZ	2.0	50.7	52.2	52.2	52.7	52.7	52.8	52.9	52.6	52.5	52.6	52.7
DK	3.5	75.1	78.1	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6
DE	0.3	73.6	74.0	73.9	73.8	73.9	73.9	74.0	74.0	73.9	73.9	73.9
EE	4.2	75.2	78.9	79.0	79.5	79.5	79.4	79.5	79.3	79.2	79.3	79.4
IE	3.2	74.4	77.1	77.3	77.8	77.7	77.7	77.5	77.4	77.4	77.5	77.6
EL	3.4	46.6	49.4	49.5	50.3	50.0	50.1	49.9	49.8	49.8	49.9	50.0
ES	1.2	55.3	56.1	56.4	56.7	57.1	56.5	56.3	56.2	56.3	56.4	56.5
FR	2.5	66.8	69.0	69.1	69.2	69.3	69.0	69.1	69.1	69.1	69.2	69.2
HR	6.4	55.5	61.7	61.6	61.9	61.7	62.0	61.9	61.9	61.8	61.9	61.9
IT	0.4	45.2	45.3	45.4	45.7	45.8	45.6	45.5	45.4	45.4	45.5	45.6
CY	3.3	68.8	72.3	71.8	72.3	72.1	72.1	72.3	72.4	72.3	72.2	72.1
LV	3.2	67.4	69.8	70.1	69.2	71.3	70.8	70.7	70.2	70.0	70.2	70.5
LT	1.7	64.1	65.8	64.6	65.4	66.5	65.1	66.1	65.9	65.5	65.5	65.8
LU	7.0	46.9	54.4	54.1	54.0	54.1	53.8	54.0	54.1	54.0	54.0	53.9
HU	2.2	54.5	56.7	56.9	56.5	56.7	56.7	56.9	56.8	56.7	56.7	56.7
MT	0.3	80.0	80.9	80.5	80.6	80.7	80.3	80.4	80.5	80.4	80.3	80.3
NL	3.7	85.4	88.3	89.0	89.1	89.1	89.1	89.1	89.1	89.1	89.1	89.1
AT	2.0	75.9	77.6	77.9	77.9	78.0	77.9	78.0	77.9	77.9	77.9	77.9
PL	1.1	57.9	58.8	58.2	59.1	59.0	59.0	59.2	58.9	58.8	58.9	59.0
PT	0.8	53.6	54.4	54.4	54.7	54.5	54.1	54.2	54.3	54.4	54.4	54.4
RO	0.9	44.6	44.5	45.0	45.3	45.4	45.2	45.4	45.2	45.3	45.4	45.5
SI	2.7	56.6	59.1	58.5	59.3	59.4	59.4	59.2	59.0	58.9	59.1	59.2
SK	1.6	47.6	49.0	48.9	49.1	49.2	49.4	49.4	49.2	49.0	49.1	49.1
FI	3.0	68.9	71.6	71.7	71.8	71.9	71.7	71.8	71.8	71.8	71.8	71.8
SE	2.0	73.2	74.8	75.1	75.1	75.2	75.1	75.1	75.1	75.1	75.1	75.1
NO	2.7	74.2	76.9	76.8	77.0	77.0	76.9	76.9	76.9	76.9	76.9	76.9
EA	2.0	63.0	64.2	64.0	64.4	65.0	65.2	65.2	65.1	64.9	64.9	65.1
EU	2.1	61.6	62.8	62.5	63.0	63.4	63.7	63.8	63.7	63.5	63.5	63.7

Table II.1.30: Participation rate prime-age (25-54y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.1	86.1	86.5	87.2	87.4	87.8	88.1	88.2	88.2	88.1	88.1	88.2
BG	3.0	85.9	86.5	87.3	87.7	88.1	88.4	88.9	89.0	89.1	89.0	88.9
CZ	-0.8	89.1	89.0	88.9	88.5	88.1	87.9	88.0	88.3	88.5	88.4	88.3
DK	2.1	87.7	88.0	88.3	88.6	89.1	89.4	89.7	89.7	89.8	89.8	89.8
DE	1.4	87.8	87.9	88.3	88.6	88.8	89.0	89.1	89.2	89.3	89.3	89.3
EE	3.5	90.8	91.2	92.1	92.8	93.4	94.0	94.3	94.3	94.3	94.3	94.3
IE	5.5	86.1	87.3	88.7	89.8	90.7	91.3	91.6	91.6	91.6	91.5	91.6
EL	-0.1	85.3	85.4	85.1	85.0	85.0	85.2	85.2	85.2	85.2	85.2	85.2
ES	-0.5	87.4	87.6	87.4	87.1	86.9	87.0	87.0	86.9	86.9	86.9	86.9
FR	1.5	88.2	88.4	88.5	88.7	89.1	89.5	89.7	89.7	89.7	89.7	89.8
HR	4.1	86.0	87.4	88.7	89.1	89.8	90.0	90.2	90.2	90.1	90.1	90.1
IT	1.8	78.6	78.9	79.1	79.3	79.8	80.4	80.6	80.6	80.5	80.4	80.4
CY	1.9	89.4	90.2	90.5	90.6	90.7	90.8	91.2	91.3	91.4	91.4	91.4
LV	1.2	87.7	87.9	88.0	88.2	88.2	88.7	89.2	89.2	89.0	88.9	88.9
LT	2.0	90.0	90.4	91.0	91.2	91.4	91.8	92.2	92.3	92.2	92.0	92.0
LU	0.7	89.8	90.1	90.3	90.3	90.3	90.2	90.3	90.4	90.4	90.4	90.5
HU	3.1	91.0	92.1	93.1	93.8	94.1	94.1	94.1	94.1	94.1	94.1	94.1
MT	3.2	90.6	92.0	93.1	93.5	93.7	93.8	93.8	93.8	93.8	93.7	93.7
NL	3.7	89.1	89.6	90.5	91.0	91.6	92.0	92.4	92.6	92.7	92.8	92.8
AT	2.0	89.6	90.2	90.8	91.1	91.3	91.5	91.6	91.6	91.6	91.6	91.6
PL	1.3	87.8	88.3	88.7	88.6	88.8	89.0	89.2	89.3	89.3	89.2	89.1
PT	1.3	91.3	91.8	92.1	92.2	92.3	92.4	92.5	92.5	92.5	92.5	92.6
RO	-0.3	82.0	82.2	82.0	81.7	81.5	81.6	81.9	81.9	81.8	81.8	81.8
SI	-0.1	92.9	92.6	92.3	92.2	92.5	92.7	93.0	92.9	92.8	92.8	92.8
SK	1.3	89.9	90.6	91.2	91.2	91.0	91.0	91.2	91.3	91.4	91.3	91.2
FI	0.4	88.1	88.2	88.3	88.4	88.4	88.5	88.6	88.6	88.6	88.5	88.5
SE	0.7	91.6	91.8	92.0	92.1	92.1	92.2	92.3	92.3	92.3	92.3	92.3
NO	3.2	86.6	87.3	88.1	88.7	89.1	89.6	89.8	89.8	89.7	89.7	89.8
EA	1.6	86.4	86.7	87.0	87.2	87.5	87.8	87.9	88.0	88.0	88.0	88.1
EU	1.5	86.7	87.0	87.3	87.4	87.7	87.9	88.1	88.2	88.2	88.2	88.2

Table II.1.31: Participation rate older (55-64y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	11.5	59.1	61.9	63.2	65.8	67.2	67.2	68.3	69.1	69.8	70.5	70.6
BG	2.5	71.0	65.0	66.3	67.8	68.5	70.1	69.4	70.1	72.8	73.7	73.5
CZ	0.3	74.7	70.3	74.5	76.2	74.2	74.8	74.5	73.5	75.2	76.0	75.0
DK	11.1	75.5	75.3	76.7	78.7	79.1	80.0	81.8	83.5	84.9	86.0	86.6
DE	2.6	75.3	73.3	72.9	75.0	76.3	76.2	76.0	76.5	77.0	77.4	77.9
EE	12.6	77.1	72.9	73.1	72.8	75.1	78.2	80.2	83.0	86.2	88.2	89.7
IE	5.8	69.0	68.7	69.5	71.1	71.6	71.3	72.5	74.5	75.3	75.4	74.8
EL	20.8	57.4	60.1	65.5	69.3	70.9	72.3	74.0	75.4	76.5	77.6	78.2
ES	12.1	65.4	67.0	72.9	76.7	77.8	77.6	77.4	77.5	77.9	77.9	77.5
FR	15.5	60.4	61.6	67.0	70.5	72.7	73.7	74.4	75.4	76.2	76.1	75.9
HR	12.4	53.0	53.7	57.2	62.2	63.5	63.5	64.3	65.6	65.0	66.0	65.4
IT	18.4	57.9	60.9	64.5	66.4	67.5	68.7	70.3	72.6	74.2	75.3	76.3
CY	8.1	68.0	64.6	65.4	67.3	69.2	70.2	70.4	71.3	72.8	74.7	76.1
LV	0.9	73.7	71.1	73.5	73.5	74.0	74.4	72.5	71.4	74.3	75.1	74.6
LT	0.4	75.3	72.6	73.2	73.1	74.1	74.6	74.0	73.9	74.5	75.4	75.7
LU	4.9	48.4	48.7	48.5	49.6	50.5	51.6	51.7	51.5	51.4	52.5	53.3
HU	9.8	68.0	70.2	72.8	74.4	74.0	77.1	78.2	77.2	77.9	78.4	77.8
MT	16.5	55.3	57.9	66.1	70.4	71.8	72.9	73.0	71.5	70.9	71.5	71.8
NL	8.9	75.3	73.5	72.5	73.5	75.6	76.9	78.4	80.0	82.0	83.0	84.2
AT	10.7	58.6	58.6	60.9	64.7	67.5	68.0	68.9	68.7	69.0	69.4	69.4
PL	4.1	57.8	58.4	61.2	62.2	61.6	60.4	60.1	59.9	61.0	63.2	61.9
PT	11.3	69.3	69.4	71.1	73.5	74.1	75.1	76.5	77.9	79.0	79.8	80.6
RO	12.4	48.6	56.4	56.8	60.5	60.8	61.8	59.5	60.3	61.4	62.1	61.0
SI	19.4	57.3	60.7	65.1	69.8	73.2	74.8	74.8	75.8	76.2	77.1	76.6
SK	15.7	67.1	64.3	66.5	68.6	69.4	71.6	73.7	75.5	78.4	81.1	82.8
FI	6.0	77.0	72.2	69.0	71.0	74.0	76.6	78.0	78.6	80.2	81.8	83.1
SE	4.3	82.2	80.0	81.0	81.4	83.6	83.8	83.5	84.5	85.4	85.6	86.5
NO	-2.3	75.5	72.2	70.2	69.6	70.2	70.5	71.3	72.3	72.9	73.3	73.2
EA	11.0	65.9	66.3	68.9	71.5	73.1	73.7	74.3	75.3	76.2	76.6	77.0
EU	10.1	65.4	65.9	68.3	70.6	71.6	72.2	72.7	73.8	74.9	75.5	75.5

Table II.1.32: Participation rate oldest (65-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	5.2	5.4	5.2	8.2	9.7	10.0	10.7	10.6	10.6	10.6	10.5	10.6
BG	0.2	11.2	12.4	10.0	9.6	10.5	10.5	10.4	10.8	10.1	10.4	11.4
CZ	-1.5	10.7	8.1	7.2	8.2	9.9	9.3	8.5	9.0	8.7	8.4	9.2
DK	19.6	16.3	14.9	16.1	18.6	22.2	24.7	27.0	31.8	34.5	35.1	35.9
DE	1.2	14.5	13.1	13.0	13.0	12.7	14.3	15.0	15.3	14.9	15.5	15.6
EE	4.6	28.7	22.0	17.3	18.2	20.5	22.5	26.0	28.4	27.2	29.0	33.3
IE	3.1	13.4	14.8	15.2	15.4	16.0	16.3	15.4	14.9	15.6	16.6	16.5
EL	15.0	9.3	10.9	9.9	12.0	13.9	15.7	16.8	17.4	19.9	21.8	24.3
ES	14.1	6.4	9.6	13.8	16.2	18.9	20.0	18.8	19.0	19.6	20.1	20.5
FR	3.6	6.8	6.6	6.9	7.9	8.9	9.5	10.0	9.9	9.8	10.3	10.4
HR	5.0	5.0	6.3	7.4	8.1	9.0	10.1	10.0	9.8	10.0	10.3	10.0
IT	23.7	9.4	10.5	14.7	16.7	18.5	19.6	21.5	24.1	27.0	30.1	33.0
CY	6.9	16.5	14.5	13.0	12.9	14.3	16.3	18.3	19.7	20.7	21.8	23.4
LV	-11.7	22.8	15.8	10.8	10.3	11.0	10.5	11.1	11.0	9.8	9.4	11.1
LT	-8.1	20.6	16.9	13.4	13.0	12.9	13.0	13.7	13.7	12.7	12.4	12.5
LU	-1.3	5.6	4.1	4.3	4.2	4.0	4.1	4.2	4.3	4.3	4.3	4.3
HU	1.9	9.7	9.2	9.3	10.7	11.3	11.3	10.8	11.6	11.7	11.3	11.6
MT	-2.4	11.1	7.5	6.6	7.3	8.9	9.3	9.5	9.6	9.4	8.8	8.6
NL	13.0	17.0	16.2	16.8	17.2	17.3	19.3	22.2	24.6	26.4	28.3	30.0
AT	1.0	8.3	7.3	7.7	7.8	8.1	8.7	9.4	9.3	9.4	9.2	9.3
PL	0.8	9.2	9.3	9.2	9.6	10.5	10.6	10.3	9.8	9.6	9.6	10.0
PT	10.8	14.3	14.6	16.1	16.6	18.4	19.1	19.3	20.6	22.5	24.3	25.1
RO	7.6	3.4	4.9	6.8	9.5	10.0	11.0	10.4	11.1	9.9	10.5	11.0
SI	-0.8	7.4	6.2	6.5	6.4	6.0	6.4	6.4	6.3	6.3	6.5	6.6
SK	12.9	7.0	6.8	8.1	8.5	10.3	11.6	12.6	14.2	15.5	17.0	19.9
FI	11.4	13.8	12.7	12.2	11.9	12.8	15.6	17.8	19.5	21.3	22.4	25.2
SE	9.4	20.3	17.0	18.9	19.0	21.9	22.9	23.8	27.8	28.4	27.0	29.7
NO	-2.0	22.2	19.9	17.5	17.1	16.8	16.9	17.9	18.6	19.1	19.6	20.2
EA	9.0	10.4	10.5	12.1	13.2	14.3	15.5	16.0	16.5	17.2	18.4	19.3
EU	8.2	10.2	10.3	11.6	12.8	13.9	14.8	15.1	15.7	16.4	17.4	18.4

Table II.1.33: Participation rate (20-64y) - female

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	5.6	71.9	73.5	74.6	75.8	76.7	77.1	77.4	77.5	77.6	77.6	77.6
BG	1.7	75.0	74.1	74.0	74.3	74.7	75.4	75.7	76.4	77.1	76.9	76.7
CZ	-1.0	75.8	75.1	75.4	75.5	74.3	74.2	74.3	74.7	75.3	75.2	74.8
DK	5.7	80.8	81.5	82.4	83.4	83.9	84.4	84.9	85.5	86.1	86.4	86.5
DE	3.8	79.0	78.7	79.6	80.9	81.4	81.6	81.8	82.2	82.5	82.6	82.8
EE	7.1	84.5	84.4	84.9	85.3	86.3	87.6	88.9	90.2	91.0	91.3	91.7
IE	7.8	75.8	77.7	79.6	81.0	81.9	82.6	83.6	84.1	84.1	83.8	83.6
EL	7.3	66.6	67.9	69.4	70.6	71.3	72.2	73.0	73.5	73.5	73.7	73.9
ES	3.7	75.0	75.6	77.1	78.3	79.0	79.3	79.3	79.1	79.0	78.8	78.7
FR	6.3	76.3	77.1	78.5	79.9	81.1	81.7	82.3	82.7	82.8	82.7	82.6
HR	8.4	70.5	72.7	75.0	76.6	77.4	77.9	78.8	79.1	79.0	79.2	78.9
IT	7.4	60.5	61.6	63.2	64.4	65.5	66.4	67.0	67.5	67.6	67.7	68.0
CY	4.3	77.7	78.5	79.4	79.8	79.9	79.6	79.8	80.4	81.2	81.8	82.0
LV	0.1	79.9	79.4	79.4	79.0	79.0	79.4	79.4	80.0	80.8	80.4	80.0
LT	0.8	83.4	83.1	83.2	82.9	83.1	83.1	83.0	83.5	84.2	84.4	84.2
LU	4.3	74.1	76.3	77.9	78.7	78.8	78.5	78.1	77.8	77.9	78.3	78.4
HU	6.0	78.1	80.1	81.1	81.7	82.1	83.6	83.9	83.8	84.2	84.3	84.1
MT	9.3	75.5	79.0	82.8	84.5	85.1	85.2	84.8	84.3	84.4	84.7	84.8
NL	7.1	81.5	82.1	83.0	84.3	85.6	86.2	86.8	87.4	88.0	88.2	88.6
AT	7.3	76.6	77.4	79.9	82.0	83.0	83.2	83.5	83.6	83.8	83.9	83.9
PL	1.3	72.5	74.2	74.6	74.0	72.7	72.3	72.8	73.7	74.7	74.9	73.9
PT	5.3	79.9	80.5	81.3	82.2	82.6	83.3	84.0	84.3	84.5	84.8	85.2
RO	1.0	61.7	63.1	62.0	63.0	62.8	62.9	62.5	62.9	63.1	63.1	62.7
SI	4.5	77.9	78.9	79.2	80.1	81.2	82.1	82.6	83.0	82.9	82.7	82.4
SK	6.0	77.5	78.2	79.0	78.7	78.4	79.5	80.9	82.1	83.0	83.4	83.6
FI	3.9	82.6	82.1	82.2	83.1	83.9	84.7	85.2	85.5	85.9	86.2	86.5
SE	1.9	85.0	84.9	85.0	85.3	85.9	86.0	85.9	86.3	86.7	86.6	86.8
NO	3.6	79.8	80.2	80.6	81.5	82.4	82.9	83.0	83.3	83.5	83.5	83.5
EA	5.8	74.2	74.8	76.1	77.4	78.3	78.9	79.3	79.7	79.8	79.9	80.0
EU	5.2	74.0	74.7	75.8	76.8	77.4	77.9	78.4	78.8	79.1	79.2	79.1

Table II.1.34: Participation rate (20-74y) - female

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.3	61.1	62.3	63.0	64.2	65.4	65.9	66.0	65.7	65.4	65.3	65.3
BG	2.3	61.8	61.6	61.2	61.0	60.5	60.0	59.9	60.1	61.2	63.3	64.2
CZ	0.5	63.5	63.3	63.9	64.0	61.9	60.0	60.4	61.5	62.2	63.5	64.0
DK	7.1	69.3	70.3	70.8	71.3	72.4	73.5	74.9	76.0	75.9	75.8	76.4
DE	2.4	67.7	66.8	65.9	66.1	68.0	69.7	69.6	69.1	69.1	69.6	70.1
EE	7.4	74.0	72.8	72.2	72.9	73.9	74.8	75.9	76.3	77.2	79.8	81.4
IE	3.6	67.0	68.9	70.2	71.0	71.1	70.4	70.0	70.7	71.8	71.7	70.6
EL	7.3	56.4	56.9	57.1	57.5	57.3	57.7	58.4	60.1	62.1	63.2	63.7
ES	1.9	64.5	64.9	65.4	65.7	65.9	65.6	65.6	66.6	67.2	67.0	66.4
FR	5.0	63.9	64.6	65.6	66.6	67.6	68.4	68.9	68.8	69.1	69.3	68.8
HR	7.6	57.2	58.7	60.2	62.0	63.1	63.4	63.4	63.9	64.6	64.9	64.7
IT	9.1	51.0	52.0	52.7	53.1	53.9	55.2	56.8	58.1	59.0	59.6	60.1
CY	2.0	68.8	69.3	69.2	69.4	69.6	69.2	68.5	68.1	68.3	69.3	70.8
LV	-0.4	68.7	66.5	64.5	64.2	64.2	64.1	63.5	62.3	63.2	66.6	68.4
LT	-3.0	72.3	70.3	67.8	67.1	67.3	67.4	67.2	66.0	65.4	67.0	69.3
LU	-1.5	65.8	67.3	67.7	67.6	67.5	67.1	66.0	64.9	64.1	64.0	64.3
HU	6.3	64.5	66.2	68.6	69.2	67.9	67.5	68.3	69.7	69.8	70.2	70.8
MT	4.4	64.5	67.6	71.5	74.3	75.1	74.1	72.4	70.3	68.5	68.1	68.9
NL	6.6	70.2	71.1	71.3	71.9	73.2	75.0	76.2	76.5	76.5	76.6	76.8
AT	3.5	66.0	66.0	66.1	66.8	68.2	69.6	69.7	69.0	68.9	69.1	69.5
PL	1.0	60.5	61.2	62.2	62.8	61.2	58.9	57.4	57.5	59.1	60.8	61.5
PT	5.0	67.2	67.8	68.0	68.1	68.0	67.8	68.7	70.5	71.8	72.1	72.3
RO	2.9	50.5	51.3	51.8	52.3	51.0	51.0	50.9	51.4	51.9	53.3	53.3
SI	4.5	64.7	64.8	64.8	65.2	66.0	66.0	65.8	66.6	67.9	69.1	69.2
SK	6.7	65.4	65.5	66.2	66.4	65.6	64.7	65.0	66.2	67.7	70.0	72.1
FI	5.5	68.7	68.6	68.5	69.6	71.4	72.3	72.1	72.2	72.4	73.0	74.3
SE	3.1	74.1	74.3	74.7	74.5	75.3	75.9	76.0	76.1	75.7	76.0	77.1
NO	0.8	70.5	70.6	70.4	70.5	70.8	71.5	72.0	71.6	71.3	71.3	71.3
EA	6.2	62.7	63.7	64.5	65.9	67.2	67.8	68.1	68.2	68.6	68.7	68.9
EU	4.6	62.6	63.1	63.5	63.9	64.5	65.0	65.4	65.9	66.4	67.0	67.2

Table II.1.35: Participation rate young (20-24y) - female

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.7	45.6	47.1	47.0	47.5	47.5	47.4	47.2	47.1	47.1	47.2	47.3
BG	2.3	33.9	36.0	35.6	36.1	36.3	36.3	36.2	36.0	36.0	36.1	36.2
CZ	1.3	42.3	43.2	43.2	43.6	43.6	43.7	43.7	43.5	43.4	43.5	43.6
DK	3.9	73.4	76.7	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
DE	-0.1	70.8	70.9	70.8	70.7	70.8	70.8	70.8	70.8	70.8	70.8	70.7
EE	3.3	78.2	81.2	81.2	81.6	81.5	81.6	81.6	81.5	81.4	81.5	81.6
IE	5.0	72.3	76.4	77.0	77.4	77.4	77.4	77.1	77.1	77.1	77.2	77.3
EL	3.3	43.3	46.1	46.0	46.9	46.5	46.6	46.5	46.3	46.3	46.5	46.6
ES	1.4	52.6	53.5	53.8	54.1	54.5	54.0	53.8	53.7	53.7	53.8	54.0
FR	2.2	64.3	66.5	66.4	66.6	66.7	66.4	66.4	66.4	66.5	66.6	66.6
HR	5.5	48.6	53.9	53.9	54.2	54.1	54.3	54.1	54.1	54.1	54.1	54.1
IT	0.5	37.5	37.8	37.9	38.1	38.2	38.0	37.9	37.8	37.9	37.9	38.0
CY	1.2	65.4	66.9	66.3	67.1	66.6	66.6	66.9	66.9	66.7	66.6	66.6
LV	1.8	61.1	62.2	62.5	61.5	63.5	63.2	63.0	62.5	62.3	62.5	62.9
LT	0.9	64.2	65.1	63.9	64.7	65.9	64.4	65.4	65.2	64.8	64.9	65.2
LU	6.4	49.2	56.3	55.8	55.8	55.8	55.5	55.7	55.8	55.8	55.7	55.7
HU	1.3	49.3	50.7	50.8	50.4	50.7	50.7	50.8	50.7	50.7	50.6	50.6
MT	0.8	79.1	80.5	80.0	80.2	80.3	79.9	80.0	80.1	80.0	80.0	79.9
NL	2.3	85.9	87.6	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2
AT	4.2	72.9	76.4	77.1	77.0	77.1	77.0	77.1	77.1	77.0	77.0	77.0
PL	1.8	50.1	51.8	51.2	51.9	51.9	51.9	52.0	51.8	51.6	51.7	51.9
PT	1.5	49.7	51.3	51.3	51.7	51.4	50.9	51.1	51.1	51.2	51.3	51.2
RO	0.8	34.0	34.0	34.3	34.7	34.8	34.5	34.7	34.5	34.6	34.7	34.8
SI	2.5	51.2	53.5	53.1	53.8	53.9	53.8	53.7	53.5	53.5	53.6	53.7
SK	1.8	35.9	37.6	37.3	37.7	37.7	38.0	37.9	37.7	37.6	37.6	37.7
FI	2.9	66.9	69.8	69.7	69.9	70.0	69.8	69.8	69.8	69.8	69.8	69.9
SE	1.8	69.0	70.5	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8
NO	2.1	73.1	75.2	75.1	75.3	75.3	75.2	75.2	75.2	75.2	75.2	75.2
EA	5.4	57.9	60.1	62.4	64.6	64.7	62.6	61.9	61.5	62.0	62.9	63.3
EU	2.1	57.4	58.6	58.2	58.7	59.1	59.4	59.6	59.5	59.3	59.3	59.4

Table II.1.36: Participation rate prime-age (25-54y) - female

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.3	82.0	82.8	83.8	84.3	84.8	85.3	85.3	85.3	85.3	85.3	85.3
BG	2.4	82.5	83.0	83.6	84.0	84.1	84.2	84.8	85.1	85.1	85.0	84.9
CZ	-1.3	81.6	81.7	81.7	80.8	80.0	79.5	79.6	80.2	80.6	80.6	80.3
DK	3.0	85.3	85.6	86.1	86.6	87.3	87.9	88.2	88.2	88.2	88.2	88.3
DE	3.0	83.4	83.7	84.5	85.2	85.7	86.0	86.1	86.2	86.3	86.3	86.4
EE	6.3	87.4	88.2	90.1	91.4	92.5	93.3	93.8	93.8	93.8	93.8	93.8
IE	8.2	80.4	82.2	84.4	85.9	87.2	88.0	88.5	88.6	88.6	88.6	88.6
EL	1.7	77.4	77.7	78.1	78.5	78.8	79.2	79.2	79.1	79.0	79.1	79.1
ES	0.4	83.3	83.7	83.9	83.8	83.7	83.7	83.8	83.7	83.7	83.7	83.7
FR	3.5	84.3	84.8	85.4	86.0	86.8	87.5	87.7	87.8	87.8	87.8	87.8
HR	5.7	82.6	84.4	86.1	86.8	87.8	88.0	88.3	88.4	88.3	88.3	88.3
IT	3.2	68.6	69.2	69.7	70.3	70.9	71.7	72.0	72.0	71.9	71.8	71.8
CY	2.5	85.0	86.0	86.4	86.7	86.7	86.7	87.3	87.5	87.5	87.5	87.5
LV	1.3	84.4	84.6	84.4	84.8	84.9	85.4	85.9	85.9	85.8	85.7	85.7
LT	1.5	88.9	88.8	89.0	89.3	89.5	89.9	90.5	90.6	90.5	90.4	90.4
LU	3.5	86.8	88.3	89.3	89.9	90.3	90.2	90.2	90.3	90.3	90.3	90.3
HU	4.9	87.7	89.4	91.0	92.0	92.5	92.5	92.4	92.5	92.5	92.5	92.6
MT	6.7	83.7	86.2	88.4	89.6	90.2	90.4	90.4	90.4	90.4	90.4	90.4
NL	5.3	85.5	86.3	87.6	88.5	89.2	90.0	90.5	90.7	90.8	90.8	90.8
AT	3.1	86.6	87.3	88.4	89.0	89.3	89.6	89.7	89.7	89.8	89.8	89.8
PL	2.2	83.4	84.2	85.0	85.1	85.3	85.4	85.6	85.8	85.8	85.7	85.6
PT	2.9	89.5	90.4	91.2	91.5	91.9	92.1	92.3	92.3	92.3	92.3	92.4
RO	-2.5	72.4	72.3	71.4	70.5	69.8	69.6	70.0	70.1	70.0	70.0	69.9
SI	-0.4	90.4	90.2	90.0	89.5	89.7	89.9	90.2	90.3	90.1	90.0	90.0
SK	4.6	86.3	88.0	89.4	90.1	90.4	90.5	90.7	91.0	91.2	91.1	90.9
FI	2.3	86.8	87.2	87.8	88.5	88.8	89.1	89.2	89.3	89.3	89.1	89.0
SE	1.3	88.9	89.3	89.6	89.8	89.9	90.0	90.1	90.2	90.2	90.2	90.1
NO	4.8	83.8	84.8	86.1	87.1	87.6	88.3	88.6	88.6	88.6	88.6	88.6
EA	2.2	83.8	84.5	84.4	84.7	85.7	86.0	86.3	86.6	86.7	86.4	85.9
EU	3.0	81.5	82.2	82.9	83.3	83.7	84.1	84.3	84.4	84.5	84.5	84.5

Table II.1.37: Participation rate older (55-64y) - female

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	14.8	53.9	57.7	59.8	63.1	64.8	64.7	66.3	67.4	68.0	68.7	68.7
BG	5.4	66.1	61.5	63.4	65.3	66.6	68.7	67.8	68.1	70.9	71.7	71.5
CZ	4.2	68.8	65.9	71.4	74.4	72.5	72.7	72.2	71.3	73.0	73.9	73.0
DK	14.0	71.5	72.1	74.2	76.3	75.8	76.5	79.2	82.0	83.9	85.0	85.5
DE	6.2	71.1	69.4	69.7	72.2	73.7	74.3	74.7	75.5	76.3	76.7	77.3
EE	12.0	78.2	74.4	72.1	69.9	72.1	76.2	79.3	82.9	86.5	88.6	90.3
IE	13.1	60.8	62.5	65.1	68.4	69.1	68.8	70.5	73.2	74.3	74.4	73.8
EL	26.4	44.8	50.1	57.9	61.5	63.3	64.5	66.6	68.6	69.6	70.6	71.2
ES	16.2	59.0	61.5	68.8	73.4	75.1	75.3	75.1	75.1	75.5	75.4	75.1
FR	16.7	58.8	60.1	64.8	68.2	70.5	71.8	73.3	74.7	75.6	75.6	75.5
HR	16.2	47.7	49.0	53.9	58.8	60.5	61.4	62.4	63.8	63.3	64.6	63.9
IT	20.9	47.6	51.2	57.0	59.5	60.4	61.1	62.7	65.3	66.9	67.7	68.5
CY	15.3	56.8	55.8	59.3	61.9	64.2	65.7	65.6	66.7	68.5	70.5	72.1
LV	-1.0	73.9	71.7	73.6	72.1	71.5	72.2	70.5	69.7	72.9	73.5	73.0
LT	0.1	75.6	74.1	75.3	73.7	73.7	73.9	73.2	73.3	74.2	75.4	75.7
LU	13.3	40.1	42.5	46.8	49.1	50.2	51.7	52.2	52.0	51.5	52.7	53.3
HU	16.5	57.8	62.5	65.7	68.1	68.5	73.1	74.7	73.5	74.4	75.1	74.3
MT	28.4	43.0	48.1	59.4	66.0	69.3	71.4	72.2	70.9	70.5	70.9	71.4
NL	13.9	68.5	68.0	67.2	68.9	71.8	73.4	75.5	77.9	80.3	81.3	82.4
AT	19.7	50.4	52.3	58.1	63.5	66.9	67.9	69.2	69.3	69.8	70.1	70.1
PL	6.5	45.8	48.3	51.8	52.7	52.0	50.6	50.4	49.8	51.2	54.2	52.3
PT	13.4	64.9	64.6	67.4	70.4	71.0	72.1	73.6	75.4	76.8	77.4	78.3
RO	17.4	37.6	47.8	50.0	56.1	56.9	56.8	53.8	54.0	55.2	55.9	55.0
SI	21.7	52.9	57.2	61.9	67.7	71.4	72.8	72.6	73.4	74.1	75.0	74.5
SK	19.2	64.4	61.2	64.2	65.6	66.2	69.8	73.1	75.5	78.7	81.8	83.6
FI	8.9	77.1	72.8	70.2	71.9	74.5	77.6	80.1	81.1	82.8	84.6	86.0
SE	5.2	79.4	77.6	77.9	78.1	80.3	80.6	80.4	81.7	83.0	83.3	84.6
NO	2.8	70.0	68.2	66.8	66.4	68.2	69.0	69.7	71.3	72.4	72.9	72.8
EA	18.2	59.4	63.8	68.5	70.3	71.5	73.2	73.7	72.9	73.4	75.1	77.6
EU	13.5	59.1	60.4	63.7	66.3	67.5	68.3	69.3	70.7	72.0	72.6	72.6

Table II.1.38: Participation rate oldest (65-74y) - female

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	7.1	3.2	4.5	7.8	9.2	9.5	10.2	10.2	10.2	10.2	10.1	10.2
BG	1.7	7.9	9.2	7.8	7.4	8.4	8.7	8.7	9.2	8.4	8.8	9.6
CZ	0.3	8.6	6.6	5.9	7.4	9.5	9.0	8.2	8.7	8.4	8.1	8.9
DK	26.2	9.2	11.5	14.2	17.4	21.8	23.6	25.2	29.8	32.8	34.1	35.4
DE	3.3	11.3	11.1	11.4	11.6	11.5	13.0	13.7	14.1	13.8	14.4	14.6
EE	4.7	27.7	22.6	18.3	19.0	20.4	21.8	25.0	27.4	26.4	28.1	32.5
IE	9.0	6.3	10.4	13.1	13.2	14.2	15.0	13.9	13.4	14.1	15.3	15.3
EL	15.8	6.0	7.5	7.0	10.3	12.1	13.9	15.0	15.4	17.8	19.6	21.7
ES	13.5	5.3	8.1	11.6	13.8	16.7	18.2	17.3	17.6	18.0	18.5	18.8
FR	4.9	5.4	6.2	7.0	7.6	8.5	9.2	9.7	9.7	9.6	10.1	10.3
HR	6.9	3.3	5.2	6.3	7.6	8.8	10.0	10.0	9.9	10.1	10.6	10.3
IT	24.8	6.0	7.9	11.3	14.1	16.7	17.9	19.6	21.8	24.7	27.8	30.8
CY	11.5	9.5	10.2	9.5	10.5	12.1	14.2	16.0	17.3	18.2	19.4	21.0
LV	-9.7	20.5	14.7	10.7	10.2	10.8	10.1	10.6	10.5	9.4	9.1	10.8
LT	-6.8	18.9	15.7	13.1	13.0	12.9	12.5	13.2	13.3	12.2	12.0	12.2
LU	0.7	3.8	3.0	3.1	3.3	3.6	3.7	3.9	4.1	4.3	4.4	4.5
HU	4.3	7.3	6.8	7.8	9.5	10.3	10.7	10.5	11.5	11.7	11.3	11.6
MT	2.9	5.4	4.1	5.0	6.1	7.9	8.6	8.9	9.3	9.0	8.5	8.4
NL	18.3	11.6	14.5	17.0	17.4	17.6	19.4	21.9	23.8	25.6	27.9	29.9
AT	1.9	6.0	4.7	4.8	5.6	6.5	7.1	7.8	7.9	7.9	7.8	7.9
PL	0.4	6.0	5.5	5.6	6.1	6.7	6.8	6.6	6.3	6.2	6.1	6.4
PT	14.4	9.6	12.6	15.0	15.6	17.7	18.4	18.4	19.5	21.4	23.2	24.0
RO	7.4	2.3	2.6	4.4	6.9	8.6	10.0	9.4	9.9	8.6	9.2	9.7
SI	1.4	5.1	4.6	6.0	6.0	5.6	6.2	6.2	6.1	6.0	6.2	6.4
SK	12.0	5.9	5.9	6.9	7.3	8.9	9.8	10.7	12.5	13.8	15.2	18.0
FI	14.6	11.0	9.6	8.9	9.1	10.3	13.0	15.3	17.6	20.2	21.9	25.6
SE	12.6	16.2	16.1	19.6	19.5	22.2	23.3	24.2	27.7	28.2	26.8	28.7
NO	1.1	17.0	16.8	15.3	15.3	14.9	14.9	16.0	16.6	16.9	17.5	18.1
EA	10.9	7.0	7.9	9.9	12.1	13.7	14.8	15.1	15.8	16.4	17.1	18.0
EU	9.6	7.5	8.3	9.8	11.2	12.4	13.3	13.6	14.3	15.0	16.1	17.1

Table II.1.39: Participation rate (20-64y) - male

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.6	80.3	81.0	81.2	82.0	82.6	82.8	82.8	82.8	82.9	82.9	82.9
BG	0.9	83.2	81.9	81.7	81.7	81.9	82.6	83.0	83.9	84.5	84.4	84.1
CZ	-2.5	90.2	88.7	88.1	87.7	87.2	87.7	87.9	88.0	88.4	88.1	87.7
DK	3.1	86.3	86.5	86.8	87.5	88.0	88.2	88.3	88.5	88.8	89.1	89.3
DE	0.0	87.4	86.8	86.9	87.4	87.4	87.1	87.0	87.2	87.3	87.5	87.4
EE	3.1	88.5	87.8	88.0	88.3	88.8	89.2	89.6	90.4	91.0	91.3	91.6
IE	0.6	87.5	87.5	87.3	87.6	88.0	88.6	89.0	89.0	88.7	88.4	88.1
EL	1.3	84.3	83.8	83.1	83.7	83.9	84.5	85.1	85.2	85.3	85.4	85.6
ES	0.3	84.2	84.0	84.2	84.6	85.0	85.3	85.3	85.1	84.9	84.6	84.6
FR	3.0	82.9	83.2	84.3	85.1	85.9	86.0	86.1	86.1	86.1	85.9	86.0
HR	3.7	79.4	81.0	82.0	83.1	83.3	83.3	83.7	83.7	83.3	83.4	83.1
IT	3.5	80.4	80.5	80.3	80.8	81.8	82.7	83.1	83.2	83.3	83.5	83.8
CY	1.1	89.0	89.0	88.9	89.1	89.1	88.7	88.6	89.0	89.6	90.0	90.2
LV	0.7	85.6	85.4	86.0	86.0	86.2	86.2	86.0	86.4	87.1	86.8	86.3
LT	1.2	85.0	85.1	85.4	85.9	86.3	86.2	85.9	86.1	86.4	86.5	86.3
LU	-2.6	80.9	80.8	79.6	79.3	78.9	78.3	77.6	77.3	77.6	78.1	78.3
HU	0.6	88.4	88.6	88.7	88.7	88.4	88.9	88.9	88.9	89.1	89.1	89.0
MT	-1.1	90.0	90.9	91.7	91.4	90.7	90.0	89.1	88.3	88.4	88.8	88.9
NL	2.9	89.3	89.2	89.5	90.1	90.6	90.8	90.9	91.1	91.5	91.8	92.2
AT	1.0	85.3	84.8	84.9	85.9	86.3	86.1	86.1	86.0	86.2	86.4	86.3
PL	-1.3	85.8	85.9	85.4	84.9	84.2	84.0	84.3	84.7	85.0	85.0	84.5
PT	1.8	85.3	85.4	85.3	85.5	85.6	85.9	86.2	86.3	86.4	86.7	87.1
RO	0.3	82.3	82.6	81.2	81.4	81.5	82.3	82.4	83.3	83.4	83.1	82.6
SI	3.3	84.6	85.2	85.3	85.9	86.8	87.7	88.2	88.4	88.3	88.2	87.9
SK	0.2	85.8	85.4	84.7	83.9	83.2	83.5	84.1	84.8	85.5	85.8	86.0
FI	0.0	84.7	83.8	82.9	83.1	83.6	83.8	83.8	83.8	84.2	84.5	84.7
SE	0.8	90.5	90.2	90.5	90.6	91.1	91.1	90.9	91.1	91.3	91.2	91.2
NO	-0.5	86.0	85.7	85.2	85.4	85.7	85.7	85.7	85.6	85.6	85.6	85.5
EA	2.7	85.1	86.0	86.5	86.7	87.1	87.0	87.1	86.8	87.1	87.4	87.8
EU	1.3	84.8	84.7	84.7	85.2	85.5	85.7	85.8	86.0	86.1	86.1	86.1

Table II.1.40: Participation rate (20-74y) - male

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.7	69.8	69.7	69.4	70.0	70.9	71.3	71.3	70.9	70.6	70.5	70.4
BG	-1.0	72.9	71.9	70.9	70.2	69.1	68.3	68.0	68.3	69.4	71.4	72.0
CZ	-2.9	78.4	77.2	76.7	76.1	74.1	72.5	72.8	73.7	74.1	75.0	75.4
DK	2.5	76.9	76.3	75.8	75.9	76.8	78.0	79.2	79.8	79.4	79.0	79.5
DE	-2.2	77.1	75.5	73.7	73.3	74.7	76.2	75.7	74.8	74.5	74.7	75.0
EE	0.9	80.8	78.8	77.8	78.1	78.3	78.2	78.2	77.8	78.1	80.3	81.8
IE	-3.6	79.1	78.6	77.7	77.5	77.0	76.3	76.0	76.6	77.0	76.5	75.5
EL	2.0	73.3	72.6	70.9	70.2	69.6	69.6	70.3	72.0	74.0	75.0	75.4
ES	-1.0	73.8	73.4	73.1	72.7	72.3	71.8	72.1	73.4	73.9	73.5	72.8
FR	1.3	71.0	71.0	71.4	72.0	72.5	72.9	73.2	73.0	73.1	72.9	72.3
HR	1.4	67.0	68.1	69.1	70.3	70.6	70.2	69.7	69.6	69.5	69.0	68.4
IT	4.4	69.7	69.6	69.0	68.4	68.8	70.1	71.8	73.0	73.5	73.8	74.1
CY	-1.1	80.4	79.5	78.2	78.1	78.7	78.7	78.3	77.5	77.3	78.0	79.2
LV	-3.6	77.8	75.7	74.1	73.9	73.7	73.0	71.7	69.8	70.3	73.1	74.2
LT	-6.3	77.3	75.9	74.0	73.9	74.3	74.0	72.7	70.8	69.4	69.8	71.0
LU	-8.6	73.0	72.2	70.1	68.8	68.2	67.5	66.3	65.2	64.3	64.1	64.4
HU	-1.8	77.5	77.7	78.6	78.0	75.8	74.4	74.7	75.5	75.0	75.2	75.7
MT	-8.8	80.1	80.7	81.6	82.2	81.3	79.1	76.5	73.7	71.4	70.7	71.4
NL	1.4	78.9	78.0	77.1	77.0	77.9	79.5	80.4	80.4	80.2	80.2	80.4
AT	-2.8	75.5	74.2	72.4	71.9	72.9	73.9	73.5	72.6	72.2	72.3	72.7
PL	-2.9	75.1	74.8	74.8	75.1	73.8	71.7	69.9	69.4	70.1	71.4	72.2
PT	0.3	74.5	73.8	73.1	72.6	72.1	71.7	72.3	73.7	74.5	74.6	74.8
RO	-0.1	70.9	71.4	71.4	70.6	68.6	68.7	68.6	69.2	69.8	71.1	70.8
SI	0.9	72.9	72.6	72.3	72.6	72.9	72.5	72.0	72.5	73.3	73.9	73.8
SK	0.1	75.3	74.4	73.7	73.1	71.7	70.2	69.7	70.4	71.6	73.5	75.4
FI	0.1	73.1	72.6	71.8	72.0	73.0	73.4	72.7	72.3	72.2	72.4	73.2
SE	0.6	80.7	79.8	79.8	79.5	80.3	80.8	80.7	80.7	80.1	80.3	81.3
NO	-3.8	77.8	76.7	75.4	74.9	74.8	75.2	75.4	74.9	74.3	74.1	74.0
EA	1.8	73.0	72.9	72.9	73.6	74.4	74.7	74.6	74.5	74.6	74.7	74.9
EU	0.0	74.1	73.5	72.9	72.7	72.9	73.2	73.3	73.5	73.7	74.0	74.1

Table II.1.41: Participation rate young (20-24y) - male

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.8	51.1	54.3	54.6	55.0	55.1	54.9	54.8	54.8	54.7	54.8	54.9
BG	1.1	48.9	49.7	49.4	50.0	50.2	50.2	50.0	49.8	49.8	49.9	50.0
CZ	2.4	58.9	60.8	60.8	61.3	61.3	61.4	61.5	61.2	61.0	61.2	61.3
DK	3.1	76.7	79.5	79.8	79.9	79.8	79.8	79.8	79.8	79.8	79.8	79.8
DE	0.6	76.1	76.9	76.8	76.7	76.8	76.8	76.8	76.8	76.8	76.7	76.7
EE	5.0	72.3	76.6	76.9	77.5	77.5	77.3	77.5	77.1	77.0	77.2	77.3
IE	1.5	76.5	77.7	77.6	78.1	78.1	78.1	77.8	77.7	77.8	77.9	78.0
EL	3.3	49.8	52.4	52.7	53.3	53.1	53.1	53.0	52.9	52.9	53.0	53.1
ES	1.1	57.9	58.5	58.8	59.1	59.5	59.0	58.8	58.7	58.7	58.9	59.0
FR	2.7	69.1	71.5	71.6	71.8	71.9	71.5	71.6	71.6	71.7	71.7	71.8
HR	7.0	61.9	68.8	68.8	69.0	68.8	69.1	68.9	68.9	68.9	68.9	68.9
IT	0.3	52.1	52.1	52.3	52.5	52.6	52.4	52.3	52.2	52.3	52.3	52.4
CY	5.2	72.3	77.7	77.3	77.5	77.5	77.4	77.6	77.6	77.5	77.5	77.4
LV	4.3	73.4	76.9	77.4	76.3	78.4	77.9	77.8	77.3	77.1	77.3	77.6
LT	2.4	64.0	66.4	65.2	66.0	67.1	65.7	66.7	66.5	66.1	66.2	66.4
LU	7.5	44.8	52.6	52.4	52.4	52.5	52.1	52.3	52.4	52.4	52.3	52.3
HU	3.0	59.4	62.4	62.7	62.3	62.5	62.5	62.6	62.5	62.5	62.5	62.5
MT	0.0	80.7	81.3	81.0	80.8	81.1	80.7	80.8	80.8	80.8	80.7	80.7
NL	5.1	84.8	89.0	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9	89.9
AT	-0.1	78.8	78.7	78.8	78.7	78.8	78.8	78.8	78.8	78.8	78.7	78.7
PL	0.4	65.4	65.8	65.1	66.0	65.9	65.9	66.1	65.8	65.6	65.7	65.9
PT	0.2	57.3	57.5	57.4	57.7	57.5	57.1	57.3	57.3	57.4	57.4	57.4
RO	0.8	54.6	54.6	54.9	55.3	55.4	55.1	55.3	55.2	55.2	55.3	55.4
SI	2.9	61.3	64.2	63.4	64.3	64.4	64.5	64.2	64.0	63.9	64.1	64.2
SK	1.4	58.8	60.1	59.9	60.1	60.2	60.4	60.4	60.2	60.1	60.1	60.2
FI	2.9	70.7	73.4	73.5	73.6	73.8	73.6	73.6	73.6	73.6	73.6	73.6
SE	2.3	76.8	78.7	79.0	79.1	79.1	79.1	79.1	79.1	79.1	79.1	79.1
NO	3.3	75.3	78.5	78.4	78.6	78.6	78.5	78.5	78.5	78.5	78.5	78.5
EA	5.9	64.2	66.1	69.6	71.8	71.3	69.2	68.5	68.0	68.7	69.7	70.1
EU	2.0	65.6	66.8	66.6	67.1	67.5	67.7	67.8	67.6	67.5	67.5	67.6

Table II.1.42: Participation rate prime-age (25-54y) - male

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.8	90.2	90.2	90.5	90.5	90.8	90.9	91.0	91.0	90.9	90.9	91.0
BG	3.6	89.1	89.9	90.8	91.4	91.9	92.4	92.7	92.8	92.8	92.7	92.7
CZ	-0.7	96.2	96.0	95.7	95.6	95.6	95.6	95.7	95.7	95.6	95.6	95.6
DK	1.1	90.1	90.3	90.5	90.6	90.8	90.9	91.0	91.2	91.2	91.3	91.3
DE	-0.2	92.2	92.0	91.9	91.8	91.6	91.8	91.9	92.0	92.1	92.0	92.0
EE	0.8	93.9	93.9	93.9	94.1	94.3	94.7	94.8	94.7	94.7	94.7	94.8
IE	2.6	92.0	92.5	93.2	93.8	94.2	94.6	94.8	94.8	94.6	94.6	94.6
EL	-2.4	93.2	92.9	92.0	91.3	91.0	90.9	90.9	90.9	90.8	90.8	90.8
ES	-1.4	91.6	91.5	91.0	90.4	90.1	90.2	90.3	90.2	90.1	90.1	90.2
FR	-0.6	92.3	92.1	91.7	91.5	91.5	91.6	91.7	91.6	91.6	91.7	91.7
HR	2.3	89.3	90.3	91.1	91.2	91.5	91.7	91.7	91.7	91.6	91.6	91.6
IT	-0.4	88.6	88.3	88.0	87.8	88.0	88.3	88.4	88.4	88.3	88.2	88.1
CY	0.8	94.3	94.7	94.9	94.8	94.7	94.8	95.0	95.1	95.1	95.1	95.1
LV	0.9	90.9	91.2	91.5	91.5	91.3	91.7	92.2	92.1	91.9	91.8	91.8
LT	2.2	91.1	92.0	92.8	92.8	92.9	93.3	93.5	93.6	93.5	93.3	93.3
LU	-2.0	92.7	91.9	91.3	90.7	90.4	90.2	90.3	90.4	90.5	90.6	90.6
HU	1.3	94.3	94.7	95.1	95.4	95.5	95.5	95.6	95.6	95.6	95.6	95.6
MT	0.2	96.3	96.8	96.7	96.6	96.5	96.4	96.4	96.5	96.5	96.5	96.5
NL	2.0	92.6	92.8	93.4	93.6	93.8	94.0	94.3	94.5	94.6	94.6	94.6
AT	0.8	92.6	93.1	93.2	93.2	93.2	93.4	93.4	93.5	93.5	93.4	93.4
PL	0.2	92.2	92.4	92.3	92.0	92.2	92.4	92.7	92.7	92.5	92.4	92.4
PT	-0.5	93.2	93.2	93.1	92.9	92.8	92.7	92.7	92.7	92.7	92.7	92.7
RO	1.4	91.3	91.7	91.9	92.1	92.4	92.7	92.9	92.8	92.7	92.7	92.7
SI	0.1	95.0	94.7	94.4	94.5	94.8	95.1	95.3	95.2	95.1	95.1	95.1
SK	-1.8	93.3	93.2	92.9	92.1	91.6	91.5	91.6	91.6	91.6	91.5	91.5
FI	-1.3	89.4	89.2	88.8	88.4	88.1	88.0	88.0	88.0	88.0	88.0	88.0
SE	0.1	94.1	94.3	94.4	94.3	94.2	94.2	94.3	94.3	94.3	94.2	94.2
NO	1.7	89.2	89.7	90.0	90.2	90.6	90.9	90.9	90.8	90.8	90.8	90.9
EA	-1.3	93.6	93.3	92.0	91.6	92.3	92.6	93.1	93.2	93.4	93.0	92.4
EU	0.0	91.8	91.7	91.6	91.4	91.4	91.6	91.7	91.7	91.7	91.7	91.7

Table II.1.43: Participation rate older (55-64y) - male

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	8.3	64.2	66.1	66.4	68.6	69.6	69.7	70.4	70.8	71.6	72.4	72.5
BG	-0.9	76.4	68.8	69.4	70.3	70.3	71.4	71.1	72.1	74.8	75.6	75.5
CZ	-3.9	80.7	74.8	77.5	78.0	75.9	76.9	76.7	75.5	77.1	77.9	76.9
DK	8.2	79.6	78.6	79.2	81.1	82.4	83.5	84.3	84.9	85.9	86.9	87.8
DE	-1.1	79.5	77.3	76.2	77.9	79.0	78.2	77.3	77.6	77.7	78.1	78.4
EE	13.5	75.7	71.1	74.2	75.7	78.0	80.0	80.9	83.1	85.9	87.8	89.2
IE	-1.8	77.6	75.1	74.0	74.0	74.3	74.1	74.7	75.9	76.3	76.5	75.9
EL	14.0	71.1	71.1	73.7	77.6	79.1	80.8	82.0	82.5	83.7	84.7	85.1
ES	7.9	72.1	72.8	77.3	80.2	80.7	80.2	79.9	80.1	80.5	80.4	80.0
FR	14.3	62.1	63.3	69.4	72.9	75.0	75.7	75.7	76.3	76.8	76.5	76.4
HR	7.8	58.8	58.8	60.6	65.5	66.5	65.5	66.1	67.2	66.5	67.2	66.6
IT	14.9	68.7	71.0	72.4	73.6	75.0	76.5	78.0	79.6	81.1	82.4	83.6
CY	0.7	79.6	74.0	72.0	73.6	75.0	75.4	75.7	76.3	77.4	79.0	80.3
LV	2.6	73.4	70.4	73.3	75.0	76.5	76.6	74.4	73.0	75.7	76.5	76.0
LT	0.7	75.0	70.7	70.6	72.5	74.5	75.2	74.7	74.5	74.7	75.4	75.7
LU	-3.0	56.2	54.5	50.2	50.1	50.8	51.5	51.3	51.1	51.3	52.3	53.2
HU	1.6	79.6	78.7	80.5	80.9	79.7	81.2	81.5	80.8	81.2	81.6	81.2
MT	5.1	67.0	67.0	72.0	74.0	73.7	74.0	73.5	71.9	71.1	71.8	72.1
NL	3.8	82.1	79.2	77.9	78.1	79.6	80.6	81.4	82.1	83.7	84.8	85.9
AT	1.6	67.1	65.0	63.9	66.0	68.2	68.1	68.5	68.0	68.2	68.7	68.7
PL	-0.1	71.1	69.6	71.2	72.2	71.5	70.4	69.9	69.7	70.4	71.8	71.0
PT	8.8	74.3	74.9	75.3	76.9	77.5	78.4	79.5	80.5	81.4	82.1	83.0
RO	5.8	60.8	65.5	63.9	65.1	64.7	66.5	65.0	66.2	67.2	67.9	66.6
SI	16.8	61.7	64.2	68.3	71.9	74.8	76.6	76.7	77.8	77.9	78.8	78.4
SK	12.0	69.9	67.7	68.8	71.7	72.5	73.4	74.3	75.5	78.0	80.4	82.0
FI	3.3	77.0	71.7	67.7	70.2	73.6	75.6	76.0	76.3	77.8	79.2	80.3
SE	3.3	84.9	82.4	84.1	84.7	86.8	86.9	86.6	87.1	87.6	87.8	88.2
NO	-7.3	80.7	76.1	73.6	72.8	72.2	72.0	72.8	73.3	73.4	73.7	73.5
EA	11.7	70.6	74.4	77.8	78.5	78.1	78.0	77.3	76.6	77.3	79.3	82.3
EU	6.3	72.1	71.7	73.2	75.0	75.9	76.2	76.3	76.9	77.8	78.3	78.4

Table II.1.44: Participation rate oldest (65-74y) - male

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.2	7.9	6.0	8.5	10.1	10.4	11.2	10.9	11.1	11.0	10.9	11.0
BG	-2.4	15.7	16.5	12.9	12.3	12.8	12.6	12.3	12.7	11.9	12.2	13.4
CZ	-3.7	13.2	10.0	8.6	9.2	10.3	9.6	8.8	9.3	9.1	8.7	9.4
DK	12.5	24.0	18.5	18.0	19.8	22.7	25.8	28.9	33.9	36.1	36.1	36.4
DE	-1.4	18.0	15.5	14.7	14.5	14.0	15.8	16.5	16.6	16.1	16.6	16.6
EE	4.0	30.0	21.1	16.0	17.2	20.7	23.3	27.2	29.4	28.1	29.9	34.0
IE	-3.0	20.9	19.5	17.4	17.7	17.8	17.8	17.1	16.6	17.2	17.9	17.9
EL	13.9	13.2	14.8	13.2	14.0	16.0	17.7	18.9	19.7	22.2	24.1	27.1
ES	14.8	7.6	11.2	16.3	18.8	21.3	21.9	20.4	20.7	21.5	22.0	22.3
FR	2.2	8.4	7.0	6.9	8.2	9.4	9.8	10.3	10.3	10.1	10.6	10.5
HR	2.8	6.9	7.7	8.7	8.6	9.2	10.1	10.0	9.6	9.8	10.1	9.7
IT	22.1	13.1	13.5	18.5	19.6	20.5	21.5	23.6	26.6	29.3	32.4	35.2
CY	2.1	24.0	19.1	16.6	15.5	16.8	18.9	21.1	22.5	23.5	24.3	26.1
LV	-15.1	26.4	17.6	11.1	10.5	11.2	11.1	11.8	11.5	10.2	9.8	11.3
LT	-10.3	23.1	18.6	13.9	12.9	12.9	13.5	14.3	14.2	13.2	12.8	12.8
LU	-3.3	7.5	5.2	5.5	5.0	4.5	4.4	4.5	4.5	4.4	4.3	4.2
HU	-1.4	12.9	12.5	11.3	12.1	12.4	11.9	11.1	11.7	11.8	11.3	11.6
MT	-8.0	16.9	11.0	8.3	8.5	9.7	9.9	9.9	10.0	9.7	9.1	8.9
NL	7.6	22.6	18.0	16.6	17.0	17.0	19.3	22.6	25.5	27.2	28.7	30.2
AT	-0.2	11.0	10.2	10.9	10.2	9.9	10.4	11.0	10.9	10.9	10.7	10.8
PL	0.2	13.4	14.4	13.7	13.9	15.0	15.0	14.5	13.7	13.4	13.2	13.6
PT	6.3	20.0	16.9	17.5	17.8	19.3	20.0	20.3	21.8	23.7	25.5	26.3
RO	7.4	5.0	8.0	10.0	12.7	11.7	12.1	11.5	12.3	11.2	11.9	12.4
SI	-3.2	9.9	7.9	7.1	6.8	6.4	6.7	6.6	6.5	6.5	6.8	6.8
SK	13.5	8.3	8.0	9.6	10.0	11.8	13.5	14.6	16.1	17.3	18.8	21.8
FI	7.8	17.0	16.2	15.9	15.0	15.5	18.3	20.3	21.4	22.5	22.9	24.8
SE	6.0	24.5	17.9	18.1	18.4	21.5	22.5	23.4	27.9	28.5	27.3	30.6
NO	-5.3	27.6	23.2	19.8	19.0	18.8	19.0	19.7	20.7	21.2	21.7	22.3
EA	8.0	12.1	11.1	13.1	15.2	16.5	17.3	17.4	18.0	18.4	19.2	20.1
EU	6.3	13.4	12.7	13.7	14.6	15.5	16.3	16.6	17.3	17.8	18.8	19.8

Table II.1.45: Average labour market exit age (Total)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.7	62.8	63.4	64.1	64.1	64.2	64.2	64.3	64.3	64.4	64.4	64.5
BG	1.3	63.0	63.2	63.6	63.9	64.0	64.1	64.1	64.2	64.2	64.3	64.3
CZ	1.8	62.2	62.7	63.8	63.9	64.0	64.0	64.0	64.0	64.0	64.0	64.0
DK	4.1	64.9	64.9	65.6	66.2	66.8	67.2	67.7	68.2	68.5	68.7	69.0
DE	1.2	64.2	64.4	64.9	65.1	65.1	65.2	65.2	65.3	65.4	65.4	65.5
EE	4.6	63.8	64.1	64.6	65.2	65.8	66.5	67.0	67.4	67.7	68.0	68.4
IE	0.7	64.2	64.5	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8
EL	3.7	63.8	64.0	64.6	65.1	65.6	66.1	66.4	66.6	66.9	67.2	67.5
ES	2.4	64.0	64.7	65.6	66.0	66.4	66.4	66.4	66.4	66.4	66.4	66.4
FR	2.2	62.6	63.0	63.8	64.2	64.6	64.8	64.8	64.8	64.8	64.8	64.8
HR	0.8	62.9	63.1	63.4	63.5	63.7	63.7	63.7	63.7	63.7	63.7	63.7
IT	4.5	64.2	65.0	65.4	65.8	66.2	66.5	66.9	67.3	67.8	68.3	68.8
CY	3.0	63.7	63.8	64.0	64.3	64.6	64.9	65.2	65.6	65.9	66.3	66.7
LV	0.7	64.2	64.6	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
LT	0.7	64.1	64.5	64.8	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
LU	0.8	60.7	60.8	60.8	60.9	61.0	61.1	61.2	61.2	61.3	61.4	61.5
HU	0.7	63.6	63.7	63.9	64.1	64.3	64.3	64.3	64.3	64.3	64.3	64.3
MT	0.6	63.0	63.2	63.5	63.5	63.6	63.6	63.6	63.6	63.6	63.6	63.6
NL	2.9	64.9	65.0	65.3	65.6	65.9	66.2	66.6	66.9	67.2	67.5	67.8
AT	1.3	62.2	62.5	63.0	63.2	63.4	63.5	63.5	63.5	63.5	63.5	63.5
PL	0.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0
PT	2.3	64.4	64.5	64.8	65.0	65.2	65.4	65.7	65.9	66.2	66.4	66.7
RO	1.2	62.8	62.9	63.2	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
SI	1.7	62.3	62.5	63.0	63.5	64.0	64.0	64.0	64.0	64.0	64.0	64.0
SK	4.0	62.4	62.6	63.2	63.4	63.8	64.3	64.8	65.2	65.6	66.0	66.4
FI	4.0	63.4	63.7	63.9	64.5	65.2	65.5	65.8	66.2	66.6	67.0	67.4
SE	2.9	65.0	65.0	65.8	65.8	66.4	66.4	66.4	67.1	67.1	67.1	67.9
NO	0.6	65.0	65.0	65.1	65.1	65.2	65.3	65.3	65.4	65.5	65.5	65.6
EA	2.4	63.8	64.2	64.8	65.1	65.3	65.4	65.6	65.7	65.9	66.0	66.1
EU	2.1	63.6	64.0	64.5	64.8	65.0	65.1	65.2	65.4	65.6	65.7	65.8

Table II.1.46: Average labour market exit age (Male)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.0	62.5	63.3	64.0	64.1	64.2	64.2	64.3	64.3	64.4	64.4	64.5
BG	1.0	63.5	63.6	64.0	64.1	64.1	64.2	64.2	64.3	64.3	64.4	64.4
CZ	1.3	62.6	63.0	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9
DK	3.7	65.3	65.3	65.8	66.4	66.9	67.3	67.8	68.3	68.6	68.7	69.0
DE	1.1	64.4	64.6	65.1	65.2	65.2	65.3	65.3	65.3	65.4	65.4	65.5
EE	4.8	63.6	64.0	64.6	65.2	65.8	66.4	67.0	67.3	67.7	68.1	68.4
IE	0.6	64.3	64.5	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8
EL	3.7	63.8	64.1	64.6	65.1	65.6	66.2	66.4	66.7	66.9	67.2	67.5
ES	2.5	64.0	64.6	65.6	66.0	66.4	66.4	66.4	66.4	66.4	66.4	66.4
FR	2.4	62.4	62.9	63.7	64.2	64.6	64.8	64.8	64.8	64.8	64.8	64.8
HR	0.4	63.3	63.4	63.6	63.7	63.7	63.7	63.7	63.7	63.7	63.7	63.7
IT	4.6	64.0	64.8	65.2	65.6	66.0	66.3	66.7	67.2	67.6	68.1	68.6
CY	2.7	64.0	64.0	64.3	64.5	64.8	65.1	65.4	65.7	66.0	66.3	66.7
LV	0.7	64.2	64.6	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
LT	0.7	64.1	64.5	64.8	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
LU	1.0	60.6	60.6	60.7	60.8	61.0	61.1	61.2	61.3	61.3	61.4	61.5
HU	0.2	64.4	64.5	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6
MT	0.7	62.9	63.1	63.4	63.5	63.6	63.6	63.6	63.6	63.6	63.6	63.6
NL	2.8	65.0	65.1	65.4	65.6	65.9	66.2	66.6	66.9	67.3	67.6	67.8
AT	0.5	63.0	63.1	63.2	63.3	63.4	63.6	63.6	63.6	63.6	63.6	63.6
PL	0.0	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5	64.5
PT	2.3	64.6	64.7	64.9	65.2	65.4	65.6	65.8	66.1	66.4	66.6	66.9
RO	0.5	63.2	63.2	63.4	63.5	63.6	63.6	63.6	63.6	63.6	63.6	63.6
SI	1.6	62.4	62.6	63.0	63.5	64.0	64.0	64.0	64.0	64.0	64.0	64.0
SK	4.0	62.8	63.0	63.6	63.7	64.2	64.7	65.2	65.5	65.9	66.4	66.8
FI	3.8	63.7	63.9	64.2	64.9	65.6	65.9	66.2	66.5	66.8	67.1	67.4
SE	2.9	65.0	65.0	65.8	65.8	66.4	66.4	66.4	67.2	67.2	67.2	67.9
NO	0.6	65.0	65.0	65.1	65.1	65.2	65.2	65.3	65.4	65.5	65.5	65.6
EA	2.4	63.8	64.2	64.8	65.1	65.3	65.4	65.6	65.7	65.9	66.0	66.1
EU	2.1	63.8	64.2	64.7	64.9	65.1	65.2	65.4	65.5	65.7	65.8	65.9

Table II.1.47: Average labour market exit age (Female)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.4	63.0	63.6	64.1	64.2	64.2	64.2	64.3	64.3	64.4	64.4	64.4
BG	1.7	62.5	62.7	63.2	63.7	63.9	64.0	64.0	64.0	64.1	64.1	64.2
CZ	2.2	61.7	62.3	63.7	63.9	64.0	64.0	64.0	64.0	64.0	64.0	64.0
DK	4.4	64.5	64.6	65.4	66.1	66.6	67.0	67.5	68.1	68.4	68.7	69.0
DE	1.4	64.0	64.3	64.8	65.0	65.1	65.1	65.2	65.3	65.3	65.4	65.5
EE	4.5	63.9	64.1	64.7	65.3	65.9	66.5	67.1	67.4	67.7	68.0	68.4
IE	0.8	64.1	64.4	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8
EL	3.8	63.7	64.0	64.6	65.1	65.5	66.1	66.3	66.6	66.9	67.2	67.5
ES	2.3	64.0	64.7	65.6	66.0	66.4	66.4	66.4	66.4	66.4	66.4	66.4
FR	2.1	62.7	63.1	63.8	64.2	64.6	64.8	64.8	64.8	64.8	64.8	64.8
HR	1.1	62.5	62.7	63.2	63.4	63.7	63.7	63.7	63.7	63.7	63.7	63.7
IT	4.5	64.5	65.2	65.6	66.0	66.3	66.7	67.1	67.5	68.0	68.5	69.0
CY	3.2	63.5	63.5	63.8	64.1	64.4	64.8	65.1	65.5	65.9	66.3	66.7
LV	0.7	64.2	64.6	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
LT	0.8	64.1	64.5	64.8	64.9	64.9	64.9	64.9	64.9	64.9	64.9	64.9
LU	0.6	60.9	60.9	61.0	61.0	61.0	61.1	61.1	61.2	61.3	61.4	61.5
HU	1.1	62.9	63.0	63.3	63.6	64.0	64.0	64.0	64.0	64.0	64.0	64.0
MT	0.5	63.1	63.3	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6
NL	3.0	64.8	64.9	65.2	65.5	65.9	66.2	66.6	66.9	67.2	67.5	67.8
AT	2.1	61.4	61.9	62.8	63.2	63.4	63.5	63.5	63.5	63.5	63.5	63.5
PL	0.0	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6	61.6
PT	2.3	64.2	64.3	64.7	64.9	65.1	65.3	65.5	65.7	66.0	66.2	66.4
RO	2.0	62.5	62.6	63.0	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4
SI	1.8	62.2	62.4	62.9	63.5	64.0	64.0	64.0	64.0	64.0	64.0	64.0
SK	4.0	62.1	62.3	62.8	63.0	63.5	64.0	64.5	64.9	65.3	65.7	66.1
FI	4.2	63.2	63.5	63.7	64.2	64.8	65.1	65.5	65.9	66.4	66.9	67.4
SE	2.9	65.0	65.0	65.7	65.7	66.4	66.4	66.4	67.1	67.1	67.1	67.9
NO	0.7	65.0	65.0	65.1	65.1	65.2	65.3	65.3	65.4	65.5	65.6	65.6
EA	2.4	63.7	64.2	64.8	65.1	65.3	65.4	65.6	65.7	65.9	66.0	66.1
EU	2.2	63.5	63.9	64.4	64.6	64.8	64.9	65.1	65.3	65.5	65.6	65.7

Table II.1.48: Employment rate (20-64y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.7	72.1	73.2	73.7	74.5	75.2	75.5	75.6	75.7	75.8	75.8	75.8
BG	0.8	75.8	75.0	74.4	74.2	74.5	75.2	75.5	76.3	77.0	76.8	76.6
CZ	-1.9	81.3	79.9	79.7	79.6	78.8	79.1	79.2	79.5	79.9	79.8	79.4
DK	4.6	80.2	80.4	81.5	82.4	82.9	83.2	83.5	83.9	84.3	84.6	84.8
DE	1.2	80.7	80.3	80.4	81.0	81.3	81.2	81.2	81.5	81.7	81.9	81.9
EE	4.3	81.8	81.3	81.5	81.6	82.3	83.1	83.8	84.9	85.6	85.8	86.1
IE	3.1	78.2	79.1	79.4	79.8	80.3	80.9	81.7	82.0	81.8	81.5	81.3
EL	8.6	66.1	67.5	68.7	69.9	71.1	72.5	73.9	74.3	74.4	74.5	74.7
ES	6.8	69.6	70.7	72.0	73.0	74.5	75.9	76.8	76.8	76.6	76.4	76.4
FR	5.0	74.0	74.4	75.6	76.8	77.8	78.4	78.9	79.1	79.1	79.0	79.0
HR	6.1	70.0	72.5	73.7	74.7	75.3	75.6	76.3	76.5	76.2	76.3	76.1
IT	6.5	64.8	65.4	65.3	66.3	67.9	69.4	70.4	70.8	70.9	71.1	71.3
CY	3.3	77.5	78.1	77.4	77.7	78.2	78.4	78.9	79.4	80.1	80.6	80.8
LV	1.0	77.0	77.2	77.1	76.8	77.0	77.3	77.5	78.0	78.7	78.4	78.0
LT	0.8	79.1	78.9	79.1	78.8	79.2	79.2	79.1	79.4	79.9	80.0	79.8
LU	0.0	74.5	75.0	74.9	75.0	74.9	74.5	73.9	73.6	73.8	74.3	74.5
HU	3.3	80.3	81.4	82.3	82.3	82.3	83.3	83.5	83.4	83.7	83.8	83.6
MT	2.5	81.0	83.0	84.5	84.7	84.6	84.3	83.6	83.0	83.1	83.4	83.5
NL	4.8	82.9	82.9	83.6	84.6	85.5	85.9	86.2	86.6	87.0	87.3	87.7
AT	4.2	77.3	77.4	78.7	80.4	81.0	81.0	81.1	81.2	81.4	81.5	81.4
PL	0.1	76.9	77.9	78.0	77.1	76.1	75.9	76.3	76.9	77.6	77.7	76.9
PT	3.1	77.6	78.1	78.5	78.6	78.9	79.3	79.8	80.0	80.1	80.4	80.7
RO	0.5	68.3	69.5	67.9	68.3	68.2	68.7	68.6	69.3	69.4	69.2	68.8
SI	2.3	78.3	78.7	77.8	78.5	79.4	80.3	80.8	81.1	81.0	80.9	80.6
SK	2.9	76.8	77.7	77.3	76.5	76.0	76.6	77.5	78.4	79.2	79.6	79.7
FI	2.0	78.3	78.1	77.7	78.0	78.6	79.0	79.3	79.4	79.8	80.1	80.3
SE	1.9	82.3	82.0	83.0	83.2	83.6	83.7	83.6	83.9	84.1	84.1	84.2
NO	1.3	80.8	80.3	80.4	81.0	81.6	81.8	81.9	82.0	82.1	82.1	82.0
EA	4.6	74.1	74.5	75.0	75.9	76.9	77.6	78.1	78.4	78.5	78.5	78.6
EU	3.8	74.7	75.1	75.5	76.1	76.8	77.5	78.0	78.3	78.5	78.5	78.5

Table II.1.49: Employment rate (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.2	62.0	62.5	62.7	63.5	64.4	64.8	64.8	64.6	64.3	64.2	64.2
BG	0.4	64.4	64.1	63.1	62.4	61.7	61.0	60.9	61.2	62.2	64.2	64.8
CZ	-1.3	69.4	68.4	68.5	68.3	66.4	64.7	65.0	66.0	66.5	67.6	68.1
DK	5.0	70.1	70.3	70.6	71.0	71.9	73.1	74.4	75.1	74.9	74.7	75.2
DE	-0.4	70.3	69.1	67.4	67.1	68.7	70.2	70.0	69.3	69.1	69.5	69.9
EE	3.6	73.3	71.7	70.8	71.2	71.7	72.1	72.6	72.7	73.2	75.4	76.9
IE	-0.7	69.9	70.7	70.4	70.3	70.1	69.4	69.1	69.7	70.5	70.2	69.2
EL	8.4	56.8	57.7	57.7	57.8	58.1	59.0	60.2	61.9	63.8	64.8	65.2
ES	4.8	60.4	61.4	62.0	62.2	63.0	63.5	64.4	65.6	66.0	65.8	65.2
FR	3.5	62.7	62.9	63.6	64.5	65.3	66.1	66.5	66.4	66.6	66.7	66.2
HR	4.7	57.9	59.8	60.7	61.9	62.7	62.7	62.5	62.8	63.1	62.9	62.6
IT	7.8	55.6	56.0	55.5	55.6	56.7	58.4	60.4	61.7	62.4	62.9	63.3
CY	1.1	69.4	69.5	67.9	68.0	68.8	69.0	68.8	68.4	68.4	69.2	70.5
LV	-1.2	68.2	66.6	64.6	64.2	64.3	64.1	63.4	62.0	62.7	65.6	66.9
LT	-4.5	70.2	68.6	66.6	65.9	66.3	66.3	65.7	64.3	63.4	64.3	65.8
LU	-5.5	66.6	66.6	65.5	64.8	64.5	63.9	62.9	61.8	61.0	60.8	61.1
HU	2.4	68.4	69.4	71.3	71.1	69.4	68.6	69.1	70.1	70.0	70.3	70.8
MT	-3.4	70.8	72.5	74.2	75.4	75.3	73.8	71.7	69.3	67.3	66.7	67.4
NL	3.7	72.4	72.1	71.9	72.1	73.2	74.9	75.9	76.0	75.9	75.9	76.1
AT	0.6	67.5	66.8	66.1	66.4	67.6	68.7	68.6	67.8	67.6	67.8	68.1
PL	-0.7	65.7	66.1	66.6	66.8	65.5	63.3	61.8	61.6	62.8	64.2	65.0
PT	2.5	66.7	66.7	66.5	66.0	65.8	65.5	66.3	67.8	68.8	69.0	69.2
RO	1.5	57.3	58.3	58.3	58.0	56.5	56.6	56.6	57.1	57.7	59.0	58.8
SI	1.3	66.2	65.8	64.8	65.2	65.7	65.5	65.1	65.8	66.8	67.6	67.6
SK	3.3	66.1	66.4	66.1	65.6	64.6	63.5	63.4	64.3	65.6	67.6	69.5
FI	2.8	66.5	66.5	66.2	66.6	67.8	68.5	68.1	67.9	68.0	68.4	69.3
SE	2.4	72.6	72.3	73.1	72.8	73.6	74.1	74.2	74.2	73.8	74.0	75.0
NO	-1.7	72.3	71.4	70.8	70.6	70.7	71.3	71.6	71.2	70.7	70.6	70.6
EA	3.4	63.9	63.9	63.5	63.7	64.7	65.8	66.4	66.7	67.0	67.2	67.3
EU	2.9	64.3	64.4	64.2	64.3	64.8	65.5	65.9	66.3	66.6	67.0	67.2

Table II.1.50: Unemployment rate (20-64y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.3	5.3	5.3	5.4	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
BG	0.6	4.2	3.9	4.4	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
CZ	0.5	2.2	2.5	2.6	2.7	2.7	2.7	2.7	2.7	2.6	2.6	2.6
DK	-0.5	4.1	4.3	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
DE	0.8	3.1	3.0	3.5	3.8	3.8	3.8	3.8	3.9	3.8	3.8	3.8
EE	0.6	5.4	5.6	5.8	6.0	6.1	6.1	6.1	6.0	6.0	6.0	6.0
IE	1.2	4.2	4.1	4.8	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
EL	-5.8	12.4	10.9	9.9	9.4	8.5	7.5	6.6	6.5	6.5	6.5	6.5
ES	-6.2	12.6	11.3	10.7	10.4	9.1	7.8	6.6	6.4	6.4	6.4	6.4
FR	-0.7	7.0	7.0	7.1	6.9	6.7	6.5	6.3	6.3	6.3	6.3	6.3
HR	-0.3	6.6	5.6	6.2	6.6	6.5	6.4	6.3	6.3	6.3	6.3	6.3
IT	-1.5	8.0	7.9	9.1	8.8	8.1	7.3	6.5	6.4	6.4	6.4	6.4
CY	-0.6	6.8	6.5	7.8	7.8	7.3	6.7	6.3	6.2	6.2	6.2	6.2
LV	-0.5	6.9	6.3	6.8	7.1	6.9	6.7	6.5	6.5	6.4	6.4	6.5
LT	0.4	6.1	6.1	6.2	6.6	6.6	6.6	6.5	6.5	6.5	6.5	6.5
LU	1.0	4.0	4.6	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
HU	-0.1	3.5	3.4	3.1	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
MT	1.3	2.7	2.9	3.7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.0
NL	0.1	2.9	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
AT	-0.2	4.5	4.7	4.5	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
PL	0.1	2.9	2.6	2.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
PT	0.3	5.9	5.8	5.8	6.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2
RO	0.6	5.2	4.7	5.3	5.7	5.8	5.8	5.8	5.8	5.8	5.8	5.8
SI	1.8	3.9	4.3	5.6	5.6	5.7	5.7	5.7	5.7	5.6	5.6	5.7
SK	0.1	6.0	5.1	5.6	6.0	6.0	6.0	6.1	6.0	6.0	6.0	6.0
FI	-0.2	6.4	5.9	5.8	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.2
SE	-0.8	6.3	6.3	5.5	5.5	5.6	5.6	5.6	5.5	5.5	5.5	5.5
NO	0.3	2.7	3.3	3.0	3.0	3.0	3.0	3.0	2.9	2.9	3.0	3.0
EA	-1.2	6.6	6.3	6.6	6.6	6.2	5.8	5.4	5.4	5.4	5.4	5.4
EU	-0.9	5.9	5.7	5.9	6.0	5.7	5.4	5.1	5.1	5.1	5.1	5.1

Table II.1.51: Unemployment rate (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.2	5.3	5.3	5.4	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
BG	0.6	4.2	3.8	4.4	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
CZ	0.5	2.1	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
DK	-0.5	4.1	4.2	3.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
DE	0.7	3.0	3.0	3.5	3.7	3.8	3.8	3.8	3.8	3.8	3.7	3.7
EE	0.5	5.2	5.4	5.6	5.8	5.9	5.8	5.8	5.7	5.7	5.7	5.7
IE	1.1	4.1	4.0	4.8	5.2	5.3	5.3	5.2	5.2	5.2	5.2	5.2
EL	-5.9	12.3	10.8	9.8	9.3	8.3	7.3	6.5	6.4	6.4	6.4	6.3
ES	-6.3	12.5	11.2	10.5	10.1	8.8	7.5	6.4	6.2	6.2	6.2	6.2
FR	-0.7	6.9	7.0	7.1	6.9	6.7	6.4	6.2	6.2	6.2	6.2	6.2
HR	-0.3	6.6	5.6	6.2	6.5	6.4	6.3	6.2	6.2	6.2	6.2	6.2
IT	-1.8	7.8	7.8	8.9	8.5	7.7	6.9	6.3	6.2	6.1	6.1	6.0
CY	-0.7	6.7	6.4	7.7	7.7	7.1	6.6	6.1	6.0	6.0	6.0	6.0
LV	-0.3	6.7	6.1	6.6	6.9	6.7	6.5	6.3	6.3	6.3	6.3	6.3
LT	0.4	5.9	5.9	6.0	6.4	6.4	6.4	6.3	6.2	6.2	6.3	6.3
LU	1.0	4.1	4.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
HU	-0.1	3.5	3.4	3.1	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
MT	1.3	2.7	2.8	3.7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
NL	0.2	3.0	3.2	3.1	3.1	3.1	3.0	3.1	3.1	3.1	3.2	3.2
AT	-0.3	4.5	4.6	4.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
PL	0.1	2.8	2.6	2.5	3.0	3.0	3.0	2.9	2.9	2.9	2.9	3.0
PT	0.2	5.8	5.6	5.6	6.1	6.0	6.0	6.0	6.0	6.0	6.0	5.9
RO	0.5	5.2	4.7	5.3	5.7	5.7	5.6	5.6	5.6	5.6	5.7	5.7
SI	1.8	3.9	4.3	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
SK	-0.1	5.9	5.0	5.5	5.9	5.9	5.9	5.9	5.9	5.8	5.8	5.8
FI	-0.3	6.2	5.8	5.7	6.0	6.1	6.0	6.0	6.0	5.9	5.9	5.9
SE	-0.8	6.2	6.3	5.4	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4
NO	0.3	2.6	3.2	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
EA	-1.2	6.5	6.3	6.5	6.5	6.1	5.7	5.3	5.3	5.3	5.3	5.2
EU	-0.9	5.9	5.7	5.8	5.9	5.6	5.3	5.0	5.0	5.0	5.0	5.0

Table II.1.52: Employment (20-64y; millions)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.2	4.9	5.0	5.0	5.1	5.2	5.2	5.2	5.2	5.1	5.1	5.1
BG	-1.0	3.1	3.0	2.8	2.7	2.5	2.4	2.3	2.2	2.1	2.1	2.1
CZ	-0.6	5.1	5.1	5.0	4.9	4.7	4.6	4.5	4.4	4.4	4.4	4.5
DK	0.0	2.7	2.8	2.8	2.8	2.7	2.8	2.8	2.8	2.8	2.7	2.7
DE	-3.9	40.1	39.8	38.2	37.3	37.5	37.6	37.4	36.9	36.6	36.2	36.2
EE	-0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
IE	0.2	2.3	2.5	2.6	2.6	2.7	2.7	2.6	2.6	2.6	2.6	2.6
EL	-1.1	4.0	4.0	3.9	3.7	3.5	3.3	3.2	3.1	3.0	3.0	2.9
ES	-1.4	20.1	20.8	21.1	21.0	20.7	20.2	19.9	19.6	19.4	19.1	18.7
FR	0.1	27.8	28.1	28.4	28.7	28.7	28.8	28.6	28.5	28.5	28.3	27.9
HR	-0.4	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.2	1.2
IT	-2.9	22.4	22.5	21.9	21.5	21.1	20.8	20.7	20.5	20.2	20.0	19.5
CY	0.0	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
LV	-0.3	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5
LT	-0.6	1.4	1.3	1.2	1.2	1.1	1.1	1.0	0.9	0.9	0.8	0.8
LU	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
HU	-0.7	4.6	4.7	4.6	4.5	4.4	4.2	4.2	4.1	4.0	4.0	3.9
MT	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
NL	-0.1	8.6	8.7	8.7	8.7	8.7	8.8	8.9	8.9	8.8	8.7	8.5
AT	-0.2	4.3	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
PL	-5.3	17.6	17.5	17.0	16.4	15.8	14.9	14.0	13.2	12.8	12.6	12.4
PT	-1.1	4.7	4.7	4.5	4.3	4.1	3.9	3.8	3.7	3.7	3.6	3.6
RO	-2.2	7.6	7.6	7.2	6.8	6.4	6.1	5.8	5.6	5.5	5.5	5.4
SI	-0.1	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
SK	-0.6	2.6	2.6	2.5	2.4	2.3	2.2	2.1	2.0	2.0	1.9	1.9
FI	-0.3	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.2	2.2
SE	0.9	4.9	5.0	5.1	5.3	5.4	5.5	5.6	5.6	5.6	5.7	5.8
NO	0.2	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.9	2.9	2.9	2.8
EA	-12.5	150.8	151.7	149.7	148.1	147.2	145.9	144.6	142.9	141.5	140.0	138.3
EU	-21.5	196.5	197.2	194.3	191.4	189.1	186.4	183.7	180.8	178.7	177.0	175.0

Table II.1.53: Employment (20-74y; millions)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.3	5.0	5.1	5.1	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.2
BG	-1.0	3.2	3.1	2.9	2.7	2.6	2.5	2.4	2.3	2.2	2.2	2.1
CZ	-0.7	5.2	5.2	5.1	5.0	4.9	4.7	4.6	4.5	4.5	4.5	4.6
DK	0.1	2.8	2.9	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0
DE	-3.7	41.4	41.1	39.7	38.8	38.8	38.9	38.8	38.5	38.1	37.8	37.7
EE	-0.1	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
IE	0.3	2.4	2.5	2.6	2.7	2.8	2.8	2.8	2.7	2.7	2.7	2.7
EL	-1.0	4.1	4.1	4.0	3.9	3.7	3.5	3.4	3.2	3.2	3.1	3.1
ES	-0.5	20.4	21.3	21.9	22.1	22.0	21.6	21.1	20.7	20.5	20.3	19.9
FR	0.4	28.3	28.5	28.9	29.3	29.4	29.5	29.4	29.3	29.2	29.1	28.7
HR	-0.4	1.6	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.2
IT	-1.2	23.1	23.2	23.0	22.9	22.7	22.4	22.2	22.1	22.0	22.0	21.8
CY	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
LV	-0.4	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5
LT	-0.6	1.4	1.4	1.3	1.2	1.2	1.1	1.0	1.0	0.9	0.8	0.8
LU	0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
HU	-0.7	4.8	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1	4.1	4.1
MT	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
NL	0.3	8.9	9.1	9.1	9.1	9.1	9.2	9.3	9.4	9.4	9.3	9.2
AT	-0.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.2	4.2
PL	-5.3	18.1	18.0	17.4	16.8	16.2	15.4	14.5	13.7	13.2	13.0	12.7
PT	-1.0	4.9	4.9	4.7	4.5	4.4	4.2	4.1	4.0	3.9	3.9	3.9
RO	-2.1	7.7	7.7	7.3	7.0	6.7	6.3	6.0	5.8	5.7	5.6	5.6
SI	-0.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
SK	-0.6	2.6	2.6	2.5	2.4	2.4	2.3	2.2	2.1	2.1	2.0	2.0
FI	-0.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.3
SE	1.1	5.1	5.1	5.3	5.5	5.7	5.8	5.9	6.0	6.0	6.1	6.2
NO	0.3	2.7	2.7	2.8	2.8	2.9	2.9	3.0	3.0	3.0	3.0	3.0
EA	-8.6	154.7	155.8	154.8	154.0	153.5	152.5	151.2	149.6	148.4	147.4	146.1
EU	-17.4	201.5	202.4	200.5	198.5	196.9	194.4	191.8	189.1	187.2	185.7	184.1

Table II.1.54: Share of young (20-24y) in total employment (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.1	5.7	5.9	6.2	6.1	5.7	5.5	5.4	5.4	5.6	5.6	5.5
BG	1.1	3.7	4.1	4.7	4.8	4.8	4.6	4.5	4.6	4.8	4.9	4.8
CZ	1.6	4.6	5.0	6.0	5.8	6.1	6.1	5.8	5.8	6.0	6.2	6.2
DK	-1.4	9.0	8.8	8.9	8.1	8.3	8.4	8.6	8.2	7.8	7.6	7.6
DE	0.5	7.6	7.6	7.7	8.0	8.5	8.4	8.2	8.0	7.9	8.0	8.1
EE	1.2	5.9	6.8	8.1	7.7	7.6	6.9	6.6	6.6	7.0	7.2	7.1
IE	-0.9	9.1	9.4	10.0	9.4	8.4	7.5	7.3	7.7	8.2	8.4	8.2
EL	1.2	4.2	4.8	5.4	5.2	5.1	5.3	5.3	5.4	5.5	5.5	5.3
ES	0.6	5.0	5.5	5.8	5.5	5.2	4.8	5.0	5.3	5.5	5.6	5.5
FR	-0.5	7.9	8.4	8.4	8.2	7.4	7.4	7.5	7.6	7.7	7.6	7.4
HR	-0.1	6.0	6.4	6.7	6.3	6.0	6.1	5.8	5.7	5.8	5.9	5.9
IT	-0.4	4.5	4.6	4.7	4.5	4.2	3.9	4.0	4.1	4.3	4.3	4.1
CY	-0.6	7.6	7.6	7.3	7.6	7.4	7.8	7.7	7.3	7.0	7.0	7.0
LV	2.4	5.5	6.4	7.7	7.9	8.5	7.3	6.8	6.9	7.5	7.9	7.9
LT	0.4	5.6	5.6	5.9	6.3	6.4	5.6	5.7	5.3	5.5	5.9	6.0
LU	0.5	5.0	5.4	5.3	5.3	5.2	5.3	5.6	5.6	5.5	5.5	5.5
HU	0.7	5.3	5.6	5.8	5.5	5.9	6.0	6.0	5.9	6.0	6.0	6.1
MT	-1.0	7.7	6.9	6.2	6.1	6.0	5.9	6.2	6.2	6.3	6.5	6.7
NL	-1.7	10.4	10.7	9.9	9.5	9.2	9.2	9.4	9.4	9.1	8.8	8.6
AT	0.3	8.0	8.1	8.2	8.4	8.5	8.3	8.1	8.0	8.1	8.2	8.3
PL	1.1	5.5	5.4	6.3	6.2	6.5	5.9	5.9	5.9	6.2	6.5	6.6
PT	-0.3	5.2	5.2	4.9	4.6	4.6	4.7	4.9	5.0	5.0	4.9	4.8
RO	0.5	4.5	4.6	5.2	5.1	5.3	4.8	4.9	5.0	5.1	5.1	5.0
SI	1.0	5.3	5.5	6.2	6.6	6.2	5.8	5.6	5.8	6.1	6.3	6.2
SK	1.0	4.2	4.3	4.7	5.0	5.3	5.2	4.9	4.8	5.0	5.2	5.2
FI	-0.6	7.4	7.8	8.4	8.2	7.0	6.7	6.8	6.8	6.9	6.9	6.8
SE	0.5	7.2	7.6	8.4	8.5	8.1	7.7	7.6	7.5	7.6	7.8	7.7
NO	-0.8	8.5	8.5	8.9	8.6	7.9	7.5	7.5	7.6	7.7	7.8	7.6
EA	0.0	6.7	6.9	7.0	6.9	6.8	6.6	6.6	6.7	6.7	6.7	6.7
EU	0.2	6.4	6.6	6.9	6.8	6.7	6.5	6.5	6.6	6.6	6.7	6.6

Table II.1.55: Share of prime-age (25-54y) in total employment (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-4.5	75.2	74.4	73.9	73.7	73.9	73.7	73.0	72.6	72.3	71.3	70.7
BG	-4.3	73.6	73.7	71.4	69.0	68.1	67.1	68.5	71.4	72.2	70.7	69.3
CZ	-4.5	74.8	75.4	71.2	67.5	67.9	69.0	69.9	72.3	73.0	71.2	70.3
DK	-4.6	67.5	67.8	67.3	67.9	68.3	67.3	64.8	62.8	62.3	62.3	62.9
DE	2.1	66.2	66.5	68.5	69.7	68.9	67.7	67.4	67.5	68.1	68.5	68.2
EE	-7.0	69.5	70.7	69.7	69.3	67.4	64.8	64.2	65.6	66.1	64.2	62.5
IE	-6.8	72.5	71.8	70.1	68.9	68.8	70.2	71.3	70.3	68.6	66.5	65.6
EL	-10.4	75.1	72.3	68.5	65.6	64.3	65.6	67.4	68.5	67.8	65.7	64.8
ES	-10.2	74.8	72.4	68.0	65.3	65.5	67.6	68.8	68.5	67.0	65.2	64.6
FR	-4.8	73.0	72.2	70.8	70.7	70.9	70.3	70.3	70.1	69.1	68.3	68.2
HR	-4.4	74.7	74.5	73.6	72.2	71.1	71.1	72.0	71.3	71.3	70.5	70.3
IT	-11.0	71.5	68.9	65.4	65.2	66.8	68.1	67.8	66.4	64.2	61.9	60.6
CY	-5.2	73.9	75.1	75.6	74.6	72.8	69.9	68.3	68.3	69.3	69.5	68.7
LV	-1.8	68.5	69.4	67.8	67.3	65.4	64.0	65.3	69.8	71.2	68.9	66.7
LT	-1.4	68.6	70.0	69.9	69.7	68.8	66.8	65.0	66.0	68.2	68.4	67.2
LU	-4.3	81.9	81.5	81.7	81.5	80.7	79.3	77.9	77.3	77.6	77.7	77.5
HU	-5.5	76.4	75.3	72.1	69.2	69.3	69.8	69.3	70.3	71.0	70.7	70.8
MT	-8.4	78.2	80.4	80.2	78.1	75.7	72.7	69.4	68.4	69.2	69.9	69.8
NL	-2.1	66.1	66.2	67.8	69.5	70.2	68.9	67.0	65.3	64.0	63.8	64.1
AT	-2.7	73.0	72.3	72.1	72.5	71.5	70.7	70.0	70.2	70.6	70.6	70.3
PL	-5.8	77.3	77.9	75.7	72.8	69.8	69.5	70.2	72.3	73.7	72.3	71.4
PT	-5.0	71.5	71.0	69.0	67.0	66.7	67.7	68.2	67.3	66.4	66.0	66.5
RO	-9.4	80.8	76.3	72.4	69.9	69.5	69.3	71.3	73.2	73.5	72.0	71.4
SI	-6.6	76.5	75.4	73.2	70.6	69.6	70.2	71.9	72.8	72.9	71.3	69.9
SK	-9.2	77.2	77.9	75.3	71.3	68.7	67.6	67.7	69.4	70.7	69.8	68.0
FI	-5.8	68.7	70.0	71.7	71.6	70.8	69.0	67.0	66.2	65.6	64.3	62.9
SE	-4.7	69.6	70.0	68.7	69.2	69.0	67.9	66.5	66.4	66.6	66.0	64.9
NO	-2.1	68.9	69.1	69.1	70.4	71.3	70.9	69.7	68.7	68.0	67.1	66.7
EA	-4.6	70.9	70.0	69.0	68.7	68.7	68.7	68.6	68.3	67.6	66.7	66.2
EU	-5.1	72.0	71.2	69.8	69.1	68.8	68.8	68.8	68.8	68.4	67.5	66.9

Table II.1.56: Share of older (55-64y) in total employment (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.1	17.8	18.4	17.7	17.6	17.9	18.2	19.0	19.2	19.3	20.2	20.9
BG	3.0	19.8	19.0	21.2	23.4	23.8	24.6	23.3	20.0	19.5	21.4	22.8
CZ	3.3	18.1	17.7	21.3	24.8	23.3	22.0	21.6	19.4	18.5	20.5	21.4
DK	0.6	20.0	20.2	20.2	19.5	18.1	18.6	21.1	22.3	21.6	21.1	20.6
DE	-3.3	23.0	22.8	20.2	18.4	19.3	20.7	20.8	20.5	20.1	19.5	19.7
EE	4.7	18.4	17.6	18.2	18.8	20.1	22.8	22.4	19.6	19.2	21.7	23.1
IE	5.8	16.0	16.1	17.0	18.6	19.4	18.3	17.3	18.3	19.6	21.2	21.9
EL	5.0	18.3	19.9	23.1	25.1	25.5	23.1	20.9	20.3	20.9	22.9	23.3
ES	5.0	18.8	19.9	22.6	24.5	23.4	21.0	20.2	20.8	22.1	23.7	23.9
FR	4.2	17.4	17.7	19.0	19.1	19.3	19.9	19.7	19.7	20.7	21.4	21.5
HR	2.9	17.8	17.1	17.4	19.1	20.2	19.7	19.1	19.9	19.9	20.4	20.7
IT	3.7	21.2	23.3	25.0	24.1	21.9	20.9	21.1	22.2	23.5	24.7	24.9
CY	3.1	15.4	14.4	14.3	15.0	16.9	18.7	19.6	19.2	17.9	17.6	18.5
LV	2.0	20.7	20.2	21.4	21.8	22.8	25.5	24.3	19.2	17.8	20.6	22.7
LT	1.5	21.4	20.5	20.4	20.2	21.1	23.9	25.1	23.8	21.5	21.2	22.9
LU	3.5	12.2	12.4	12.2	12.4	13.2	14.5	15.6	16.1	15.7	15.5	15.7
HU	4.3	15.9	17.0	20.1	23.0	21.9	20.9	21.7	20.8	19.9	20.4	20.2
MT	9.0	11.8	11.3	12.5	14.7	16.9	19.7	22.4	22.9	21.6	20.8	20.8
NL	0.0	20.0	19.7	18.5	16.8	16.7	17.9	19.3	20.2	21.0	20.7	20.0
AT	1.6	17.3	18.0	17.6	16.9	17.8	18.9	19.5	19.2	18.7	18.7	18.9
PL	4.3	15.0	14.2	15.8	18.8	21.2	21.4	20.3	18.2	16.7	18.3	19.3
PT	1.7	19.7	20.0	21.5	23.4	22.8	21.0	20.6	21.6	22.4	22.2	21.4
RO	6.7	13.8	17.6	20.6	22.3	21.7	21.9	20.2	17.9	18.1	19.8	20.4
SI	5.8	16.5	17.5	18.9	21.1	22.6	22.2	20.5	19.6	19.4	20.8	22.3
SK	5.0	17.1	16.2	18.0	21.7	23.3	23.7	23.2	21.1	19.4	20.3	22.1
FI	3.2	20.3	18.8	16.7	17.1	19.2	20.5	21.6	21.7	21.4	22.4	23.5
SE	2.0	19.1	19.1	19.1	18.3	18.3	19.8	21.1	20.0	19.0	20.0	21.1
NO	2.2	18.3	18.4	18.3	17.1	16.8	17.8	18.8	19.3	19.4	20.1	20.4
EA	1.8	19.9	20.4	20.7	20.5	20.4	20.4	20.4	20.5	21.0	21.6	21.7
EU	2.3	19.1	19.6	20.2	20.5	20.5	20.6	20.4	20.3	20.5	21.1	21.4

Table II.1.57: Share of oldest (65-74y) in total employment (20-74y)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.6	1.3	1.3	2.1	2.5	2.5	2.6	2.6	2.8	2.8	2.8	2.9
BG	0.1	3.0	3.3	2.7	2.7	3.3	3.6	3.7	4.0	3.5	3.0	3.1
CZ	-0.4	2.6	1.9	1.6	1.9	2.7	2.9	2.6	2.6	2.4	2.1	2.1
DK	5.4	3.5	3.2	3.6	4.5	5.3	5.6	5.6	6.8	8.2	8.9	8.9
DE	0.8	3.2	3.1	3.6	3.9	3.3	3.3	3.6	4.0	4.0	4.1	4.0
EE	1.2	6.1	4.9	4.0	4.1	4.8	5.5	6.8	8.2	7.7	6.9	7.3
IE	1.9	2.4	2.7	2.9	3.1	3.5	4.0	4.1	3.7	3.6	4.0	4.3
EL	4.2	2.4	3.0	3.0	4.0	5.1	6.0	6.4	5.8	5.8	5.9	6.6
ES	4.6	1.4	2.2	3.6	4.7	5.9	6.6	6.0	5.4	5.3	5.5	6.0
FR	1.1	1.7	1.7	1.8	2.1	2.4	2.4	2.6	2.6	2.5	2.7	2.8
HR	1.6	1.5	2.0	2.3	2.4	2.6	3.0	3.2	3.1	3.0	3.2	3.1
IT	7.7	2.7	3.1	4.9	6.2	7.1	7.1	7.0	7.3	8.1	9.1	10.4
CY	2.7	3.1	2.8	2.7	2.8	3.0	3.5	4.3	5.2	5.8	5.9	5.8
LV	-2.6	5.3	4.0	3.1	3.0	3.2	3.2	3.6	4.1	3.5	2.6	2.7
LT	-0.5	4.4	4.0	3.8	3.8	3.7	3.8	4.2	4.9	4.9	4.5	3.9
LU	0.4	0.9	0.7	0.8	0.9	0.9	0.9	1.0	1.1	1.2	1.3	1.3
HU	0.5	2.3	2.2	1.9	2.3	2.9	3.3	3.0	3.0	3.1	2.9	2.8
MT	0.4	2.2	1.4	1.1	1.1	1.4	1.7	2.0	2.5	2.8	2.8	2.6
NL	3.8	3.6	3.4	3.8	4.1	4.0	4.0	4.4	5.2	5.9	6.7	7.3
AT	0.8	1.7	1.6	2.0	2.2	2.2	2.1	2.4	2.5	2.6	2.6	2.5
PL	0.4	2.3	2.4	2.3	2.2	2.6	3.2	3.6	3.6	3.3	2.9	2.7
PT	3.7	3.6	3.8	4.5	5.0	5.9	6.5	6.3	6.1	6.3	7.0	7.4
RO	2.2	1.0	1.4	1.8	2.8	3.5	4.0	3.7	3.9	3.3	3.0	3.2
SI	-0.2	1.8	1.6	1.7	1.7	1.6	1.8	1.9	1.8	1.6	1.6	1.6
SK	3.2	1.6	1.6	2.0	2.0	2.7	3.6	4.2	4.8	4.9	4.7	4.8
FI	3.2	3.7	3.3	3.2	3.0	3.0	3.7	4.6	5.3	6.1	6.4	6.9
SE	2.2	4.1	3.3	3.8	4.0	4.6	4.6	4.8	6.1	6.7	6.1	6.3
NO	0.8	4.4	4.1	3.7	3.9	3.9	3.8	4.0	4.4	4.8	5.0	5.2
EA	2.8	2.5	2.6	3.3	3.9	4.1	4.3	4.4	4.5	4.7	5.0	5.3
EU	2.5	2.5	2.6	3.1	3.6	3.9	4.2	4.2	4.4	4.5	4.7	5.0

Table II.1.58: Share of older population (55-64) in population (20-64)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.2	22.9	22.8	22.0	21.3	21.4	21.9	22.5	22.6	22.5	23.3	24.1
BG	3.0	22.6	23.4	25.4	27.5	27.9	28.6	27.4	23.6	22.2	23.9	25.5
CZ	3.1	20.6	21.0	23.7	27.0	26.0	24.5	24.2	22.0	20.7	22.5	23.7
DK	0.1	22.7	23.0	22.9	22.0	20.6	21.1	23.4	24.7	24.0	23.5	22.8
DE	-3.8	26.1	26.5	23.9	21.4	22.0	23.6	23.9	23.5	23.0	22.2	22.3
EE	3.4	21.8	21.7	22.2	23.2	24.4	27.0	26.5	23.0	21.8	23.9	25.2
IE	6.7	19.2	19.7	20.8	22.5	23.5	22.6	21.3	21.8	23.2	24.9	25.9
EL	1.3	23.7	25.0	27.0	28.4	28.7	26.1	23.4	22.4	22.7	24.5	25.0
ES	3.6	23.1	24.0	25.7	27.0	26.0	23.7	22.8	23.2	24.5	26.2	26.6
FR	1.4	23.0	23.1	23.2	22.5	22.4	22.9	22.6	22.4	23.3	24.1	24.4
HR	1.0	25.1	24.6	24.0	24.7	25.8	25.4	24.5	25.1	25.2	25.5	26.1
IT	1.4	25.7	27.2	28.2	27.1	25.0	23.7	23.7	24.3	25.4	26.7	27.0
CY	2.8	19.0	18.9	18.5	19.0	20.8	22.8	24.1	23.7	22.0	21.1	21.8
LV	1.6	24.2	24.1	24.5	24.9	26.0	29.0	28.5	23.1	20.6	23.4	25.8
LT	1.8	25.3	24.9	24.6	24.4	25.3	28.4	30.2	28.9	26.1	25.4	27.0
LU	3.7	19.8	20.2	20.1	20.1	21.0	22.3	23.8	24.6	24.2	23.6	23.5
HU	3.2	19.9	20.8	23.8	26.8	25.8	24.0	24.6	23.9	22.7	23.1	23.1
MT	7.5	18.0	16.7	16.5	18.4	20.7	23.8	26.9	28.0	26.8	25.7	25.5
NL	-0.3	23.5	23.7	22.8	20.8	20.2	21.4	22.8	23.8	24.4	24.1	23.2
AT	-0.6	24.1	25.1	24.1	22.2	22.5	23.7	24.4	24.1	23.4	23.3	23.5
PL	4.4	20.7	19.8	20.9	24.3	27.4	28.3	27.2	24.8	22.5	23.6	25.1
PT	0.3	24.1	24.6	26.2	27.8	27.2	25.1	24.2	24.9	25.5	25.3	24.4
RO	4.5	20.3	22.8	26.0	26.9	26.2	26.4	25.0	22.2	21.9	23.7	24.8
SI	1.4	23.8	24.0	24.2	25.5	26.4	25.7	24.0	22.6	22.2	23.5	25.3
SK	2.5	20.8	20.7	22.4	25.8	27.4	27.5	26.6	24.0	21.6	21.8	23.3
FI	3.1	23.1	22.6	20.9	20.8	22.6	23.7	24.8	25.0	24.4	25.1	26.2
SE	2.0	21.0	21.4	21.3	20.4	20.1	21.7	23.3	22.3	21.1	22.0	23.0
NO	3.8	20.7	21.6	22.0	21.0	20.6	21.7	22.9	23.3	23.3	24.0	24.5
EA	0.3	24.3	24.8	24.6	23.9	23.6	23.6	23.4	23.4	23.8	24.3	24.6
EU	1.0	23.5	24.0	24.2	24.2	24.0	24.1	23.9	23.5	23.4	24.1	24.5

Table II.1.59: Old-age dependency ratio (65+ / 20-64)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	19.2	33.7	35.5	39.0	41.6	43.5	44.9	46.3	48.0	49.8	51.3	53.0
BG	23.6	36.6	37.8	40.2	43.1	47.7	53.6	58.6	64.4	65.5	62.5	60.3
CZ	16.6	34.9	35.2	37.2	38.7	43.2	48.9	51.7	54.4	55.7	53.3	51.5
DK	21.1	35.4	36.7	40.0	43.5	45.9	46.8	46.4	47.6	50.9	54.3	56.5
DE	17.6	37.4	39.0	44.4	49.2	49.5	49.2	49.9	51.6	52.7	54.2	55.0
EE	22.4	34.9	36.2	38.6	40.4	43.2	46.2	50.6	57.0	59.3	58.0	57.3
IE	29.8	25.7	27.3	30.1	33.0	37.0	42.4	47.7	50.3	51.5	53.2	55.6
EL	27.0	39.0	41.4	46.0	53.1	60.6	68.7	74.4	74.6	72.1	68.4	66.0
ES	31.2	33.3	35.2	39.9	45.6	52.6	60.1	63.9	64.5	64.0	63.4	64.5
FR	19.7	38.2	40.1	43.8	46.9	50.1	51.6	53.2	54.6	55.0	55.8	57.8
HR	23.3	38.9	41.6	45.6	48.4	50.5	53.1	56.2	58.0	59.1	61.3	62.2
IT	24.7	40.8	42.8	48.0	54.4	60.8	64.9	66.0	65.6	64.7	64.3	65.5
CY	28.8	26.7	28.4	32.1	34.7	36.7	38.8	42.1	46.7	51.5	54.7	55.5
LV	25.0	36.0	38.4	42.8	46.2	49.8	53.2	58.8	66.5	69.0	64.4	61.0
LT	39.3	33.1	35.7	41.5	46.3	50.3	53.7	57.9	65.0	71.2	73.7	72.4
LU	32.3	23.1	24.2	27.2	30.5	33.4	36.3	39.5	43.4	48.0	52.4	55.4
HU	19.8	34.5	35.2	35.3	37.6	41.9	47.7	49.8	52.1	54.5	54.6	54.3
MT	34.9	30.5	31.1	31.0	30.0	30.5	32.8	37.0	43.7	52.6	60.4	65.4
NL	22.0	34.3	36.0	40.3	44.4	46.4	46.3	46.4	47.5	49.6	52.6	56.3
AT	25.0	32.0	34.1	39.5	44.7	47.2	48.4	50.6	52.7	54.8	56.1	57.0
PL	31.9	31.9	34.8	37.6	39.2	42.3	47.9	55.4	61.9	66.0	65.9	63.7
PT	27.0	40.7	43.1	48.2	53.5	59.8	65.9	68.6	68.4	67.8	67.8	67.8
RO	22.3	33.5	35.4	36.0	41.7	46.5	52.2	55.4	59.8	59.1	57.2	55.8
SI	21.5	36.1	38.8	43.1	46.6	49.8	54.5	58.5	60.8	60.3	59.0	57.5
SK	31.2	28.5	31.1	35.1	37.7	42.0	48.4	54.7	60.5	63.7	62.5	59.7
FI	21.3	41.2	42.5	45.4	46.7	46.5	47.8	50.3	53.1	57.1	59.9	62.4
SE	14.4	36.0	36.6	38.1	39.6	40.7	41.2	42.4	45.4	48.7	49.4	50.4
NO	23.2	31.2	33.1	35.8	39.0	41.7	43.1	44.7	47.2	49.7	52.1	54.4
EA	22.7	36.9	38.7	43.3	48.0	51.5	54.1	55.9	57.2	57.7	58.4	59.6
EU	23.0	36.1	38.0	42.0	46.2	49.7	52.8	55.2	57.1	58.0	58.4	59.1

Table II.1.60: Total dependency ratio ((0-19 & 65+) / (20-64))

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	16.6	72.0	73.7	76.1	77.7	79.4	81.1	82.8	84.5	86.0	87.1	88.7
BG	25.9	69.6	71.7	73.1	75.2	80.0	87.1	93.8	101.2	102.4	98.3	95.5
CZ	16.9	71.2	72.4	72.9	73.6	78.2	85.0	89.1	93.1	94.5	90.9	88.1
DK	21.2	73.4	74.6	78.1	82.7	85.4	85.3	83.1	83.7	87.6	91.9	94.7
DE	21.9	69.0	71.9	79.2	85.2	84.5	83.4	84.0	86.5	88.3	90.3	90.8
EE	20.5	72.0	73.8	74.0	74.2	76.1	79.8	85.7	94.0	96.5	94.0	92.5
IE	20.3	70.2	70.0	68.5	68.5	72.1	79.1	86.0	88.6	88.4	88.7	90.5
EL	28.9	70.9	73.1	76.5	83.8	92.4	102.2	109.5	110.0	107.0	102.4	99.8
ES	29.8	64.9	65.7	68.1	72.9	80.5	90.1	95.1	95.8	94.6	93.4	94.6
FR	16.2	81.0	82.4	84.8	87.3	91.1	92.8	94.4	95.3	94.8	95.0	97.2
HR	20.9	72.0	74.8	77.7	79.7	81.2	83.6	87.1	89.1	90.0	92.1	92.8
IT	23.8	70.6	71.6	75.3	81.2	88.5	93.9	95.7	95.1	93.6	92.8	94.4
CY	28.8	61.1	63.5	67.8	69.8	71.2	71.9	74.5	79.6	85.5	89.4	90.0
LV	23.0	72.3	75.8	79.1	80.6	82.3	86.1	94.0	104.5	107.4	100.5	95.4
LT	37.5	65.7	69.1	74.3	77.2	79.4	82.4	86.9	95.4	102.8	105.2	103.1
LU	33.6	56.0	57.2	60.4	63.8	66.6	69.2	72.0	76.0	81.2	86.3	89.6
HU	23.6	67.4	68.6	68.5	71.5	76.3	83.1	85.6	88.4	91.5	91.6	91.1
MT	36.1	58.2	58.6	58.0	56.1	55.9	57.9	62.0	69.4	79.6	88.6	94.3
NL	22.0	70.3	71.4	75.9	80.8	83.4	82.9	81.9	82.2	84.2	87.7	92.4
AT	27.3	63.7	66.6	72.7	78.2	80.1	80.9	83.3	85.9	88.7	90.1	90.9
PL	32.2	65.9	70.3	71.0	71.0	72.8	79.4	88.9	97.3	102.0	101.2	98.1
PT	30.5	71.3	73.3	78.1	84.2	91.8	99.0	102.1	101.5	100.7	101.1	101.8
RO	21.3	70.5	72.7	71.6	77.5	82.1	89.3	93.2	98.5	97.0	93.9	91.9
SI	21.6	69.3	72.7	76.0	77.9	81.0	87.2	93.1	96.5	95.4	93.0	90.9
SK	35.0	62.7	66.5	70.6	72.2	75.7	83.0	91.2	99.2	103.5	101.7	97.7
FI	16.1	78.2	78.9	79.8	79.0	78.4	79.9	82.5	85.3	89.2	91.7	94.3
SE	11.2	77.2	77.9	78.5	78.8	79.1	79.6	80.9	84.6	88.1	88.1	88.4
NO	18.4	69.7	70.7	71.3	73.3	75.9	77.4	79.0	81.3	83.5	85.6	88.0
EA	22.9	71.1	72.8	76.9	81.4	85.1	88.3	90.5	91.8	92.2	92.6	93.9
EU	23.1	70.7	72.6	75.9	79.8	83.4	87.1	90.0	92.2	93.0	93.2	93.8

Table II.1.61: Total economic dependency ratio (total inactive population / employment)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.4	135.5	134.3	133.8	132.4	132.5	133.7	135.3	136.9	138.5	139.8	141.8
BG	30.3	117.1	121.5	126.3	129.6	133.6	139.9	147.1	153.3	153.8	150.5	147.5
CZ	26.8	105.1	111.7	113.4	114.0	120.1	127.1	132.4	136.7	137.3	134.2	131.9
DK	0.4	108.8	110.1	110.6	111.8	111.7	110.2	106.9	104.2	104.1	106.5	109.2
DE	21.1	102.6	107.4	114.9	119.8	119.5	118.4	118.3	119.8	121.4	123.0	123.7
EE	9.8	97.4	103.2	105.0	104.5	103.7	104.5	106.5	109.8	112.0	110.6	107.2
IE	11.7	112.7	109.1	106.1	104.7	106.8	112.4	118.5	121.5	121.9	122.3	124.4
EL	-2.6	152.2	148.7	149.2	152.4	157.0	162.0	165.4	166.2	162.1	155.5	149.7
ES	5.9	133.6	129.1	124.9	125.8	128.1	133.9	138.7	141.1	140.4	139.0	139.5
FR	2.3	140.2	140.9	140.1	138.9	139.8	140.0	140.3	140.4	139.9	140.2	142.5
HR	3.6	142.0	136.1	135.7	134.8	134.5	135.6	137.6	139.7	141.8	143.6	145.6
IT	-12.0	156.0	154.3	155.3	156.2	158.0	159.5	158.4	155.5	150.9	146.6	144.0
CY	20.0	101.5	103.5	110.9	112.6	112.3	111.5	111.6	114.4	118.3	121.1	121.6
LV	31.9	112.0	118.5	125.1	128.2	129.1	133.0	141.3	151.4	154.2	149.2	144.0
LT	44.2	100.4	105.8	112.0	116.2	118.2	121.6	126.3	134.0	141.5	145.1	144.5
LU	43.9	107.6	108.1	112.4	116.5	120.6	125.2	130.4	136.4	142.5	147.6	151.5
HU	18.4	103.6	102.6	100.8	103.6	108.0	112.6	115.6	119.1	121.6	122.0	122.0
MT	35.7	90.9	88.3	84.9	82.3	81.7	84.2	89.8	99.0	110.0	119.7	126.6
NL	5.2	98.1	99.7	102.3	105.0	106.0	104.5	101.8	99.5	99.1	100.6	103.3
AT	20.4	108.2	111.9	114.9	116.7	117.4	118.5	120.5	123.2	125.7	127.3	128.6
PL	39.5	110.9	113.3	114.4	117.0	121.0	128.9	138.6	147.2	151.5	151.4	150.4
PT	18.8	112.7	113.4	116.7	122.7	128.9	134.5	137.2	136.8	134.7	132.8	131.5
RO	22.7	147.2	145.0	148.1	152.7	157.7	164.7	171.3	175.3	174.5	171.6	169.9
SI	20.7	112.5	116.2	122.3	122.9	124.3	129.0	134.7	137.9	137.3	134.9	133.2
SK	27.8	108.5	110.8	116.3	120.6	125.0	130.2	136.2	141.9	144.2	141.6	136.2
FI	6.1	119.0	121.6	124.0	122.5	120.2	119.2	119.6	120.9	122.7	124.2	125.2
SE	3.1	106.6	109.6	106.9	106.4	104.4	104.7	106.1	106.6	108.4	109.9	109.7
NO	16.5	100.9	104.1	105.1	105.7	107.1	108.5	109.8	111.2	112.9	114.8	117.3
EA	8.4	125.1	125.9	128.0	129.9	130.9	132.2	133.1	133.7	133.4	133.1	133.5
EU	11.7	122.9	123.9	125.7	127.7	129.3	131.5	133.4	134.7	134.8	134.4	134.5

Table II.1.62: Economic old-age dependency ratio (inactive population 65+ / employment 20-64)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	21.5	45.4	47.2	50.7	53.2	55.2	56.7	58.5	60.4	62.7	64.7	66.9
BG	30.3	45.1	46.9	51.1	55.2	60.6	67.4	73.6	80.2	81.4	78.2	75.5
CZ	22.5	40.2	42.1	45.0	46.7	52.1	58.7	62.5	65.8	67.1	64.7	62.7
DK	16.3	40.3	42.2	45.2	47.9	49.5	50.1	49.3	49.3	51.1	54.0	56.6
DE	20.0	42.9	45.3	51.4	56.6	57.4	57.2	57.6	59.1	60.3	61.9	62.9
EE	22.6	35.9	39.3	43.1	45.1	47.4	49.7	52.9	58.0	60.8	60.1	58.5
IE	33.3	30.4	31.6	34.8	38.0	42.3	48.1	54.0	57.3	59.0	61.0	63.8
EL	24.7	56.2	57.9	63.7	71.5	79.6	88.0	93.6	94.0	90.6	85.3	80.9
ES	31.5	46.3	47.4	51.4	57.4	64.1	71.8	76.5	78.1	77.7	77.0	77.8
FR	20.5	49.7	52.1	55.9	58.9	61.9	63.2	64.8	66.2	66.8	67.8	70.2
HR	24.6	53.9	55.2	59.4	62.2	64.3	67.1	70.3	72.6	74.3	76.9	78.5
IT	20.0	60.0	62.1	68.1	75.1	81.7	85.6	86.0	84.6	82.2	80.2	79.9
CY	31.3	31.1	33.5	38.6	41.8	43.8	45.7	48.7	53.2	58.1	61.5	62.4
LV	34.5	41.0	45.5	52.3	57.0	61.3	65.4	72.0	80.9	84.0	79.4	75.5
LT	49.4	37.2	41.0	48.5	54.7	59.6	63.8	68.8	76.7	84.0	87.4	86.6
LU	43.0	30.0	31.5	35.4	39.8	43.6	47.7	52.3	57.8	63.7	69.2	73.1
HU	21.5	40.4	41.0	40.9	43.4	47.9	53.8	56.6	59.2	61.8	62.1	62.0
MT	40.3	35.2	36.0	35.5	34.3	34.6	37.2	42.1	50.0	60.3	69.3	75.5
NL	18.6	37.3	39.7	44.0	48.0	49.9	49.6	49.0	49.1	50.4	52.6	55.9
AT	27.9	39.5	42.5	48.1	53.3	56.0	57.6	59.9	62.2	64.6	66.1	67.4
PL	41.0	39.0	42.1	45.8	48.7	52.9	59.8	68.8	76.7	81.5	81.8	80.0
PT	27.2	48.6	51.2	56.5	62.7	69.4	75.9	79.1	79.0	77.7	76.7	75.8
RO	29.8	47.9	49.5	51.2	58.2	64.4	71.9	76.8	82.1	81.7	79.4	77.7
SI	25.6	44.1	47.6	53.5	57.5	61.0	66.0	70.4	73.0	72.6	71.2	69.7
SK	34.3	35.4	38.3	43.3	47.2	52.4	59.4	66.1	72.0	75.1	73.6	69.7
FI	21.7	48.4	51.0	55.0	56.6	56.1	56.6	58.4	61.1	64.9	67.8	70.1
SE	13.7	39.1	41.0	41.8	43.3	43.7	44.2	45.5	47.4	50.3	52.0	52.9
NO	26.9	33.8	36.9	40.6	44.1	47.0	48.7	50.4	52.8	55.5	58.1	60.7
EA	22.9	47.1	49.2	54.2	59.1	62.6	65.1	66.9	68.1	68.5	69.0	70.0
EU	24.2	45.7	47.9	52.3	56.8	60.5	63.7	66.2	68.2	69.0	69.3	69.9

Table II.1.63: Economic old-age dependency ratio (inactive population 65+ / employment 20-74)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	20.1	44.8	46.6	49.6	51.8	53.8	55.2	56.9	58.8	60.9	62.8	65.0
BG	29.4	43.8	45.4	49.7	53.7	58.6	64.9	70.9	77.0	78.6	75.9	73.2
CZ	22.2	39.2	41.3	44.2	45.9	50.7	57.0	60.9	64.1	65.5	63.3	61.3
DK	12.7	38.9	40.9	43.5	45.7	46.9	47.3	46.6	46.0	46.9	49.2	51.6
DE	18.9	41.5	43.8	49.5	54.4	55.5	55.3	55.5	56.8	57.9	59.4	60.4
EE	20.5	33.7	37.4	41.4	43.3	45.1	47.0	49.3	53.2	56.2	56.0	54.2
IE	31.3	29.7	30.8	33.8	36.8	40.9	46.2	51.8	55.2	56.9	58.6	61.0
EL	20.8	54.8	56.2	61.8	68.7	75.6	82.7	87.6	88.5	85.4	80.3	75.6
ES	27.5	45.7	46.3	49.5	54.7	60.3	67.0	72.0	73.8	73.5	72.7	73.1
FR	19.4	48.8	51.3	54.9	57.7	60.4	61.6	63.1	64.5	65.1	66.0	68.2
HR	23.0	53.0	54.1	58.0	60.7	62.6	65.0	68.1	70.3	72.1	74.4	76.0
IT	13.2	58.3	60.1	64.8	70.4	75.9	79.5	80.0	78.4	75.6	72.8	71.6
CY	28.7	30.2	32.6	37.6	40.6	42.5	44.1	46.6	50.5	54.7	57.9	58.8
LV	34.7	38.8	43.7	50.7	55.3	59.4	63.4	69.4	77.6	81.0	77.3	73.5
LT	47.6	35.5	39.4	46.7	52.6	57.4	61.4	65.9	73.0	79.9	83.5	83.2
LU	42.4	29.7	31.3	35.2	39.4	43.3	47.3	51.8	57.1	62.9	68.3	72.1
HU	20.7	39.5	40.1	40.1	42.4	46.5	52.0	54.9	57.5	59.9	60.3	60.2
MT	39.1	34.4	35.4	35.1	33.9	34.1	36.5	41.2	48.8	58.6	67.4	73.5
NL	15.8	36.0	38.3	42.4	46.0	48.0	47.6	46.8	46.6	47.4	49.1	51.8
AT	26.9	38.9	41.8	47.1	52.1	54.8	56.3	58.5	60.7	62.9	64.4	65.7
PL	39.7	38.1	41.1	44.8	47.6	51.5	57.9	66.3	74.0	78.8	79.4	77.8
PT	23.4	46.9	49.2	54.0	59.6	65.3	71.0	74.1	74.2	72.8	71.3	70.3
RO	27.8	47.5	48.8	50.2	56.6	62.2	69.0	74.0	78.9	79.0	77.0	75.3
SI	25.3	43.3	46.9	52.6	56.5	60.1	64.8	69.1	71.7	71.5	70.1	68.6
SK	31.5	34.9	37.7	42.5	46.2	51.0	57.3	63.3	68.6	71.4	70.1	66.4
FI	18.6	46.6	49.3	53.3	54.9	54.4	54.5	55.8	57.9	61.0	63.5	65.2
SE	12.0	37.5	39.7	40.2	41.6	41.7	42.2	43.3	44.5	46.9	48.8	49.5
NO	25.2	32.4	35.4	39.1	42.4	45.1	46.8	48.4	50.5	52.8	55.2	57.6
EA	20.4	45.9	47.9	52.4	56.8	60.0	62.3	64.0	65.0	65.3	65.5	66.3
EU	21.8	44.6	46.6	50.7	54.8	58.1	61.1	63.4	65.1	65.9	66.0	66.4

Table II.1.64: Public pensions, gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.5	12.7	13.1	13.6	14.1	14.4	14.6	14.8	15.1	15.4	15.8	16.2
BG	0.1	9.5	10.8	10.2	9.7	9.4	9.3	9.4	9.7	9.7	9.6	9.6
CZ	1.7	8.7	7.9	8.0	8.4	9.1	10.0	10.6	11.0	11.0	10.7	10.4
DK	-1.4	8.3	8.9	9.3	9.2	8.8	8.3	7.8	7.2	6.9	6.8	6.8
DE	1.2	10.2	10.5	10.8	11.2	11.1	11.0	11.0	11.1	11.2	11.3	11.4
EE	-0.7	7.4	7.8	7.8	7.6	7.6	7.5	7.5	7.5	7.5	7.2	6.7
IE	2.8	3.8	3.7	4.2	4.7	5.0	5.5	6.0	6.2	6.5	6.5	6.6
EL	-2.5	14.5	13.2	12.7	13.4	13.7	14.0	14.0	13.3	12.7	12.4	12.0
ES	3.6	13.1	13.7	14.3	15.4	16.2	16.9	17.3	17.2	16.9	16.6	16.7
FR	-0.9	14.4	14.2	14.3	14.3	14.1	13.9	13.7	13.6	13.5	13.4	13.6
HR	-0.2	9.0	10.4	10.1	10.0	9.6	9.3	9.1	8.9	8.8	8.8	8.8
IT	-1.9	15.6	16.1	16.6	17.2	17.1	16.5	15.5	14.4	13.7	13.4	13.7
CY	3.6	8.2	8.7	9.3	10.1	10.4	10.9	11.0	11.7	12.0	12.5	11.8
LV	-1.7	7.2	7.0	6.9	6.7	6.5	6.3	6.3	6.4	6.1	5.7	5.4
LT	3.2	6.4	7.3	8.1	8.8	9.3	9.6	9.8	10.1	10.2	10.0	9.7
LU	8.3	9.2	9.3	9.7	10.6	11.2	11.8	12.5	13.6	15.0	16.4	17.5
HU	4.3	7.7	7.8	7.7	8.1	9.0	10.2	10.7	11.0	11.5	11.8	12.0
MT	4.4	6.2	6.0	5.4	5.1	5.2	5.6	6.4	7.5	8.8	9.8	10.5
NL	2.0	6.5	6.8	7.3	7.7	8.0	7.9	7.9	7.9	8.0	8.2	8.5
AT	0.4	13.7	14.5	15.0	15.0	14.6	14.2	14.0	14.0	14.0	14.0	14.0
PL	-0.2	10.2	11.1	11.3	10.9	10.6	10.6	10.7	10.8	10.6	10.3	10.1
PT	-1.8	12.2	12.8	13.5	14.3	14.7	15.1	14.6	13.1	11.8	10.9	10.4
RO	-0.9	8.5	10.5	10.4	10.3	10.3	10.6	10.5	10.4	9.6	8.6	7.6
SI	3.8	9.8	10.2	10.8	11.4	12.1	12.8	13.5	13.8	13.8	13.7	13.7
SK	2.8	8.5	9.6	10.2	10.5	10.8	11.2	11.5	12.0	12.1	11.8	11.3
FI	1.4	12.8	13.2	13.3	13.2	12.6	12.3	12.4	12.8	13.3	13.8	14.1
SE	-0.2	7.4	7.9	7.6	7.5	7.2	7.0	7.0	7.0	7.3	7.4	7.2
NO	1.7	10.8	11.5	12.1	12.2	12.1	12.0	12.0	12.1	12.2	12.3	12.5
EA	0.6	11.9	12.1	12.4	12.8	12.8	12.7	12.6	12.5	12.4	12.4	12.5
EU	0.4	11.4	11.7	11.9	12.2	12.2	12.1	12.1	11.9	11.8	11.8	11.8

Table II.1.65: Old-age and early pensions, gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.1	10.4	10.8	11.3	12.0	12.4	12.7	12.9	13.3	13.7	14.1	14.5
BG	0.2	7.5	8.5	7.8	7.3	7.1	7.2	7.4	7.7	7.8	7.7	7.7
CZ	1.8	7.3	6.7	6.8	7.1	7.9	8.8	9.4	9.7	9.7	9.4	9.2
DK	-1.7	6.5	6.9	7.3	7.2	6.8	6.3	5.7	5.2	4.8	4.6	4.8
DE	1.7	8.2	8.4	8.7	9.2	9.2	9.2	9.2	9.4	9.5	9.7	9.9
EE	-0.3	6.0	6.5	6.5	6.3	6.3	6.3	6.3	6.3	6.4	6.1	5.7
IE	2.8	1.6	1.6	1.9	2.2	2.6	3.0	3.6	3.9	4.1	4.3	4.4
EL	-0.8	10.5	9.8	9.5	10.1	10.6	10.9	11.2	10.6	10.1	10.1	9.8
ES	4.1	9.7	10.3	11.0	12.1	13.0	13.9	14.3	14.3	13.9	13.7	13.8
FR	-0.3	12.0	11.8	11.8	11.9	11.8	11.7	11.6	11.5	11.5	11.5	11.7
HR	0.7	6.2	7.2	7.2	7.2	7.0	7.0	6.9	6.9	6.9	6.9	6.9
IT	-1.1	12.9	13.4	14.0	14.5	14.4	13.9	13.0	12.1	11.6	11.4	11.8
CY	2.7	6.9	7.2	7.5	8.2	8.4	8.8	8.9	9.5	9.8	10.2	9.6
LV	-1.7	6.3	6.2	6.2	6.0	5.8	5.6	5.6	5.7	5.5	5.0	4.7
LT	2.5	5.2	5.6	6.1	6.7	7.2	7.5	7.7	8.0	8.1	8.0	7.7
LU	8.1	7.2	7.4	7.9	8.7	9.3	9.8	10.5	11.5	12.9	14.2	15.3
HU	4.7	6.3	6.4	6.4	7.0	8.0	9.2	9.7	10.0	10.5	10.8	11.1
MT	4.9	4.2	4.2	3.9	3.7	3.9	4.3	5.1	6.2	7.4	8.4	9.1
NL	1.6	4.7	4.8	5.2	5.7	6.0	5.9	5.8	5.7	5.8	6.0	6.3
AT	1.1	11.4	12.2	12.8	12.8	12.5	12.2	12.0	12.1	12.3	12.4	12.5
PL	0.1	9.5	10.5	10.7	10.3	10.0	10.0	10.1	10.2	10.1	9.8	9.6
PT	-1.1	9.6	10.2	10.9	11.8	12.2	12.8	12.4	11.0	9.7	8.9	8.5
RO	0.0	6.4	8.2	8.3	8.4	8.6	9.0	9.0	8.9	8.2	7.3	6.5
SI	3.4	7.9	8.3	8.8	9.4	10.0	10.6	11.1	11.3	11.3	11.3	11.3
SK	2.2	6.5	7.3	7.7	7.8	8.1	8.5	8.9	9.3	9.5	9.2	8.8
FI	1.5	11.0	11.4	11.6	11.5	11.0	10.7	10.7	11.1	11.7	12.2	12.5
SE	-0.1	6.5	6.9	6.5	6.5	6.2	6.0	6.1	6.0	6.4	6.6	6.4
NO	1.6	7.6	8.0	8.5	8.7	8.7	8.6	8.5	8.7	8.9	9.0	9.2
EA	1.1	9.5	9.7	10.0	10.4	10.5	10.5	10.5	10.4	10.4	10.4	10.6
EU	0.9	9.2	9.4	9.7	10.0	10.1	10.1	10.1	10.1	10.0	10.0	10.1

Table II.1.66: Disability pensions, gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.1	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5
BG	0.0	1.5	1.7	1.8	1.7	1.7	1.6	1.6	1.6	1.5	1.4	1.4
CZ	-0.2	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
DK	0.3	1.8	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
DE	0.0	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5	0.5
EE	-0.3	1.1	1.1	1.1	1.1	1.0	1.0	0.9	0.9	0.9	0.8	0.8
IE	0.3	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9
EL	-0.4	0.9	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5
ES	-0.2	1.1	1.1	1.0	1.0	0.9	0.8	0.8	0.8	0.9	0.9	0.9
FR	-0.2	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9
HR	-0.9	1.4	1.5	1.3	1.2	1.0	0.8	0.7	0.6	0.5	0.5	0.5
IT	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CY	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LV	-0.1	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6
LT	0.7	0.9	1.1	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.6	1.6
LU	0.2	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
HU	-0.2	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
MT	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NL	0.4	1.8	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2
AT	-0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
PL	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PT	0.0	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5
RO	0.0	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
SI	0.3	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2
SK	0.6	0.7	0.9	1.1	1.2	1.3	1.3	1.3	1.3	1.2	1.3	1.3
FI	0.2	1.0	1.1	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2
SE	0.2	0.7	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8
NO	0.1	3.2	3.5	3.6	3.5	3.4	3.4	3.5	3.4	3.3	3.3	3.3
EA	0.0	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
EU	0.0	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Table II.1.67: Survivors' pensions, gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.5	0.7	0.7	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2
BG	-0.1	0.3	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2
CZ	0.1	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6
DK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	-0.5	1.5	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0
EE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	-0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
EL	-0.7	2.2	2.2	2.2	2.3	2.2	2.1	2.0	1.9	1.8	1.6	1.5
ES	-0.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.0	2.0
FR	-0.4	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.1	1.1	1.1	1.0
HR	0.0	1.4	1.7	1.7	1.7	1.6	1.5	1.5	1.4	1.4	1.4	1.4
IT	-0.8	2.3	2.4	2.4	2.4	2.4	2.3	2.1	2.0	1.8	1.7	1.5
CY	0.9	1.2	1.4	1.6	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.1
LV	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LT	0.1	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
LU	0.0	1.4	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.4
HU	-0.3	0.8	0.8	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
MT	-0.2	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
NL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AT	-0.7	1.6	1.6	1.6	1.5	1.4	1.3	1.3	1.1	1.0	0.9	0.9
PL	-0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
PT	-0.7	1.9	2.0	1.9	1.9	1.8	1.6	1.5	1.4	1.3	1.3	1.2
RO	0.0	0.4	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4
SI	0.3	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.3	1.3	1.2
SK	-0.1	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6
FI	-0.3	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4
SE	-0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EA	-0.5	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.1	1.0
EU	-0.4	1.3	1.3	1.3	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9

Table II.1.68: Other pensions, gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BG	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CZ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EE	-0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
IE	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
EL	-0.7	0.9	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT	-0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HU	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MT	-0.3	0.8	0.7	0.5	0.4	0.4	0.3	0.3	0.4	0.4	0.5	0.5
NL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AT	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
PL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PT	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2
RO	-0.8	1.2	1.3	1.1	0.9	0.8	0.7	0.7	0.6	0.5	0.5	0.4
SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SK	0.2	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6
FI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EA	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EU	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Table II.1.69: Earnings-related public pensions (old-age and early pensions), gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.1	10.2	10.7	11.2	11.8	12.2	12.5	12.8	13.2	13.5	13.9	14.3
BG	0.2	7.5	8.5	7.8	7.3	7.1	7.1	7.3	7.6	7.8	7.7	7.7
CZ	1.3	5.7	5.1	5.1	5.4	6.0	6.7	7.1	7.4	7.4	7.1	6.9
DK	-1.0	1.1	1.1	1.1	0.9	0.7	0.5	0.3	0.2	0.2	0.1	0.1
DE	1.7	8.2	8.4	8.7	9.2	9.2	9.2	9.2	9.4	9.5	9.7	9.9
EE	-1.0	3.4	3.4	3.4	3.2	3.2	3.1	3.1	3.0	2.9	2.7	2.5
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	0.2	6.9	6.3	6.1	6.5	6.7	7.0	7.3	7.0	6.9	7.1	7.2
ES	4.0	9.6	10.2	10.8	11.9	12.8	13.6	14.1	14.0	13.7	13.4	13.6
FR	-0.7	11.8	11.6	11.6	11.6	11.4	11.3	11.2	11.0	11.0	11.0	11.1
HR	0.7	6.2	7.2	7.2	7.2	7.0	7.0	6.9	6.9	6.9	6.9	6.9
IT	-1.2	12.7	13.1	13.7	14.2	14.0	13.5	12.6	11.7	11.2	11.0	11.4
CY	2.9	6.6	6.9	7.2	7.9	8.1	8.5	8.6	9.3	9.6	10.0	9.5
LV	-1.7	6.3	6.2	6.2	6.0	5.8	5.6	5.6	5.7	5.4	4.9	4.7
LT	2.8	1.7	2.3	2.8	3.3	3.8	4.1	4.3	4.6	4.7	4.7	4.5
LU	8.1	7.2	7.4	7.9	8.7	9.3	9.8	10.5	11.5	12.9	14.2	15.3
HU	4.7	6.3	6.4	6.4	7.0	8.0	9.2	9.7	10.0	10.5	10.8	11.1
MT	5.0	3.9	3.9	3.6	3.5	3.7	4.1	4.9	6.0	7.2	8.2	8.9
NL	:	:	:	:	:	:	:	:	:	:	:	:
AT	1.1	11.4	12.2	12.8	12.8	12.5	12.2	12.0	12.1	12.3	12.4	12.5
PL	-1.8	9.0	9.9	10.1	9.6	9.1	8.9	8.7	8.5	8.1	7.6	7.2
PT	-1.2	9.4	10.0	10.8	11.6	12.0	12.6	12.1	10.7	9.4	8.6	8.2
RO	-0.1	6.3	8.0	8.2	8.3	8.5	8.8	8.7	8.6	7.9	7.0	6.2
SI	3.4	7.9	8.3	8.8	9.4	10.0	10.6	11.1	11.3	11.3	11.3	11.3
SK	2.2	6.5	7.3	7.7	7.8	8.0	8.5	8.8	9.3	9.4	9.2	8.7
FI	1.5	10.4	10.8	11.0	10.9	10.4	10.1	10.2	10.5	11.1	11.6	11.9
SE	-1.2	6.1	6.2	5.7	5.6	5.2	5.0	4.9	4.7	5.0	5.1	4.9
NO	3.6	5.1	5.6	6.5	7.1	7.6	7.8	7.9	8.1	8.3	8.5	8.7
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.70: Private occupational pensions, gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	:	:	:	:	:	:	:	:	:	:	:	:
BG	:	:	:	:	:	:	:	:	:	:	:	:
CZ	:	:	:	:	:	:	:	:	:	:	:	:
DK	2.3	4.0	3.7	3.9	4.2	4.6	4.9	5.2	5.5	5.7	6.0	6.3
DE	:	:	:	:	:	:	:	:	:	:	:	:
EE	:	:	:	:	:	:	:	:	:	:	:	:
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	:	:	:	:	:	:	:	:	:	:	:	:
ES	-0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1
FR	:	:	:	:	:	:	:	:	:	:	:	:
HR	:	:	:	:	:	:	:	:	:	:	:	:
IT	:	:	:	:	:	:	:	:	:	:	:	:
CY	:	:	:	:	:	:	:	:	:	:	:	:
LV	:	:	:	:	:	:	:	:	:	:	:	:
LT	:	:	:	:	:	:	:	:	:	:	:	:
LU	:	:	:	:	:	:	:	:	:	:	:	:
HU	:	:	:	:	:	:	:	:	:	:	:	:
MT	:	:	:	:	:	:	:	:	:	:	:	:
NL	0.8	5.1	5.3	5.3	5.4	5.5	5.2	5.1	5.0	5.1	5.5	5.9
AT	:	0.4	:	:	:	:	:	:	:	:	:	:
PL	:	:	:	:	:	:	:	:	:	:	:	:
PT	-0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RO	:	:	:	:	:	:	:	:	:	:	:	:
SI	:	:	:	:	:	:	:	:	:	:	:	:
SK	:	:	:	:	:	:	:	:	:	:	:	:
FI	:	:	:	:	:	:	:	:	:	:	:	:
SE	0.6	1.7	1.8	1.8	1.9	1.8	1.8	1.7	1.8	2.0	2.2	2.2
NO	:	:	:	:	:	:	:	:	:	:	:	:
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.71: Private individual pensions (mandatory), gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	:	:	:	:	:	:	:	:	:	:	:	:
BG	:	:	:	:	:	:	:	:	:	:	:	:
CZ	:	:	:	:	:	:	:	:	:	:	:	:
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	:	:	:	:	:	:	:	:	:	:	:	:
EE	1.1	0.2	0.1	0.1	0.2	0.4	0.5	0.6	0.8	1.0	1.2	1.2
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
ES	:	:	:	:	:	:	:	:	:	:	:	:
FR	:	:	:	:	:	:	:	:	:	:	:	:
HR	0.3	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3
IT	:	:	:	:	:	:	:	:	:	:	:	:
CY	:	:	:	:	:	:	:	:	:	:	:	:
LV	2.1	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.6	1.9	2.0	2.2
LT	1.2	0.0	0.0	0.1	0.1	0.2	0.3	0.5	0.7	0.9	1.1	1.2
LU	:	:	:	:	:	:	:	:	:	:	:	:
HU	:	:	:	:	:	:	:	:	:	:	:	:
MT	:	:	:	:	:	:	:	:	:	:	:	:
NL	:	:	:	:	:	:	:	:	:	:	:	:
AT	:	:	:	:	:	:	:	:	:	:	:	:
PL	:	:	:	:	:	:	:	:	:	:	:	:
PT	:	:	:	:	:	:	:	:	:	:	:	:
RO	0.9	0.0	0.2	0.5	0.4	0.6	0.7	0.8	0.8	0.7	0.8	0.9
SI	:	:	:	:	:	:	:	:	:	:	:	:
SK	:	:	:	:	:	:	:	:	:	:	:	:
FI	:	:	:	:	:	:	:	:	:	:	:	:
SE	0.6	0.3	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8
NO	:	:	:	:	:	:	:	:	:	:	:	:
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.72: New pensions (old-age and early pensions), gross expenditure as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.1	0.5	0.4	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
BG	0.0	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CZ	0.1	0.3	0.3	0.4	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.4
DK	0.1	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3
DE	0.0	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1
EE	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
IE	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
EL	0.0	0.5	0.5	0.5	0.6	0.7	0.4	0.6	0.4	0.5	0.6	0.5
ES	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
FR	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
HR	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
IT	0.1	0.6	0.5	0.7	0.7	0.8	0.5	0.5	0.5	0.6	0.5	0.7
CY	0.1	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.3
LV	-0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LT	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1
LU	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.6
HU	0.0	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MT	0.3	0.1	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.5	0.4	0.4
NL	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.3
AT	-0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
PL	-0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
PT	-0.1	0.3	0.4	0.5	0.5	0.6	0.6	0.2	0.2	0.2	0.2	0.2
RO	-0.1	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2
SI	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SK	-0.1	0.3	0.4	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.2	0.2
FI	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
SE	-0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
NO	-0.1	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
EA	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
EU	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3

Table II.1.73: Public pensions, contributions as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	:	:	:	:	:	:	:	:	:	:	:	:
BG	0.4	4.7	4.8	4.8	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1
CZ	-0.6	8.2	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	0.9	9.9	9.8	10.3	10.6	10.6	10.5	10.5	10.5	10.6	10.8	10.8
EE	-0.2	6.1	6.2	6.1	6.1	6.1	6.1	6.1	6.0	6.0	6.0	6.0
IE	2.1	2.7	2.7	2.8	2.8	3.0	3.5	4.0	4.3	4.5	4.7	4.8
EL	-2.1	12.5	12.2	12.1	12.4	12.4	12.4	12.2	11.8	11.3	10.8	10.4
ES	1.1	12.9	13.3	13.8	14.2	14.3	14.4	14.6	14.1	14.0	14.0	14.0
FR	-0.1	11.1	11.0	10.9	11.0	11.0	11.0	11.0	11.1	11.0	11.0	11.0
HR	0.9	5.7	6.0	6.1	6.4	6.5	6.6	6.6	6.5	6.5	6.6	6.6
IT	0.4	10.9	11.1	11.2	11.3	11.2	11.2	11.3	11.4	11.4	11.4	11.3
CY	1.9	8.2	8.5	9.0	9.5	10.0	9.9	10.0	10.0	10.0	10.0	10.0
LV	-0.8	7.9	7.4	7.3	7.3	7.2	7.2	7.2	7.2	7.2	7.1	7.1
LT	0.8	6.8	7.8	7.7	7.8	7.8	7.8	7.8	7.8	7.8	7.7	7.6
LU	-0.4	9.8	9.3	9.2	9.3	9.3	9.4	9.4	9.4	9.4	9.4	9.4
HU	0.0	6.8	7.0	6.9	6.9	6.9	6.9	6.8	6.8	6.8	6.8	6.8
MT	-0.4	7.6	8.4	8.4	8.3	8.1	7.9	7.7	7.5	7.4	7.3	7.2
NL	1.9	6.9	7.2	7.8	8.2	8.4	8.3	8.2	8.2	8.2	8.4	8.7
AT	0.0	9.8	9.9	9.8	9.7	9.7	9.7	9.7	9.8	9.8	9.8	9.8
PL	0.4	8.0	8.1	8.3	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.4
PT	-3.8	14.2	14.0	14.1	14.2	14.2	14.6	14.2	13.1	11.9	11.0	10.3
RO	-0.7	6.0	5.6	5.5	5.4	5.2	5.2	5.2	5.2	5.3	5.3	5.2
SI	0.0	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
SK	-1.0	7.4	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.5	6.4	6.4
FI	1.5	13.4	14.8	14.5	14.4	14.3	14.4	14.6	14.8	15.0	15.0	14.9
SE	0.5	5.4	5.9	5.9	5.9	5.9	5.9	5.9	5.8	5.8	5.9	5.9
NO	-0.1	11.5	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.74: Balance of the pension system (contributions - gross expenditure) as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	:	:	:	:	:	:	:	:	:	:	:	:
BG	0.3	-4.8	-6.0	-5.4	-4.8	-4.2	-4.2	-4.3	-4.5	-4.6	-4.5	-4.4
CZ	-2.3	-0.5	-0.3	-0.4	-0.7	-1.5	-2.4	-2.9	-3.3	-3.3	-3.0	-2.8
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	-0.3	-0.3	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.5	-0.5	-0.5
EE	0.5	-1.3	-1.7	-1.7	-1.5	-1.5	-1.4	-1.4	-1.4	-1.4	-1.2	-0.8
IE	-0.9	-0.2	-0.2	-0.5	-0.8	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1
EL	0.4	-2.0	-0.9	-0.6	-1.0	-1.3	-1.6	-1.8	-1.5	-1.4	-1.6	-1.6
ES	-2.6	-0.2	-0.4	-0.5	-1.3	-1.9	-2.5	-2.7	-3.1	-2.8	-2.6	-2.7
FR	0.8	-3.3	-3.3	-3.4	-3.3	-3.1	-2.9	-2.7	-2.4	-2.5	-2.4	-2.5
HR	1.2	-3.3	-4.4	-4.0	-3.6	-3.1	-2.8	-2.5	-2.4	-2.3	-2.2	-2.2
IT	2.3	-4.7	-5.0	-5.5	-6.0	-5.8	-5.3	-4.2	-3.0	-2.3	-2.0	-2.4
CY	-1.8	0.0	-0.2	-0.3	-0.6	-0.5	-0.9	-1.0	-1.7	-2.0	-2.4	-1.8
LV	0.9	0.8	0.4	0.4	0.5	0.7	0.9	0.9	0.8	1.0	1.5	1.7
LT	-2.4	0.3	0.5	-0.3	-1.0	-1.4	-1.8	-2.0	-2.3	-2.4	-2.3	-2.1
LU	-8.6	0.6	0.0	-0.6	-1.3	-1.9	-2.4	-3.1	-4.2	-5.6	-7.0	-8.0
HU	-4.3	-0.9	-0.8	-0.8	-1.2	-2.1	-3.3	-3.8	-4.2	-4.7	-5.0	-5.2
MT	-4.8	1.4	2.4	3.0	3.2	2.9	2.3	1.4	0.0	-1.4	-2.5	-3.4
NL	-0.1	0.3	0.3	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.2	0.2
AT	-0.3	-3.6	-4.2	-4.8	-4.9	-4.5	-4.0	-3.8	-3.8	-3.8	-3.8	-3.8
PL	0.6	-2.2	-3.1	-3.0	-2.4	-2.1	-2.1	-2.3	-2.4	-2.2	-1.9	-1.6
PT	-2.0	1.9	1.2	0.5	-0.1	-0.5	-0.6	-0.4	0.0	0.2	0.1	-0.1
RO	0.1	-2.6	-4.9	-5.0	-4.9	-5.1	-5.4	-5.3	-5.1	-4.3	-3.3	-2.4
SI	-3.8	-0.7	-1.1	-1.6	-2.3	-3.0	-3.7	-4.3	-4.6	-4.6	-4.6	-4.5
SK	-3.9	-1.1	-2.5	-3.2	-3.5	-3.9	-4.5	-4.9	-5.4	-5.6	-5.4	-5.0
FI	0.2	0.7	1.6	1.2	1.2	1.6	2.1	2.2	2.1	1.7	1.2	0.8
SE	1.7	-0.7	-0.3	0.1	0.3	0.7	0.9	1.0	1.1	0.8	0.8	1.0
NO	-1.8	0.6	-0.2	-0.8	-0.9	-0.8	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.75: Public pension scheme, tax revenues as % of GDP

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.5	1.8	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3
BG	:	:	:	:	:	:	:	:	:	:	:	:
CZ	:	:	:	:	:	:	:	:	:	:	:	:
DK	-0.6	2.3	2.3	2.4	2.4	2.3	2.2	2.0	1.9	1.7	1.7	1.7
DE	0.5	1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5
EE	-0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	-0.2	1.9	1.8	1.7	1.8	1.8	1.9	1.9	1.8	1.7	1.7	1.6
ES	0.3	1.1	1.1	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4
FR	-0.1	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5
HR	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
IT	-0.4	3.0	3.1	3.2	3.3	3.2	3.1	2.9	2.7	2.6	2.6	2.6
CY	:	:	:	:	:	:	:	:	:	:	:	:
LV	-0.1	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LT	:	:	:	:	:	:	:	:	:	:	:	:
LU	1.4	1.6	1.6	1.7	1.8	1.9	2.0	2.1	2.3	2.6	2.8	3.0
HU	:	:	:	:	:	:	:	:	:	:	:	:
MT	:	:	:	:	:	:	:	:	:	:	:	:
NL	0.3	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3
AT	-0.2	2.4	2.4	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2
PL	0.0	1.3	1.4	1.4	1.4	1.3	1.3	1.4	1.4	1.3	1.3	1.3
PT	-0.1	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.1	1.0	0.9	0.9
RO	-0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
SI	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SK	:	:	:	:	:	:	:	:	:	:	:	:
FI	0.3	2.7	2.8	2.8	2.8	2.7	2.6	2.6	2.7	2.8	2.9	3.0
SE	-0.3	1.5	1.6	1.5	1.4	1.3	1.3	1.2	1.2	1.3	1.3	1.2
NO	0.4	2.5	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.9
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.76: Pensioners (public, in thousands)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1,155	3,068	3,147	3,296	3,456	3,614	3,729	3,835	3,931	4,031	4,123	4,222
BG	-298	2,037	1,996	1,925	1,870	1,816	1,797	1,788	1,799	1,798	1,766	1,739
CZ	462	2,844	2,881	2,865	2,907	3,066	3,234	3,342	3,422	3,434	3,366	3,306
DK	92	1,340	1,386	1,420	1,447	1,450	1,447	1,436	1,411	1,386	1,392	1,432
DE	6,372	23,083	23,556	24,813	26,553	27,544	27,978	28,501	28,947	29,206	29,348	29,455
EE	11	327	326	326	325	329	333	338	348	360	353	338
IE	1,277	1,066	1,155	1,319	1,489	1,671	1,858	2,036	2,149	2,220	2,282	2,343
EL	50	2,460	2,476	2,503	2,631	2,765	2,898	2,959	2,854	2,742	2,666	2,511
ES	5,652	9,984	10,374	11,137	12,249	13,493	14,725	15,605	15,981	15,999	15,831	15,637
FR	4,386	20,263	20,383	21,034	21,894	22,510	23,057	23,450	23,684	23,993	24,233	24,649
HR	-133	1,228	1,219	1,204	1,194	1,180	1,164	1,149	1,131	1,116	1,105	1,095
IT	697	14,760	15,039	15,755	16,492	17,222	17,657	17,523	17,000	16,406	15,792	15,457
CY	119	173	191	204	227	243	264	280	306	310	314	291
LV	-68	543	538	541	538	538	534	540	549	535	502	474
LT	-63	939	965	921	925	931	929	930	936	930	910	876
LU	552	227	253	306	360	415	472	532	597	666	731	780
HU	586	2,549	2,580	2,610	2,693	2,832	2,982	3,057	3,109	3,160	3,164	3,135
MT	173	101	108	116	125	137	154	175	203	232	257	273
NL	1,230	4,075	4,232	4,560	4,851	5,068	5,028	4,998	4,984	5,008	5,129	5,305
AT	551	2,550	2,651	2,797	2,904	2,962	2,999	3,028	3,048	3,060	3,073	3,101
PL	2,174	9,696	10,019	10,344	10,665	11,200	11,832	12,357	12,615	12,557	12,228	11,870
PT	210	2,776	2,844	2,955	3,075	3,169	3,241	3,263	3,205	3,123	3,048	2,987
RO	-1,036	4,998	5,067	5,087	5,121	5,161	5,281	5,230	5,154	4,833	4,426	3,962
SI	86	630	644	672	696	714	735	749	750	739	726	716
SK	279	1,390	1,475	1,584	1,662	1,733	1,801	1,829	1,851	1,823	1,758	1,669
FI	278	1,601	1,638	1,686	1,702	1,703	1,709	1,734	1,775	1,821	1,860	1,879
SE	1,102	2,701	2,767	2,896	3,047	3,106	3,202	3,331	3,415	3,648	3,793	3,803
NO	1,475	1,383	1,526	1,787	1,991	2,156	2,317	2,488	2,663	2,791	2,844	2,857
EA	22,815	91,243	93,215	97,730	103,347	107,940	111,265	113,454	114,229	114,320	114,040	114,057
EU	17,346	83,567	85,343	88,740	92,839	96,876	100,522	102,694	103,287	102,985	101,914	100,914

Table II.1.77: Public pensioners aged 65+ (in thousands)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1,321	2,234	2,331	2,555	2,773	2,953	3,070	3,173	3,267	3,374	3,462	3,555
BG	-4	1,504	1,507	1,461	1,435	1,430	1,455	1,479	1,539	1,566	1,533	1,500
CZ	652	2,142	2,177	2,247	2,299	2,469	2,695	2,817	2,911	2,954	2,876	2,794
DK	141	1,113	1,162	1,217	1,254	1,262	1,256	1,242	1,219	1,201	1,213	1,254
DE	7,163	20,355	20,918	22,336	24,275	25,369	25,730	26,277	26,767	27,129	27,340	27,518
EE	38	288	296	304	305	312	318	324	335	347	341	326
IE	1,140	703	766	888	1,021	1,183	1,367	1,553	1,661	1,720	1,778	1,843
EL	420	2,001	2,078	2,200	2,367	2,556	2,745	2,821	2,733	2,631	2,562	2,421
ES	5,965	8,126	8,497	9,191	10,353	11,728	13,141	14,123	14,488	14,468	14,265	14,090
FR	6,029	15,395	16,046	17,285	18,371	19,244	19,707	20,147	20,472	20,623	20,914	21,424
HR	30	961	1,002	1,036	1,053	1,049	1,039	1,033	1,020	1,006	1,003	991
IT	2,015	12,729	13,178	14,083	15,122	16,153	16,747	16,703	16,210	15,622	15,039	14,744
CY	128	155	177	192	216	231	252	269	296	301	305	283
LV	-23	413	417	427	428	434	436	446	463	455	420	391
LT	91	637	685	679	692	712	720	730	754	767	758	728
LU	498	165	184	228	279	329	378	430	486	546	609	663
HU	717	1,914	1,956	1,969	2,030	2,155	2,395	2,507	2,563	2,640	2,663	2,631
MT	166	85	93	103	110	119	133	152	178	208	234	251
NL	1,305	3,303	3,449	3,789	4,094	4,310	4,260	4,229	4,228	4,269	4,408	4,608
AT	794	1,975	2,094	2,349	2,543	2,628	2,645	2,672	2,689	2,714	2,736	2,768
PL	3,118	7,318	7,898	8,391	8,618	9,056	9,723	10,489	10,996	11,168	10,917	10,437
PT	402	2,349	2,439	2,585	2,729	2,842	2,951	2,997	2,946	2,868	2,799	2,751
RO	79	3,507	3,780	3,850	4,259	4,531	4,750	4,759	4,721	4,412	4,013	3,586
SI	147	510	534	576	610	636	666	686	693	684	671	657
SK	503	919	987	1,109	1,182	1,284	1,412	1,499	1,558	1,563	1,508	1,422
FI	423	1,317	1,393	1,477	1,515	1,517	1,531	1,566	1,613	1,673	1,718	1,740
SE	1,191	2,331	2,414	2,556	2,706	2,803	2,894	3,034	3,131	3,372	3,514	3,522
NO	1,379	1,005	1,114	1,331	1,539	1,715	1,864	2,021	2,193	2,324	2,379	2,384
EA	28,555	74,618	77,565	83,391	90,037	95,589	99,249	101,832	102,855	102,967	102,870	103,173
EU	24,458	65,660	68,806	73,464	78,589	83,645	87,915	90,814	91,954	91,861	91,005	90,118

Table II.1.78: Share of public pensioners below age 65 as % of all public pensioners

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-11.4	27.2	25.9	22.5	19.8	18.3	17.7	17.3	16.9	16.3	16.0	15.8
BG	-12.4	26.1	24.5	24.1	23.3	21.2	19.1	17.3	14.4	12.9	13.2	13.7
CZ	-9.2	24.7	24.4	21.6	20.9	19.5	16.7	15.7	14.9	14.0	14.6	15.5
DK	-4.5	16.9	16.1	14.3	13.3	13.0	13.2	13.5	13.6	13.4	12.9	12.4
DE	-5.2	11.8	11.2	10.0	8.6	7.9	8.0	7.8	7.5	7.1	6.8	6.6
EE	-8.4	12.0	8.9	6.8	6.1	5.2	4.7	4.2	3.7	3.4	3.5	3.6
IE	-12.7	34.0	33.7	32.7	31.4	29.2	26.4	23.7	22.7	22.5	22.1	21.3
EL	-15.1	18.7	16.1	12.1	10.0	7.5	5.3	4.6	4.2	4.1	3.9	3.6
ES	-8.7	18.6	18.1	17.5	15.5	13.1	10.8	9.5	9.3	9.6	9.9	9.9
FR	-10.9	24.0	21.3	17.8	16.1	14.5	14.5	14.1	13.6	14.0	13.7	13.1
HR	-12.2	21.7	17.8	14.0	11.9	11.1	10.7	10.1	9.8	9.9	9.2	9.5
IT	-9.1	13.8	12.4	10.6	8.3	6.2	5.2	4.7	4.6	4.8	4.8	4.6
CY	-7.5	10.3	7.4	5.7	5.2	4.6	4.4	4.0	3.4	3.0	2.7	2.8
LV	-6.2	23.8	22.4	21.0	20.4	19.3	18.4	17.4	15.7	14.9	16.3	17.6
LT	-15.3	32.2	29.0	26.2	25.1	23.5	22.5	21.5	19.5	17.6	16.7	17.0
LU	-12.6	27.5	27.5	25.6	22.5	20.5	19.8	19.1	18.7	18.1	16.6	15.0
HU	-8.8	24.9	24.2	24.5	24.6	23.9	19.7	18.0	17.6	16.5	15.8	16.1
MT	-7.2	15.2	14.2	11.4	12.4	13.3	13.6	13.3	12.4	10.5	8.8	8.0
NL	-5.8	19.0	18.5	16.9	15.6	15.0	15.3	15.4	15.2	14.8	14.0	13.1
AT	-11.8	22.6	21.0	16.0	12.4	11.3	11.8	11.7	11.8	11.3	11.0	10.7
PL	-12.4	24.5	21.2	18.9	19.2	19.1	17.8	15.1	12.8	11.1	10.7	12.1
PT	-7.5	15.4	14.2	12.5	11.2	10.3	9.0	8.1	8.1	8.2	8.2	7.9
RO	-20.4	29.8	25.4	24.3	16.8	12.2	10.1	9.0	8.4	8.7	9.3	9.5
SI	-10.8	19.0	17.0	14.4	12.3	10.8	9.3	8.3	7.5	7.5	7.6	8.2
SK	-19.1	33.9	33.1	30.0	28.9	25.9	21.6	18.0	15.8	14.3	14.2	14.8
FI	-10.3	17.7	15.0	12.4	11.0	10.9	10.4	9.7	9.1	8.1	7.6	7.4
SE	-6.3	13.7	12.7	11.8	11.2	9.8	9.6	8.9	8.3	7.6	7.3	7.4
NO	-10.8	27.3	27.0	25.5	22.7	20.4	19.6	18.8	17.7	16.7	16.4	16.6
EA	-8.7	18.2	16.8	14.7	12.9	11.4	10.8	10.2	10.0	9.9	9.8	9.5
EU	-10.7	21.4	19.4	17.2	15.3	13.7	12.5	11.6	11.0	10.8	10.7	10.7

Table II.1.79: Benefit ratio (total public pensions, gross, %)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-2.5	46.4	45.9	46.5	46.8	46.2	45.5	44.8	44.6	44.2	44.1	43.9
BG	-6.6	31.1	34.7	32.3	29.8	28.2	26.9	25.9	25.2	24.7	24.5	24.5
CZ	-2.3	42.7	40.5	40.0	40.5	40.7	41.1	41.1	40.9	40.6	40.3	40.3
DK	-11.0	41.1	40.1	40.0	39.1	37.7	36.0	34.4	33.0	31.8	30.9	30.1
DE	-8.0	43.0	43.1	41.6	39.3	37.6	36.8	36.0	35.4	35.0	35.0	35.0
EE	-4.4	28.8	31.2	30.4	29.5	28.9	28.4	27.6	26.6	25.6	24.8	24.4
IE	0.6	29.7	29.0	29.3	29.3	29.5	29.7	29.9	30.0	30.6	30.7	30.3
EL	-23.4	76.4	76.2	73.0	69.9	65.3	60.5	57.1	53.9	52.3	52.3	53.0
ES	-12.7	64.1	68.7	69.0	67.2	63.8	59.9	56.5	53.9	52.1	51.4	51.4
FR	-9.8	47.1	47.2	46.6	45.3	43.5	41.9	40.6	39.5	38.8	38.0	37.3
HR	-5.6	29.7	33.3	32.4	31.2	29.7	28.2	26.9	25.9	25.1	24.5	24.1
IT	-13.6	69.3	72.0	70.6	69.0	64.8	60.3	56.6	54.1	53.2	53.9	55.7
CY	-7.9	57.2	57.1	56.1	54.7	53.0	51.3	49.1	47.4	47.4	48.1	49.3
LV	-12.0	25.5	25.1	22.9	20.8	19.0	17.5	16.1	14.9	13.9	13.5	13.5
LT	-0.6	23.8	26.6	29.1	29.4	29.3	28.7	27.7	26.3	25.0	23.9	23.2
LU	-9.6	52.1	54.2	52.6	50.3	47.7	45.4	43.8	43.0	42.7	42.7	42.5
HU	3.4	38.2	37.7	37.1	37.0	38.2	39.6	39.8	39.5	39.9	40.6	41.5
MT	-6.7	38.7	38.3	36.0	34.2	33.3	33.1	33.1	33.1	32.9	32.5	32.0
NL	1.3	37.8	38.7	38.6	38.3	38.0	38.4	39.0	39.4	39.6	39.4	39.1
AT	-9.5	55.5	55.7	55.9	54.2	52.1	49.9	48.5	47.6	47.0	46.5	46.0
PL	-19.8	44.5	46.7	43.8	39.4	35.1	31.5	28.8	26.9	25.7	25.0	24.7
PT	-18.6	52.9	56.3	55.3	53.8	51.4	49.8	46.2	41.6	37.8	35.5	34.3
RO	-5.0	33.9	44.2	41.0	37.8	35.9	34.3	32.8	31.6	30.4	29.5	28.9
SI	3.4	31.6	32.7	32.6	33.2	34.0	34.1	34.2	34.1	34.2	34.6	34.9
SK	-4.6	37.9	41.4	39.3	36.9	35.3	34.2	33.3	33.0	32.9	33.0	33.3
FI	-6.8	50.8	52.0	50.0	49.0	47.0	45.0	44.0	44.0	44.0	44.0	44.0
SE	-5.5	36.0	38.2	36.4	35.3	34.2	33.2	32.4	31.9	31.6	31.0	30.4
NO	-20.5	56.6	55.6	51.7	48.2	44.9	42.0	39.5	37.5	36.1	35.8	36.2
EA	-7.2	42.8	44.0	43.2	42.0	40.4	39.0	37.7	36.6	35.9	35.6	35.6
EU	-7.3	43.2	44.7	43.6	42.3	40.7	39.3	38.0	36.9	36.3	35.9	35.8

Table II.1.80: Gross replacement rate at retirement (old-age earnings-related public pensions, %)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.5	35.1	34.7	35.3	37.1	36.5	36.3	35.6	35.2	34.7	34.7	34.6
BG	-11.7	41.7	37.4	36.1	34.9	33.2	32.0	31.3	30.6	30.4	30.2	29.9
CZ	0.4	47.9	44.4	53.1	51.7	51.4	52.7	50.3	48.4	49.3	49.0	48.3
DK	-5.8	29.4	29.0	29.6	29.4	28.8	27.9	26.9	25.8	24.8	24.1	23.7
DE	-1.7	36.8	38.0	36.9	35.1	35.1	34.9	35.3	36.1	35.5	35.2	35.1
EE	-6.9	45.6	51.6	49.3	48.3	48.2	45.6	42.3	40.4	39.6	38.8	38.7
IE	2.0	34.6	34.4	34.8	34.6	35.1	34.9	36.9	36.9	36.9	37.0	36.6
EL	-10.7	75.9	76.3	77.2	72.7	70.0	62.0	67.3	62.9	65.3	66.7	65.2
ES	-13.2	77.2	76.3	76.0	73.7	71.1	67.6	64.6	63.6	63.9	64.6	64.0
FR	-7.2	41.6	42.1	39.4	44.0	41.0	35.0	34.4	33.9	35.7	37.2	34.4
HR	-5.4	29.2	30.1	28.9	27.9	27.1	26.4	25.7	25.1	24.5	24.1	23.7
IT	-7.1	59.3	57.3	54.8	51.3	49.6	46.4	46.2	47.7	49.8	51.5	52.3
CY	11.5	37.5	44.7	46.8	46.5	45.1	42.9	41.4	43.8	47.8	48.2	49.0
LV	-32.5	56.3	47.4	39.5	34.1	27.7	25.6	23.8	22.5	22.6	23.3	23.7
LT	-8.2	26.7	27.6	26.6	24.9	23.6	22.5	21.4	20.4	19.5	19.0	18.5
LU	-4.2	51.0	49.7	46.6	46.0	45.6	44.9	45.1	45.7	46.3	46.6	46.8
HU	8.5	39.9	45.9	46.8	46.4	47.5	46.6	48.2	47.1	47.4	48.2	48.3
MT	-2.2	51.8	49.5	50.3	49.1	49.0	49.0	49.0	49.1	49.3	49.4	49.6
NL	0.0	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2	27.2
AT	1.2	53.2	55.1	55.6	54.5	53.8	54.2	54.3	54.4	54.3	54.3	54.4
PL	-31.4	58.2	54.9	47.1	38.0	32.2	28.7	27.4	27.0	27.0	27.0	26.8
PT	-30.5	69.4	71.6	79.9	77.9	90.1	91.2	38.5	39.2	40.1	40.9	38.9
RO	-7.4	38.0	43.8	42.8	40.7	38.7	36.5	34.7	33.5	32.4	31.5	30.7
SI	-0.7	34.7	36.1	36.3	34.6	34.2	33.2	32.7	32.9	34.0	34.0	34.0
SK	-4.9	39.6	44.6	40.6	37.1	36.8	36.0	36.0	35.5	34.3	35.9	34.7
FI	-7.3	45.3	44.0	42.0	40.0	38.0	39.0	39.0	38.0	39.0	39.0	38.0
SE	-5.3	30.8	31.7	30.8	28.3	26.4	25.0	24.6	25.3	25.7	24.6	25.5
NO	-1.8	21.5	23.8	21.8	20.7	19.0	17.5	17.1	16.9	17.6	19.0	19.6
EA	-6.1	44.2	44.7	44.0	42.7	42.1	40.7	37.9	37.6	38.1	38.5	38.1
EU	-6.7	45.0	45.4	44.8	43.2	42.3	40.9	38.5	38.1	38.4	38.6	38.2

Table II.1.81: Average accrual rate (new earnings-related public pensions, %)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
BG	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
CZ	0.1	1.6	1.4	1.7	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	0.1	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8
EE	-0.2	1.0	1.0	1.0	1.0	1.1	1.0	0.9	0.9	0.9	0.9	0.9
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	0.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.2	1.2
ES	-0.7	2.5	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.9	1.9	1.9
FR	-0.1	1.5	1.4	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.4
HR	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
IT	-0.1	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7
CY	-0.1	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2
LV	-0.5	1.1	1.1	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6
LT	-0.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
LU	-0.4	2.3	2.3	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9
HU	-0.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0
MT	-0.3	1.9	1.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NL	:	:	:	:	:	:	:	:	:	:	:	:
AT	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
PL	-0.3	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7
PT	0.0	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2
RO	0.1	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SI	0.0	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
SK	-0.1	0.9	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
FI	0.0	1.6	1.6	1.5	1.5	1.4	1.5	1.5	1.5	1.6	1.6	1.6
SE	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
NO	-0.1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.82: Average contributory period (new earnings-related public pensions, years)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.9	38.5	41.7	42.0	40.6	40.5	40.6	40.5	40.5	40.3	40.3	40.4
BG	0.8	35.7	36.3	37.0	37.5	37.4	37.3	37.1	37.0	36.8	36.6	36.4
CZ	-2.5	44.3	45.3	46.3	46.8	46.8	45.8	42.8	41.8	41.8	41.8	41.8
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	1.1	45.9	46.3	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
EE	0.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	6.6	31.9	32.0	32.4	31.2	31.5	32.3	34.3	34.0	35.9	37.0	38.4
ES	4.8	37.8	38.0	38.4	38.8	39.4	39.8	40.4	40.9	41.5	42.0	42.6
FR	0.5	33.9	32.9	31.1	30.8	31.6	32.0	31.7	30.8	33.9	32.9	34.3
HR	1.7	32.2	32.6	33.1	33.5	33.8	33.8	33.9	33.8	33.9	33.9	33.9
IT	2.2	35.5	35.1	34.6	33.7	34.6	34.6	34.4	35.0	36.0	37.1	37.7
CY	:	:	:	:	:	:	:	:	:	:	:	:
LV	0.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
LT	2.8	35.5	38.6	38.6	38.6	38.6	38.5	38.4	38.4	38.3	38.3	38.3
LU	0.3	25.2	24.8	24.3	24.0	24.6	24.4	24.6	24.9	25.3	25.3	25.5
HU	3.1	35.9	36.1	37.1	37.7	38.5	37.1	38.4	38.4	38.1	38.9	39.0
MT	0.6	36.4	35.0	35.6	35.9	36.0	36.2	36.4	36.5	36.7	36.8	37.0
NL	:	:	:	:	:	:	:	:	:	:	:	:
AT	0.7	38.7	39.2	39.3	39.3	39.1	39.1	39.2	39.3	39.4	39.3	39.3
PL	2.5	36.6	37.1	37.3	37.5	38.1	37.9	38.0	38.5	39.1	39.3	39.1
PT	3.9	34.3	35.5	35.8	36.3	36.8	36.4	36.1	37.2	37.8	37.8	38.3
RO	3.6	35.4	36.9	37.7	38.6	38.8	38.8	38.8	38.9	38.9	39.0	39.0
SI	-1.8	38.1	39.0	39.1	37.0	36.3	35.2	34.6	34.9	36.4	36.4	36.3
SK	3.8	42.0	42.2	42.7	42.9	43.3	43.7	44.2	44.6	44.9	45.3	45.7
FI	1.6	37.6	38.3	38.0	37.8	36.7	37.0	37.7	37.8	38.3	38.8	39.2
SE	2.4	40.0	40.0	39.7	39.1	38.3	38.2	39.6	40.6	41.5	41.4	42.4
NO	0.4	33.7	33.8	31.2	30.6	28.9	27.1	26.8	27.0	29.0	31.9	34.1
EA	:	:	:	:	:	:	:	:	:	:	:	:
EU	:	:	:	:	:	:	:	:	:	:	:	:

Table II.1.83: Contributors (public pensions, in thousands)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	278	5,030	5,130	5,214	5,314	5,377	5,403	5,401	5,385	5,362	5,342	5,308
BG	-726	2,875	2,846	2,747	2,681	2,628	2,506	2,374	2,262	2,201	2,173	2,149
CZ	-646	5,228	5,225	5,108	5,041	4,899	4,754	4,650	4,566	4,539	4,568	4,582
DK	-148	254	200	145	122	113	109	103	104	106	105	106
DE	-3,759	37,037	36,796	35,400	34,298	34,311	34,385	34,276	33,941	33,613	33,356	33,277
EE	-28	668	687	672	666	667	664	656	645	635	634	640
IE	243	2,763	2,869	3,005	3,093	3,119	3,085	3,052	3,055	3,068	3,053	3,006
EL	-1,213	4,962	4,973	4,830	4,641	4,440	4,237	4,056	3,906	3,822	3,782	3,749
ES	-2,159	23,636	24,265	24,796	24,824	24,414	23,596	22,811	22,348	22,094	21,855	21,478
FR	368	28,708	29,051	29,563	30,011	30,256	30,069	30,068	29,868	29,686	29,580	29,076
HR	-364	1,613	1,675	1,602	1,554	1,515	1,466	1,415	1,367	1,323	1,285	1,249
IT	-644	24,198	24,546	24,610	24,494	24,203	23,941	23,964	24,048	24,017	23,951	23,554
CY	-25	556	549	543	541	544	546	550	545	538	533	531
LV	-391	939	892	827	773	734	696	650	603	571	558	548
LT	-658	1,414	1,285	1,191	1,116	1,063	1,007	948	882	823	782	757
LU	220	525	572	630	659	686	710	729	739	744	746	745
HU	-655	4,701	4,782	4,765	4,668	4,543	4,400	4,298	4,203	4,125	4,075	4,046
MT	86	282	302	336	366	387	400	403	397	386	376	368
NL	229	9,984	10,155	10,135	10,092	10,121	10,237	10,363	10,430	10,416	10,334	10,213
AT	-125	4,453	4,413	4,396	4,417	4,444	4,457	4,442	4,402	4,364	4,343	4,328
PL	-5,281	17,404	17,291	16,831	16,287	15,689	14,843	13,947	13,191	12,694	12,404	12,123
PT	-1,237	4,592	4,615	4,377	4,114	3,893	3,680	3,531	3,459	3,421	3,388	3,356
RO	-1,760	5,850	5,887	5,572	5,261	4,902	4,644	4,393	4,263	4,216	4,179	4,089
SI	-135	989	977	950	944	936	914	887	867	859	857	854
SK	-499	2,264	2,254	2,169	2,097	2,032	1,964	1,893	1,825	1,779	1,763	1,765
FI	-239	2,475	2,443	2,413	2,399	2,404	2,399	2,372	2,339	2,298	2,263	2,236
SE	1,453	5,785	5,938	6,224	6,422	6,640	6,800	6,902	6,996	7,006	7,090	7,238
NO	268	2,780	2,774	2,838	2,897	2,943	2,984	3,019	3,043	3,054	3,056	3,048
EA	-10,053	157,089	158,447	157,660	156,414	155,547	153,854	152,464	151,050	149,819	148,780	147,036
EU	-12,255	145,774	147,371	147,523	146,698	145,044	142,266	139,882	137,916	136,420	135,382	133,519

Table II.1.84: Support ratio (contributors/100 pensioners, public pensions)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-38.2	164.0	163.0	158.2	153.7	148.8	144.9	140.8	137.0	133.0	129.6	125.7
BG	-17.6	141.2	142.6	142.7	143.4	144.7	139.4	132.8	125.7	122.4	123.1	123.6
CZ	-45.2	183.8	181.4	178.3	173.4	159.8	147.0	139.2	133.4	132.2	135.7	138.6
DK	-11.6	19.0	14.4	10.2	8.5	7.8	7.5	7.2	7.4	7.6	7.5	7.4
DE	-47.5	160.5	156.2	142.7	129.2	124.6	122.9	120.3	117.3	115.1	113.7	113.0
EE	-14.8	204.1	211.1	206.2	205.1	202.6	199.1	194.3	185.4	176.5	179.5	189.4
IE	-130.9	259.2	248.4	227.8	207.7	186.6	166.0	149.9	142.2	138.2	133.8	128.3
EL	-52.4	201.7	200.8	192.9	176.4	160.6	146.2	137.1	136.9	139.4	141.9	149.3
ES	-99.4	236.7	233.9	222.7	202.7	180.9	160.2	146.2	139.8	138.1	138.1	137.4
FR	-23.7	141.7	142.5	140.6	137.1	134.4	130.4	128.2	126.1	123.7	122.1	118.0
HR	-17.3	131.4	137.4	133.0	130.1	128.4	125.9	123.1	120.8	118.6	116.2	114.1
IT	-11.6	163.9	163.2	156.2	148.5	140.5	135.6	136.8	141.5	146.4	151.7	152.4
CY	-139.6	322.0	287.3	266.2	237.8	224.0	206.9	196.4	178.0	173.7	169.7	182.4
LV	-57.4	172.9	165.9	152.9	143.9	136.6	130.3	120.3	109.8	106.8	111.2	115.5
LT	-64.2	150.5	133.1	129.4	120.7	114.2	108.4	101.9	94.2	88.5	85.9	86.3
LU	-135.3	230.8	225.5	205.8	183.1	165.6	150.6	137.1	123.8	111.6	102.0	95.6
HU	-55.4	184.4	185.3	182.6	173.3	160.4	147.5	140.6	135.2	130.5	128.8	129.1
MT	-146.1	280.6	279.2	290.3	292.6	282.1	260.0	230.1	195.7	166.2	146.5	134.5
NL	-52.5	245.0	240.0	222.3	208.0	199.7	203.6	207.4	209.3	208.0	201.5	192.5
AT	-35.1	174.6	166.5	157.2	152.1	150.0	148.6	146.7	144.4	142.6	141.3	139.6
PL	-77.4	179.5	172.6	162.7	152.7	140.1	125.5	112.9	104.6	101.1	101.4	102.1
PT	-53.1	165.4	162.3	148.1	133.8	122.9	113.5	108.2	107.9	109.5	111.2	112.3
RO	-13.8	117.0	116.2	109.5	102.7	95.0	87.9	84.0	82.7	87.2	94.4	103.2
SI	-37.9	157.1	151.6	141.3	135.7	131.1	124.3	118.5	115.7	116.2	118.0	119.2
SK	-57.2	162.9	152.8	137.0	126.2	117.2	109.1	103.5	98.6	97.6	100.3	105.7
FI	-35.6	154.6	149.1	143.1	141.0	141.2	140.4	136.8	131.8	126.2	121.7	119.0
SE	-23.8	214.2	214.6	214.9	210.8	213.8	212.4	207.2	204.8	192.1	186.9	190.3
NO	-94.4	201.1	181.8	158.9	145.6	136.5	128.8	121.3	114.3	109.4	107.4	106.7
EA	-43.3	172.2	170.0	161.3	151.3	144.1	138.3	134.4	132.2	131.1	130.5	128.9
EU	-42.1	174.4	172.7	166.2	158.0	149.7	141.5	136.2	133.5	132.5	132.8	132.3

Table II.1.85: Public pensions, gross expenditure as % of GDP - High life expectancy (+2 years)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.4	12.7	13.1	13.6	14.2	14.6	14.9	15.2	15.6	16.0	16.5	17.0
BG	0.7	9.5	10.8	10.3	9.8	9.5	9.6	9.7	10.1	10.2	10.1	10.1
CZ	2.4	8.7	7.9	8.1	8.5	9.4	10.3	10.9	11.4	11.5	11.2	11.1
DK	-1.2	8.3	8.9	9.3	9.2	8.9	8.5	7.9	7.4	7.1	7.0	7.0
DE	1.5	10.2	10.5	10.8	11.2	11.2	11.1	11.1	11.3	11.4	11.5	11.7
EE	-0.2	7.4	7.9	7.8	7.7	7.7	7.7	7.7	7.8	7.8	7.6	7.2
IE	3.1	3.8	3.7	4.2	4.7	5.1	5.6	6.1	6.4	6.6	6.8	6.9
EL	-2.6	14.5	13.2	12.7	13.1	13.9	14.2	14.1	13.3	12.8	12.3	11.9
ES	4.5	13.1	13.7	14.4	15.6	16.4	17.2	17.7	17.7	17.5	17.4	17.5
FR	-0.2	14.5	14.3	14.4	14.4	14.3	14.1	14.1	14.0	14.0	14.0	14.2
HR	0.4	9.0	10.3	10.2	10.1	9.8	9.6	9.5	9.4	9.3	9.4	9.4
IT	-2.0	15.6	16.1	16.6	17.2	17.0	16.5	15.5	14.5	13.8	13.4	13.6
CY	3.8	8.2	8.7	9.3	10.0	10.4	10.5	11.0	11.4	12.2	12.4	12.0
LV	-1.6	7.2	7.0	7.0	6.8	6.5	6.4	6.4	6.5	6.3	5.8	5.6
LT	3.4	6.4	7.3	8.2	8.9	9.4	9.7	10.0	10.3	10.4	10.2	9.8
LU	8.8	9.2	9.3	9.8	10.7	11.3	11.9	12.7	13.9	15.3	16.8	18.0
HU	5.0	7.7	7.8	7.7	8.2	9.1	10.4	10.9	11.4	11.9	12.4	12.7
MT	4.8	6.2	6.0	5.4	5.2	5.3	5.7	6.5	7.7	9.0	10.2	11.0
NL	2.0	6.5	6.8	7.3	7.7	8.0	8.0	7.9	7.9	8.1	8.3	8.6
AT	1.1	13.7	14.5	15.1	15.2	14.9	14.5	14.4	14.5	14.6	14.7	14.8
PL	0.1	10.2	11.1	11.3	10.9	10.7	10.7	10.9	11.0	10.9	10.6	10.4
PT	-1.3	12.2	12.8	13.6	14.2	14.6	15.1	14.7	13.4	12.1	11.3	10.9
RO	-0.3	8.5	10.5	10.5	10.4	10.5	10.9	10.9	10.8	10.1	9.2	8.2
SI	4.8	9.8	10.3	10.8	11.5	12.3	13.1	13.9	14.3	14.4	14.5	14.6
SK	3.0	8.5	9.6	10.2	10.5	10.8	11.1	11.5	11.9	12.2	12.0	11.5
FI	1.5	12.8	13.2	13.3	13.2	12.7	12.4	12.5	12.8	13.3	13.8	14.2
SE	-0.3	7.4	7.9	7.6	7.3	7.3	6.9	6.9	7.0	7.2	7.4	7.1
NO	1.9	10.8	11.5	12.1	12.3	12.3	12.2	12.2	12.3	12.4	12.6	12.8
EA	1.0	11.9	12.1	12.4	12.8	12.9	12.9	12.8	12.7	12.7	12.7	12.9
EU	0.8	11.4	11.7	11.9	12.2	12.3	12.3	12.3	12.2	12.2	12.1	12.2

Table II.1.86: Public pensions, gross expenditure as % of GDP - Higher migration (+33%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.1	12.7	13.1	13.5	13.9	14.1	14.2	14.3	14.6	14.9	15.3	15.8
BG	-0.3	9.5	10.8	10.1	9.6	9.2	9.1	9.1	9.3	9.3	9.2	9.2
CZ	1.4	8.7	7.9	8.0	8.2	8.9	9.8	10.2	10.6	10.6	10.3	10.1
DK	-1.7	8.3	8.8	9.2	9.0	8.6	8.1	7.5	7.0	6.6	6.5	6.6
DE	0.6	10.2	10.5	10.7	10.9	10.8	10.6	10.5	10.6	10.7	10.7	10.8
EE	-0.5	7.4	7.8	7.8	7.6	7.5	7.5	7.5	7.5	7.5	7.3	6.9
IE	2.6	3.8	3.6	4.1	4.6	4.9	5.3	5.7	5.9	6.2	6.3	6.4
EL	-3.5	14.5	13.2	12.6	13.2	13.4	13.5	13.4	12.5	11.8	11.5	11.0
ES	2.6	13.1	13.6	14.0	14.9	15.5	16.0	16.1	16.0	15.6	15.5	15.7
FR	-1.4	14.4	14.2	14.2	14.1	13.9	13.6	13.3	13.0	13.0	12.8	13.0
HR	-0.4	9.0	10.3	10.0	9.8	9.4	9.1	8.8	8.6	8.6	8.6	8.6
IT	-2.4	15.6	16.0	16.5	17.0	16.7	16.0	14.9	13.8	13.1	12.8	13.1
CY	2.5	8.2	8.6	9.0	9.7	9.8	10.0	10.0	10.6	10.7	11.1	10.7
LV	-1.7	7.2	7.0	6.9	6.7	6.5	6.3	6.3	6.4	6.1	5.7	5.4
LT	3.4	6.4	7.3	8.1	8.9	9.4	9.7	9.9	10.2	10.3	10.2	9.8
LU	8.1	9.2	9.3	9.7	10.5	11.1	11.6	12.3	13.4	14.7	16.1	17.3
HU	4.0	7.7	7.8	7.6	8.0	8.8	9.9	10.4	10.7	11.1	11.5	11.7
MT	3.1	6.2	5.9	5.2	4.9	4.8	5.1	5.7	6.7	7.7	8.6	9.3
NL	1.8	6.5	6.8	7.2	7.6	7.8	7.7	7.7	7.7	7.8	8.0	8.3
AT	0.0	13.7	14.4	14.9	14.8	14.4	13.8	13.6	13.5	13.5	13.6	13.7
PL	-0.3	10.2	11.1	11.2	10.8	10.5	10.5	10.6	10.6	10.5	10.2	9.9
PT	-2.2	12.2	12.8	13.5	14.2	14.5	14.8	14.2	12.7	11.3	10.4	10.0
RO	-1.1	8.5	10.5	10.4	10.1	10.1	10.3	10.2	10.0	9.2	8.3	7.4
SI	3.2	9.8	10.2	10.5	11.0	11.5	12.1	12.6	12.8	12.8	12.9	13.0
SK	2.7	8.5	9.6	10.2	10.5	10.8	11.2	11.5	12.0	12.1	11.8	11.2
FI	0.8	12.8	13.2	13.2	13.0	12.4	12.1	12.0	12.4	12.8	13.3	13.6
SE	-0.6	7.4	7.9	7.4	7.3	6.9	6.7	6.7	6.6	6.9	7.0	6.8
NO	1.2	10.8	11.5	12.0	12.0	11.9	11.7	11.6	11.6	11.7	11.8	12.0
EA	0.1	11.9	12.1	12.3	12.5	12.5	12.3	12.1	11.9	11.8	11.8	12.0
EU	0.0	11.4	11.6	11.8	12.0	11.9	11.8	11.6	11.4	11.3	11.3	11.4

Table II.1.87: Public pensions, gross expenditure as % of GDP - Lower migration (-33%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.1	12.7	13.2	13.7	14.3	14.7	15.0	15.3	15.6	16.0	16.4	16.7
BG	0.6	9.5	10.9	10.3	9.9	9.5	9.6	9.7	10.1	10.2	10.1	10.0
CZ	2.1	8.7	7.9	8.1	8.5	9.3	10.3	11.0	11.4	11.5	11.1	10.8
DK	-1.1	8.3	8.9	9.3	9.3	9.0	8.6	8.1	7.5	7.2	7.1	7.2
DE	1.8	10.2	10.6	10.9	11.4	11.4	11.4	11.5	11.6	11.8	11.9	12.0
EE	-0.9	7.4	7.9	7.8	7.6	7.6	7.5	7.4	7.4	7.4	7.0	6.6
IE	3.1	3.8	3.7	4.2	4.8	5.2	5.8	6.3	6.5	6.8	6.8	6.9
EL	-1.4	14.5	13.2	12.8	13.5	14.0	14.5	14.7	14.2	13.6	13.6	13.1
ES	5.0	13.1	13.8	14.7	16.0	17.0	18.0	18.7	18.7	18.4	18.1	18.1
FR	-0.2	14.4	14.3	14.4	14.5	14.4	14.3	14.3	14.1	14.2	14.1	14.2
HR	0.0	9.0	10.4	10.2	10.2	9.8	9.6	9.4	9.2	9.1	9.0	9.0
IT	-1.2	15.6	16.1	16.8	17.5	17.5	17.1	16.1	15.2	14.5	14.2	14.4
CY	5.4	8.2	8.8	9.6	10.6	11.1	11.8	12.2	13.2	13.7	14.4	13.6
LV	-1.7	7.2	7.0	6.9	6.8	6.5	6.3	6.4	6.5	6.2	5.7	5.5
LT	3.6	6.4	7.4	8.2	9.0	9.5	9.8	10.1	10.5	10.6	10.4	10.0
LU	8.5	9.2	9.3	9.8	10.7	11.3	11.9	12.7	13.8	15.2	16.6	17.7
HU	5.3	7.7	7.8	7.7	8.2	9.3	10.5	11.2	11.6	12.2	12.7	13.0
MT	5.2	6.2	6.1	5.7	5.5	5.6	6.2	7.0	8.3	9.7	10.7	11.3
NL	2.2	6.5	6.9	7.3	7.8	8.1	8.1	8.1	8.1	8.2	8.4	8.7
AT	0.8	13.7	14.5	15.1	15.2	14.9	14.6	14.4	14.5	14.5	14.5	14.5
PL	0.0	10.2	11.2	11.4	11.0	10.7	10.7	10.9	11.0	10.8	10.5	10.2
PT	-1.4	12.2	12.8	13.6	14.5	15.0	15.6	15.1	13.6	12.2	11.3	10.8
RO	-0.6	8.5	10.6	10.5	10.4	10.5	10.9	10.9	10.7	9.9	8.9	7.9
SI	4.7	9.8	10.3	11.0	11.9	12.8	13.7	14.6	15.0	15.0	14.8	14.6
SK	2.9	8.5	9.6	10.2	10.5	10.8	11.3	11.6	12.1	12.2	11.9	11.4
FI	1.9	12.8	13.2	13.4	13.3	12.8	12.6	12.7	13.2	13.8	14.3	14.7
SE	0.3	7.4	7.9	7.7	7.7	7.4	7.3	7.4	7.4	7.8	7.9	7.7
NO	2.1	10.8	11.5	12.2	12.4	12.4	12.3	12.4	12.6	12.7	12.8	13.0
EA	1.3	11.9	12.2	12.5	13.0	13.1	13.2	13.2	13.1	13.1	13.1	13.2
EU	1.0	11.4	11.7	12.0	12.4	12.5	12.6	12.6	12.5	12.5	12.4	12.4

Table II.1.88: Public pensions, gross expenditure as % of GDP - Lower fertility (-20%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.8	12.7	13.1	13.6	14.1	14.4	14.6	15.0	15.5	16.1	16.8	17.5
BG	1.0	9.5	10.8	10.2	9.7	9.3	9.3	9.5	10.0	10.2	10.3	10.4
CZ	2.4	8.7	7.9	8.0	8.4	9.1	10.0	10.6	11.1	11.3	11.1	11.1
DK	-0.9	8.3	8.9	9.2	9.2	8.8	8.4	8.0	7.5	7.2	7.2	7.4
DE	1.8	10.2	10.5	10.8	11.1	11.1	11.1	11.2	11.3	11.5	11.8	12.0
EE	-0.6	7.4	7.8	7.8	7.6	7.6	7.5	7.5	7.5	7.5	7.2	6.8
IE	3.2	3.8	3.7	4.2	4.7	5.0	5.6	6.1	6.4	6.7	6.9	7.1
EL	-1.8	14.5	13.2	12.7	13.3	13.7	14.0	14.2	13.6	13.1	13.1	12.7
ES	4.7	13.1	13.7	14.3	15.4	16.2	16.9	17.5	17.6	17.5	17.5	17.8
FR	0.3	14.4	14.2	14.3	14.2	14.0	13.9	14.0	14.1	14.3	14.4	14.7
HR	0.6	9.0	10.4	10.1	10.0	9.6	9.4	9.2	9.2	9.3	9.4	9.6
IT	-1.3	15.6	16.1	16.6	17.2	17.0	16.5	15.6	14.7	14.2	14.0	14.3
CY	4.4	8.2	8.7	9.3	10.1	10.4	10.9	11.2	12.0	12.5	13.1	12.6
LV	-1.5	7.2	7.0	6.9	6.7	6.5	6.3	6.3	6.5	6.3	5.8	5.6
LT	3.4	6.4	7.3	8.2	8.9	9.4	9.7	9.9	10.2	10.3	10.2	9.9
LU	9.4	9.2	9.3	9.7	10.6	11.2	11.8	12.7	13.9	15.5	17.2	18.6
HU	5.3	7.7	7.8	7.7	8.1	9.0	10.2	10.8	11.3	12.0	12.5	13.0
MT	4.9	6.2	6.0	5.4	5.1	5.2	5.6	6.4	7.6	9.0	10.2	11.1
NL	2.7	6.5	6.8	7.3	7.7	8.0	8.1	8.1	8.2	8.4	8.7	9.2
AT	0.9	13.7	14.5	15.0	15.0	14.6	14.3	14.2	14.4	14.4	14.5	14.6
PL	0.6	10.2	11.1	11.3	10.9	10.6	10.6	10.9	11.1	11.1	10.9	10.8
PT	-1.0	12.2	12.8	13.5	14.3	14.7	15.2	14.8	13.5	12.3	11.5	11.3
RO	-0.2	8.5	10.5	10.4	10.3	10.3	10.6	10.7	10.7	10.0	9.2	8.3
SI	5.0	9.8	10.2	10.8	11.4	12.1	12.9	13.7	14.2	14.4	14.6	14.8
SK	3.8	8.5	9.6	10.2	10.5	10.8	11.3	11.7	12.4	12.7	12.7	12.3
FI	2.4	12.8	13.2	13.3	13.2	12.6	12.4	12.6	13.2	13.9	14.6	15.1
SE	0.5	7.4	7.9	7.6	7.5	7.2	7.1	7.2	7.2	7.7	8.0	7.9
NO	2.6	10.8	11.5	12.1	12.2	12.2	12.2	12.3	12.6	12.8	13.1	13.5
EA	1.4	11.9	12.1	12.4	12.7	12.8	12.8	12.8	12.8	12.9	13.0	13.3
EU	1.2	11.4	11.7	11.9	12.1	12.1	12.2	12.3	12.3	12.3	12.4	12.6

Table II.1.89: Public pensions, gross expenditure as % of GDP - Higher employment rate of older workers (+10 pps)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.4	12.7	13.0	13.0	13.0	13.3	13.5	13.7	14.1	14.4	14.7	15.1
BG	-0.3	9.5	10.7	9.8	9.1	8.7	8.7	8.8	9.1	9.3	9.2	9.1
CZ	1.7	8.7	7.9	7.6	7.6	8.4	9.3	10.1	10.7	10.9	10.6	10.4
DK	-1.6	8.3	8.8	9.1	9.0	8.6	8.1	7.6	7.1	6.7	6.6	6.7
DE	1.0	10.2	10.5	10.6	10.8	10.8	10.7	10.7	10.8	10.9	11.1	11.2
EE	-0.6	7.4	7.8	7.7	7.6	7.6	7.5	7.5	7.5	7.5	7.2	6.8
IE	2.6	3.8	3.6	4.1	4.5	4.9	5.4	5.8	6.1	6.3	6.4	6.4
EL	-2.7	14.5	13.1	12.4	12.9	13.2	13.5	13.6	12.9	12.3	12.1	11.8
ES	2.4	13.1	13.5	13.4	13.8	14.5	15.3	15.8	15.9	15.7	15.4	15.5
FR	-1.4	14.4	14.2	14.0	14.0	13.7	13.5	13.3	13.1	13.1	12.9	13.1
HR	-0.9	9.0	10.3	9.9	9.6	9.1	8.8	8.5	8.2	8.1	8.1	8.1
IT	-1.6	15.6	15.9	15.4	16.0	16.4	16.2	15.7	14.9	14.2	13.8	13.9
CY	3.3	8.2	8.7	9.1	9.9	10.1	10.5	10.6	11.2	11.5	12.0	11.5
LV	-1.7	7.2	6.9	6.8	6.6	6.5	6.3	6.4	6.5	6.2	5.7	5.4
LT	3.3	6.4	7.3	8.1	8.8	9.3	9.6	9.8	10.1	10.2	10.1	9.7
LU	8.0	9.2	9.3	9.5	10.3	10.8	11.3	12.0	13.0	14.4	15.9	17.2
HU	3.9	7.7	7.8	7.5	7.9	8.7	9.8	10.3	10.6	11.1	11.4	11.6
MT	4.0	6.2	6.0	5.3	5.0	5.1	5.4	6.1	7.2	8.4	9.4	10.1
NL	1.9	6.5	6.8	7.3	7.7	8.0	7.9	7.9	7.9	7.9	8.1	8.4
AT	-0.1	13.7	14.4	14.7	14.6	14.2	13.8	13.5	13.5	13.5	13.5	13.6
PL	-0.4	10.2	11.1	11.1	10.6	10.3	10.3	10.4	10.5	10.4	10.1	9.8
PT	-2.2	12.2	12.7	13.2	13.8	14.1	14.6	14.1	12.7	11.3	10.4	10.0
RO	-1.1	8.5	10.5	10.2	9.9	9.9	10.2	10.1	10.0	9.3	8.3	7.4
SI	3.2	9.8	10.1	10.3	10.5	11.1	11.8	12.6	13.0	13.1	13.1	13.0
SK	2.6	8.5	9.5	10.0	10.1	10.4	10.8	11.1	11.6	11.8	11.6	11.1
FI	1.2	12.8	13.1	13.1	12.8	12.4	12.1	12.2	12.6	13.1	13.7	14.0
SE	-0.4	7.4	7.9	7.4	7.2	6.9	6.8	6.8	6.7	7.1	7.2	7.0
NO	1.1	10.8	11.4	11.8	11.8	11.7	11.6	11.6	11.6	11.7	11.8	12.0
EA	0.3	11.9	12.0	12.0	12.2	12.3	12.3	12.3	12.2	12.1	12.1	12.2
EU	0.1	11.4	11.6	11.5	11.6	11.7	11.7	11.7	11.6	11.6	11.5	11.5

Table II.1.90: Public pensions, gross expenditure as % of GDP - Higher TFP growth (+0.2 pps)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.9	12.7	13.1	13.6	14.1	14.4	14.5	14.7	14.9	15.1	15.4	15.6
BG	0.0	9.5	10.8	10.2	9.7	9.4	9.3	9.4	9.7	9.7	9.5	9.4
CZ	1.5	8.7	7.9	8.0	8.4	9.1	10.0	10.6	10.9	10.9	10.5	10.2
DK	-1.8	8.3	8.9	9.3	9.2	8.8	8.3	7.7	7.1	6.7	6.5	6.5
DE	1.1	10.2	10.5	10.8	11.2	11.1	11.0	11.0	11.1	11.1	11.3	11.3
EE	-0.7	7.4	7.8	7.8	7.6	7.6	7.5	7.5	7.4	7.4	7.1	6.7
IE	2.8	3.8	3.7	4.2	4.7	5.0	5.5	6.0	6.2	6.4	6.5	6.6
EL	-2.9	14.5	13.2	12.7	13.4	13.7	14.0	14.0	13.2	12.5	12.2	11.6
ES	3.1	13.1	13.7	14.3	15.4	16.2	16.9	17.2	17.0	16.6	16.2	16.1
FR	-1.2	14.4	14.2	14.3	14.3	14.1	13.9	13.7	13.4	13.3	13.1	13.2
HR	-0.5	9.0	10.3	10.1	9.9	9.5	9.2	8.9	8.7	8.6	8.5	8.5
IT	-2.3	15.6	16.1	16.6	17.2	17.1	16.4	15.4	14.2	13.5	13.1	13.2
CY	3.5	8.2	8.7	9.3	10.1	10.4	10.9	11.0	11.6	11.9	12.4	11.7
LV	-1.8	7.2	7.0	6.9	6.7	6.5	6.3	6.3	6.4	6.1	5.6	5.4
LT	3.0	6.4	7.3	8.1	8.7	9.2	9.4	9.6	9.8	9.9	9.8	9.5
LU	7.7	9.2	9.3	9.7	10.6	11.2	11.7	12.4	13.4	14.7	15.9	16.9
HU	4.0	7.7	7.8	7.7	8.1	9.0	10.2	10.7	11.0	11.4	11.6	11.7
MT	4.1	6.2	6.0	5.4	5.1	5.2	5.6	6.3	7.4	8.6	9.6	10.2
NL	2.0	6.5	6.8	7.3	7.7	8.0	7.9	7.9	7.9	8.0	8.2	8.5
AT	0.2	13.7	14.5	15.0	15.0	14.7	14.2	14.0	14.0	14.0	13.9	13.9
PL	-0.4	10.2	11.1	11.3	10.9	10.6	10.6	10.7	10.7	10.5	10.2	9.9
PT	-2.2	12.2	12.8	13.5	14.3	14.7	15.1	14.5	13.0	11.6	10.6	10.0
RO	-1.0	8.5	10.5	10.4	10.3	10.3	10.6	10.5	10.3	9.5	8.5	7.5
SI	3.7	9.8	10.2	10.8	11.4	12.1	12.8	13.4	13.7	13.6	13.6	13.5
SK	2.6	8.5	9.6	10.2	10.5	10.8	11.2	11.5	12.0	12.0	11.7	11.1
FI	1.0	12.8	13.2	13.3	13.2	12.6	12.3	12.3	12.6	13.0	13.5	13.7
SE	-0.2	7.4	7.9	7.6	7.5	7.2	7.0	7.0	7.0	7.3	7.4	7.2
NO	1.5	10.8	11.5	12.1	12.2	12.1	12.0	12.0	12.0	12.1	12.2	12.3
EA	0.4	11.9	12.1	12.4	12.8	12.8	12.7	12.6	12.4	12.3	12.2	12.3
EU	0.2	11.4	11.7	11.9	12.2	12.2	12.1	12.0	11.9	11.7	11.6	11.6

Table II.1.91: Public pensions, gross expenditure as % of GDP - Lower TFP growth (-0.2 pps)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.6	12.7	13.1	13.6	14.1	14.5	14.8	15.2	15.7	16.2	16.7	17.3
BG	0.4	9.5	10.8	10.2	9.7	9.4	9.4	9.6	9.9	10.0	9.9	9.8
CZ	2.1	8.7	7.9	8.0	8.4	9.2	10.2	10.8	11.3	11.3	11.0	10.8
DK	-0.7	8.3	8.9	9.3	9.2	8.9	8.5	8.1	7.7	7.4	7.4	7.6
DE	1.2	10.2	10.5	10.8	11.2	11.1	11.0	11.0	11.1	11.2	11.3	11.4
EE	-0.5	7.4	7.8	7.8	7.6	7.6	7.6	7.6	7.6	7.6	7.3	6.9
IE	2.9	3.8	3.7	4.2	4.7	5.1	5.6	6.0	6.3	6.5	6.6	6.7
EL	-1.8	14.5	13.2	12.7	13.4	13.8	14.2	14.5	13.8	13.3	13.1	12.7
ES	4.6	13.1	13.7	14.3	15.5	16.4	17.3	17.9	17.9	17.7	17.6	17.7
FR	-0.2	14.4	14.3	14.3	14.4	14.2	14.1	14.1	14.0	14.1	14.1	14.3
HR	0.0	9.0	10.4	10.1	10.0	9.7	9.4	9.2	9.0	9.0	9.0	9.0
IT	-1.3	15.6	16.1	16.6	17.3	17.2	16.9	16.0	15.0	14.4	14.1	14.3
CY	4.1	8.2	8.7	9.3	10.2	10.5	11.0	11.2	12.0	12.3	12.8	12.3
LV	-1.6	7.2	7.0	6.9	6.8	6.6	6.5	6.5	6.6	6.3	5.8	5.6
LT	3.7	6.4	7.3	8.0	8.7	9.2	9.5	9.9	10.2	10.4	10.4	10.1
LU	9.0	9.2	9.3	9.7	10.6	11.3	12.0	12.9	14.0	15.5	17.0	18.2
HU	4.8	7.7	7.8	7.7	8.1	9.1	10.4	11.0	11.4	11.9	12.3	12.6
MT	4.9	6.2	6.0	5.4	5.1	5.2	5.7	6.5	7.7	9.1	10.2	11.0
NL	2.0	6.5	6.8	7.3	7.7	8.0	7.9	7.9	7.9	8.0	8.2	8.5
AT	0.5	13.7	14.5	15.0	15.0	14.7	14.4	14.2	14.2	14.2	14.2	14.2
PL	0.2	10.2	11.1	11.3	10.9	10.7	10.8	11.0	11.1	11.0	10.6	10.4
PT	-1.0	12.2	12.8	13.5	14.3	14.9	15.5	15.2	13.8	12.5	11.7	11.2
RO	-0.5	8.5	10.5	10.4	10.3	10.4	10.9	10.9	10.7	9.9	9.0	8.0
SI	4.1	9.8	10.2	10.8	11.5	12.2	13.0	13.7	14.0	14.0	14.0	13.9
SK	3.2	8.5	9.6	10.2	10.5	10.9	11.4	11.8	12.3	12.5	12.2	11.7
FI	1.9	12.8	13.2	13.3	13.2	12.8	12.5	12.7	13.1	13.7	14.3	14.7
SE	-0.1	7.4	7.9	7.6	7.5	7.2	7.0	7.0	7.0	7.3	7.4	7.2
NO	1.9	10.8	11.5	12.1	12.2	12.2	12.1	12.1	12.3	12.4	12.5	12.7
EA	1.1	11.9	12.1	12.4	12.8	12.9	12.9	12.9	12.8	12.8	12.8	13.0
EU	0.8	11.4	11.7	11.9	12.2	12.2	12.3	12.3	12.3	12.2	12.2	12.3

Table II.1.92: Public pensions, gross expenditure as % of GDP - Retirement age linked to increases in life expectancy

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.0	12.7	13.1	13.6	14.1	14.2	14.2	14.2	14.3	14.4	14.5	14.6
BG	-0.8	9.5	10.8	10.2	9.7	9.2	9.0	9.0	9.1	9.1	8.9	8.6
CZ	0.4	8.7	7.9	8.0	8.3	8.8	9.5	9.8	10.0	9.9	9.5	9.1
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	0.3	10.2	10.5	10.8	11.1	10.9	10.7	10.6	10.6	10.5	10.5	10.5
EE	:	:	:	:	:	:	:	:	:	:	:	:
IE	1.6	3.8	3.7	4.0	4.5	4.7	5.2	5.4	5.5	5.7	5.6	5.4
EL	:	:	:	:	:	:	:	:	:	:	:	:
ES	1.8	13.1	13.7	14.3	15.5	16.2	16.7	16.8	16.5	15.8	15.2	14.8
FR	-1.9	14.4	14.3	14.4	14.3	14.0	13.6	13.3	13.0	12.8	12.6	12.6
HR	-1.6	9.0	10.4	10.1	9.8	9.2	8.7	8.2	7.9	7.7	7.5	7.5
IT	:	:	:	:	:	:	:	:	:	:	:	:
CY	:	:	:	:	:	:	:	:	:	:	:	:
LV	-1.9	7.2	7.0	6.8	6.6	6.2	6.1	5.9	6.1	5.9	5.6	5.2
LT	3.1	6.4	7.3	8.1	8.8	9.3	9.5	9.7	9.9	10.0	9.8	9.5
LU	6.1	9.2	9.3	9.7	10.5	11.0	11.4	11.9	12.7	13.7	14.7	15.3
HU	2.0	7.7	7.8	7.5	7.6	8.3	8.8	9.6	9.7	9.6	9.8	9.8
MT	3.7	6.2	6.0	5.4	5.1	5.1	5.5	6.1	7.1	8.2	9.2	9.8
NL	1.8	6.5	6.8	7.3	7.7	7.9	7.9	7.8	7.8	7.9	8.1	8.4
AT	-1.6	13.7	14.4	14.7	14.6	14.1	13.4	12.9	12.6	12.4	12.2	12.0
PL	-1.2	10.2	11.1	11.0	10.5	10.0	9.8	9.8	9.9	9.8	9.5	9.0
PT	-1.9	12.2	12.8	13.5	14.2	14.6	15.0	14.4	13.0	11.7	10.8	10.3
RO	-1.5	8.5	10.5	10.4	10.2	10.1	10.2	10.2	9.9	9.2	8.1	7.0
SI	2.2	9.8	10.2	10.8	11.4	12.1	12.7	13.2	13.2	12.9	12.5	12.1
SK	:	:	:	:	:	:	:	:	:	:	:	:
FI	:	:	:	:	:	:	:	:	:	:	:	:
SE	-0.3	7.4	7.9	7.4	7.3	7.2	6.8	6.8	7.0	7.0	7.1	7.1
NO	1.1	10.8	11.5	12.0	12.2	12.0	11.8	11.8	11.8	11.8	11.8	11.9
EA	-0.3	11.9	12.1	12.4	12.7	12.7	12.5	12.3	12.0	11.8	11.7	11.6
EU	-0.5	11.4	11.7	11.9	12.1	12.0	11.8	11.7	11.4	11.2	11.1	10.9

Table II.1.93: Public pensions, gross expenditure as % of GDP - Constant retirement age scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.6	12.7	13.3	14.1	14.9	15.2	15.4	15.6	16.0	16.4	16.8	17.3
BG	0.4	9.5	10.8	10.4	10.0	9.8	9.8	9.9	10.0	10.0	9.9	9.9
CZ	2.9	8.7	8.1	8.7	9.4	10.6	11.4	11.9	12.2	12.1	11.7	11.6
DK	0.6	8.3	8.9	9.5	9.7	9.7	9.4	8.9	8.6	8.6	8.7	8.8
DE	1.6	10.2	10.6	11.0	11.4	11.4	11.3	11.3	11.5	11.6	11.7	11.8
EE	1.7	7.4	8.0	8.3	8.4	8.7	9.0	9.4	9.7	9.5	9.2	9.1
IE	2.9	3.8	3.7	4.2	4.7	5.1	5.6	6.0	6.3	6.5	6.6	6.7
EL	-1.6	14.5	13.2	13.1	14.0	14.9	15.4	15.2	14.6	14.0	13.7	12.9
ES	5.7	13.1	14.0	15.6	17.6	19.1	19.9	19.9	19.4	19.0	18.7	18.8
FR	0.1	14.4	14.4	14.9	15.1	15.0	14.8	14.6	14.4	14.5	14.3	14.5
HR	0.0	9.0	10.4	10.2	10.1	9.8	9.5	9.3	9.1	9.0	9.0	9.0
IT	-0.7	15.6	16.1	17.0	17.9	18.0	17.3	16.1	15.2	14.7	14.7	14.8
CY	6.2	8.2	8.7	9.3	10.3	10.8	11.5	12.4	13.4	14.4	14.7	14.4
LV	-1.6	7.2	7.3	7.2	6.9	6.6	6.4	6.4	6.5	6.1	5.7	5.5
LT	3.4	6.4	7.3	8.2	8.9	9.4	9.8	10.0	10.3	10.4	10.3	9.9
LU	13.1	9.2	9.3	9.9	11.1	12.1	13.4	14.9	16.6	18.7	20.7	22.3
HU	4.5	7.7	7.8	7.7	8.1	9.1	10.3	10.9	11.2	11.7	12.0	12.2
MT	4.6	6.2	6.0	5.5	5.3	5.3	5.8	6.6	7.7	9.0	10.0	10.7
NL	3.0	6.5	6.9	7.4	7.9	8.2	8.3	8.3	8.5	8.7	9.1	9.6
AT	1.5	13.7	14.7	15.7	15.8	15.4	15.1	15.0	15.0	14.9	15.1	15.1
PL	-0.2	10.2	11.1	11.3	10.9	10.6	10.6	10.7	10.8	10.6	10.3	10.1
PT	0.0	12.2	12.7	13.4	14.2	14.8	15.7	15.6	14.6	13.5	12.7	12.3
RO	-0.6	8.5	10.7	10.8	11.0	11.3	11.6	11.5	11.2	10.2	9.0	7.9
SI	4.8	9.8	10.3	11.1	12.1	13.3	14.2	14.7	14.8	14.7	14.6	14.7
SK	4.3	8.5	9.6	10.5	10.9	11.6	12.3	13.0	13.6	13.7	13.3	12.8
FI	2.3	12.8	13.2	13.5	13.5	13.1	13.0	13.2	13.7	14.2	14.7	15.1
SE	0.7	7.4	7.9	7.6	7.6	7.5	7.3	7.3	7.6	8.0	8.0	8.1
NO	1.8	10.8	11.5	12.1	12.3	12.2	12.1	12.1	12.2	12.3	12.4	12.7
EA	1.6	11.9	12.2	12.8	13.4	13.5	13.5	13.4	13.3	13.3	13.3	13.5
EU	1.3	11.4	11.8	12.3	12.7	12.9	12.9	12.8	12.7	12.7	12.6	12.7

Table II.1.94: Public pensions, gross expenditure as % of GDP - Constant benefit ratio scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	:	:	:	:	:	:	:	:	:	:	:	:
BG	1.4	9.5	10.8	10.2	9.7	9.4	9.4	9.9	10.6	10.9	10.9	10.8
CZ	:	:	:	:	:	:	:	:	:	:	:	:
DK	:	:	:	:	:	:	:	:	:	:	:	:
DE	1.9	10.2	10.5	10.8	11.2	11.1	11.2	11.4	11.7	11.9	12.0	12.1
EE	:	:	:	:	:	:	:	:	:	:	:	:
IE	:	:	:	:	:	:	:	:	:	:	:	:
EL	1.0	14.5	13.2	12.7	13.4	14.5	15.8	16.8	16.9	16.7	16.2	15.5
ES	5.9	13.1	13.7	14.3	15.4	16.2	16.9	17.8	18.6	18.9	18.9	19.0
FR	1.1	14.4	14.2	14.3	14.3	14.1	14.2	14.5	14.7	14.8	15.1	15.5
HR	0.7	9.0	10.4	10.1	10.0	9.6	9.3	9.2	9.2	9.3	9.5	9.7
IT	-0.3	15.6	16.1	16.6	17.2	17.1	16.9	16.9	16.4	15.9	15.4	15.2
CY	5.7	8.2	8.7	9.3	10.2	10.9	11.8	12.7	13.9	14.4	14.8	13.9
LV	2.2	7.2	7.0	7.0	7.5	7.9	8.3	9.1	10.1	10.3	9.8	9.4
LT	:	:	:	:	:	:	:	:	:	:	:	:
LU	10.1	9.2	9.3	9.7	10.6	11.2	12.2	13.4	14.8	16.4	18.0	19.3
HU	:	:	:	:	:	:	:	:	:	:	:	:
MT	4.8	6.2	6.0	5.4	5.1	5.2	5.6	6.4	7.5	8.8	10.0	10.9
NL	:	:	:	:	:	:	:	:	:	:	:	:
AT	1.8	13.7	14.5	15.0	15.0	14.6	14.2	14.7	14.9	15.1	15.3	15.5
PL	4.5	10.2	11.1	11.3	11.1	12.0	13.1	14.3	15.1	15.4	15.1	14.7
PT	2.5	12.2	12.8	13.5	14.3	14.7	15.1	15.2	15.3	15.1	14.8	14.7
RO	-0.3	8.5	10.5	10.4	10.3	10.3	10.6	10.5	10.6	10.0	9.2	8.3
SI	:	:	:	:	:	:	:	:	:	:	:	:
SK	3.2	8.5	9.6	10.2	10.5	10.8	11.3	11.9	12.5	12.7	12.4	11.7
FI	1.6	12.8	13.2	13.3	13.2	12.6	12.3	12.6	13.0	13.5	14.0	14.3
SE	-0.1	7.4	7.9	7.6	7.5	7.2	7.0	7.0	7.0	7.3	7.4	7.2
NO	:	:	:	:	:	:	:	:	:	:	:	:
EA	1.9	11.9	12.1	12.4	12.8	12.8	13.0	13.2	13.4	13.6	13.6	13.7
EU	1.7	11.4	11.7	11.9	12.2	12.3	12.5	12.8	13.0	13.1	13.1	13.1

Table II.1.95: Public pensions, gross expenditure as % of GDP - pps change from 2022

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.5		0.4	0.9	1.5	1.7	1.9	2.1	2.4	2.8	3.1	3.5
BG	0.1		1.4	0.8	0.3	-0.1	-0.1	0.0	0.2	0.3	0.1	0.1
CZ	1.7		-0.8	-0.7	-0.3	0.4	1.3	1.9	2.3	2.3	2.0	1.7
DK	-1.4		0.6	1.0	0.9	0.5	0.0	-0.5	-1.0	-1.4	-1.5	-1.4
DE	1.2		0.3	0.6	1.0	0.9	0.8	0.8	0.9	1.0	1.1	1.2
EE	-0.7		0.4	0.4	0.2	0.1	0.1	0.1	0.1	0.1	-0.2	-0.7
IE	2.8		-0.2	0.3	0.8	1.2	1.7	2.2	2.4	2.6	2.7	2.8
EL	-2.5		-1.3	-1.8	-1.1	-0.8	-0.5	-0.5	-1.2	-1.8	-2.1	-2.5
ES	3.6		0.6	1.2	2.4	3.1	3.8	4.2	4.1	3.8	3.5	3.6
FR	-0.9		-0.2	-0.1	-0.1	-0.3	-0.5	-0.7	-0.9	-1.0	-1.0	-0.9
HR	-0.2		1.3	1.1	1.0	0.6	0.3	0.1	-0.1	-0.2	-0.2	-0.2
IT	-1.9		0.5	1.1	1.7	1.5	0.9	-0.1	-1.1	-1.8	-2.1	-1.9
CY	3.6		0.5	1.1	1.9	2.2	2.7	2.8	3.5	3.8	4.3	3.6
LV	-1.7		-0.2	-0.2	-0.4	-0.7	-0.8	-0.8	-0.7	-1.0	-1.5	-1.7
LT	3.2		0.9	1.7	2.4	2.8	3.1	3.4	3.6	3.7	3.6	3.2
LU	8.3		0.1	0.6	1.4	2.0	2.6	3.3	4.4	5.8	7.2	8.3
HU	4.3		0.1	-0.1	0.4	1.3	2.4	2.9	3.3	3.7	4.1	4.3
MT	4.4		-0.1	-0.7	-1.0	-0.9	-0.5	0.2	1.3	2.6	3.6	4.4
NL	2.0		0.3	0.7	1.2	1.4	1.4	1.3	1.3	1.4	1.6	2.0
AT	0.4		0.8	1.3	1.3	1.0	0.5	0.3	0.3	0.3	0.3	0.4
PL	-0.2		0.9	1.1	0.7	0.3	0.4	0.5	0.5	0.4	0.1	-0.2
PT	-1.8		0.6	1.3	2.1	2.5	2.9	2.4	0.9	-0.5	-1.4	-1.8
RO	-0.9		2.0	1.9	1.8	1.8	2.1	2.0	1.8	1.1	0.1	-0.9
SI	3.8		0.4	0.9	1.6	2.3	3.0	3.6	3.9	3.9	3.9	3.8
SK	2.8		1.1	1.7	2.0	2.3	2.7	3.0	3.5	3.6	3.3	2.8
FI	1.4		0.4	0.5	0.4	-0.1	-0.4	-0.4	0.0	0.5	1.0	1.4
SE	-0.2		0.5	0.2	0.1	-0.2	-0.4	-0.4	-0.4	-0.1	0.0	-0.2
NO	1.7		0.7	1.2	1.4	1.3	1.2	1.2	1.3	1.3	1.5	1.7
EA	0.6		0.2	0.5	0.9	0.9	0.9	0.7	0.6	0.5	0.5	0.6
EU	0.4		0.3	0.5	0.8	0.8	0.7	0.7	0.5	0.4	0.4	0.4

Table II.1.96: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to dependency ratio

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.5		0.7	1.9	2.9	3.5	4.0	4.4	5.0	5.5	6.0	6.5
BG	5.1		0.3	1.0	1.7	2.8	3.9	4.8	5.7	5.9	5.4	5.1
CZ	3.6		0.1	0.5	0.9	1.8	3.0	3.6	4.2	4.4	4.0	3.6
DK	4.0		0.3	1.1	1.9	2.4	2.6	2.5	2.7	3.2	3.7	4.0
DE	4.3		0.4	1.9	3.1	3.1	3.1	3.2	3.6	3.8	4.2	4.3
EE	3.9		0.3	0.8	1.2	1.7	2.2	2.9	3.9	4.2	4.0	3.9
IE	4.0		0.2	0.6	1.0	1.6	2.3	3.0	3.3	3.5	3.7	4.0
EL	7.7		0.9	2.4	4.3	6.2	8.0	9.2	9.2	8.8	8.2	7.7
ES	10.5		0.8	2.6	4.6	7.0	9.3	10.4	10.5	10.4	10.3	10.5
FR	6.0		0.8	2.0	3.1	4.1	4.5	4.9	5.3	5.4	5.6	6.0
HR	4.6		0.6	1.6	2.2	2.7	3.2	3.7	4.0	4.2	4.5	4.6
IT	8.3		0.7	2.7	4.9	7.0	8.1	8.4	8.3	8.1	8.0	8.3
CY	7.8		0.5	1.7	2.4	3.0	3.6	4.5	5.7	6.9	7.7	7.8
LV	3.8		0.5	1.3	1.8	2.4	2.8	3.5	4.3	4.5	4.1	3.8
LT	7.1		0.5	1.7	2.6	3.4	4.0	4.8	6.0	6.9	7.3	7.1
LU	10.8		0.4	1.6	2.8	3.8	4.7	5.8	7.0	8.5	9.9	10.8
HU	4.3		0.2	0.2	0.7	1.6	2.8	3.3	3.8	4.3	4.3	4.3
MT	5.9		0.1	0.1	-0.1	0.0	0.4	1.1	2.3	3.8	5.1	5.9
NL	3.8		0.3	1.2	1.9	2.2	2.2	2.2	2.4	2.8	3.2	3.8
AT	8.7		0.9	3.2	5.2	6.0	6.4	7.0	7.6	8.2	8.5	8.7
PL	7.9		0.9	1.8	2.3	3.2	4.6	6.3	7.5	8.2	8.2	7.9
PT	7.3		0.7	2.2	3.7	5.4	6.9	7.5	7.5	7.3	7.3	7.3
RO	5.6		0.5	0.7	2.3	3.5	4.8	5.4	6.3	6.1	5.8	5.6
SI	5.4		0.7	1.9	2.7	3.6	4.7	5.6	6.2	6.0	5.7	5.4
SK	8.2		0.8	2.0	2.8	4.0	5.6	7.1	8.3	8.9	8.7	8.2
FI	5.5		0.4	1.3	1.7	1.7	2.0	2.6	3.3	4.3	4.9	5.5
SE	2.5		0.1	0.5	0.8	1.0	1.0	1.3	1.7	2.2	2.4	2.5
NO	6.8		0.7	1.6	2.7	3.6	4.0	4.4	5.1	5.7	6.3	6.8
EA	6.2		0.6	2.0	3.4	4.3	5.0	5.4	5.7	5.8	5.9	6.2
EU	6.1		0.6	1.8	3.0	3.9	4.7	5.2	5.6	5.8	5.9	6.1

Table II.1.97: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-1.6		-0.4	-1.0	-1.3	-1.3	-1.4	-1.4	-1.4	-1.5	-1.6	-1.6
BG	-2.4		-0.3	-0.8	-1.3	-2.0	-2.6	-2.9	-3.1	-3.0	-2.7	-2.4
CZ	-1.0		-0.1	-0.4	-0.5	-0.8	-1.1	-1.1	-1.2	-1.3	-1.1	-1.0
DK	-2.7		-0.1	-0.6	-1.0	-1.4	-1.6	-1.6	-2.0	-2.4	-2.7	-2.7
DE	-0.2		-0.2	-0.6	-0.6	-0.3	-0.1	0.0	0.0	0.0	-0.1	-0.2
EE	-2.4		-0.3	-0.7	-1.0	-1.3	-1.6	-1.9	-2.2	-2.1	-2.1	-2.4
IE	-0.2		0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2
EL	-0.7		-0.4	-1.0	-1.3	-1.4	-1.5	-1.4	-1.4	-1.2	-0.7	-0.7
ES	-0.3		-0.4	-1.1	-1.4	-1.6	-1.6	-1.2	-0.7	-0.4	-0.2	-0.3
FR	-2.2		-0.7	-1.4	-1.8	-2.1	-2.1	-2.1	-2.2	-2.1	-2.1	-2.2
HR	-2.1		-0.4	-0.9	-1.2	-1.4	-1.6	-1.9	-2.0	-2.0	-2.1	-2.1
IT	-3.0		-0.3	-1.0	-1.7	-2.2	-2.3	-2.3	-2.5	-2.6	-2.8	-3.0
CY	-1.6		0.2	-0.2	0.1	0.2	0.5	0.4	0.5	-0.2	-0.5	-1.6
LV	-0.9		-0.3	-0.4	-0.6	-0.7	-0.8	-0.8	-0.9	-1.0	-0.9	-0.9
LT	-2.4		-0.2	-1.1	-1.4	-1.6	-1.8	-1.9	-2.1	-2.4	-2.4	-2.4
LU	1.8		0.1	0.3	0.3	0.5	0.8	1.0	1.2	1.4	1.6	1.8
HU	-0.4		0.0	0.2	0.2	0.0	-0.3	-0.3	-0.4	-0.5	-0.4	-0.4
MT	0.0		0.0	-0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.0
NL	-1.2		-0.2	-0.4	-0.5	-0.4	-0.5	-0.6	-0.8	-1.0	-1.1	-1.2
AT	-4.0		-0.3	-1.2	-2.2	-2.7	-2.9	-3.3	-3.5	-3.8	-4.0	-4.0
PL	-1.4		-0.3	-0.5	-0.4	-0.4	-0.5	-0.9	-1.2	-1.5	-1.5	-1.4
PT	-1.7		-0.2	-0.7	-0.9	-1.3	-1.6	-1.6	-1.6	-1.6	-1.6	-1.7
RO	-3.7		-0.1	0.0	-0.8	-1.3	-1.6	-1.8	-2.3	-2.6	-3.1	-3.7
SI	-1.7		-0.3	-0.8	-1.1	-1.3	-1.6	-1.8	-2.0	-2.0	-1.9	-1.7
SK	-2.5		-0.1	-0.2	-0.2	-0.5	-1.1	-1.7	-2.0	-2.4	-2.5	-2.5
FI	-1.4		-0.2	-0.6	-0.8	-0.7	-0.8	-0.9	-1.0	-1.2	-1.3	-1.4
SE	-1.0		-0.1	-0.2	-0.3	-0.5	-0.6	-0.6	-0.9	-0.9	-0.8	-1.0
NO	1.1		0.4	1.0	1.1	1.1	1.4	1.7	1.9	1.8	1.5	1.1
EA	-1.3		-0.3	-0.9	-1.1	-1.3	-1.3	-1.2	-1.2	-1.2	-1.2	-1.3
EU	-1.5		-0.3	-0.7	-1.0	-1.2	-1.2	-1.3	-1.3	-1.3	-1.4	-1.5

Table II.1.98: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio - old-age effect

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.3		-0.2	-0.2	0.0	0.2	0.3	0.3	0.3	0.4	0.3	0.3
BG	-0.9		-0.1	-0.5	-0.9	-1.4	-1.7	-1.8	-1.8	-1.5	-1.2	-0.9
CZ	-0.1		-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1
DK	-2.3		0.0	-0.3	-0.6	-1.0	-1.2	-1.3	-1.6	-2.1	-2.3	-2.3
DE	0.4		-0.1	-0.4	-0.2	0.2	0.3	0.5	0.5	0.6	0.5	0.4
EE	-1.7		-0.1	-0.3	-0.5	-0.8	-1.0	-1.3	-1.5	-1.4	-1.4	-1.7
IE	0.7		0.0	0.0	0.1	0.2	0.3	0.5	0.6	0.7	0.7	0.7
EL	1.5		0.1	0.1	0.0	0.3	0.6	0.8	0.8	1.1	1.6	1.5
ES	1.2		-0.3	-0.9	-0.9	-0.6	-0.2	0.5	1.0	1.3	1.3	1.2
FR	-0.3		-0.2	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.3
HR	-0.7		0.1	-0.1	-0.1	-0.2	-0.4	-0.5	-0.6	-0.7	-0.7	-0.7
IT	-1.4		-0.1	-0.5	-0.8	-0.8	-0.7	-0.7	-0.9	-1.0	-1.2	-1.4
CY	-0.8		0.5	0.2	0.6	0.8	1.1	1.0	1.2	0.5	0.2	-0.8
LV	-0.4		-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4
LT	-0.7		0.1	-0.5	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.7
LU	3.8		0.1	0.5	1.0	1.5	1.8	2.1	2.4	2.7	3.2	3.8
HU	0.7		0.1	0.2	0.2	0.1	0.3	0.5	0.5	0.5	0.7	0.7
MT	0.6		0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.6
NL	-0.7		-0.1	-0.2	-0.2	-0.1	-0.2	-0.3	-0.5	-0.7	-0.7	-0.7
AT	-2.0		0.0	-0.1	-0.5	-0.8	-1.1	-1.4	-1.7	-1.9	-2.0	-2.0
PL	0.2		0.1	0.2	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.2
PT	-0.5		-0.1	-0.2	-0.3	-0.5	-0.6	-0.5	-0.4	-0.5	-0.5	-0.5
RO	-1.2		0.4	0.7	0.9	0.9	0.8	0.7	0.4	-0.1	-0.6	-1.2
SI	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.4
SK	0.1		0.0	0.3	0.5	0.6	0.6	0.6	0.5	0.3	0.3	0.1
FI	0.2		0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2
SE	-0.5		0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.4	-0.4	-0.3	-0.5
NO	2.8		0.4	1.3	1.8	2.2	2.7	3.1	3.4	3.5	3.2	2.8
EA	-0.1		-0.1	-0.4	-0.4	-0.3	-0.2	-0.1	-0.1	0.0	0.0	-0.1
EU	-0.2		-0.1	-0.2	-0.3	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2

Table II.1.99: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio - early age effect

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-3.3		-0.2	-1.0	-2.0	-2.6	-3.0	-3.0	-2.9	-3.3	-3.5	-3.3
BG	-4.5		-1.0	-1.7	-2.2	-3.1	-3.3	-3.0	-3.3	-4.1	-4.5	-4.5
CZ	-2.4		-0.7	-2.2	-2.4	-2.2	-2.3	-1.8	-1.3	-2.0	-2.4	-2.4
DK	-1.5		-0.2	-0.8	-0.7	-0.8	-1.2	-1.6	-1.7	-1.7	-1.6	-1.5
DE	-1.2		0.1	0.6	0.4	-0.5	-0.4	-0.6	-0.3	-0.5	-0.6	-1.2
EE	-7.9		-2.0	-3.9	-5.0	-6.4	-7.0	-6.9	-6.8	-7.2	-7.6	-7.9
IE	0.1		0.0	0.1	0.1	0.3	0.6	0.7	0.6	0.3	0.1	0.1
EL	-16.5		-2.1	-5.3	-6.5	-8.3	-10.7	-10.6	-12.1	-13.6	-14.7	-16.5
ES	-1.2		-0.5	-0.7	-0.6	-0.4	-0.5	-0.9	-1.3	-1.6	-1.5	-1.2
FR	-5.0		-1.6	-3.2	-4.0	-4.8	-4.4	-4.4	-4.9	-4.6	-5.0	-5.0
HR	-5.7		-1.4	-3.4	-4.9	-5.3	-5.2	-5.5	-5.5	-5.6	-6.0	-5.7
IT	-12.3		-1.7	-2.8	-4.5	-6.9	-8.6	-10.1	-10.9	-11.5	-12.1	-12.3
CY	-7.5		-1.7	-3.2	-3.6	-4.9	-5.3	-5.6	-5.8	-6.3	-7.0	-7.5
LV	0.2		-0.3	-0.2	-0.3	-0.7	-0.7	0.1	0.9	0.7	0.4	0.2
LT	-1.9		-0.3	-0.7	-0.7	-1.4	-1.9	-1.8	-1.2	-1.2	-1.5	-1.9
LU	3.6		0.6	1.2	0.9	0.6	0.7	1.0	2.2	3.7	4.1	3.6
HU	-1.0		-0.5	-1.0	-0.6	0.0	-0.6	-0.9	-0.5	-0.6	-0.9	-1.0
MT	-1.0		-0.2	-1.6	-1.8	-1.8	-1.9	-1.6	-1.0	-0.8	-0.9	-1.0
NL	0.0		0.2	0.6	0.9	0.9	0.5	0.1	-0.2	-0.3	-0.2	0.0
AT	-5.9		-0.3	-2.3	-4.8	-6.1	-5.8	-5.6	-5.1	-5.2	-5.5	-5.9
PL	-3.6		-1.0	-2.5	-3.1	-2.8	-2.4	-2.3	-2.3	-3.4	-4.1	-3.6
PT	-3.4		-0.9	-2.1	-2.5	-2.0	-2.2	-3.0	-3.4	-3.5	-3.3	-3.4
RO	-9.8		-1.2	-2.3	-4.9	-7.3	-7.9	-8.1	-7.8	-8.3	-8.8	-9.8
SI	-6.2		-0.9	-2.2	-3.5	-4.5	-4.9	-5.0	-5.5	-6.1	-6.7	-6.2
SK	-4.8		0.1	-0.8	-1.2	-1.9	-2.6	-3.1	-2.9	-3.4	-4.1	-4.8
FI	-8.5		-1.5	-3.1	-4.7	-5.5	-6.4	-6.9	-7.1	-7.8	-8.5	-8.5
SE	-3.5		-0.5	-0.8	-0.9	-2.0	-2.5	-2.8	-2.9	-3.1	-3.3	-3.5
NO	0.5		0.7	1.8	1.8	1.2	0.9	0.8	0.7	0.4	0.2	0.5
EA	-3.2		-0.7	-1.4	-1.7	-2.3	-2.4	-2.6	-2.8	-2.9	-3.1	-3.2
EU	-3.7		-0.8	-1.5	-2.0	-2.5	-2.6	-2.9	-3.0	-3.3	-3.6	-3.7

Table II.1.100: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to coverage ratio - cohort effect

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-5.6		-0.8	-2.3	-3.4	-3.9	-4.0	-4.3	-4.7	-5.0	-5.1	-5.6
BG	-3.5		0.1	0.2	-0.2	-0.9	-2.2	-3.6	-5.1	-5.2	-4.2	-3.5
CZ	-2.1		0.6	0.9	0.8	-0.3	-1.7	-2.8	-3.8	-3.9	-2.9	-2.1
DK	-3.6		-0.2	-1.2	-2.3	-2.8	-2.5	-1.9	-2.0	-2.6	-3.3	-3.6
DE	-4.9		-0.8	-2.7	-4.1	-3.7	-3.4	-3.5	-4.1	-4.6	-5.0	-4.9
EE	-2.6		-0.2	-0.6	-0.5	-0.5	-0.9	-2.0	-3.3	-3.4	-2.9	-2.6
IE	-2.5		-0.1	-0.3	-0.5	-1.0	-1.8	-2.5	-2.6	-2.3	-2.2	-2.5
EL	-6.6		-0.3	-0.9	-2.4	-4.5	-7.0	-9.0	-9.2	-8.1	-7.0	-6.6
ES	-8.1		-0.3	-1.3	-3.2	-6.0	-8.7	-9.9	-9.4	-8.3	-7.7	-8.1
FR	-5.4		-0.7	-2.2	-3.2	-4.1	-4.5	-5.0	-5.1	-4.8	-4.8	-5.4
HR	-3.9		-0.6	-1.5	-1.8	-2.2	-2.8	-3.3	-3.6	-3.6	-3.9	-3.9
IT	-7.6		-0.2	-2.1	-4.8	-7.5	-8.9	-9.0	-8.4	-7.5	-7.1	-7.6
CY	-5.8		-0.6	-1.5	-1.7	-1.4	-1.3	-2.1	-3.6	-5.1	-5.9	-5.8
LV	-2.6		-0.4	-1.1	-1.3	-1.4	-1.7	-2.9	-4.2	-4.4	-3.4	-2.6
LT	-5.6		-0.6	-1.7	-2.3	-2.5	-2.5	-3.1	-4.7	-6.0	-6.2	-5.6
LU	-8.6		-0.4	-1.5	-2.4	-2.8	-3.1	-3.6	-4.8	-6.2	-7.7	-8.6
HU	-3.3		0.3	1.2	0.8	-0.2	-1.5	-2.1	-2.8	-3.4	-3.5	-3.3
MT	-3.3		-0.3	0.0	0.7	1.3	1.5	1.2	0.2	-1.3	-2.6	-3.3
NL	-3.6		-0.5	-1.6	-2.5	-2.8	-2.3	-2.0	-1.9	-2.3	-2.9	-3.6
AT	-8.2		-0.9	-3.4	-5.4	-5.9	-5.8	-6.4	-7.1	-7.9	-8.1	-8.2
PL	-4.5		-0.7	-0.6	0.3	0.1	-1.2	-3.2	-5.0	-5.7	-5.4	-4.5
PT	-6.9		-0.3	-1.1	-2.3	-4.3	-6.2	-6.9	-6.6	-6.4	-6.6	-6.9
RO	-4.2		-0.2	0.6	-0.9	-1.8	-3.5	-4.6	-5.9	-5.4	-4.7	-4.2
SI	-4.2		-0.5	-1.2	-1.8	-2.5	-4.1	-5.5	-6.5	-5.9	-5.0	-4.2
SK	-5.9		-0.3	-0.6	-0.5	-1.2	-2.9	-4.8	-6.7	-7.7	-7.2	-5.9
FI	-3.8		-0.8	-1.9	-2.0	-1.2	-0.9	-1.4	-2.0	-2.8	-3.1	-3.8
SE	-1.8		-0.1	-0.5	-1.0	-0.9	-0.6	-0.9	-1.5	-2.0	-1.9	-1.8
NO	-5.2		-0.4	-1.5	-2.8	-3.4	-3.3	-3.4	-3.9	-4.2	-4.6	-5.2
EA	-5.8		-0.5	-2.0	-3.4	-4.4	-5.1	-5.5	-5.7	-5.5	-5.6	-5.8
EU	-5.5		-0.5	-1.5	-2.7	-3.6	-4.4	-5.0	-5.4	-5.5	-5.4	-5.5

Table II.1.101: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to benefit ratio

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.4		0.3	0.4	0.6	0.4	0.2	0.0	-0.1	-0.3	-0.3	-0.4
BG	-2.1		1.3	0.4	-0.3	-0.8	-1.2	-1.6	-1.8	-2.0	-2.1	-2.1
CZ	-0.9		-0.9	-1.0	-0.9	-0.8	-0.7	-0.7	-0.8	-0.9	-0.9	-0.9
DK	-1.6		0.3	0.6	0.4	0.1	-0.4	-0.7	-1.0	-1.2	-1.4	-1.6
DE	-2.4		0.0	-0.6	-1.2	-1.7	-1.9	-2.1	-2.3	-2.4	-2.4	-2.4
EE	-1.5		0.4	0.2	0.0	-0.2	-0.4	-0.6	-0.9	-1.3	-1.5	-1.5
IE	-0.7		-0.3	-0.2	0.0	-0.1	-0.2	-0.3	-0.4	-0.4	-0.5	-0.7
EL	-6.6		-1.4	-2.4	-2.9	-3.8	-4.8	-5.6	-6.4	-6.8	-6.8	-6.6
ES	-3.9		0.6	0.7	0.5	-0.3	-1.3	-2.3	-3.1	-3.6	-3.9	-3.9
FR	-3.4		-0.2	-0.4	-0.7	-1.3	-1.8	-2.3	-2.6	-2.9	-3.2	-3.4
HR	-1.6		1.5	1.1	0.8	0.3	-0.2	-0.6	-0.9	-1.2	-1.4	-1.6
IT	-3.8		0.3	0.0	-0.3	-1.3	-2.5	-3.5	-4.2	-4.4	-4.3	-3.8
CY	-1.5		-0.2	-0.4	-0.5	-0.8	-1.2	-1.7	-2.0	-2.0	-1.8	-1.5
LV	-4.4		-0.4	-1.1	-1.7	-2.3	-2.8	-3.3	-3.7	-4.2	-4.4	-4.4
LT	-1.0		0.6	1.1	1.2	1.2	1.0	0.7	0.2	-0.3	-0.7	-1.0
LU	-4.1		-0.4	-1.2	-1.5	-2.1	-2.7	-3.3	-3.7	-3.9	-4.0	-4.1
HU	0.8		-0.1	-0.3	-0.3	-0.1	0.3	0.3	0.3	0.4	0.6	0.8
MT	-1.3		-0.1	-0.5	-0.8	-0.9	-0.9	-0.9	-1.0	-1.0	-1.1	-1.3
NL	0.2		0.1	0.1	0.0	-0.1	0.0	0.1	0.2	0.3	0.3	0.2
AT	-3.0		0.1	-0.2	-0.7	-1.3	-1.9	-2.3	-2.5	-2.7	-2.9	-3.0
PL	-5.9		0.5	-0.1	-1.2	-2.3	-3.4	-4.3	-5.0	-5.5	-5.8	-5.9
PT	-6.1		0.2	0.1	-0.3	-0.9	-1.3	-2.4	-3.9	-5.1	-5.8	-6.1
RO	-2.1		1.8	1.2	0.5	0.0	-0.4	-0.9	-1.3	-1.7	-2.0	-2.1
SI	0.7		0.0	-0.2	0.0	0.3	0.4	0.4	0.3	0.4	0.5	0.7
SK	-1.6		0.5	0.1	-0.5	-1.0	-1.3	-1.6	-1.7	-1.7	-1.7	-1.6
FI	-1.9		0.1	-0.3	-0.6	-1.0	-1.4	-1.7	-1.8	-1.9	-1.9	-1.9
SE	-1.3		0.4	0.0	-0.3	-0.5	-0.7	-0.8	-0.9	-1.0	-1.2	-1.3
NO	-5.6		-0.4	-1.4	-2.2	-3.0	-3.8	-4.5	-5.1	-5.6	-5.7	-5.6
EA	-2.9		0.0	-0.3	-0.7	-1.3	-1.8	-2.3	-2.6	-2.8	-2.9	-2.9
EU	-3.1		0.1	-0.3	-0.7	-1.3	-1.9	-2.4	-2.8	-3.0	-3.1	-3.1

Table II.1.102: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.8		-0.2	-0.4	-0.6	-0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
BG	-0.1		0.1	0.2	0.2	0.1	0.0	0.0	-0.1	-0.2	-0.1	-0.1
CZ	0.3		0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.2	0.3
DK	-0.9		0.0	-0.1	-0.3	-0.5	-0.5	-0.6	-0.7	-0.9	-0.9	-0.9
DE	-0.2		0.1	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
EE	-0.4		0.1	0.2	0.2	0.1	-0.1	-0.2	-0.4	-0.4	-0.4	-0.4
IE	-0.2		0.0	-0.1	-0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.2	-0.2
EL	-2.2		-0.4	-0.6	-0.9	-1.3	-1.7	-2.0	-2.0	-2.0	-2.0	-2.2
ES	-2.0		-0.3	-0.7	-1.1	-1.6	-2.0	-2.1	-2.0	-1.9	-1.9	-2.0
FR	-1.0		-0.1	-0.3	-0.5	-0.8	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0
HR	-1.0		-0.4	-0.6	-0.7	-0.8	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0
IT	-2.8		-0.2	-0.5	-0.9	-1.5	-1.9	-2.1	-2.2	-2.4	-2.6	-2.8
CY	-0.8		0.0	0.1	0.0	-0.1	-0.2	-0.3	-0.5	-0.7	-0.8	-0.8
LV	0.1		0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1
LT	-0.1		0.0	0.0	0.1	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.1
LU	0.0		0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0
HU	-0.4		-0.1	-0.1	-0.2	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
MT	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2
NL	-0.7		0.0	-0.1	-0.2	-0.2	-0.3	-0.3	-0.4	-0.5	-0.6	-0.7
AT	-0.8		0.0	-0.3	-0.6	-0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
PL	0.0		-0.1	-0.1	0.0	0.1	0.1	0.0	-0.1	-0.2	-0.2	0.0
PT	-1.0		-0.1	-0.2	-0.3	-0.5	-0.7	-0.8	-0.7	-0.8	-0.9	-1.0
RO	-0.3		-0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.4	-0.4	-0.3	-0.3
SI	-0.3		0.0	0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3
SK	-0.8		-0.1	-0.1	0.0	0.0	-0.2	-0.4	-0.6	-0.7	-0.7	-0.8
FI	-0.7		0.1	0.2	0.2	0.0	-0.1	-0.3	-0.4	-0.5	-0.6	-0.7
SE	-0.3		0.1	0.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.4	-0.3	-0.3
NO	-0.3		0.1	0.1	0.0	-0.1	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3
EA	-1.1		-0.1	-0.2	-0.4	-0.6	-0.8	-0.9	-0.9	-1.0	-1.0	-1.1
EU	-0.8		-0.1	-0.2	-0.3	-0.5	-0.6	-0.7	-0.7	-0.8	-0.8	-0.8

Table II.1.103: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio - employment rate

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.7		-0.2	-0.3	-0.4	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7
BG	-0.1		0.1	0.2	0.2	0.2	0.1	0.0	0.0	-0.1	-0.1	-0.1
CZ	0.2		0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2
DK	-0.5		0.0	-0.1	-0.2	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5
DE	-0.2		0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2
EE	-0.4		0.0	0.0	0.0	0.0	-0.1	-0.2	-0.3	-0.3	-0.4	-0.4
IE	-0.2		0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
EL	-1.7		-0.3	-0.5	-0.7	-1.0	-1.2	-1.5	-1.6	-1.6	-1.6	-1.7
ES	-1.4		-0.2	-0.5	-0.6	-1.0	-1.3	-1.5	-1.5	-1.4	-1.4	-1.4
FR	-0.9		-0.1	-0.3	-0.5	-0.7	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9
HR	-0.8		-0.3	-0.5	-0.6	-0.7	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
IT	-1.6		-0.1	-0.1	-0.4	-0.8	-1.1	-1.4	-1.5	-1.5	-1.5	-1.6
CY	-0.5		-0.1	0.0	0.0	-0.1	-0.1	-0.2	-0.3	-0.4	-0.4	-0.5
LV	-0.1		0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1
LT	-0.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1
LU	0.0		-0.1	0.0	-0.1	-0.1	0.0	0.1	0.1	0.1	0.0	0.0
HU	-0.3		-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.3
MT	-0.2		-0.1	-0.3	-0.3	-0.3	-0.2	-0.2	-0.1	-0.2	-0.2	-0.2
NL	-0.4		0.0	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4
AT	-0.8		0.0	-0.3	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8
PL	0.0		-0.1	-0.2	0.0	0.1	0.2	0.1	0.0	-0.1	-0.1	0.0
PT	-0.5		-0.1	-0.1	-0.2	-0.2	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5
RO	-0.1		-0.1	0.1	0.0	0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1
SI	-0.3		0.0	0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.4	-0.4	-0.3
SK	-0.4		-0.1	0.0	0.1	0.1	0.0	-0.1	-0.2	-0.3	-0.4	-0.4
FI	-0.3		0.0	0.1	0.1	0.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3
SE	-0.2		0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
NO	-0.2		0.1	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
EA	-0.7		-0.1	-0.1	-0.3	-0.5	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7
EU	-0.6		-0.1	-0.1	-0.2	-0.3	-0.4	-0.5	-0.6	-0.6	-0.6	-0.6

Table II.1.104: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio - labour intensity

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
BG	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CZ	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DK	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EE	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EL	0.0		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
ES	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FR	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HR	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IT	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CY	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LV	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LU	0.1		0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
HU	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MT	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NL	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AT	0.0		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0
PL	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PT	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RO	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SI	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SK	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FI	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NO	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EA	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EU	0.1		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1

Table II.1.105: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to labour market ratio - career shift

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.2	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
BG	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
CZ	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
DK	-0.5	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.4	-0.5	-0.5
DE	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1
EE	-0.1	0.1	0.2	0.2	0.1	0.0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1
IE	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1
EL	-0.6	-0.1	-0.1	-0.2	-0.4	-0.5	-0.6	-0.6	-0.5	-0.5	-0.5	-0.6
ES	-0.7	-0.1	-0.3	-0.5	-0.7	-0.8	-0.7	-0.7	-0.6	-0.5	-0.6	-0.7
FR	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
HR	-0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2
IT	-1.3	-0.1	-0.4	-0.6	-0.7	-0.8	-0.7	-0.8	-0.9	-0.9	-1.1	-1.3
CY	-0.3	0.0	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3
LV	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2
LT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0
LU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HU	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0
MT	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
NL	-0.3	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3
AT	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
PL	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.0
PT	-0.5	0.0	-0.1	-0.2	-0.3	-0.4	-0.4	-0.4	-0.3	-0.4	-0.5	-0.5
RO	-0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2
SI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SK	-0.4	0.0	0.0	0.0	-0.1	-0.2	-0.3	-0.4	-0.4	-0.4	-0.3	-0.4
FI	-0.4	0.1	0.1	0.1	0.1	0.0	-0.1	-0.2	-0.3	-0.3	-0.4	-0.4
SE	-0.2	0.1	0.0	0.0	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
NO	-0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-0.1	-0.1	-0.1
EA	-0.4	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4
EU	-0.3	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3

Table II.1.106: Public pensions, gross expenditure as % of GDP - pps change from 2022 due to interaction effect (residual)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2
BG	-0.4	0.0	-0.1	-0.1	-0.2	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4
CZ	-0.1	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
DK	-0.2	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2
DE	-0.2	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
EE	-0.2	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
IE	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1
EL	-0.7	0.0	-0.2	-0.3	-0.5	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7
ES	-0.7	0.0	-0.2	-0.3	-0.4	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7
FR	-0.3	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3
HR	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
IT	-0.5	0.0	-0.1	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
CY	-0.3	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3
LV	-0.4	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.4	-0.4	-0.4	-0.4
LT	-0.4	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.4	-0.4	-0.4
LU	-0.3	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3
HU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MT	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1
NL	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
AT	-0.5	0.0	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5
PL	-0.7	0.0	-0.1	-0.1	-0.2	-0.4	-0.4	-0.5	-0.6	-0.7	-0.7	-0.7
PT	-0.3	0.0	-0.1	-0.1	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3
RO	-0.4	0.0	0.0	-0.2	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
SI	-0.2	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
SK	-0.5	0.0	0.0	-0.1	-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5
FI	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
SE	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1
NO	-0.4	0.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4
EA	-0.3	0.0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
EU	-0.3	0.0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3

Table II.1.107: Health care spending as % of GDP - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.6	6.1	6.2	6.3	6.4	6.5	6.5	6.6	6.6	6.7	6.7	6.8
BG	0.2	4.5	4.5	4.6	4.7	4.8	4.9	4.9	4.9	4.9	4.8	4.7
CZ	0.2	6.4	5.9	6.0	6.2	6.3	6.4	6.6	6.6	6.7	6.7	6.6
DK	0.4	7.4	7.1	7.2	7.3	7.4	7.5	7.6	7.6	7.7	7.7	7.8
DE	0.1	8.0	7.7	7.7	7.8	7.9	8.0	8.1	8.1	8.1	8.1	8.2
EE	0.6	5.1	5.1	5.2	5.3	5.4	5.5	5.5	5.6	5.6	5.7	5.7
IE	1.5	4.1	4.1	4.3	4.5	4.7	4.9	5.0	5.2	5.4	5.5	5.6
EL	0.6	5.4	5.2	5.4	5.6	5.8	5.9	6.0	6.1	6.1	6.0	5.9
ES	1.2	5.9	5.9	6.2	6.4	6.7	6.9	7.0	7.1	7.2	7.1	7.1
FR	0.3	8.8	8.4	8.5	8.7	8.8	8.9	8.9	9.0	9.0	9.0	9.1
HR	0.7	5.8	5.8	5.9	6.1	6.2	6.2	6.3	6.4	6.4	6.5	6.5
IT	0.1	6.3	5.8	5.9	6.1	6.3	6.4	6.5	6.5	6.5	6.5	6.4
CY	0.8	7.5	7.5	7.6	7.7	7.9	8.0	8.1	8.1	8.2	8.2	8.3
LV	-0.3	6.0	5.3	5.4	5.5	5.6	5.7	5.8	5.8	5.9	5.8	5.8
LT	0.8	4.3	4.4	4.5	4.6	4.8	4.9	5.0	5.0	5.1	5.1	5.1
LU	1.2	3.9	4.1	4.2	4.3	4.4	4.6	4.7	4.8	4.9	5.0	5.1
HU	0.5	4.3	4.3	4.4	4.5	4.5	4.6	4.7	4.8	4.8	4.8	4.7
MT	2.1	5.1	5.1	5.2	5.3	5.4	5.6	5.8	6.0	6.4	6.8	7.2
NL	0.7	5.7	5.8	5.9	6.1	6.1	6.2	6.3	6.3	6.4	6.4	6.5
AT	1.1	7.8	7.8	8.0	8.2	8.4	8.6	8.8	8.8	8.8	8.9	8.9
PL	1.1	4.4	4.5	4.7	4.9	5.0	5.1	5.2	5.4	5.5	5.5	5.5
PT	1.0	6.2	6.0	6.2	6.5	6.7	6.9	7.1	7.2	7.3	7.3	7.2
RO	0.7	4.4	4.5	4.7	4.8	4.9	5.0	5.1	5.2	5.2	5.2	5.2
SI	0.8	7.0	6.9	7.1	7.4	7.6	7.7	7.8	7.8	7.9	7.9	7.8
SK	1.6	5.7	6.2	6.4	6.7	6.9	7.0	7.2	7.3	7.4	7.4	7.3
FI	0.6	6.2	6.2	6.4	6.5	6.5	6.6	6.6	6.6	6.7	6.8	6.8
SE	0.4	7.3	7.1	7.2	7.3	7.3	7.4	7.4	7.5	7.6	7.6	7.7
NO	1.2	7.7	7.8	8.0	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9
EA	0.4	7.1	6.9	7.0	7.1	7.2	7.4	7.4	7.5	7.5	7.5	7.6
EU	0.4	6.9	6.6	6.7	6.8	7.0	7.1	7.2	7.2	7.2	7.3	7.3

Table II.1.108: Health care spending as % of GDP - Risk scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.3	6.1	6.3	6.4	6.6	6.8	7.0	7.1	7.2	7.3	7.4	7.5
BG	1.2	4.5	4.6	4.9	5.2	5.5	5.7	5.8	5.9	5.9	5.8	5.7
CZ	1.2	6.4	6.0	6.3	6.6	6.8	7.1	7.3	7.5	7.6	7.7	7.6
DK	1.3	7.4	7.2	7.4	7.6	7.8	8.0	8.3	8.4	8.5	8.6	8.7
DE	0.9	8.0	7.7	7.8	8.0	8.3	8.5	8.7	8.8	8.8	8.9	9.0
EE	1.5	5.1	5.2	5.4	5.7	5.9	6.2	6.3	6.5	6.6	6.6	6.6
IE	2.5	4.1	4.3	4.8	5.1	5.4	5.7	5.9	6.1	6.3	6.5	6.6
EL	1.5	5.4	5.3	5.7	6.0	6.3	6.6	6.8	7.0	7.0	7.0	6.9
ES	2.0	5.9	6.0	6.3	6.7	7.0	7.4	7.6	7.8	7.9	7.9	7.9
FR	1.1	8.8	8.5	8.7	8.9	9.1	9.3	9.5	9.7	9.8	9.8	9.9
HR	2.0	5.8	5.9	6.3	6.7	7.0	7.2	7.4	7.6	7.7	7.8	7.9
IT	0.9	6.3	5.9	6.0	6.3	6.6	6.8	7.0	7.1	7.2	7.2	7.2
CY	1.9	7.5	7.6	7.9	8.2	8.5	8.8	9.0	9.1	9.3	9.3	9.4
LV	1.0	6.0	5.4	5.8	6.2	6.5	6.8	6.9	7.0	7.1	7.1	7.0
LT	1.8	4.3	4.5	4.8	5.2	5.5	5.7	5.9	6.0	6.1	6.2	6.2
LU	1.7	3.9	4.1	4.3	4.4	4.6	4.8	5.0	5.2	5.3	5.4	5.5
HU	1.5	4.3	4.4	4.7	4.9	5.2	5.4	5.6	5.7	5.8	5.8	5.7
MT	3.2	5.1	5.2	5.5	5.8	6.1	6.3	6.6	6.9	7.3	7.8	8.3
NL	1.4	5.7	5.9	6.1	6.2	6.4	6.6	6.8	6.9	7.0	7.0	7.1
AT	2.1	7.8	7.8	8.2	8.6	9.0	9.3	9.5	9.7	9.7	9.8	9.9
PL	2.2	4.4	4.6	5.0	5.4	5.7	6.0	6.2	6.4	6.6	6.7	6.6
PT	2.0	6.2	6.1	6.4	6.8	7.2	7.6	7.9	8.1	8.3	8.3	8.2
RO	2.0	4.4	4.7	5.1	5.5	5.8	6.0	6.3	6.4	6.5	6.5	6.5
SI	2.2	7.0	7.0	7.6	8.1	8.5	8.7	8.9	9.0	9.1	9.2	9.2
SK	2.8	5.7	6.3	6.8	7.2	7.6	8.0	8.3	8.5	8.6	8.7	8.6
FI	1.5	6.2	6.3	6.6	6.8	7.0	7.2	7.3	7.4	7.5	7.6	7.7
SE	1.3	7.3	7.1	7.3	7.6	7.8	7.9	8.1	8.3	8.4	8.5	8.6
NO	2.1	7.7	7.9	8.2	8.5	8.8	9.0	9.2	9.4	9.6	9.7	9.8
EA	1.3	7.1	6.9	7.1	7.3	7.6	7.9	8.1	8.2	8.3	8.3	8.4
EU	1.2	6.9	6.7	6.9	7.1	7.4	7.7	7.8	8.0	8.0	8.1	8.1

Table II.1.109: Health care spending as % of GDP - Demographic scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.5	6.1	6.2	6.2	6.3	6.4	6.4	6.4	6.5	6.5	6.5	6.6
BG	0.0	4.5	4.5	4.5	4.6	4.7	4.7	4.7	4.7	4.6	4.6	4.5
CZ	0.0	6.4	5.9	6.0	6.1	6.2	6.3	6.4	6.4	6.5	6.4	6.4
DK	0.2	7.4	7.1	7.2	7.2	7.3	7.4	7.4	7.5	7.5	7.5	7.6
DE	0.0	8.0	7.7	7.7	7.7	7.8	7.9	7.9	7.9	7.9	7.9	8.0
EE	0.3	5.1	5.1	5.1	5.2	5.2	5.3	5.3	5.4	5.4	5.4	5.4
IE	1.2	4.1	4.1	4.2	4.4	4.6	4.7	4.8	5.0	5.1	5.2	5.3
EL	0.3	5.4	5.2	5.3	5.5	5.7	5.8	5.9	5.9	5.9	5.8	5.7
ES	1.0	5.9	5.9	6.1	6.4	6.6	6.8	6.9	7.0	7.0	7.0	6.9
FR	0.1	8.8	8.4	8.5	8.6	8.7	8.8	8.8	8.8	8.8	8.9	8.9
HR	0.4	5.8	5.7	5.8	5.9	6.0	6.0	6.1	6.1	6.1	6.2	6.2
IT	0.0	6.3	5.8	5.9	6.0	6.2	6.3	6.4	6.4	6.3	6.3	6.3
CY	0.5	7.5	7.5	7.6	7.6	7.7	7.8	7.8	7.9	7.9	8.0	8.0
LV	-0.5	6.0	5.2	5.3	5.4	5.4	5.5	5.6	5.6	5.6	5.6	5.5
LT	0.5	4.3	4.3	4.4	4.5	4.6	4.7	4.8	4.8	4.8	4.9	4.9
LU	1.1	3.9	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5.0
HU	0.3	4.3	4.3	4.3	4.3	4.4	4.5	4.5	4.6	4.6	4.6	4.5
MT	1.8	5.1	5.1	5.1	5.2	5.3	5.4	5.6	5.8	6.2	6.5	7.0
NL	0.6	5.7	5.8	5.9	6.0	6.1	6.1	6.2	6.2	6.2	6.2	6.3
AT	0.9	7.8	7.8	7.9	8.1	8.3	8.5	8.6	8.6	8.6	8.7	8.7
PL	0.8	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.2
PT	0.8	6.2	6.0	6.1	6.4	6.6	6.8	6.9	7.0	7.1	7.1	7.0
RO	0.4	4.4	4.5	4.6	4.7	4.7	4.8	4.9	4.9	4.9	4.9	4.9
SI	0.5	7.0	6.9	7.0	7.2	7.4	7.4	7.5	7.5	7.6	7.6	7.5
SK	1.3	5.7	6.2	6.4	6.5	6.7	6.8	7.0	7.1	7.1	7.1	7.0
FI	0.4	6.2	6.2	6.3	6.4	6.4	6.4	6.4	6.5	6.5	6.6	6.7
SE	0.2	7.3	7.1	7.1	7.2	7.2	7.2	7.3	7.3	7.4	7.4	7.5
NO	1.0	7.7	7.8	8.0	8.1	8.2	8.3	8.4	8.4	8.5	8.6	8.7
EA	0.3	7.1	6.8	6.9	7.0	7.1	7.2	7.3	7.3	7.3	7.3	7.4
EU	0.2	6.9	6.6	6.7	6.8	6.9	7.0	7.0	7.0	7.0	7.1	7.1

Table II.1.110: Health care spending as % of GDP - Healthy ageing scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.2	6.1	6.1	6.1	6.2	6.2	6.3	6.3	6.3	6.3	6.3	6.4
BG	-0.2	4.5	4.4	4.5	4.6	4.6	4.6	4.7	4.6	4.6	4.5	4.3
CZ	-0.3	6.4	5.8	5.9	6.0	6.0	6.1	6.2	6.2	6.3	6.2	6.1
DK	0.1	7.4	7.1	7.1	7.2	7.2	7.3	7.3	7.4	7.4	7.4	7.4
DE	-0.3	8.0	7.6	7.6	7.6	7.7	7.8	7.8	7.8	7.7	7.7	7.7
EE	0.2	5.1	5.1	5.1	5.1	5.2	5.3	5.3	5.3	5.4	5.4	5.3
IE	1.1	4.1	4.1	4.3	4.4	4.6	4.7	4.8	5.0	5.1	5.2	5.2
EL	0.2	5.4	5.2	5.3	5.5	5.6	5.7	5.8	5.8	5.8	5.7	5.6
ES	0.8	5.9	5.9	6.1	6.3	6.5	6.7	6.8	6.9	6.9	6.8	6.8
FR	-0.1	8.8	8.4	8.4	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6
HR	0.4	5.8	5.8	5.9	6.0	6.0	6.1	6.1	6.2	6.2	6.2	6.2
IT	-0.2	6.3	5.8	5.8	6.0	6.1	6.2	6.3	6.3	6.2	6.2	6.1
CY	0.6	7.5	7.5	7.6	7.7	7.8	7.9	7.9	7.9	8.0	8.0	8.1
LV	-0.7	6.0	5.2	5.3	5.3	5.4	5.5	5.5	5.5	5.5	5.4	5.4
LT	0.4	4.3	4.3	4.4	4.5	4.6	4.7	4.7	4.8	4.8	4.8	4.8
LU	0.9	3.9	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.8
HU	0.0	4.3	4.2	4.2	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.3
MT	1.5	5.1	5.1	5.1	5.2	5.3	5.3	5.5	5.7	5.9	6.3	6.7
NL	0.4	5.7	5.8	5.9	5.9	6.0	6.1	6.1	6.1	6.1	6.1	6.1
AT	0.6	7.8	7.7	7.9	8.0	8.2	8.4	8.4	8.4	8.4	8.4	8.4
PL	0.7	4.4	4.4	4.6	4.7	4.8	4.9	5.0	5.1	5.1	5.2	5.1
PT	0.5	6.2	5.9	6.0	6.3	6.5	6.6	6.8	6.9	6.9	6.8	6.7
RO	0.3	4.4	4.4	4.6	4.7	4.7	4.8	4.8	4.9	4.9	4.8	4.8
SI	0.4	7.0	6.8	7.0	7.2	7.3	7.4	7.4	7.4	7.4	7.4	7.3
SK	0.8	5.7	6.1	6.3	6.4	6.5	6.6	6.7	6.8	6.8	6.7	6.6
FI	0.2	6.2	6.1	6.2	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.4
SE	0.1	7.3	7.0	7.1	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.4
NO	0.8	7.7	7.8	7.9	8.0	8.1	8.2	8.2	8.3	8.3	8.4	8.5
EA	0.0	7.1	6.8	6.9	6.9	7.0	7.1	7.2	7.2	7.2	7.2	7.2
EU	0.0	6.9	6.6	6.6	6.7	6.8	6.9	6.9	6.9	6.9	6.9	6.9

Table II.1.111: Health care spending as % of GDP - No healthy ageing scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.2	6.1	6.2	6.4	6.6	6.8	6.9	7.0	7.1	7.2	7.3	7.4
BG	0.6	4.5	4.6	4.7	4.9	5.0	5.2	5.2	5.2	5.2	5.2	5.1
CZ	0.9	6.4	6.0	6.2	6.4	6.6	6.8	7.0	7.1	7.2	7.2	7.2
DK	0.8	7.4	7.1	7.3	7.4	7.5	7.7	7.8	7.9	8.0	8.1	8.2
DE	0.6	8.0	7.7	7.8	7.9	8.1	8.3	8.4	8.4	8.5	8.6	8.7
EE	1.0	5.1	5.1	5.3	5.4	5.6	5.7	5.8	5.9	6.0	6.1	6.1
IE	1.8	4.1	4.1	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	5.9
EL	0.9	5.4	5.2	5.5	5.7	5.9	6.1	6.3	6.4	6.4	6.4	6.3
ES	1.6	5.9	6.0	6.3	6.6	6.9	7.1	7.3	7.4	7.5	7.5	7.5
FR	0.8	8.8	8.4	8.6	8.8	9.0	9.1	9.2	9.3	9.4	9.5	9.6
HR	1.0	5.8	5.8	6.0	6.2	6.3	6.5	6.6	6.7	6.7	6.8	6.9
IT	0.5	6.3	5.9	6.0	6.2	6.4	6.6	6.7	6.7	6.8	6.8	6.8
CY	1.0	7.5	7.6	7.7	7.8	8.0	8.1	8.2	8.3	8.4	8.4	8.5
LV	0.3	6.0	5.3	5.5	5.7	5.9	6.1	6.2	6.3	6.4	6.4	6.4
LT	1.2	4.3	4.4	4.6	4.8	5.0	5.1	5.3	5.3	5.4	5.5	5.5
LU	1.6	3.9	4.1	4.2	4.4	4.6	4.7	4.9	5.1	5.2	5.3	5.5
HU	1.1	4.3	4.3	4.5	4.7	4.8	5.0	5.1	5.2	5.3	5.3	5.3
MT	2.7	5.1	5.1	5.2	5.4	5.6	5.8	6.1	6.4	6.8	7.3	7.8
NL	1.1	5.7	5.8	6.0	6.2	6.3	6.4	6.5	6.6	6.6	6.7	6.8
AT	1.7	7.8	7.8	8.1	8.4	8.7	8.9	9.1	9.2	9.3	9.4	9.5
PL	1.5	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.7	5.9	5.9	5.9
PT	1.5	6.2	6.1	6.3	6.7	7.0	7.3	7.5	7.7	7.8	7.8	7.7
RO	1.2	4.4	4.6	4.8	5.0	5.2	5.3	5.4	5.5	5.6	5.6	5.6
SI	1.4	7.0	7.0	7.3	7.6	7.8	8.0	8.2	8.3	8.4	8.4	8.4
SK	2.3	5.7	6.3	6.6	7.0	7.3	7.5	7.7	7.9	8.1	8.1	8.1
FI	1.2	6.2	6.3	6.5	6.7	6.8	6.9	7.0	7.1	7.2	7.3	7.4
SE	0.8	7.3	7.1	7.2	7.3	7.4	7.5	7.6	7.8	7.9	8.0	8.1
NO	1.8	7.7	7.8	8.1	8.3	8.5	8.7	8.9	9.0	9.2	9.3	9.4
EA	0.9	7.1	6.9	7.0	7.2	7.4	7.6	7.7	7.8	7.9	7.9	8.0
EU	0.8	6.9	6.7	6.8	7.0	7.2	7.3	7.5	7.5	7.6	7.7	7.7

Table II.1.112: Health care spending as % of GDP - Labour intensity scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.7	6.1	6.1	6.1	6.2	6.3	6.4	6.5	6.5	6.6	6.7	6.8
BG	0.7	4.5	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.5	5.4	5.2
CZ	0.9	6.4	5.9	6.1	6.3	6.6	6.9	7.2	7.5	7.5	7.4	7.3
DK	0.8	7.4	7.2	7.6	7.7	7.8	7.9	7.8	7.8	7.9	8.0	8.2
DE	1.0	8.0	7.7	7.9	8.2	8.4	8.6	8.6	8.7	8.8	8.9	9.0
EE	0.8	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.9	6.0	6.0	5.9
IE	1.9	4.1	4.0	4.2	4.4	4.7	5.0	5.3	5.6	5.7	5.9	6.0
EL	0.2	5.4	5.0	5.0	5.3	5.6	5.9	6.1	6.1	6.0	5.8	5.6
ES	1.4	5.9	5.7	5.9	6.2	6.5	6.9	7.2	7.4	7.4	7.3	7.3
FR	0.4	8.8	8.4	8.5	8.6	8.8	8.9	8.9	9.0	9.0	9.1	9.2
HR	0.6	5.8	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.3	6.3	6.4
IT	-0.1	6.3	5.7	5.9	6.1	6.3	6.5	6.6	6.5	6.4	6.2	6.2
CY	1.4	7.5	7.3	7.7	7.9	8.1	8.1	8.2	8.4	8.6	8.8	8.8
LV	0.3	6.0	5.1	5.4	5.6	5.8	6.0	6.3	6.6	6.7	6.5	6.3
LT	1.7	4.3	4.4	4.5	4.8	5.0	5.2	5.4	5.7	5.9	6.0	6.0
LU	1.5	3.9	4.0	3.9	4.1	4.3	4.5	4.6	4.8	5.0	5.2	5.4
HU	1.0	4.3	4.3	4.3	4.5	4.7	4.9	5.1	5.2	5.3	5.3	5.2
MT	3.7	5.1	5.0	5.1	5.2	5.3	5.5	5.9	6.4	7.2	8.0	8.8
NL	0.8	5.7	5.7	5.9	6.1	6.2	6.3	6.2	6.2	6.3	6.4	6.5
AT	1.5	7.8	7.6	7.8	8.1	8.3	8.6	8.8	8.9	9.1	9.2	9.3
PL	2.2	4.4	4.5	4.8	5.1	5.3	5.6	6.0	6.4	6.7	6.7	6.6
PT	1.4	6.2	5.8	6.1	6.6	7.1	7.5	7.8	7.9	7.9	7.8	7.6
RO	1.5	4.4	4.5	4.8	5.1	5.4	5.7	5.9	6.1	6.1	6.0	5.9
SI	1.3	7.0	6.9	7.2	7.5	7.7	8.0	8.3	8.5	8.5	8.4	8.3
SK	2.7	5.7	6.2	6.8	7.2	7.6	8.0	8.4	8.7	8.9	8.8	8.5
FI	0.9	6.2	6.3	6.5	6.6	6.6	6.6	6.6	6.7	6.8	7.0	7.1
SE	0.3	7.3	7.0	7.0	7.1	7.1	7.1	7.3	7.3	7.5	7.6	7.7
NO	1.9	7.7	7.9	8.1	8.2	8.5	8.6	8.8	8.9	9.1	9.3	9.5
EA	0.8	7.1	6.8	7.0	7.2	7.4	7.5	7.7	7.7	7.8	7.8	7.9
EU	0.7	6.9	6.6	6.7	6.9	7.1	7.3	7.4	7.5	7.6	7.6	7.6

Table II.1.113: Health care spending as % of GDP - Sector-specific composite indexation scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.2	6.1	6.2	6.2	6.2	6.2	6.3	6.3	6.3	6.3	6.3	6.4
BG	0.2	4.5	4.5	4.6	4.7	4.8	4.9	5.0	5.0	4.9	4.8	4.8
CZ	-0.1	6.4	5.9	6.0	6.1	6.1	6.2	6.3	6.4	6.4	6.4	6.3
DK	0.0	7.4	7.1	7.1	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.4
DE	0.1	8.0	7.7	7.7	7.7	7.9	8.0	8.0	8.0	8.0	8.0	8.1
EE	0.4	5.1	5.1	5.1	5.2	5.3	5.4	5.4	5.5	5.5	5.5	5.5
IE	0.8	4.1	4.0	4.0	4.1	4.2	4.3	4.5	4.6	4.7	4.8	4.9
EL	0.6	5.4	5.2	5.4	5.6	5.8	6.0	6.1	6.1	6.1	6.1	6.0
ES	0.5	5.9	5.8	6.0	6.2	6.4	6.5	6.5	6.5	6.5	6.5	6.4
FR	0.1	8.8	8.4	8.5	8.6	8.7	8.7	8.7	8.7	8.8	8.8	8.8
HR	0.6	5.8	5.8	5.9	6.1	6.2	6.2	6.3	6.4	6.4	6.5	6.5
IT	-0.3	6.3	5.8	5.8	6.0	6.1	6.1	6.2	6.1	6.1	6.0	6.0
CY	0.8	7.5	7.5	7.6	7.7	7.9	8.0	8.0	8.1	8.1	8.2	8.3
LV	-0.4	6.0	5.3	5.3	5.5	5.6	5.6	5.7	5.7	5.7	5.7	5.7
LT	0.2	4.3	4.3	4.3	4.3	4.4	4.4	4.5	4.5	4.5	4.6	4.6
LU	1.2	3.9	4.1	4.2	4.3	4.4	4.5	4.7	4.8	4.9	5.0	5.1
HU	0.1	4.3	4.2	4.2	4.2	4.3	4.3	4.4	4.4	4.4	4.4	4.3
MT	1.9	5.1	5.1	5.1	5.2	5.4	5.5	5.7	5.9	6.2	6.6	7.1
NL	0.6	5.7	5.8	5.9	6.0	6.1	6.1	6.2	6.2	6.2	6.3	6.3
AT	1.2	7.8	7.8	8.0	8.3	8.5	8.7	8.9	8.9	9.0	9.0	9.1
PL	0.8	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.2	5.2
PT	0.4	6.2	5.9	6.0	6.2	6.4	6.6	6.7	6.7	6.7	6.7	6.6
RO	1.0	4.4	4.6	4.8	5.0	5.1	5.3	5.4	5.4	5.5	5.5	5.4
SI	0.3	7.0	6.8	7.0	7.1	7.2	7.3	7.3	7.3	7.3	7.3	7.3
SK	0.5	5.7	6.1	6.1	6.2	6.2	6.2	6.3	6.3	6.4	6.3	6.2
FI	0.4	6.2	6.2	6.3	6.4	6.4	6.5	6.4	6.5	6.5	6.6	6.7
SE	0.2	7.3	7.1	7.1	7.2	7.2	7.2	7.3	7.3	7.4	7.4	7.5
NO	1.3	7.7	7.8	8.1	8.2	8.4	8.5	8.6	8.7	8.8	8.9	9.0
EA	0.2	7.1	6.8	6.9	7.0	7.1	7.2	7.2	7.2	7.2	7.2	7.3
EU	0.1	6.9	6.6	6.7	6.7	6.8	6.9	7.0	7.0	7.0	7.0	7.0

Table II.1.114: Long-term care spending as % of GDP - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.7	2.3	2.3	2.5	2.7	3.0	3.2	3.5	3.6	3.8	3.9	4.1
BG	0.2	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7
CZ	1.4	1.5	1.5	1.7	1.9	2.1	2.2	2.3	2.5	2.7	2.8	2.9
DK	3.3	3.0	3.2	3.9	4.4	4.7	4.9	5.2	5.6	5.8	6.1	6.2
DE	0.5	1.9	2.0	2.2	2.2	2.3	2.4	2.4	2.4	2.3	2.3	2.3
EE	0.7	0.4	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	1.1	1.1
IE	1.4	1.2	1.2	1.4	1.5	1.6	1.8	2.0	2.1	2.3	2.5	2.6
EL	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
ES	0.9	0.8	0.8	0.9	0.9	1.0	1.2	1.3	1.5	1.6	1.7	1.7
FR	0.7	1.9	1.9	2.0	2.1	2.3	2.3	2.4	2.5	2.5	2.5	2.6
HR	0.1	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
IT	0.5	1.6	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.2	2.2	2.1
CY	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
LV	0.3	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8
LT	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.7	1.8	1.9
LU	1.6	1.1	1.1	1.1	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.7
HU	0.4	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9
MT	2.3	1.2	1.2	1.4	1.5	1.6	1.7	1.8	2.0	2.4	2.9	3.4
NL	1.9	3.8	3.9	4.2	4.5	4.8	5.0	5.3	5.5	5.5	5.5	5.7
AT	1.5	1.6	1.6	1.8	1.9	2.1	2.4	2.6	2.8	2.9	2.9	3.1
PL	0.9	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
PT	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9
RO	0.4	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.7
SI	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	1.9	2.0
SK	1.4	1.0	1.1	1.3	1.4	1.6	1.7	1.8	2.0	2.2	2.3	2.4
FI	1.8	2.1	2.2	2.5	2.9	3.1	3.2	3.2	3.3	3.4	3.6	3.9
SE	1.3	3.2	3.2	3.5	3.6	3.7	3.7	3.9	4.0	4.2	4.3	4.4
NO	3.5	4.0	4.2	4.7	5.1	5.5	5.8	6.2	6.6	7.0	7.2	7.5
EA	0.8	1.8	1.8	1.9	2.0	2.2	2.3	2.4	2.5	2.5	2.5	2.6
EU	0.8	1.7	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.5	2.6

Table II.1.115: Long-term care spending as % of GDP on institutional care - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.3	1.4	1.4	1.5	1.7	1.9	2.1	2.2	2.4	2.5	2.6	2.7
BG	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
CZ	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.7
DK	1.4	1.0	1.1	1.4	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4
DE	0.4	0.7	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.1	1.1
EE	0.5	0.2	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8
IE	0.8	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
EL	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ES	0.6	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.1
FR	0.5	1.1	1.1	1.1	1.3	1.3	1.4	1.5	1.5	1.6	1.6	1.6
HR	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IT	0.1	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
CY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LV	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
LT	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0
LU	1.0	0.7	0.6	0.7	0.7	0.8	1.0	1.1	1.3	1.4	1.5	1.7
HU	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6
MT	2.1	1.0	1.1	1.3	1.4	1.5	1.6	1.7	1.8	2.2	2.6	3.1
NL	1.3	2.0	2.0	2.2	2.4	2.7	2.8	3.0	3.1	3.1	3.2	3.3
AT	0.7	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.3
PL	0.6	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.9	1.0
PT	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.5
RO	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
SI	0.6	0.5	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1
SK	0.7	0.4	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.1
FI	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
SE	0.8	1.7	1.7	1.9	2.0	2.0	2.1	2.2	2.3	2.3	2.4	2.5
NO	2.9	2.1	2.3	2.6	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.0
EA	0.5	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.3	1.3
EU	0.5	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.3

Table II.1.116: Long-term care spending as % of GDP on home care - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.4	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0
BG	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3
CZ	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
DK	1.9	2.0	2.1	2.5	2.8	3.0	3.1	3.3	3.4	3.6	3.7	3.8
DE	0.1	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EE	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
IE	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9
EL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ES	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4
FR	0.2	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9
HR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IT	0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
CY	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
LV	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
LT	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LU	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8
HU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MT	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
NL	0.3	0.6	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
AT	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
PL	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4
PT	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3
RO	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4
SI	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
SK	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
FI	1.4	1.6	1.7	2.0	2.2	2.4	2.4	2.5	2.6	2.7	2.8	3.0
SE	0.4	1.4	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.8
NO	0.6	1.7	1.8	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.3
EA	0.2	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7
EU	0.2	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7

Table II.1.117: Long-term care spending as % of GDP on cash benefits - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
BG	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CZ	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9
DK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	0.0	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
EE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IE	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5
EL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ES	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
FR	-0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HR	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
IT	0.3	0.9	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.2	1.2	1.2
CY	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
LV	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
LT	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8
LU	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
HU	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MT	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
NL	0.3	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5
AT	0.6	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.4	1.4
PL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SI	0.1	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4
SK	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9	0.9
FI	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
SE	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NO	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
EA	0.1	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
EU	0.1	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Table II.1.118: Long-term care spending as % of GDP - Risk scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.9	2.3	2.4	2.7	3.0	3.4	3.9	4.3	4.8	5.2	5.6	6.2
BG	2.5	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.7	2.1	2.5	3.0
CZ	2.9	1.5	1.6	1.8	2.1	2.3	2.6	2.8	3.2	3.7	4.1	4.4
DK	3.7	3.0	3.2	3.9	4.4	4.8	5.1	5.4	5.8	6.1	6.4	6.6
DE	1.4	1.9	2.0	2.3	2.4	2.6	2.8	2.9	3.0	3.1	3.1	3.3
EE	6.0	0.4	0.6	0.9	1.1	1.5	1.9	2.4	3.1	4.0	5.1	6.4
IE	2.0	1.2	1.3	1.4	1.6	1.7	1.9	2.2	2.4	2.7	3.0	3.2
EL	3.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.9	1.4	2.2	3.3
ES	3.6	0.8	0.9	1.0	1.2	1.5	1.9	2.4	2.9	3.5	4.0	4.5
FR	2.9	1.9	2.0	2.2	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.8
HR	1.3	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.6	1.8
IT	1.5	1.6	1.6	1.7	1.9	2.1	2.3	2.6	2.9	3.0	3.1	3.2
CY	3.6	0.2	0.2	0.3	0.4	0.5	0.6	0.8	1.1	1.6	2.4	3.8
LV	2.6	0.5	0.5	0.6	0.8	0.9	1.2	1.4	1.8	2.2	2.6	3.0
LT	8.4	1.0	1.1	1.4	1.8	2.3	2.9	3.7	4.7	6.0	7.5	9.4
LU	3.0	1.1	1.1	1.2	1.4	1.7	2.0	2.3	2.7	3.1	3.6	4.1
HU	3.4	0.5	0.6	0.7	0.9	1.1	1.3	1.6	2.0	2.6	3.2	4.0
MT	5.5	1.2	1.3	1.4	1.6	1.8	2.0	2.3	2.8	3.6	4.9	6.6
NL	3.8	3.8	3.9	4.4	4.8	5.3	5.7	6.1	6.5	6.8	7.1	7.6
AT	2.9	1.6	1.7	1.9	2.1	2.4	2.8	3.3	3.6	3.9	4.1	4.5
PL	4.2	0.5	0.6	0.8	1.0	1.3	1.6	2.0	2.5	3.1	3.9	4.7
PT	8.3	0.5	0.6	0.8	1.2	1.6	2.3	3.1	4.1	5.4	7.0	8.8
RO	3.1	0.3	0.4	0.5	0.7	0.8	1.1	1.4	1.8	2.3	2.8	3.5
SI	3.2	1.0	1.1	1.4	1.6	1.9	2.3	2.6	3.0	3.4	3.8	4.2
SK	4.4	1.0	1.2	1.4	1.7	2.1	2.5	2.9	3.4	4.1	4.8	5.4
FI	3.8	2.1	2.2	2.6	3.1	3.4	3.7	3.9	4.2	4.6	5.2	5.9
SE	3.1	3.2	3.3	3.6	3.8	4.0	4.1	4.4	4.8	5.2	5.7	6.3
NO	4.6	4.0	4.2	4.8	5.3	5.7	6.2	6.6	7.2	7.7	8.1	8.6
EA	2.6	1.8	1.8	2.1	2.3	2.5	2.8	3.1	3.4	3.7	4.0	4.4
EU	2.7	1.7	1.8	2.0	2.2	2.5	2.8	3.1	3.4	3.7	4.0	4.5

Table II.1.119: Long-term care spending as % of GDP - Healthy ageing scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.6	2.3	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.6	3.7	3.9
BG	0.1	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6
CZ	1.2	1.5	1.5	1.7	1.8	2.0	2.1	2.2	2.3	2.5	2.6	2.6
DK	2.9	3.0	3.2	3.8	4.3	4.6	4.8	5.0	5.3	5.6	5.8	5.9
DE	0.3	1.9	1.9	2.1	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2
EE	0.6	0.4	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.0
IE	1.2	1.2	1.2	1.4	1.5	1.6	1.7	1.9	2.0	2.2	2.3	2.5
EL	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ES	0.8	0.8	0.8	0.8	0.9	1.0	1.1	1.3	1.4	1.5	1.6	1.6
FR	0.6	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.4	2.4	2.4	2.5
HR	0.1	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
IT	0.4	1.6	1.5	1.6	1.7	1.7	1.9	2.0	2.1	2.1	2.1	2.0
CY	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
LV	0.2	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7
LT	0.8	1.0	1.0	1.1	1.2	1.2	1.4	1.5	1.6	1.6	1.7	1.7
LU	1.4	1.1	1.1	1.1	1.2	1.4	1.6	1.8	2.0	2.1	2.3	2.6
HU	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8
MT	2.0	1.2	1.2	1.4	1.5	1.6	1.7	1.8	1.9	2.2	2.7	3.2
NL	1.5	3.8	3.9	4.2	4.4	4.7	4.9	5.0	5.2	5.2	5.2	5.3
AT	1.3	1.6	1.6	1.8	1.9	2.0	2.3	2.5	2.7	2.8	2.8	2.9
PL	0.8	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3
PT	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.8
RO	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7
SI	0.8	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.9
SK	1.2	1.0	1.1	1.2	1.4	1.5	1.6	1.7	1.8	2.0	2.1	2.2
FI	1.6	2.1	2.2	2.5	2.8	3.0	3.0	3.1	3.2	3.2	3.4	3.7
SE	1.0	3.2	3.2	3.4	3.6	3.6	3.6	3.7	3.9	4.0	4.1	4.2
NO	3.1	4.0	4.2	4.6	5.0	5.4	5.6	6.0	6.3	6.6	6.9	7.1
EA	0.7	1.8	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.4	2.4	2.4
EU	0.7	1.7	1.7	1.9	2.0	2.1	2.2	2.3	2.3	2.4	2.4	2.4

Table II.1.120: Long-term care spending as % of GDP - No healthy ageing scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	2.0	2.3	2.3	2.5	2.8	3.1	3.3	3.6	3.8	4.0	4.1	4.3
BG	0.3	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8
CZ	1.6	1.5	1.5	1.8	2.0	2.1	2.3	2.4	2.6	2.9	3.0	3.1
DK	3.6	3.0	3.2	3.9	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.6
DE	0.6	1.9	2.0	2.2	2.2	2.3	2.4	2.5	2.5	2.5	2.5	2.5
EE	0.8	0.4	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.2
IE	1.5	1.2	1.3	1.4	1.5	1.7	1.8	2.0	2.2	2.4	2.6	2.7
EL	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
ES	1.0	0.8	0.8	0.9	1.0	1.1	1.2	1.4	1.6	1.7	1.8	1.8
FR	0.9	1.9	1.9	2.0	2.2	2.3	2.4	2.5	2.6	2.6	2.7	2.7
HR	0.2	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7
IT	0.7	1.6	1.6	1.6	1.7	1.9	2.0	2.2	2.3	2.4	2.3	2.3
CY	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4
LV	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9
LT	1.1	1.0	1.0	1.1	1.2	1.4	1.5	1.7	1.8	1.9	2.0	2.0
LU	1.7	1.1	1.1	1.1	1.3	1.4	1.6	1.9	2.1	2.3	2.5	2.8
HU	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0
MT	2.6	1.2	1.2	1.4	1.6	1.7	1.8	1.9	2.1	2.5	3.1	3.7
NL	2.3	3.8	3.9	4.3	4.7	5.0	5.3	5.5	5.8	5.9	5.9	6.1
AT	1.7	1.6	1.7	1.8	2.0	2.2	2.4	2.7	3.0	3.1	3.1	3.2
PL	1.0	0.5	0.5	0.6	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5
PT	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.0
RO	0.5	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8
SI	1.1	1.0	1.1	1.3	1.4	1.5	1.7	1.8	1.9	2.0	2.1	2.1
SK	1.6	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.1	2.3	2.5	2.6
FI	2.1	2.1	2.2	2.6	2.9	3.2	3.3	3.4	3.5	3.6	3.9	4.2
SE	1.6	3.2	3.2	3.5	3.7	3.8	3.9	4.0	4.2	4.4	4.6	4.7
NO	4.0	4.0	4.2	4.7	5.2	5.7	6.0	6.5	6.9	7.3	7.7	8.0
EA	1.0	1.8	1.8	2.0	2.1	2.2	2.4	2.5	2.6	2.7	2.7	2.8
EU	1.0	1.7	1.8	1.9	2.0	2.2	2.3	2.5	2.6	2.6	2.7	2.7

Table II.1.121: Long-term care spending as % of GDP - Coverage convergence scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	1.7	2.3	2.3	2.5	2.7	3.0	3.2	3.5	3.6	3.8	3.9	4.1
BG	1.6	0.5	0.5	0.6	0.7	0.8	1.0	1.2	1.4	1.6	1.8	2.1
CZ	1.4	1.5	1.5	1.7	1.9	2.1	2.2	2.3	2.5	2.7	2.8	2.9
DK	3.6	3.0	3.2	3.9	4.4	4.8	5.1	5.4	5.7	6.1	6.3	6.6
DE	0.5	1.9	2.0	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.3	2.4
EE	1.7	0.4	0.6	0.7	0.8	1.0	1.1	1.3	1.4	1.7	1.9	2.1
IE	1.4	1.2	1.2	1.4	1.5	1.6	1.8	2.0	2.1	2.3	2.5	2.6
EL	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3
ES	2.5	0.8	0.8	1.0	1.1	1.4	1.6	2.0	2.4	2.8	3.1	3.3
FR	2.1	1.9	1.9	2.1	2.3	2.6	2.8	3.0	3.3	3.5	3.7	4.0
HR	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0
IT	0.6	1.6	1.5	1.6	1.7	1.8	2.0	2.2	2.3	2.3	2.3	2.3
CY	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4
LV	0.8	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.2
LT	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.7	1.8	1.9
LU	2.6	1.1	1.1	1.2	1.4	1.6	1.9	2.2	2.5	2.9	3.3	3.7
HU	1.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.5	1.7	2.0
MT	2.3	1.2	1.2	1.4	1.6	1.7	1.7	1.9	2.1	2.4	2.9	3.5
NL	1.9	3.8	3.9	4.2	4.6	4.9	5.1	5.3	5.5	5.6	5.6	5.7
AT	1.5	1.6	1.6	1.8	1.9	2.1	2.4	2.6	2.8	2.9	2.9	3.1
PL	3.8	0.5	0.6	0.8	1.0	1.3	1.6	2.0	2.4	3.0	3.7	4.4
PT	8.5	0.5	0.6	0.8	1.2	1.7	2.3	3.1	4.2	5.5	7.1	9.0
RO	0.5	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.8	0.8	0.8
SI	1.3	1.0	1.1	1.3	1.4	1.6	1.8	1.9	2.0	2.1	2.2	2.3
SK	1.4	1.0	1.1	1.3	1.4	1.6	1.7	1.8	2.0	2.2	2.3	2.4
FI	1.9	2.1	2.2	2.5	2.9	3.1	3.2	3.3	3.4	3.5	3.7	4.0
SE	1.6	3.2	3.2	3.5	3.7	3.8	3.9	4.0	4.2	4.4	4.5	4.7
NO	3.5	4.0	4.2	4.7	5.1	5.5	5.8	6.2	6.6	7.0	7.2	7.5
EA	1.4	1.8	1.8	2.0	2.1	2.3	2.5	2.6	2.8	2.9	3.1	3.2
EU	1.6	1.7	1.8	1.9	2.1	2.2	2.4	2.6	2.8	3.0	3.1	3.3

Table II.1.122: Long-term care spending as % of GDP - Cost convergence scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.9	2.3	2.4	2.7	3.0	3.4	3.9	4.3	4.8	5.2	5.6	6.2
BG	0.8	0.5	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.1	1.2	1.4
CZ	2.9	1.5	1.6	1.8	2.1	2.3	2.6	2.8	3.2	3.7	4.1	4.4
DK	3.3	3.0	3.2	3.9	4.4	4.7	4.9	5.2	5.6	5.8	6.1	6.3
DE	1.4	1.9	2.0	2.3	2.4	2.6	2.8	2.9	3.0	3.0	3.1	3.2
EE	3.1	0.4	0.6	0.8	1.0	1.2	1.4	1.7	2.1	2.5	3.0	3.5
IE	2.0	1.2	1.3	1.4	1.6	1.7	1.9	2.2	2.4	2.7	3.0	3.2
EL	1.4	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.6	0.8	1.1	1.6
ES	1.6	0.8	0.8	0.9	1.0	1.2	1.4	1.6	1.9	2.1	2.3	2.4
FR	1.2	1.9	1.9	2.0	2.2	2.4	2.6	2.7	2.8	2.9	3.0	3.1
HR	1.0	0.5	0.5	0.6	0.7	0.7	0.8	0.9	1.0	1.2	1.3	1.5
IT	1.3	1.6	1.6	1.7	1.8	2.0	2.2	2.5	2.7	2.9	2.9	3.0
CY	2.5	0.2	0.2	0.3	0.3	0.4	0.5	0.7	0.9	1.3	1.8	2.7
LV	1.4	0.5	0.5	0.6	0.7	0.8	0.9	1.1	1.3	1.5	1.7	1.9
LT	8.4	1.0	1.1	1.4	1.8	2.3	2.9	3.7	4.7	6.0	7.5	9.4
LU	2.0	1.1	1.1	1.2	1.3	1.5	1.7	2.0	2.2	2.5	2.8	3.1
HU	1.2	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.3	1.4	1.6	1.8
MT	5.1	1.2	1.2	1.4	1.6	1.8	2.0	2.2	2.7	3.5	4.7	6.3
NL	3.7	3.8	3.9	4.4	4.8	5.2	5.6	6.0	6.4	6.7	7.0	7.6
AT	2.9	1.6	1.7	1.9	2.1	2.4	2.8	3.3	3.6	3.8	4.1	4.5
PL	1.1	0.5	0.5	0.6	0.7	0.8	1.0	1.0	1.2	1.3	1.5	1.6
PT	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9
RO	2.9	0.3	0.4	0.5	0.6	0.8	1.0	1.3	1.7	2.2	2.7	3.2
SI	2.7	1.0	1.1	1.3	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7
SK	4.4	1.0	1.2	1.4	1.7	2.1	2.5	2.9	3.4	4.1	4.8	5.4
FI	3.7	2.1	2.2	2.6	3.1	3.4	3.6	3.8	4.1	4.5	5.0	5.8
SE	2.8	3.2	3.2	3.5	3.7	3.9	4.0	4.3	4.6	5.0	5.4	6.0
NO	4.6	4.0	4.2	4.8	5.2	5.7	6.1	6.6	7.2	7.7	8.1	8.6
EA	1.8	1.8	1.8	2.0	2.2	2.4	2.6	2.9	3.1	3.2	3.4	3.6
EU	1.8	1.7	1.8	2.0	2.1	2.3	2.5	2.8	3.0	3.2	3.3	3.6

Table II.1.123: Number of dependent people (in thousands) - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	313	1,029	1,051	1,135	1,173	1,213	1,250	1,281	1,300	1,310	1,323	1,342
BG	13	274	272	277	280	281	282	285	289	292	292	287
CZ	192	741	768	808	833	848	855	869	894	924	940	933
DK	79	370	380	402	413	420	427	435	442	446	447	449
DE	851	5,931	6,027	6,093	6,110	6,295	6,547	6,738	6,759	6,662	6,653	6,782
EE	31	134	137	141	145	150	153	156	158	160	163	165
IE	202	258	274	300	323	346	369	391	412	433	450	460
EL	-3	1,012	1,015	1,035	1,066	1,096	1,120	1,131	1,127	1,103	1,063	1,009
ES	1,079	2,181	2,257	2,415	2,580	2,757	2,943	3,122	3,265	3,343	3,342	3,259
FR	1,723	6,196	6,355	6,679	7,058	7,353	7,549	7,689	7,784	7,849	7,869	7,919
HR	-9	371	372	378	383	386	383	377	372	368	365	361
IT	625	3,337	3,405	3,554	3,716	3,871	4,043	4,204	4,282	4,240	4,106	3,962
CY	40	65	68	74	79	83	87	90	93	97	101	105
LV	-20	164	163	160	159	159	158	156	153	150	147	144
LT	5	259	261	265	268	274	278	279	276	272	268	265
LU	56	55	59	66	72	79	86	92	97	102	106	111
HU	102	705	709	735	749	756	759	772	793	811	813	806
MT	28	18	20	23	27	29	31	33	35	38	42	47
NL	328	1,133	1,171	1,249	1,298	1,341	1,381	1,421	1,445	1,449	1,447	1,461
AT	279	819	841	885	920	968	1,021	1,062	1,078	1,076	1,080	1,099
PL	588	2,556	2,604	2,718	2,846	2,940	2,975	2,984	3,019	3,088	3,147	3,145
PT	65	839	853	885	914	938	953	962	961	953	933	904
RO	142	1,177	1,183	1,222	1,256	1,283	1,295	1,314	1,340	1,351	1,343	1,319
SI	34	200	205	215	223	230	234	236	236	236	236	234
SK	171	506	523	556	588	614	632	647	663	678	685	678
FI	70	398	407	433	447	454	454	453	451	452	460	469
SE	217	471	488	535	560	578	594	614	637	654	668	687
NO	161	302	313	343	365	383	400	417	432	444	453	464
EA	5,869	24,907	25,464	26,541	27,550	28,634	29,674	30,521	30,949	30,974	30,841	30,776
EU	7,203	31,200	31,868	33,239	34,487	35,740	36,860	37,795	38,363	38,539	38,491	38,403

Table II.1.124: Number of dependent people (in thousands) - Recipients: receiving institutional care - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	135	127	132	145	161	182	202	220	234	242	250	262
BG	-6	36	36	37	36	35	35	34	33	32	31	30
CZ	93	120	126	138	151	161	166	172	182	196	210	213
DK	52	46	50	59	67	73	77	83	89	94	96	98
DE	430	861	890	932	941	1,008	1,103	1,193	1,255	1,256	1,242	1,291
EE	10	13	14	14	15	17	18	19	20	21	22	23
IE	64	32	34	39	45	52	59	66	73	81	90	96
EL	-3	11	11	10	10	9	9	9	8	8	8	8
ES	339	369	383	411	449	494	545	602	654	693	713	707
FR	560	888	905	960	1,092	1,196	1,270	1,331	1,375	1,407	1,416	1,448
HR	0	14	14	14	15	15	14	14	14	14	14	14
IT	186	448	463	484	518	548	590	640	676	685	663	634
CY	9	9	10	11	12	13	14	14	15	16	17	18
LV	-1	12	12	12	12	12	12	12	12	12	11	11
LT	3	112	113	115	116	119	120	121	120	118	116	114
LU	13	5	5	6	7	8	10	12	13	15	16	18
HU	31	92	93	97	101	103	105	108	113	118	121	123
MT	13	5	5	7	8	9	10	10	11	13	15	18
NL	206	261	275	310	343	374	400	428	450	458	457	467
AT	73	67	73	80	87	96	109	123	132	133	133	139
PL	175	171	176	195	222	250	266	273	281	301	327	345
PT	11	33	34	37	39	42	44	45	46	47	46	45
RO	78	208	211	221	231	244	254	262	272	283	287	286
SI	20	23	24	27	30	33	36	38	39	41	42	43
SK	77	73	77	86	97	107	115	121	128	137	146	150
FI	16	22	23	26	29	32	33	33	34	35	36	38
SE	69	85	89	101	110	116	120	127	134	141	147	153
NO	74	46	49	58	68	77	84	93	101	109	114	120
EA	2,159	3,384	3,497	3,728	4,026	4,364	4,711	5,053	5,311	5,431	5,453	5,543
EU	2,650	4,142	4,279	4,576	4,944	5,346	5,734	6,110	6,416	6,597	6,673	6,792

Table II.1.125: Number of dependent people (in thousands) - Recipients: receiving home care - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	270	598	614	685	721	757	787	811	826	836	849	868
BG	-4	20	20	20	20	19	19	19	18	18	17	17
CZ	106	105	112	126	141	151	157	165	179	196	210	211
DK	155	195	209	241	263	278	292	310	327	337	343	350
DE	291	807	823	854	884	944	1,005	1,040	1,052	1,050	1,063	1,098
EE	6	9	10	10	11	12	12	13	14	14	15	16
IE	136	92	100	113	128	142	158	173	189	206	220	229
EL	77	284	286	294	308	327	346	363	376	382	377	361
ES	438	420	438	481	535	599	674	752	819	866	880	858
FR	584	1,404	1,434	1,527	1,662	1,762	1,832	1,887	1,926	1,951	1,962	1,989
HR	0	5	5	5	5	5	5	5	5	5	5	5
IT	366	956	987	1,038	1,113	1,180	1,264	1,357	1,416	1,422	1,378	1,322
CY	13	10	11	12	14	15	16	18	19	20	21	23
LV	3	18	18	18	18	19	20	20	21	21	21	21
LT	34	85	87	90	94	101	108	115	117	117	118	119
LU	14	7	7	9	10	11	13	15	16	18	19	21
HU	40	91	93	98	103	106	110	115	123	129	131	131
MT	42	21	23	27	30	33	35	38	43	48	55	63
NL	547	928	978	1,096	1,191	1,265	1,330	1,390	1,424	1,428	1,433	1,475
AT	83	93	100	110	118	130	145	159	168	169	169	177
PL	218	235	242	266	300	335	354	361	373	398	431	453
PT	7	17	18	19	21	22	23	24	25	25	25	25
RO	127	236	242	259	276	293	310	325	342	358	364	362
SI	16	24	25	28	30	33	35	36	38	39	40	40
SK	74	62	66	75	85	95	102	108	115	124	132	136
FI	79	127	132	148	163	176	181	184	186	188	194	206
SE	249	292	312	354	382	399	418	443	471	494	514	541
NO	177	203	213	244	268	287	305	323	342	356	366	379
EA	3,082	5,967	6,163	6,639	7,141	7,626	8,092	8,508	8,794	8,929	8,976	9,049
EU	3,973	7,141	7,393	8,002	8,625	9,208	9,751	10,247	10,627	10,860	10,987	11,114

Table II.1.126: Number of dependent people (in thousands) - Recipients: receiving cash benefits - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	176	285	295	328	351	377	400	419	431	439	448	461
BG	6	69	69	72	73	73	74	74	75	76	76	76
CZ	276	365	384	425	462	488	502	520	553	599	636	641
DK	0	0	0	0	0	0	0	0	0	0	0	0
DE	1,071	2,971	3,031	3,144	3,253	3,475	3,698	3,826	3,872	3,864	3,911	4,042
EE	4	11	12	12	12	13	13	14	14	15	15	15
IE	132	101	107	120	133	147	162	178	194	210	223	232
EL	0	0	0	0	0	0	0	0	0	0	0	0
ES	291	433	449	509	535	571	615	662	702	728	735	724
FR	-60	460	454	448	437	437	435	432	425	416	406	400
HR	-3	118	118	121	123	124	122	120	119	118	117	115
IT	601	1,935	1,977	2,063	2,180	2,296	2,454	2,627	2,737	2,739	2,647	2,537
CY	4	6	7	7	8	8	8	9	9	9	9	10
LV	1	24	24	24	24	24	24	25	25	25	25	25
LT	32	118	120	126	129	135	142	147	149	149	149	150
LU	11	7	8	9	10	11	12	14	15	16	17	18
HU	4	33	34	35	36	36	36	36	37	38	38	38
MT	3	1	1	1	2	2	2	2	2	3	3	4
NL	58	99	101	107	113	124	132	142	152	158	158	156
AT	345	451	473	517	555	601	659	717	756	768	772	795
PL	65	70	73	80	90	100	106	108	112	119	129	136
PT	0	13	14	14	14	15	15	15	15	15	14	14
RO	99	319	323	335	347	362	376	386	400	415	421	418
SI	32	49	51	55	59	65	69	72	75	77	79	81
SK	87	133	138	150	162	174	183	189	197	207	216	219
FI	91	275	281	303	321	335	340	343	344	346	353	366
SE	317	403	428	483	519	540	564	597	632	661	686	720
NO	79	91	96	109	120	129	137	145	153	160	164	170
EA	2,875	7,490	7,660	8,056	8,420	8,932	9,486	9,953	10,233	10,300	10,297	10,365
EU	3,643	8,751	8,971	9,487	9,946	10,532	11,143	11,674	12,042	12,208	12,284	12,394

Table II.1.127: Number of dependent people (in thousands) - Aged 65 or more - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	361	466	489	571	620	665	704	738	764	783	802	827
BG	55	164	166	171	179	187	196	205	216	223	223	219
CZ	258	395	413	451	482	515	547	574	612	650	662	653
DK	105	140	148	173	188	199	207	214	223	233	240	245
DE	1,434	3,049	3,160	3,363	3,524	3,694	3,948	4,190	4,306	4,276	4,330	4,483
EE	42	78	81	85	89	95	100	105	111	116	118	120
IE	201	110	120	141	163	186	212	238	260	279	298	311
EL	150	670	683	715	771	826	880	915	924	906	869	820
ES	1,264	1,316	1,383	1,540	1,734	1,955	2,193	2,399	2,549	2,633	2,641	2,580
FR	2,042	3,425	3,596	3,941	4,372	4,719	4,935	5,110	5,236	5,314	5,362	5,466
HR	45	230	237	251	263	271	274	276	275	275	276	275
IT	927	2,292	2,370	2,547	2,772	2,997	3,216	3,398	3,487	3,455	3,336	3,219
CY	43	35	38	43	48	52	56	60	64	69	74	78
LV	11	101	103	105	108	111	114	116	119	119	116	112
LT	56	159	164	174	184	196	205	210	214	216	216	214
LU	49	22	24	28	33	38	44	49	55	60	66	71
HU	184	417	425	437	459	484	513	536	567	597	604	600
MT	26	11	13	15	17	19	20	22	24	28	32	37
NL	421	501	539	634	706	757	791	827	856	873	887	922
AT	341	439	464	513	564	616	668	716	741	749	758	780
PL	998	1,428	1,512	1,650	1,783	1,907	2,007	2,106	2,218	2,344	2,424	2,426
PT	176	520	541	582	625	669	706	728	734	730	718	696
RO	330	745	767	801	871	929	979	1,022	1,081	1,103	1,097	1,075
SI	56	103	109	121	132	142	151	157	160	161	162	159
SK	254	289	311	349	383	418	452	482	513	540	551	544
FI	104	212	222	248	266	273	276	280	284	291	303	316
SE	190	210	223	256	279	293	305	324	349	371	383	401
NO	152	121	131	152	173	191	205	220	237	251	262	274
EA	8,003	14,030	14,647	15,966	17,374	18,699	19,945	21,016	21,675	21,875	21,917	22,033
EU	10,123	17,529	18,302	19,905	21,617	23,214	24,699	25,996	26,941	27,394	27,549	27,652

Table II.1.128: Number of dependent people (in thousands) - Recipients: receiving institutional care - Aged 65 or more - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	135	118	124	137	153	174	194	212	226	234	242	254
BG	1	16	16	16	16	17	17	18	18	18	17	16
CZ	97	86	91	102	115	126	134	141	152	167	180	183
DK	52	44	48	57	65	71	75	80	87	91	94	96
DE	461	691	721	769	786	852	948	1,040	1,107	1,112	1,102	1,152
EE	11	12	12	13	14	15	17	18	19	20	21	22
IE	64	23	25	30	36	42	49	57	64	72	80	87
EL	0	1	1	1	1	1	2	2	2	2	2	2
ES	362	267	281	310	350	399	455	516	570	611	632	629
FR	590	628	646	700	839	947	1,022	1,086	1,133	1,169	1,181	1,217
HR	2	8	9	9	10	10	10	10	10	10	10	10
IT	212	353	369	392	431	467	512	565	602	612	592	565
CY	9	6	7	8	9	10	11	12	12	13	14	16
LV	2	7	7	7	8	8	8	9	9	9	9	9
LT	23	69	72	76	81	85	89	91	93	94	94	93
LU	13	4	5	5	6	8	9	11	12	14	15	17
HU	41	59	61	64	69	73	77	81	87	95	98	100
MT	13	5	5	6	8	9	9	10	11	12	15	17
NL	218	179	193	229	266	298	324	352	375	384	386	398
AT	73	61	67	74	81	90	103	117	126	128	128	134
PL	182	148	155	173	200	228	245	253	264	286	312	330
PT	13	28	29	31	34	37	39	41	42	43	42	41
RO	103	147	153	162	178	194	209	219	234	247	251	251
SI	21	19	20	23	25	29	32	34	36	37	39	40
SK	83	55	60	70	80	91	100	107	116	126	135	139
FI	16	19	20	23	26	29	30	30	31	32	33	36
SE	65	53	57	66	75	80	84	91	99	106	111	118
NO	74	41	44	53	63	72	80	88	96	104	110	115
EA	2,322	2,554	2,672	2,915	3,243	3,600	3,962	4,319	4,597	4,734	4,773	4,876
EU	2,863	3,107	3,253	3,555	3,960	4,389	4,804	5,202	5,538	5,743	5,837	5,970

Table II.1.129: Number of dependent people (in thousands) - Recipients: receiving home care - Aged 65 or more - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	284	349	366	428	469	507	539	565	582	596	612	633
BG	0	11	11	11	11	11	12	12	12	12	12	11
CZ	107	94	100	114	128	139	146	155	169	187	200	201
DK	158	164	177	209	233	249	263	279	295	307	314	322
DE	315	612	626	657	696	756	818	856	873	874	890	927
EE	7	8	8	9	9	10	11	12	12	13	14	14
IE	136	60	67	79	92	107	123	140	156	172	186	196
EL	106	218	222	233	251	274	299	320	336	343	338	323
ES	447	371	388	430	485	552	631	710	778	825	838	818
FR	648	833	865	960	1,103	1,214	1,290	1,352	1,399	1,428	1,445	1,481
HR	1	3	3	3	4	4	4	4	4	4	4	4
IT	416	759	792	845	928	1,006	1,098	1,196	1,259	1,268	1,226	1,174
CY	13	8	9	10	12	13	14	16	17	18	20	21
LV	5	14	15	15	15	16	17	18	19	19	19	19
LT	42	68	70	74	79	87	95	103	106	108	109	110
LU	13	5	6	6	8	9	11	12	14	15	17	18
HU	42	83	86	90	95	99	103	109	117	124	126	125
MT	41	18	21	24	27	29	31	34	38	44	52	59
NL	592	633	683	807	913	991	1,055	1,115	1,151	1,161	1,174	1,225
AT	85	80	87	96	105	117	132	147	155	157	158	165
PL	233	191	200	224	258	293	313	325	340	368	402	424
PT	8	15	15	17	18	20	21	22	23	24	24	23
RO	143	196	205	220	241	260	281	297	317	334	341	339
SI	17	19	20	22	25	28	30	32	33	34	35	35
SK	78	51	55	64	74	84	92	99	107	117	125	129
FI	84	98	104	119	135	148	154	157	160	164	170	182
SE	241	231	249	287	315	331	349	373	401	425	445	472
NO	171	120	130	154	178	198	214	232	251	266	277	291
EA	3,337	4,223	4,421	4,900	5,451	5,974	6,467	6,910	7,224	7,383	7,456	7,559
EU	4,261	5,191	5,449	6,055	6,731	7,356	7,933	8,460	8,876	9,142	9,296	9,452

Table II.1.130: Number of dependent people (in thousands) - Recipients: receiving cash benefits - Aged 65 or more - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	179	194	203	232	256	283	306	325	338	348	358	372
BG	15	38	39	40	42	44	47	49	52	53	53	53
CZ	286	253	268	305	344	374	394	414	450	498	534	539
DK	0	0	0	0	0	0	0	0	0	0	0	0
DE	1,161	2,252	2,305	2,420	2,562	2,784	3,011	3,149	3,213	3,216	3,275	3,413
EE	5	7	8	8	9	9	10	10	11	11	12	12
IE	133	59	65	76	89	104	120	136	152	167	182	192
EL	0	0	0	0	0	0	0	0	0	0	0	0
ES	300	255	269	298	336	381	431	480	520	549	561	555
FR	0	0	0	0	0	0	0	0	0	0	0	0
HR	15	72	74	79	83	85	86	87	86	87	87	86
IT	744	1,413	1,465	1,567	1,711	1,852	2,027	2,210	2,328	2,340	2,256	2,157
CY	4	3	4	4	4	5	5	6	6	6	7	7
LV	5	15	15	16	16	17	18	19	20	20	20	20
LT	49	79	82	86	93	102	111	118	122	124	126	128
LU	10	4	5	5	6	7	8	10	11	12	13	14
HU	8	19	20	20	21	22	24	25	26	27	28	27
MT	3	1	1	1	2	2	2	2	2	3	3	4
NL	66	42	45	54	62	74	81	89	99	106	108	108
AT	357	349	372	413	456	504	562	621	662	677	681	706
PL	70	57	60	67	77	88	94	97	102	110	120	127
PT	2	8	8	9	9	10	11	11	11	11	11	10
RO	148	201	210	223	245	268	289	303	324	343	350	349
SI	35	32	34	38	43	49	54	57	60	63	65	67
SK	105	79	85	98	111	125	137	147	158	170	180	184
FI	113	168	175	199	221	235	241	247	251	256	266	281
SE	306	307	331	380	416	437	459	490	526	556	581	613
NO	77	54	58	69	80	89	96	104	113	119	124	131
EA	3,285	5,032	5,214	5,602	6,069	6,629	7,220	7,723	8,051	8,166	8,211	8,317
EU	4,118	5,907	6,141	6,638	7,214	7,862	8,526	9,102	9,530	9,754	9,877	10,025

Table II.1.131: Education spending as % of GDP - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-0.8	5.6	5.5	5.3	5.1	4.9	4.9	4.9	4.9	4.9	4.9	4.8
BG	0.1	3.7	3.8	3.7	3.7	3.6	3.6	3.8	3.9	4.0	3.9	3.8
CZ	0.3	4.1	4.2	4.3	4.2	4.2	4.2	4.3	4.5	4.5	4.5	4.4
DK	-0.9	5.8	5.5	5.4	5.4	5.4	5.3	5.1	5.0	4.9	4.9	4.9
DE	0.2	4.3	4.3	4.4	4.5	4.5	4.4	4.4	4.4	4.4	4.5	4.5
EE	-0.6	3.9	3.9	3.7	3.6	3.4	3.4	3.4	3.5	3.6	3.5	3.4
IE	-0.7	2.8	2.6	2.5	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.1
EL	-0.5	3.4	3.2	3.0	2.9	2.9	3.0	3.1	3.1	3.0	3.0	2.9
ES	-0.6	4.1	4.0	3.7	3.5	3.3	3.4	3.5	3.6	3.6	3.5	3.5
FR	-0.9	4.8	4.6	4.4	4.2	4.1	4.1	4.1	4.1	4.0	3.9	3.9
HR	-0.7	3.4	3.1	3.1	2.9	2.8	2.7	2.7	2.8	2.8	2.7	2.7
IT	-0.8	3.8	3.7	3.4	3.2	3.1	3.2	3.2	3.2	3.1	3.0	3.0
CY	-0.5	5.0	4.9	4.9	4.9	4.9	4.6	4.4	4.4	4.4	4.5	4.5
LV	-0.2	3.6	3.6	3.6	3.5	3.3	3.2	3.3	3.5	3.6	3.5	3.4
LT	-0.3	3.0	3.0	2.9	2.9	2.7	2.6	2.6	2.6	2.7	2.8	2.8
LU	-0.4	3.0	2.8	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.6	2.6
HU	0.1	3.5	3.4	3.3	3.4	3.4	3.5	3.5	3.5	3.6	3.6	3.6
MT	-0.1	4.5	4.2	4.0	3.9	3.8	3.8	3.8	3.9	4.1	4.3	4.4
NL	-1.0	4.9	4.5	4.2	4.2	4.2	4.1	4.1	3.9	3.9	3.8	3.9
AT	-0.4	4.6	4.4	4.3	4.2	4.2	4.1	4.1	4.1	4.2	4.2	4.2
PL	0.1	3.9	3.9	3.9	3.8	3.7	3.7	3.8	4.0	4.1	4.1	4.0
PT	-0.1	4.4	4.2	4.1	4.1	4.3	4.4	4.4	4.4	4.3	4.3	4.3
RO	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.5
SI	-0.3	4.3	4.2	4.2	4.0	3.8	3.8	4.0	4.1	4.2	4.1	4.0
SK	0.3	3.7	3.8	4.0	4.0	3.9	3.8	3.9	4.1	4.2	4.2	4.0
FI	-1.1	5.3	5.1	4.8	4.6	4.4	4.3	4.3	4.3	4.3	4.2	4.2
SE	-0.6	5.8	5.7	5.6	5.5	5.3	5.2	5.2	5.2	5.2	5.2	5.1
NO	-1.4	7.5	7.2	6.9	6.6	6.4	6.3	6.3	6.3	6.2	6.2	6.2
EA	-0.5	4.3	4.2	4.1	4.0	3.9	3.9	3.9	3.9	3.9	3.9	3.8
EU	-0.5	4.4	4.2	4.1	4.0	4.0	3.9	4.0	4.0	4.0	3.9	3.9

Table II.1.132: Number of students (in thousands)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-200	2,344	2,347	2,306	2,243	2,209	2,211	2,228	2,232	2,213	2,176	2,144
BG	-266	933	948	896	828	775	744	734	728	713	689	667
CZ	-109	1,787	1,887	1,845	1,781	1,717	1,682	1,691	1,722	1,736	1,716	1,678
DK	-138	1,229	1,193	1,162	1,173	1,178	1,165	1,135	1,106	1,089	1,088	1,091
DE	134	13,858	14,314	14,525	14,661	14,522	14,218	13,961	13,890	13,958	14,033	13,992
EE	-41	222	225	212	200	190	186	187	191	190	186	181
IE	-209	1,234	1,224	1,162	1,093	1,065	1,081	1,115	1,127	1,105	1,063	1,025
EL	-634	1,912	1,837	1,721	1,615	1,533	1,483	1,448	1,412	1,366	1,317	1,278
ES	-1,725	8,574	8,598	8,064	7,533	7,264	7,270	7,363	7,377	7,245	7,029	6,849
FR	-2,120	12,989	12,723	12,208	11,833	11,736	11,777	11,774	11,612	11,315	11,031	10,869
HR	-226	602	567	535	499	467	442	426	414	402	389	375
IT	-2,311	9,115	8,886	8,238	7,680	7,411	7,398	7,452	7,408	7,220	6,976	6,804
CY	-18	164	163	162	162	160	154	148	146	146	146	146
LV	-136	317	318	297	266	236	215	209	208	204	194	181
LT	-208	461	468	429	390	348	316	294	283	276	266	253
LU	25	100	103	107	113	118	121	121	121	122	124	125
HU	-138	1,467	1,450	1,430	1,421	1,401	1,376	1,355	1,347	1,345	1,339	1,329
MT	21	73	76	80	85	88	89	90	91	92	94	94
NL	-510	3,553	3,395	3,248	3,231	3,264	3,275	3,230	3,149	3,076	3,043	3,043
AT	-76	1,464	1,465	1,454	1,444	1,423	1,400	1,390	1,390	1,395	1,395	1,387
PL	-1,747	6,310	6,489	6,170	5,750	5,319	5,028	4,930	4,923	4,879	4,744	4,563
PT	-352	1,635	1,578	1,486	1,439	1,419	1,403	1,376	1,340	1,306	1,287	1,283
RO	-878	2,829	2,817	2,659	2,487	2,340	2,250	2,203	2,162	2,096	2,018	1,951
SI	-54	361	364	358	338	320	315	320	326	325	317	307
SK	-139	841	866	863	831	779	740	729	736	738	725	702
FI	-317	1,153	1,126	1,060	1,003	968	945	929	909	886	859	836
SE	167	2,253	2,291	2,305	2,312	2,319	2,336	2,372	2,411	2,432	2,432	2,420
NO	-96	1,153	1,117	1,086	1,061	1,054	1,063	1,075	1,080	1,073	1,062	1,057
EA	-9,473	60,972	60,076	57,981	56,159	55,052	54,595	54,363	53,946	53,178	52,259	51,499
EU	-12,205	77,780	77,719	74,984	72,411	70,567	69,618	69,210	68,759	67,871	66,674	65,574

Table II.1.133: Number of students as % of population 5-24

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	-1.2	87.5	86.8	85.8	85.7	86.3	86.6	86.7	86.5	86.3	86.1	86.3
BG	-2.5	69.7	69.2	67.6	66.9	66.7	67.3	67.9	68.0	67.7	67.3	67.2
CZ	-2.2	81.2	80.5	78.7	79.3	78.6	78.7	79.4	79.8	79.5	79.2	79.0
DK	-2.2	90.7	89.1	87.9	89.0	88.1	87.7	87.3	87.9	88.3	88.6	88.5
DE	-0.8	85.5	85.5	85.4	85.0	84.3	84.6	84.7	84.9	85.0	84.9	84.7
EE	-5.1	77.9	74.9	72.2	72.5	72.2	73.2	73.7	74.1	73.5	72.9	72.8
IE	-2.4	90.9	88.8	86.7	86.8	88.6	90.5	90.9	89.9	88.7	88.0	88.5
EL	-1.6	93.3	91.1	89.9	91.4	92.0	92.2	92.2	91.9	91.4	91.3	91.7
ES	-0.4	87.6	86.7	85.9	86.6	87.8	88.8	88.2	87.5	87.0	86.9	87.2
FR	-1.7	78.9	77.6	76.6	76.6	77.6	77.7	77.7	77.4	77.0	76.9	77.1
HR	-3.2	78.2	76.1	75.1	75.2	75.0	74.6	75.4	75.5	75.4	75.2	75.1
IT	-0.6	81.8	81.4	80.2	80.4	81.6	82.5	82.2	81.7	81.2	81.0	81.2
CY	-2.5	79.4	78.4	76.8	76.1	76.3	75.0	75.2	76.3	77.0	77.1	76.9
LV	-4.0	81.5	80.1	78.3	77.5	76.4	77.9	78.7	79.2	78.6	77.8	77.5
LT	-1.4	80.9	81.7	80.5	79.4	79.0	79.9	79.3	80.3	80.5	80.0	79.5
LU	-1.0	70.2	69.5	69.3	69.5	69.8	69.3	68.6	68.7	69.0	69.2	69.2
HU	-1.1	75.2	74.1	73.6	74.4	73.8	73.7	73.8	74.2	74.2	74.2	74.1
MT	-0.1	75.3	75.9	75.8	75.0	74.9	74.7	74.1	74.6	75.1	75.3	75.3
NL	-3.7	88.2	84.6	84.2	84.3	84.6	84.3	83.8	83.6	83.9	84.2	84.5
AT	-2.4	80.8	79.6	78.7	78.2	77.9	78.2	78.3	78.5	78.6	78.5	78.3
PL	-1.6	80.3	80.3	79.0	79.3	78.2	79.0	79.1	79.5	79.3	79.0	78.8
PT	0.7	81.7	81.5	81.6	82.4	82.6	82.6	82.4	82.1	82.0	82.1	82.4
RO	-1.4	68.6	68.4	67.1	67.2	66.8	67.6	67.7	67.7	67.4	67.2	67.2
SI	-2.4	86.0	85.2	83.8	83.2	83.4	84.0	84.5	84.5	84.1	83.7	83.6
SK	-1.5	74.3	74.7	74.0	73.3	72.1	72.2	73.1	73.8	73.7	73.2	72.8
FI	-1.1	94.3	93.0	91.3	91.6	94.0	93.4	92.7	92.4	92.5	92.7	93.2
SE	-2.3	92.3	91.0	88.9	88.9	89.9	90.4	90.2	90.2	89.8	89.7	90.0
NO	-1.5	89.3	87.8	86.7	87.1	88.0	88.3	88.1	87.8	87.5	87.5	87.9
EA	-1.8	83.8	82.2	81.4	81.5	82.0	82.4	82.3	82.2	81.9	81.8	82.0
EU	-1.1	82.7	81.9	81.0	81.2	81.5	81.9	81.9	81.8	81.6	81.5	81.6

Table II.1.134: Education spending as % of GDP - High enrolment rate scenario

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	0.0	5.6	5.6	5.7	5.6	5.5	5.6	5.7	5.7	5.7	5.7	5.7
BG	1.1	3.7	3.9	4.2	4.3	4.4	4.5	4.8	5.0	5.0	5.0	4.9
CZ	1.6	4.1	4.3	4.8	4.9	5.1	5.3	5.5	5.6	5.7	5.7	5.6
DK	0.1	5.8	5.6	5.8	5.9	6.0	6.2	6.3	6.1	5.9	5.9	5.9
DE	1.2	4.3	4.3	4.7	5.0	5.2	5.3	5.4	5.4	5.4	5.5	5.5
EE	0.5	3.9	4.0	4.3	4.3	4.2	4.3	4.4	4.5	4.6	4.6	4.4
IE	-0.2	2.8	2.7	2.7	2.6	2.5	2.5	2.7	2.7	2.7	2.7	2.6
EL	-0.4	3.4	3.1	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.1	3.0
ES	0.0	4.1	4.1	4.1	3.9	3.8	3.9	4.0	4.1	4.2	4.1	4.1
FR	0.3	4.8	4.8	4.8	4.8	4.9	5.0	5.2	5.2	5.2	5.1	5.0
HR	-0.4	3.4	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1
IT	-0.2	3.8	3.8	3.7	3.6	3.6	3.6	3.8	3.8	3.7	3.6	3.6
CY	0.5	5.0	5.0	5.3	5.5	5.7	5.7	5.6	5.4	5.4	5.5	5.5
LV	0.7	3.6	3.7	4.0	4.2	4.0	3.9	4.0	4.3	4.4	4.4	4.2
LT	0.7	3.0	3.1	3.4	3.5	3.5	3.5	3.5	3.5	3.6	3.7	3.7
LU	1.2	3.0	3.0	3.2	3.4	3.7	4.0	4.2	4.2	4.2	4.2	4.2
HU	0.9	3.5	3.4	3.5	3.7	3.9	4.1	4.3	4.3	4.4	4.4	4.4
MT	1.5	4.5	4.3	4.4	4.6	4.7	5.0	5.3	5.4	5.6	5.8	6.0
NL	-0.5	4.9	4.5	4.5	4.5	4.5	4.6	4.6	4.5	4.4	4.4	4.4
AT	0.2	4.6	4.5	4.5	4.5	4.6	4.6	4.7	4.7	4.8	4.8	4.8
PL	0.9	3.9	3.9	4.2	4.2	4.2	4.3	4.5	4.7	4.8	4.8	4.8
PT	0.4	4.4	4.2	4.2	4.3	4.5	4.8	5.0	5.0	4.9	4.8	4.8
RO	1.1	2.5	2.6	2.9	3.1	3.3	3.4	3.6	3.7	3.7	3.6	3.6
SI	0.6	4.3	4.3	4.5	4.5	4.4	4.5	4.7	4.9	5.0	4.9	4.8
SK	1.6	3.7	3.8	4.3	4.6	4.8	5.0	5.2	5.3	5.4	5.5	5.3
FI	-0.6	5.3	5.2	5.2	5.0	4.9	4.8	4.8	4.8	4.8	4.8	4.7
SE	0.3	5.8	5.8	5.9	6.0	6.0	6.0	6.1	6.1	6.1	6.1	6.0
NO	-0.5	7.5	7.3	7.2	7.1	7.0	7.0	7.1	7.1	7.1	7.1	7.0
EA	0.3	4.3	4.3	4.4	4.5	4.5	4.6	4.7	4.7	4.7	4.7	4.7
EU	0.4	4.4	4.3	4.4	4.5	4.6	4.6	4.8	4.8	4.8	4.8	4.7

Table II.1.135: Total cost of ageing as % of GDP - Baseline

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	5.1	26.8	27.1	27.7	28.3	28.7	29.2	29.7	30.3	30.8	31.3	31.9
BG	0.6	18.2	19.6	19.2	18.7	18.4	18.5	18.8	19.3	19.3	19.0	18.8
CZ	3.7	20.6	19.6	20.1	20.7	21.7	22.9	23.8	24.6	24.9	24.6	24.3
DK	1.4	24.4	24.7	25.8	26.3	26.3	26.0	25.7	25.4	25.2	25.4	25.8
DE	2.0	24.3	24.4	25.0	25.7	25.8	25.8	25.9	26.0	26.0	26.2	26.4
EE	0.0	16.8	17.4	17.4	17.2	17.1	17.2	17.3	17.5	17.7	17.4	16.9
IE	4.9	12.0	11.7	12.3	13.0	13.6	14.4	15.2	15.8	16.4	16.7	16.9
EL	-2.4	23.4	21.7	21.2	22.0	22.5	23.0	23.3	22.6	21.9	21.6	21.0
ES	5.1	23.9	24.4	25.1	26.3	27.3	28.4	29.2	29.4	29.2	29.0	29.0
FR	-0.7	29.9	29.2	29.2	29.3	29.2	29.2	29.2	29.1	29.0	28.9	29.2
HR	-0.2	18.8	19.8	19.7	19.5	19.2	18.9	18.8	18.7	18.6	18.6	18.7
IT	-2.0	27.3	27.1	27.6	28.2	28.3	28.0	27.3	26.4	25.6	25.2	25.3
CY	4.1	20.9	21.3	22.0	23.1	23.4	23.7	23.7	24.5	24.9	25.5	25.0
LV	-1.9	17.2	16.3	16.4	16.4	16.0	15.8	16.1	16.5	16.4	15.8	15.4
LT	4.6	14.8	15.7	16.6	17.5	18.0	18.5	18.9	19.4	19.7	19.7	19.4
LU	10.7	17.2	17.3	17.8	18.9	19.8	20.6	21.7	23.0	24.7	26.4	27.9
HU	5.2	16.0	16.0	15.9	16.6	17.7	19.0	19.6	20.1	20.7	21.1	21.3
MT	8.6	16.9	16.6	16.0	15.9	16.1	16.7	17.8	19.4	21.6	23.7	25.6
NL	3.5	21.0	21.0	21.7	22.5	23.1	23.3	23.5	23.6	23.7	24.0	24.5
AT	2.6	27.7	28.3	29.1	29.4	29.3	29.3	29.5	29.7	29.9	30.0	30.2
PL	1.9	19.1	20.1	20.5	20.3	20.1	20.3	20.8	21.3	21.4	21.2	21.0
PT	-0.5	23.3	23.5	24.4	25.6	26.4	27.3	27.0	25.7	24.3	23.4	22.8
RO	0.2	15.8	17.9	18.1	18.1	18.3	18.7	18.8	18.8	18.1	17.1	16.0
SI	5.4	22.1	22.5	23.3	24.2	25.0	26.0	27.0	27.6	27.7	27.6	27.5
SK	6.1	19.0	20.7	21.9	22.6	23.1	23.8	24.5	25.4	25.9	25.7	25.0
FI	2.7	26.4	26.7	27.0	27.1	26.7	26.4	26.5	27.0	27.6	28.4	29.0
SE	0.8	23.6	23.9	23.8	23.8	23.5	23.4	23.6	23.7	24.3	24.6	24.5
NO	5.0	30.1	30.7	31.7	32.1	32.4	32.6	33.0	33.6	34.1	34.5	35.1
EA	1.4	25.1	25.0	25.3	25.9	26.1	26.3	26.4	26.4	26.3	26.3	26.5
EU	1.2	24.4	24.3	24.6	25.0	25.2	25.4	25.5	25.6	25.5	25.5	25.6

Table II.1.136: Total cost of ageing as % of GDP - Risk scenario (health care & long-term care)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	8.0	26.8	27.2	28.0	28.8	29.6	30.3	31.2	32.0	32.9	33.7	34.7
BG	3.9	18.2	19.7	19.6	19.4	19.4	19.8	20.4	21.2	21.7	21.8	22.1
CZ	6.2	20.6	19.7	20.4	21.2	22.5	23.9	25.1	26.2	26.9	26.9	26.8
DK	2.7	24.4	24.7	26.0	26.6	26.8	26.7	26.5	26.4	26.3	26.6	27.1
DE	3.8	24.3	24.5	25.3	26.1	26.5	26.8	27.0	27.3	27.5	27.8	28.1
EE	6.3	16.8	17.5	17.9	18.0	18.4	18.9	19.6	20.5	21.6	22.3	23.1
IE	6.6	12.0	11.8	12.8	13.6	14.3	15.3	16.3	17.1	17.7	18.2	18.6
EL	1.7	23.4	21.9	21.5	22.5	23.2	23.9	24.5	24.3	24.2	24.6	25.0
ES	8.6	23.9	24.6	25.4	26.8	28.1	29.6	30.8	31.5	31.8	32.0	32.5
FR	2.2	29.9	29.3	29.5	29.8	30.1	30.4	30.7	31.0	31.3	31.5	32.1
HR	2.4	18.8	20.0	20.1	20.2	20.2	20.2	20.3	20.5	20.7	20.9	21.2
IT	-0.3	27.3	27.2	27.8	28.6	28.8	28.8	28.3	27.6	27.1	26.8	27.0
CY	8.7	20.9	21.5	22.4	23.6	24.2	24.9	25.2	26.3	27.3	28.8	29.6
LV	1.6	17.2	16.5	17.0	17.2	17.2	17.4	17.9	18.7	19.0	18.9	18.9
LT	13.2	14.8	15.9	17.3	18.6	19.7	20.8	22.0	23.5	25.0	26.5	28.0
LU	12.5	17.2	17.4	17.9	19.1	20.2	21.2	22.5	24.1	26.0	28.0	29.8
HU	9.3	16.0	16.2	16.4	17.3	18.7	20.3	21.3	22.3	23.4	24.4	25.3
MT	12.9	16.9	16.7	16.4	16.5	17.0	17.8	19.1	21.1	23.8	26.8	29.9
NL	6.1	21.0	21.1	21.9	22.9	23.8	24.3	24.8	25.2	25.6	26.2	27.1
AT	4.9	27.7	28.4	29.4	30.0	30.2	30.4	30.8	31.4	31.7	32.1	32.6
PL	6.3	19.1	20.2	21.0	21.1	21.3	21.9	22.7	23.7	24.4	24.9	25.4
PT	8.4	23.3	23.7	24.9	26.4	27.8	29.4	30.0	29.8	29.8	30.4	31.7
RO	4.3	15.8	18.1	18.6	19.0	19.5	20.3	20.7	21.2	20.9	20.5	20.1
SI	8.9	22.1	22.6	23.9	25.1	26.3	27.7	29.0	30.0	30.5	30.8	31.1
SK	10.4	19.0	20.8	22.4	23.4	24.4	25.5	26.6	28.0	29.0	29.5	29.3
FI	5.6	26.4	26.8	27.3	27.6	27.5	27.5	27.9	28.6	29.6	30.7	31.9
SE	3.6	23.6	23.9	24.1	24.3	24.2	24.3	24.8	25.2	26.1	26.8	27.2
NO	7.0	30.1	30.8	32.0	32.5	33.0	33.5	34.2	34.9	35.7	36.3	37.1
EA	4.0	25.1	25.1	25.6	26.4	26.9	27.3	27.7	28.0	28.3	28.6	29.1
EU	3.9	24.4	24.4	24.9	25.6	26.0	26.5	26.9	27.3	27.6	27.9	28.3

Table II.1.137: Total cost of ageing as % of GDP - High life expectancy (+2 years)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.3	26.8	27.1	27.7	28.4	29.0	29.6	30.2	31.0	31.7	32.3	33.1
BG	1.1	18.2	19.6	19.2	18.8	18.6	18.7	19.1	19.6	19.7	19.5	19.4
CZ	4.7	20.6	19.6	20.1	20.8	21.9	23.2	24.2	25.1	25.6	25.5	25.3
DK	2.2	24.4	24.7	25.8	26.4	26.5	26.4	26.1	25.9	25.9	26.2	26.6
DE	2.5	24.3	24.4	25.0	25.7	25.9	26.0	26.1	26.3	26.4	26.6	26.9
EE	0.6	16.8	17.4	17.4	17.2	17.2	17.3	17.5	17.8	18.1	17.9	17.5
IE	5.5	12.0	11.6	12.3	13.0	13.6	14.5	15.4	16.1	16.7	17.1	17.5
EL	-2.4	23.4	21.7	21.2	21.7	22.7	23.3	23.3	22.7	22.1	21.5	21.0
ES	6.1	23.9	24.4	25.1	26.4	27.5	28.7	29.6	30.0	29.9	29.9	30.0
FR	0.1	29.9	29.2	29.2	29.3	29.5	29.5	29.6	29.6	29.7	29.6	30.0
HR	0.4	18.8	19.7	19.6	19.5	19.3	19.1	19.0	19.0	19.0	19.1	19.2
IT	-2.0	27.3	27.1	27.5	28.2	28.3	28.0	27.4	26.5	25.8	25.2	25.3
CY	4.2	20.9	21.3	22.1	22.9	23.4	23.4	23.7	24.1	25.1	25.4	25.1
LV	-1.7	17.2	16.4	16.5	16.4	16.0	15.9	16.2	16.7	16.6	16.0	15.6
LT	5.0	14.8	15.7	16.7	17.6	18.1	18.6	19.1	19.7	20.0	20.1	19.8
LU	11.5	17.2	17.3	17.8	18.9	19.9	20.8	21.9	23.4	25.2	27.1	28.7
HU	6.0	16.0	16.0	16.0	16.6	17.8	19.2	19.9	20.5	21.2	21.7	22.0
MT	9.4	16.9	16.6	16.0	15.9	16.2	16.9	18.0	19.8	22.0	24.3	26.4
NL	3.9	21.0	21.0	21.7	22.5	23.2	23.5	23.7	23.9	24.1	24.4	24.9
AT	3.7	27.7	28.3	29.1	29.5	29.6	29.7	30.0	30.5	30.8	31.0	31.3
PL	2.4	19.1	20.1	20.5	20.3	20.2	20.5	21.0	21.5	21.7	21.6	21.5
PT	0.2	23.3	23.5	24.4	25.5	26.3	27.2	27.1	26.1	24.8	24.0	23.5
RO	1.0	15.8	17.9	18.1	18.2	18.4	19.0	19.2	19.3	18.7	17.7	16.8
SI	6.5	22.1	22.5	23.4	24.2	25.2	26.3	27.4	28.2	28.5	28.6	28.6
SK	6.4	19.0	20.7	21.8	22.5	23.1	23.7	24.5	25.4	26.0	26.0	25.4
FI	3.0	26.4	26.7	27.1	27.1	26.8	26.5	26.7	27.1	27.9	28.6	29.4
SE	0.9	23.6	23.9	23.8	23.7	23.6	23.3	23.5	23.8	24.3	24.7	24.5
NO	5.9	30.1	30.7	31.7	32.2	32.5	32.9	33.4	34.1	34.8	35.3	36.0
EA	2.0	25.1	25.0	25.3	25.9	26.2	26.5	26.7	26.7	26.8	26.8	27.1
EU	1.7	24.4	24.3	24.6	25.1	25.3	25.6	25.8	25.9	26.0	26.0	26.2

Table II.1.138: Total cost of ageing as % of GDP - Higher migration (+33%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.4	26.8	27.1	27.5	27.9	28.3	28.6	29.0	29.5	29.9	30.5	31.1
BG	0.1	18.2	19.5	19.1	18.6	18.2	18.2	18.5	18.8	18.8	18.5	18.3
CZ	3.1	20.6	19.6	19.9	20.4	21.4	22.4	23.2	23.9	24.2	24.0	23.7
DK	0.6	24.4	24.6	25.6	26.0	25.9	25.5	25.1	24.7	24.5	24.7	25.0
DE	1.2	24.3	24.4	24.8	25.4	25.4	25.3	25.2	25.2	25.3	25.4	25.6
EE	0.1	16.8	17.3	17.3	17.1	17.0	17.1	17.2	17.4	17.6	17.4	16.9
IE	4.5	12.0	11.6	12.2	12.8	13.3	14.0	14.8	15.3	15.8	16.2	16.5
EL	-3.5	23.4	21.7	21.1	21.8	22.2	22.5	22.5	21.7	20.9	20.5	19.8
ES	3.8	23.9	24.3	24.7	25.7	26.4	27.3	27.8	27.9	27.7	27.5	27.7
FR	-1.5	29.9	29.1	29.1	29.0	28.9	28.8	28.7	28.4	28.3	28.2	28.4
HR	-0.5	18.8	19.7	19.5	19.2	18.9	18.5	18.4	18.3	18.2	18.3	18.4
IT	-2.8	27.3	27.1	27.4	27.9	27.8	27.4	26.5	25.5	24.8	24.3	24.5
CY	2.8	20.9	21.2	21.6	22.4	22.6	22.8	22.7	23.2	23.5	24.0	23.7
LV	-2.0	17.2	16.3	16.4	16.3	15.9	15.8	16.0	16.4	16.2	15.7	15.3
LT	4.6	14.8	15.6	16.6	17.5	18.0	18.4	18.8	19.3	19.7	19.7	19.4
LU	10.4	17.2	17.3	17.7	18.7	19.6	20.4	21.4	22.8	24.4	26.1	27.6
HU	4.8	16.0	16.0	15.8	16.4	17.4	18.6	19.2	19.6	20.2	20.6	20.8
MT	6.7	16.9	16.4	15.6	15.3	15.4	15.8	16.7	18.1	20.0	21.9	23.7
NL	3.0	21.0	21.0	21.6	22.3	22.9	23.0	23.1	23.1	23.2	23.5	24.0
AT	1.9	27.7	28.3	28.9	29.1	28.9	28.7	28.8	29.0	29.2	29.3	29.6
PL	1.7	19.1	20.0	20.4	20.2	20.0	20.1	20.5	21.0	21.1	21.0	20.7
PT	-1.1	23.3	23.5	24.3	25.4	26.1	26.9	26.5	25.1	23.7	22.8	22.2
RO	-0.1	15.8	17.9	18.0	17.9	18.0	18.3	18.4	18.3	17.6	16.6	15.7
SI	4.4	22.1	22.3	23.0	23.6	24.2	24.9	25.7	26.2	26.3	26.4	26.5
SK	6.0	19.0	20.7	21.9	22.5	23.1	23.8	24.4	25.3	25.8	25.6	24.9
FI	1.9	26.4	26.6	26.9	26.9	26.4	26.0	26.1	26.4	27.0	27.7	28.3
SE	0.1	23.6	23.8	23.6	23.6	23.1	22.9	23.0	23.0	23.5	23.8	23.7
NO	4.1	30.1	30.7	31.5	31.8	31.9	32.1	32.4	32.8	33.2	33.6	34.2
EA	0.6	25.1	24.9	25.2	25.6	25.7	25.7	25.7	25.6	25.5	25.5	25.7
EU	0.5	24.4	24.3	24.4	24.7	24.8	24.9	24.9	24.9	24.8	24.7	24.9

Table II.1.139: Total cost of ageing as % of GDP - Lower migration (-33%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.0	26.8	27.2	27.9	28.6	29.2	29.8	30.4	31.1	31.7	32.2	32.7
BG	1.1	18.2	19.6	19.3	18.9	18.6	18.8	19.2	19.7	19.8	19.5	19.3
CZ	4.3	20.6	19.7	20.2	20.8	22.0	23.3	24.3	25.2	25.6	25.4	24.9
DK	2.3	24.4	24.7	25.9	26.5	26.7	26.5	26.3	26.1	26.1	26.3	26.7
DE	3.0	24.3	24.5	25.2	26.0	26.3	26.4	26.5	26.7	26.9	27.1	27.3
EE	0.0	16.8	17.4	17.5	17.3	17.2	17.2	17.4	17.6	17.7	17.4	16.8
IE	5.5	12.0	11.7	12.5	13.2	13.8	14.8	15.7	16.4	17.0	17.3	17.5
EL	-1.1	23.4	21.7	21.3	22.2	22.9	23.6	24.1	23.6	23.1	22.9	22.3
ES	6.8	23.9	24.6	25.5	27.0	28.2	29.7	30.8	31.3	31.2	30.8	30.7
FR	0.2	29.9	29.2	29.4	29.5	29.6	29.7	29.9	29.8	29.9	29.8	30.1
HR	0.2	18.8	19.9	19.8	19.7	19.5	19.3	19.2	19.1	19.1	19.0	19.0
IT	-1.1	27.3	27.2	27.8	28.6	28.8	28.7	28.1	27.4	26.7	26.2	26.2
CY	6.0	20.9	21.5	22.5	23.8	24.3	24.8	25.0	26.0	26.8	27.6	26.9
LV	-1.8	17.2	16.4	16.5	16.4	16.1	15.9	16.2	16.7	16.6	16.0	15.5
LT	5.2	14.8	15.8	16.8	17.8	18.4	18.9	19.4	20.0	20.4	20.3	20.0
LU	10.9	17.2	17.4	17.9	19.0	19.9	20.8	21.9	23.3	25.0	26.7	28.2
HU	6.4	16.0	16.1	16.0	16.8	18.0	19.5	20.2	20.9	21.6	22.1	22.4
MT	10.3	16.9	16.8	16.6	16.7	17.0	17.8	19.0	21.0	23.3	25.5	27.2
NL	4.1	21.0	21.0	21.8	22.7	23.4	23.7	23.9	24.1	24.3	24.5	25.1
AT	3.3	27.7	28.4	29.3	29.7	29.8	29.8	30.1	30.5	30.7	30.8	31.0
PL	2.2	19.1	20.1	20.6	20.4	20.3	20.5	21.1	21.6	21.8	21.5	21.2
PT	0.2	23.3	23.5	24.5	25.8	26.8	27.8	27.6	26.3	25.0	24.0	23.5
RO	0.6	15.8	17.9	18.2	18.3	18.5	19.1	19.3	19.3	18.6	17.5	16.4
SI	6.7	22.1	22.6	23.7	24.8	25.9	27.2	28.4	29.3	29.4	29.2	28.8
SK	6.2	19.0	20.7	21.9	22.6	23.1	23.9	24.5	25.5	25.9	25.8	25.1
FI	3.5	26.4	26.7	27.2	27.3	27.0	26.8	27.0	27.6	28.4	29.2	29.9
SE	1.8	23.6	23.9	23.9	24.1	23.9	23.9	24.2	24.4	25.1	25.5	25.4
NO	6.0	30.1	30.7	31.8	32.3	32.7	33.1	33.7	34.4	35.0	35.5	36.1
EA	2.3	25.1	25.1	25.5	26.2	26.6	26.9	27.1	27.2	27.3	27.3	27.4
EU	2.0	24.4	24.4	24.8	25.3	25.6	26.0	26.2	26.4	26.4	26.4	26.4

Table II.1.140: Total cost of ageing as % of GDP - Lower fertility (-20%)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.4	26.8	27.1	27.7	28.1	28.3	28.7	29.4	30.4	31.2	32.1	33.1
BG	1.0	18.2	19.6	19.1	18.5	18.0	18.0	18.5	19.1	19.3	19.2	19.3
CZ	4.2	20.6	19.7	20.1	20.5	21.4	22.4	23.4	24.4	24.9	24.9	24.8
DK	2.1	24.4	24.7	25.8	26.1	25.9	25.7	25.6	25.5	25.6	25.9	26.5
DE	2.5	24.3	24.5	25.0	25.5	25.5	25.5	25.7	25.9	26.2	26.5	26.9
EE	-0.1	16.8	17.4	17.4	17.0	16.8	16.8	17.0	17.2	17.4	17.2	16.7
IE	5.6	12.0	11.7	12.3	12.9	13.4	14.2	15.2	15.9	16.6	17.1	17.5
EL	-1.8	23.4	21.7	21.2	21.9	22.3	22.7	23.1	22.7	22.2	22.1	21.6
ES	6.1	23.9	24.4	25.0	26.2	27.0	28.1	29.1	29.6	29.6	29.7	30.0
FR	0.5	29.9	29.2	29.2	29.1	28.8	28.8	29.2	29.4	29.8	29.9	30.4
HR	0.5	18.8	19.8	19.6	19.3	18.9	18.6	18.6	18.7	18.9	19.1	19.3
IT	-1.5	27.3	27.1	27.5	28.1	28.0	27.7	27.1	26.4	25.9	25.6	25.8
CY	4.3	20.9	21.4	22.0	22.7	22.7	23.1	23.4	24.3	24.9	25.7	25.2
LV	-1.9	17.2	16.3	16.5	16.2	15.7	15.4	15.7	16.3	16.2	15.7	15.3
LT	4.7	14.8	15.7	16.7	17.5	17.9	18.2	18.7	19.3	19.6	19.7	19.4
LU	11.8	17.2	17.3	17.8	18.7	19.5	20.4	21.6	23.2	25.2	27.2	29.0
HU	6.0	16.0	16.0	15.9	16.4	17.3	18.6	19.4	20.1	20.9	21.5	22.0
MT	9.0	16.9	16.6	16.0	15.7	15.8	16.3	17.5	19.3	21.6	23.9	26.0
NL	4.3	21.0	21.0	21.6	22.3	22.8	23.1	23.5	23.8	24.1	24.6	25.3
AT	3.2	27.7	28.4	29.1	29.3	29.1	29.1	29.5	30.0	30.3	30.5	30.9
PL	2.4	19.1	20.1	20.5	20.1	19.8	19.9	20.5	21.2	21.6	21.5	21.5
PT	0.2	23.3	23.5	24.4	25.4	26.0	26.8	26.7	25.7	24.6	23.9	23.5
RO	0.8	15.8	17.9	18.1	18.0	18.0	18.4	18.7	18.9	18.4	17.5	16.6
SI	6.3	22.1	22.5	23.3	24.0	24.7	25.6	26.7	27.6	28.0	28.3	28.5
SK	7.1	19.0	20.7	21.9	22.4	22.8	23.5	24.3	25.6	26.3	26.5	26.1
FI	3.7	26.4	26.7	27.0	26.9	26.4	26.2	26.5	27.2	28.1	29.1	30.1
SE	1.4	23.6	23.9	23.8	23.7	23.2	23.1	23.3	23.6	24.4	24.9	25.0
NO	6.1	30.1	30.7	31.7	31.9	32.0	32.3	32.9	33.8	34.6	35.3	36.2
EA	2.2	25.1	25.0	25.3	25.7	25.8	26.0	26.3	26.5	26.7	26.9	27.3
EU	1.9	24.4	24.3	24.6	24.9	24.9	25.1	25.4	25.7	25.9	26.0	26.3

Table II.1.141: Total cost of ageing as % of GDP - Higher employment rate of older workers (+10 pps)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	3.8	26.8	26.9	27.0	27.1	27.6	28.1	28.6	29.1	29.6	30.0	30.6
BG	0.1	18.2	19.5	18.8	18.1	17.7	17.8	18.2	18.7	18.8	18.5	18.4
CZ	3.6	20.6	19.6	19.6	19.9	20.9	22.1	23.2	24.3	24.7	24.5	24.2
DK	1.0	24.4	24.6	25.5	25.9	25.9	25.7	25.3	25.0	24.9	25.0	25.4
DE	1.8	24.3	24.4	24.8	25.2	25.4	25.5	25.5	25.6	25.7	25.9	26.1
EE	0.1	16.8	17.3	17.3	17.1	17.1	17.2	17.3	17.5	17.7	17.4	16.9
IE	4.7	12.0	11.6	12.3	12.8	13.4	14.2	15.0	15.6	16.1	16.4	16.6
EL	-2.5	23.4	21.6	21.0	21.6	22.0	22.5	22.8	22.2	21.6	21.3	20.8
ES	3.8	23.9	24.2	24.1	24.7	25.6	26.8	27.7	28.1	28.0	27.7	27.8
FR	-1.3	29.9	29.1	28.9	28.8	28.8	28.7	28.7	28.6	28.5	28.3	28.6
HR	-0.9	18.8	19.7	19.4	19.1	18.7	18.3	18.1	18.0	17.9	17.9	17.9
IT	-1.8	27.3	27.0	26.3	26.9	27.6	27.7	27.5	26.8	26.1	25.5	25.5
CY	3.7	20.9	21.3	21.9	22.8	23.1	23.3	23.3	24.0	24.4	25.1	24.7
LV	-1.9	17.2	16.3	16.3	16.2	16.0	15.8	16.1	16.6	16.5	15.9	15.3
LT	4.7	14.8	15.7	16.6	17.5	18.0	18.5	18.9	19.4	19.7	19.8	19.4
LU	10.3	17.2	17.3	17.5	18.5	19.3	20.1	21.1	22.4	24.0	25.9	27.5
HU	4.8	16.0	16.0	15.8	16.3	17.4	18.6	19.2	19.7	20.3	20.6	20.8
MT	8.1	16.9	16.6	15.9	15.8	16.0	16.5	17.5	19.1	21.1	23.2	25.0
NL	3.3	21.0	21.0	21.6	22.3	23.0	23.2	23.4	23.5	23.5	23.8	24.3
AT	2.1	27.7	28.3	28.8	28.9	28.9	28.8	29.0	29.2	29.4	29.5	29.7
PL	1.6	19.1	20.0	20.3	20.0	19.8	20.0	20.4	20.9	21.1	20.9	20.7
PT	-0.9	23.3	23.4	24.1	25.1	25.8	26.7	26.4	25.2	23.9	22.9	22.4
RO	0.0	15.8	17.8	17.8	17.7	17.8	18.3	18.4	18.5	17.8	16.8	15.8
SI	4.6	22.1	22.3	22.8	23.2	23.9	24.9	26.0	26.7	27.0	26.9	26.7
SK	5.8	19.0	20.6	21.7	22.2	22.7	23.4	24.0	25.0	25.5	25.4	24.8
FI	2.4	26.4	26.6	26.8	26.7	26.3	26.1	26.2	26.7	27.4	28.1	28.8
SE	0.5	23.6	23.8	23.6	23.5	23.1	23.0	23.2	23.3	23.9	24.2	24.1
NO	4.2	30.1	30.6	31.3	31.5	31.7	32.0	32.4	32.9	33.4	33.7	34.3
EA	1.0	25.1	24.9	24.9	25.2	25.5	25.8	26.0	26.0	25.9	25.9	26.1
EU	0.8	24.4	24.2	24.2	24.4	24.7	24.9	25.1	25.2	25.2	25.1	25.2

Table II.1.142: Total cost of ageing as % of GDP - Higher TFP growth (+0.2 pps)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	4.5	26.8	27.1	27.7	28.3	28.7	29.2	29.6	30.1	30.4	30.8	31.3
BG	0.4	18.2	19.6	19.2	18.7	18.4	18.5	18.8	19.2	19.2	18.9	18.6
CZ	3.5	20.6	19.6	20.1	20.7	21.7	22.8	23.7	24.5	24.8	24.5	24.1
DK	1.0	24.4	24.7	25.8	26.3	26.3	26.0	25.6	25.3	25.1	25.2	25.4
DE	1.9	24.3	24.4	25.0	25.7	25.8	25.8	25.8	25.9	26.0	26.1	26.3
EE	0.0	16.8	17.4	17.4	17.2	17.1	17.2	17.3	17.5	17.6	17.3	16.8
IE	4.9	12.0	11.7	12.3	13.0	13.6	14.4	15.2	15.8	16.3	16.7	16.9
EL	-2.7	23.4	21.7	21.2	22.0	22.5	23.0	23.2	22.5	21.8	21.4	20.6
ES	4.5	23.9	24.4	25.1	26.3	27.3	28.4	29.1	29.3	28.9	28.6	28.4
FR	-1.1	29.9	29.1	29.2	29.3	29.2	29.2	29.2	29.0	28.9	28.6	28.8
HR	-0.4	18.8	19.8	19.6	19.4	19.1	18.8	18.6	18.5	18.4	18.4	18.4
IT	-2.5	27.3	27.1	27.6	28.2	28.3	28.0	27.2	26.2	25.4	24.8	24.8
CY	4.0	20.9	21.3	22.0	23.1	23.4	23.7	23.7	24.4	24.8	25.4	24.9
LV	-1.9	17.2	16.3	16.4	16.4	16.0	15.8	16.1	16.5	16.4	15.8	15.3
LT	4.5	14.8	15.7	16.6	17.4	17.9	18.3	18.7	19.2	19.5	19.5	19.2
LU	10.1	17.2	17.3	17.8	18.9	19.8	20.6	21.6	22.9	24.4	26.0	27.4
HU	5.0	16.0	16.0	15.9	16.6	17.7	19.0	19.6	20.1	20.6	20.9	21.0
MT	8.3	16.9	16.6	16.0	15.9	16.1	16.7	17.7	19.4	21.5	23.5	25.3
NL	3.5	21.0	21.0	21.7	22.5	23.1	23.3	23.5	23.6	23.7	24.0	24.5
AT	2.4	27.7	28.4	29.1	29.4	29.4	29.3	29.5	29.7	29.9	29.9	30.1
PL	1.7	19.1	20.1	20.5	20.3	20.1	20.3	20.8	21.2	21.3	21.1	20.8
PT	-0.8	23.3	23.5	24.4	25.6	26.4	27.3	27.0	25.6	24.2	23.1	22.5
RO	0.1	15.8	17.9	18.1	18.1	18.3	18.7	18.8	18.8	18.0	17.0	15.9
SI	5.2	22.1	22.5	23.3	24.2	25.0	25.9	26.9	27.5	27.6	27.5	27.3
SK	5.9	19.0	20.7	21.9	22.6	23.1	23.8	24.5	25.3	25.8	25.6	24.8
FI	2.3	26.4	26.7	27.0	27.1	26.7	26.4	26.4	26.8	27.4	28.1	28.6
SE	0.8	23.6	23.9	23.8	23.8	23.5	23.4	23.6	23.7	24.3	24.6	24.5
NO	4.9	30.1	30.7	31.7	32.1	32.4	32.6	33.0	33.6	34.0	34.4	35.0
EA	1.1	25.1	25.0	25.3	25.9	26.1	26.3	26.3	26.3	26.2	26.1	26.2
EU	0.9	24.4	24.3	24.6	25.0	25.2	25.4	25.5	25.5	25.4	25.3	25.3

Table II.1.143: Total cost of ageing as % of GDP - Lower TFP growth (-0.2 pps)

	Ch 22-70	2022	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070
BE	6.2	26.8	27.1	27.7	28.3	28.9	29.5	30.2	30.9	31.5	32.1	32.9
BG	0.8	18.2	19.6	19.2	18.7	18.5	18.6	19.0	19.4	19.5	19.2	19.0
CZ	4.0	20.6	19.6	20.1	20.7	21.8	23.0	24.0	24.8	25.2	24.9	24.6
DK	2.1	24.4	24.7	25.8	26.3	26.4	26.2	26.0	25.8	25.7	26.0	26.5
DE	2.1	24.3	24.4	25.0	25.7	25.8	25.9	25.9	26.0	26.1	26.3	26.5
EE	0.2	16.8	17.4	17.4	17.2	17.1	17.2	17.4	17.6	17.8	17.5	17.0
IE	5.0	12.0	11.7	12.3	13.0	13.6	14.4	15.2	15.9	16.4	16.7	17.0
EL	-1.7	23.4	21.7	21.2	22.0	22.7	23.3	23.7	23.1	22.5	22.2	21.6
ES	6.1	23.9	24.4	25.1	26.3	27.4	28.8	29.7	30.1	30.0	29.9	30.0
FR	0.0	29.9	29.2	29.2	29.3	29.4	29.4	29.6	29.5	29.6	29.6	29.8
HR	0.0	18.8	19.8	19.7	19.5	19.2	19.0	18.8	18.8	18.8	18.8	18.9
IT	-1.4	27.3	27.1	27.6	28.3	28.5	28.4	27.8	27.0	26.2	25.7	25.8
CY	4.5	20.9	21.3	22.0	23.1	23.5	23.9	24.0	24.7	25.2	25.9	25.4
LV	-1.8	17.2	16.3	16.5	16.4	16.1	16.0	16.3	16.7	16.5	16.0	15.5
LT	5.1	14.8	15.7	16.6	17.4	17.9	18.4	18.9	19.5	19.9	20.1	19.8
LU	11.4	17.2	17.3	17.8	18.9	19.9	20.9	22.0	23.5	25.2	27.1	28.6
HU	5.8	16.0	16.0	15.9	16.6	17.8	19.2	19.9	20.5	21.1	21.6	21.8
MT	9.1	16.9	16.6	16.0	15.9	16.2	16.8	17.9	19.6	21.9	24.1	26.0
NL	3.5	21.0	21.0	21.7	22.5	23.1	23.3	23.5	23.6	23.7	23.9	24.5
AT	2.7	27.7	28.4	29.1	29.4	29.4	29.4	29.7	29.9	30.1	30.1	30.4
PL	2.2	19.1	20.1	20.5	20.3	20.2	20.5	21.0	21.5	21.7	21.5	21.3
PT	0.3	23.3	23.5	24.4	25.6	26.6	27.6	27.6	26.3	25.1	24.1	23.6
RO	0.6	15.8	17.9	18.1	18.1	18.4	19.0	19.2	19.2	18.4	17.4	16.4
SI	5.6	22.1	22.5	23.3	24.2	25.0	26.1	27.1	27.8	27.9	27.8	27.7
SK	6.4	19.0	20.7	21.9	22.6	23.2	24.0	24.7	25.7	26.2	26.0	25.4
FI	3.2	26.4	26.7	27.0	27.1	26.8	26.6	26.8	27.4	28.1	28.9	29.6
SE	0.8	23.6	23.9	23.8	23.8	23.5	23.4	23.6	23.7	24.3	24.6	24.5
NO	5.3	30.1	30.7	31.7	32.1	32.4	32.7	33.2	33.8	34.3	34.7	35.3
EA	1.8	25.1	25.0	25.3	25.9	26.2	26.5	26.6	26.7	26.7	26.7	27.0
EU	1.6	24.4	24.3	24.6	25.0	25.3	25.6	25.8	25.9	25.9	25.9	26.0

Part III

Statistical Annex – Country tables

The full dataset with annual data for 2022-2070 is available online.

1. BELGIUM

Belgium

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.53	1.55	1.58	1.60	1.62	1.64
Life expectancy at birth							
males	6.9	79.5	80.8	82.4	83.8	85.2	86.4
females	5.9	84.6	85.5	86.9	88.2	89.4	90.5
Life expectancy at 65 (years)							
males	4.9	18.7	19.7	20.7	21.7	22.7	23.6
females	4.6	22.3	23.0	24.1	25.1	26.0	26.9
Net migration (thousands)	-86.8	115.7	37.2	36.2	32.5	30.1	28.9
Net migration as % of population in t-1	-0.8	1.0	0.3	0.3	0.3	0.2	0.2
Population (million)	1.0	11.7	12.0	12.4	12.6	12.6	12.7
share of prime-age population (25-54y)	-4.0	39.0	38.1	38.2	37.1	36.2	35.0
share of working-age population (20-64y)	-5.1	58.1	56.8	55.7	54.7	53.8	53.0
share of elderly population (+65y)	8.5	19.6	22.1	24.2	25.3	26.8	28.1
share of very elderly population (+80y)	5.8	5.5	6.4	8.1	9.7	10.3	11.3
share of very elderly population (+80y) in elderly population (+65y)	12.1	28.1	28.7	33.4	38.2	38.4	40.2
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.3	1.8	1.1	1.7	1.3	1.2	1.1
Employment (15-74y; growth rate)	0.2	1.5	0.5	0.2	0.0	-0.1	-0.2
Labour input: hours worked (growth rate)	0.2	1.6	0.5	0.2	0.0	-0.1	-0.2
Labour productivity per hour (growth rate)	1.1	0.2	0.6	1.5	1.4	1.3	1.2
TFP (growth rate)	0.7	0.2	0.4	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.0	0.2	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.1	1.0	0.9	1.4	1.2	1.2	1.0
Potential GDP per worker (growth rate)	1.1	0.3	0.6	1.5	1.4	1.3	1.2
HICP (growth rate)	2.3	10.3	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.8	1.7	3.6	3.9	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-60	6,786	6,829	6,888	6,873	6,792	6,726
Working-age population (growth rate)	-0.6	0.4	0.0	0.1	0.0	-0.1	-0.2
Labour force (20-64y; thousands)	231	5,167	5,323	5,489	5,506	5,452	5,398
Participation rate (20-64y)	4.1	76.1	77.9	79.7	80.1	80.3	80.3
Participation rate (20-74y)	2.5	65.4	66.2	68.1	68.6	68.0	67.9
young (20-24y)	2.8	48.4	50.9	51.3	51.1	51.0	51.2
prime-age (25-54y)	2.1	86.1	87.2	87.8	88.2	88.1	88.2
older (55-64y)	11.5	59.1	63.2	67.2	68.3	69.8	70.6
oldest (65-74y)	5.2	5.4	8.2	10.0	10.6	10.6	10.6
Participation rate (20-64y) - female	5.6	71.9	74.6	76.7	77.4	77.6	77.6
Participation rate (20-74y) - female	4.3	61.1	63.0	65.4	66.0	65.4	65.3
young (20-24y)	1.7	45.6	47.0	47.5	47.2	47.1	47.3
prime-age (25-54y)	3.3	82.0	83.8	84.8	85.3	85.3	85.3
older (55-64y)	14.8	53.9	59.8	64.8	66.3	68.0	68.7
oldest (65-74y)	7.1	3.2	7.8	9.5	10.2	10.2	10.2
Participation rate (20-64y) - male	2.6	80.3	81.2	82.6	82.8	82.9	82.9
Participation rate (20-74y) - male	0.7	69.8	69.4	70.9	71.3	70.6	70.4
young (20-24y)	3.8	51.1	54.6	55.1	54.8	54.7	54.9
prime-age (25-54y)	0.8	90.2	90.5	90.8	91.0	90.9	91.0
older (55-64y)	8.3	64.2	66.4	69.6	70.4	71.6	72.5
oldest (65-74y)	3.2	7.9	8.5	10.4	10.9	11.0	11.0
Average labour market exit age (1)	1.7	62.8	64.1	64.2	64.3	64.4	64.5
male	2.0	62.5	64.0	64.2	64.3	64.4	64.5
female	1.4	63.0	64.1	64.2	64.3	64.4	64.4
Employment rate (20-64y)	3.7	72.1	73.7	75.2	75.6	75.8	75.8
Employment rate (20-74y)	2.2	62.0	62.7	64.4	64.8	64.3	64.2
Unemployment rate (20-64y)	0.3	5.3	5.4	5.6	5.6	5.6	5.6
Unemployment rate (20-74y)	0.2	5.3	5.4	5.5	5.5	5.5	5.5
Employment (20-64y; millions)	0.2	4.9	5.0	5.2	5.2	5.1	5.1
Employment (20-74y; millions)	0.3	5.0	5.1	5.3	5.3	5.3	5.2
share of young (20-24y)	-0.1	5.7	6.2	5.7	5.4	5.6	5.5
share of prime-age (25-54y)	-4.5	75.2	73.9	73.9	73.0	72.3	70.7
share of older (55-64y)	3.1	17.8	17.7	17.9	19.0	19.3	20.9
share of oldest (65-74y)	1.6	1.3	2.1	2.5	2.6	2.8	2.9
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.2	22.9	22.0	21.4	22.5	22.5	24.1
Old-age dependency ratio (3)	19.2	33.7	39.0	43.5	46.3	49.8	53.0
Total dependency ratio (4)	16.6	72.0	76.1	79.4	82.8	86.0	88.7
Total economic dependency ratio (5)	6.4	135.5	133.8	132.5	135.3	138.5	141.8
Economic old-age dependency ratio (20-64y) (6)	21.5	45.4	50.7	55.2	58.5	62.7	66.9
Economic old-age dependency ratio (20-74y) (7)	20.1	44.8	49.6	53.8	56.9	60.9	65.0

Belgium

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	3.5	12.7	13.6	14.4	14.8	15.4	16.2
Of which: Old-age and early pensions	4.1	10.4	11.3	12.4	12.9	13.7	14.5
Disability pensions	-0.1	1.6	1.6	1.6	1.5	1.5	1.5
Survivors' pensions	-0.5	0.7	0.6	0.5	0.3	0.3	0.2
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	4.1	10.2	11.2	12.2	12.8	13.5	14.3
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.5	0.4	0.6	0.6	0.6	0.6
Public pensions, contributions	:	:	:	:	:	:	:
Balance of the pension system (contributions - gross expenditure)	:	:	:	:	:	:	:
Public pension scheme, tax revenues	0.5	1.8	1.9	2.0	2.1	2.2	2.3
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	1,155	3,068	3,296	3,614	3,835	4,031	4,222
Pensioners aged 65+ (1000 persons)	1,321	2,234	2,555	2,953	3,173	3,374	3,555
Share of pensioners below age 65 as % of all pensioners	-11.4	27.2	22.5	18.3	17.3	16.3	15.8
Benefit ratio (total public pensions, gross)	-2.5	46.4	46.5	46.2	44.8	44.2	43.9
Gross replacement rate at retirement (earnings-related public pensions)	-0.5	35.1	35.3	36.5	35.6	34.7	34.6
Average accrual rate (new earnings-related pensions)	0.0	1.4	1.4	1.4	1.4	1.4	1.4
Average contributory period (new earnings-related pensions)	1.9	38.5	42.0	40.5	40.5	40.3	40.4
Contributors (public pensions, 1000 persons)	278	5,030	5,214	5,377	5,401	5,362	5,308
Support ratio (contributors/100 pensioners, public pensions)	-38	164	158	149	141	133	126
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.8		0.0	0.2	0.4	0.6	0.8
Higher migration (+33%)	-0.4		-0.1	-0.3	-0.5	-0.5	-0.4
Lower migration (-33%)	0.5		0.1	0.3	0.5	0.6	0.5
Lower fertility (-20%)	1.3		0.0	0.0	0.2	0.7	1.3
Higher employment rate of older workers (+10 pps)	-1.1		-0.6	-1.0	-1.0	-1.0	-1.1
Higher TFP growth (+0.2 pps)	-0.6		0.0	0.0	-0.1	-0.3	-0.6
Lower TFP growth (-0.2 pps)	1.1		0.0	0.1	0.4	0.8	1.1
Retirement age linked to increases in life expectancy	-1.6		0.0	-0.2	-0.6	-1.0	-1.6
Constant retirement age	1.1		0.5	0.8	0.8	0.9	1.1
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	3.5		0.9	1.7	2.1	2.8	3.5
Dependency ratio	6.5		1.9	3.5	4.4	5.5	6.5
Coverage ratio	-1.6		-1.0	-1.3	-1.4	-1.5	-1.6
Of which: Old-age	0.3		-0.2	0.2	0.3	0.4	0.3
Early-age	-3.3		-1.0	-2.6	-3.0	-3.3	-3.3
Cohort effect	-5.6		-2.3	-3.9	-4.3	-5.0	-5.6
Benefit ratio	-0.4		0.4	0.4	0.0	-0.3	-0.4
Labour market ratio	-0.8		-0.4	-0.7	-0.8	-0.8	-0.8
Of which: Employment rate	-0.7		-0.3	-0.6	-0.6	-0.7	-0.7
Labour intensity	0.1		0.0	0.0	0.0	0.0	0.1
Career shift	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Interaction effect (residual)	-0.2		-0.1	-0.1	-0.1	-0.2	-0.2
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	3.5		0.9	0.8	0.4	0.7	0.8
Dependency ratio	6.5		1.9	1.6	0.9	1.1	1.0
Coverage ratio	-1.6		-1.0	-0.3	0.0	-0.2	-0.1
Of which: Old-age	0.3		-0.2	0.4	0.2	0.0	0.0
Early-age	-3.3		-1.0	-1.6	-0.4	-0.3	0.0
Cohort effect	-5.6		-2.3	-1.5	-0.4	-0.7	-0.6
Benefit ratio	-0.4		0.4	0.0	-0.4	-0.2	-0.1
Labour market ratio	-0.8		-0.4	-0.3	-0.1	-0.1	0.0
Of which: Employment rate	-0.7		-0.3	-0.3	-0.1	0.0	0.0
Labour intensity	0.1		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		-0.1	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.2		-0.1	0.0	0.0	0.0	0.0

Belgium**Health care**

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.6	6.1	6.3	6.5	6.6	6.7	6.8
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.7		0.2	0.4	0.6	0.7	0.7
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.3	-0.4
No healthy ageing scenario	0.6		0.1	0.3	0.4	0.5	0.6
Labour intensity scenario	0.1		-0.2	-0.2	-0.1	0.0	0.1
Sector-specific composite indexation scenario	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.7	2.3	2.5	3.0	3.5	3.8	4.1
of which on institutional care - baseline	1.3	1.4	1.5	1.9	2.2	2.5	2.7
of which on home care - baseline	0.4	0.6	0.7	0.8	0.9	1.0	1.0
of which on cash benefits - baseline	0.1	0.2	0.3	0.3	0.3	0.3	0.3
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.2		0.2	0.5	0.9	1.4	2.2
Healthy ageing scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
No healthy ageing scenario	0.3		0.0	0.1	0.1	0.2	0.3
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	2.2		0.2	0.5	0.9	1.4	2.2
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	30%	1,029	1,135	1,213	1,281	1,310	1,342
Recipients: receiving institutional care	106%	127	145	182	220	242	262
receiving home care	45%	598	685	757	811	836	868
receiving cash benefits	62%	285	328	377	419	439	461
Baseline aged 65+	77%	466	571	665	738	783	827
Recipients: receiving institutional care aged 65+	114%	118	137	174	212	234	254
receiving home care aged 65+	81%	349	428	507	565	596	633
receiving cash benefits aged 65+	92%	194	232	283	325	348	372

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.8	5.6	5.3	4.9	4.9	4.9	4.8
Number of students (in thousands)							
Total	-9%	2,344	2,306	2,209	2,228	2,213	2,144
as % of population 5-24	-1.2	87.5	85.8	86.3	86.7	86.3	86.3
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.8		0.4	0.6	0.8	0.8	0.8

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	5.1	26.8	27.7	28.7	29.7	30.8	31.9
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.9		0.3	0.8	1.4	2.1	2.9
High life expectancy (+2 years)	1.2		0.0	0.2	0.5	0.9	1.2
Higher migration (+33%)	-0.7		-0.2	-0.5	-0.7	-0.8	-0.7
Lower migration (-33%)	0.9		0.2	0.5	0.7	0.9	0.9
Lower fertility (-20%)	1.3		0.0	-0.4	-0.3	0.5	1.3
Higher employment rate of older workers (+10 pps)	-1.3		-0.7	-1.1	-1.2	-1.2	-1.3
Higher TFP growth (+0.2 pps)	-0.6		0.0	0.0	-0.1	-0.3	-0.6
Lower TFP growth (-0.2 pps)	1.1		0.0	0.1	0.4	0.7	1.1

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

2. BULGARIA

Bulgaria							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.56	1.60	1.64	1.66	1.68	1.69
Life expectancy at birth							
males	12.3	70.5	73.4	76.0	78.5	80.7	82.8
females	10.0	77.7	80.1	82.3	84.2	86.0	87.7
Life expectancy at 65 (years)							
males	7.8	13.5	15.4	17.0	18.5	19.9	21.3
females	7.1	17.5	19.1	20.6	22.0	23.3	24.6
Net migration (thousands)	-144.3	160.1	-2.9	11.5	12.9	12.4	15.8
Net migration as % of population in t-1	-2.0	2.3	0.0	0.2	0.2	0.2	0.3
Population (million)	-1.6	6.9	6.5	6.1	5.8	5.6	5.3
share of prime-age population (25-54y)	-8.1	41.2	37.8	34.8	32.8	33.5	33.1
share of working-age population (20-64y)	-7.8	59.0	57.8	55.6	51.6	49.4	51.2
share of elderly population (+65y)	9.2	21.6	23.2	26.5	30.2	32.4	30.8
share of very elderly population (+80y)	9.0	4.7	5.9	7.5	9.0	11.8	13.7
share of very elderly population (+80y) in elderly population (+65y)	22.5	21.9	25.6	28.2	29.7	36.4	44.5
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.4	2.2	1.7	1.4	1.1	1.3	1.0
Employment (15-74y; growth rate)	-0.7	0.0	-1.2	-1.0	-1.1	-0.4	-0.3
Labour input: hours worked (growth rate)	-0.7	-0.2	-1.2	-1.0	-1.1	-0.4	-0.3
Labour productivity per hour (growth rate)	2.2	2.4	2.9	2.4	2.2	1.7	1.2
TFP (growth rate)	1.4	2.0	1.5	1.5	1.4	1.1	0.8
capital deepening (contribution to labour productivity growth)	0.8	0.4	1.4	0.9	0.8	0.6	0.4
Potential GDP per capita (growth rate)	2.0	2.0	2.5	1.9	1.6	1.9	1.4
Potential GDP per worker (growth rate)	2.2	2.2	2.9	2.4	2.2	1.7	1.2
HICP (growth rate)	2.5	13.0	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.4	1.5	2.6	3.1	3.8	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-1,353	4,063	3,781	3,411	3,015	2,749	2,710
Working-age population (growth rate)	0.0	-0.2	-0.8	-1.3	-1.2	-0.3	-0.3
Labour force (20-64y; thousands)	-1,034	3,215	2,944	2,672	2,393	2,224	2,181
Participation rate (20-64y)	1.3	79.1	77.9	78.3	79.4	80.9	80.5
Participation rate (20-74y)	0.9	67.3	66.0	64.8	63.9	65.3	68.1
young (20-24y)	1.8	41.6	42.7	43.5	43.4	43.2	43.4
prime-age (25-54y)	3.0	85.9	87.3	88.1	88.9	89.1	88.9
older (55-64y)	2.5	71.0	66.3	68.5	69.4	72.8	73.5
oldest (65-74y)	0.2	11.2	10.0	10.5	10.4	10.1	11.4
Participation rate (20-64y) - female	1.7	75.0	74.0	74.7	75.7	77.1	76.7
Participation rate (20-74y) - female	2.3	61.8	61.2	60.5	59.9	61.2	64.2
young (20-24y)	2.3	33.9	35.6	36.3	36.2	36.0	36.2
prime-age (25-54y)	2.4	82.5	83.6	84.1	84.8	85.1	84.9
older (55-64y)	5.4	66.1	63.4	66.6	67.8	70.9	71.5
oldest (65-74y)	1.7	7.9	7.8	8.4	8.7	8.4	9.6
Participation rate (20-64y) - male	0.9	83.2	81.7	81.9	83.0	84.5	84.1
Participation rate (20-74y) - male	-1.0	72.9	70.9	69.1	68.0	69.4	72.0
young (20-24y)	1.1	48.9	49.4	50.2	50.0	49.8	50.0
prime-age (25-54y)	3.6	89.1	90.8	91.9	92.7	92.8	92.7
older (55-64y)	-0.9	76.4	69.4	70.3	71.1	74.8	75.5
oldest (65-74y)	-2.4	15.7	12.9	12.8	12.3	11.9	13.4
Average labour market exit age (1)	1.3	63.0	63.6	64.0	64.1	64.2	64.3
male	1.0	63.5	64.0	64.1	64.2	64.3	64.4
female	1.7	62.5	63.2	63.9	64.0	64.1	64.2
Employment rate (20-64y)	0.8	75.8	74.4	74.5	75.5	77.0	76.6
Employment rate (20-74y)	0.4	64.4	63.1	61.7	60.9	62.2	64.8
Unemployment rate (20-64y)	0.6	4.2	4.4	4.9	4.9	4.9	4.9
Unemployment rate (20-74y)	0.6	4.2	4.4	4.8	4.8	4.8	4.8
Employment (20-64y; millions)	-1.0	3.1	2.8	2.5	2.3	2.1	2.1
Employment (20-74y; millions)	-1.0	3.2	2.9	2.6	2.4	2.2	2.1
share of young (20-24y)	1.1	3.7	4.7	4.8	4.5	4.8	4.8
share of prime-age (25-54y)	-4.3	73.6	71.4	68.1	68.5	72.2	69.3
share of older (55-64y)	3.0	19.8	21.2	23.8	23.3	19.5	22.8
share of oldest (65-74y)	0.1	3.0	2.7	3.3	3.7	3.5	3.1
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.0	22.6	25.4	27.9	27.4	22.2	25.5
Old-age dependency ratio (3)	23.6	36.6	40.2	47.7	58.6	65.5	60.3
Total dependency ratio (4)	25.9	69.6	73.1	80.0	93.8	102.4	95.5
Total economic dependency ratio (5)	30.3	117.1	126.3	133.6	147.1	153.8	147.5
Economic old-age dependency ratio (20-64y) (6)	30.3	45.1	51.1	60.6	73.6	81.4	75.5
Economic old-age dependency ratio (20-74y) (7)	29.4	43.8	49.7	58.6	70.9	78.6	73.2

Bulgaria**Pension expenditure projections**

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	0.1	9.5	10.2	9.4	9.4	9.7	9.6
Of which: Old-age and early pensions	0.2	7.5	7.8	7.1	7.4	7.8	7.7
Disability pensions	0.0	1.5	1.8	1.7	1.6	1.5	1.4
Survivors' pensions	-0.1	0.3	0.5	0.4	0.3	0.2	0.2
Other	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Earnings-related pensions, gross	0.2	7.5	7.8	7.1	7.3	7.8	7.7
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Public pensions, contributions	0.4	4.7	4.8	5.1	5.1	5.1	5.1
Balance of the pension system (contributions - gross expenditure)	0.3	-4.8	-5.4	-4.2	-4.3	-4.6	-4.4
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	-298	2,037	1,925	1,816	1,788	1,798	1,739
Pensioners aged 65+ (1000 persons)	-4	1,504	1,461	1,430	1,479	1,566	1,500
Share of pensioners below age 65 as % of all pensioners	-12.4	26.1	24.1	21.2	17.3	12.9	13.7
Benefit ratio (total public pensions, gross)	-6.6	31.1	32.3	28.2	25.9	24.7	24.5
Gross replacement rate at retirement (earnings-related public pensions)	-11.7	41.7	36.1	33.2	31.3	30.4	29.9
Average accrual rate (new earnings-related pensions)	0.0	1.4	1.4	1.4	1.4	1.4	1.4
Average contributory period (new earnings-related pensions)	0.8	35.7	37.0	37.4	37.1	36.8	36.4
Contributors (public pensions, 1000 persons)	-726	2,875	2,747	2,628	2,374	2,201	2,149
Support ratio (contributors/100 pensioners, public pensions)	-18	141	143	145	133	122	124
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.6		0.1	0.2	0.3	0.4	0.6
Higher migration (+33%)	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
Lower migration (-33%)	0.5		0.1	0.2	0.3	0.4	0.5
Lower fertility (-20%)	0.9		0.0	0.0	0.1	0.5	0.9
Higher employment rate of older workers (+10 pps)	-0.4		-0.4	-0.6	-0.6	-0.5	-0.4
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower TFP growth (-0.2 pps)	0.3		0.0	0.1	0.2	0.2	0.3
Retirement age linked to increases in life expectancy	-0.9		0.0	-0.1	-0.5	-0.6	-0.9
Constant retirement age	0.3		0.2	0.4	0.4	0.2	0.3
Constant benefit ratio	1.3		0.0	0.0	0.5	1.1	1.3
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	0.1		0.8	-0.1	0.0	0.3	0.1
Dependency ratio	5.1		1.0	2.8	4.8	5.9	5.1
Coverage ratio	-2.4		-0.8	-2.0	-2.9	-3.0	-2.4
Of which: Old-age	-0.9		-0.5	-1.4	-1.8	-1.5	-0.9
Early-age	-4.5		-1.7	-3.1	-3.0	-4.1	-4.5
Cohort effect	-3.5		0.2	-0.9	-3.6	-5.2	-3.5
Benefit ratio	-2.1		0.4	-0.8	-1.6	-2.0	-2.1
Labour market ratio	-0.1		0.2	0.1	0.0	-0.2	-0.1
Of which: Employment rate	-0.1		0.2	0.2	0.0	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	-0.1	0.0	0.0
Interaction effect (residual)	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	0.1		0.8	-0.9	0.1	0.3	-0.2
Dependency ratio	5.1		1.0	1.8	2.0	1.1	-0.8
Coverage ratio	-2.4		-0.8	-1.2	-0.9	-0.1	0.6
Of which: Old-age	-0.9		-0.5	-0.9	-0.4	0.4	0.5
Early-age	-4.5		-1.7	-1.4	0.1	-1.1	-0.4
Cohort effect	-3.5		0.2	-1.1	-2.7	-1.6	1.7
Benefit ratio	-2.1		0.4	-1.2	-0.8	-0.4	-0.1
Labour market ratio	-0.1		0.2	-0.1	-0.2	-0.2	0.1
Of which: Employment rate	-0.1		0.2	0.0	-0.1	-0.2	0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	-0.1	0.0	0.0	0.0
Interaction effect (residual)	-0.4		-0.1	-0.1	-0.1	-0.1	0.0

Bulgaria							
Health care							
Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.2	4.5	4.6	4.8	4.9	4.9	4.7
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.3	0.7	0.9	1.0	1.0
Demographic scenario	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.3	-0.4
No healthy ageing scenario	0.4		0.1	0.2	0.3	0.3	0.4
Labour intensity scenario	0.5		0.0	0.2	0.5	0.6	0.5
Sector-specific composite indexation scenario	0.0		0.0	0.0	0.0	0.0	0.0
Long-term care							
Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.2	0.5	0.6	0.6	0.7	0.7	0.7
of which on institutional care - baseline	0.1	0.2	0.2	0.2	0.3	0.3	0.3
of which on home care - baseline	0.1	0.3	0.3	0.3	0.3	0.4	0.3
of which on cash benefits - baseline	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.3		0.1	0.3	0.7	1.4	2.3
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	1.4		0.1	0.2	0.5	0.9	1.4
Cost convergence scenario	0.7		0.0	0.1	0.2	0.4	0.7
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	5%	274	277	281	285	292	287
Recipients: receiving institutional care	-17%	36	37	35	34	32	30
receiving home care	-18%	20	20	19	19	18	17
receiving cash benefits	9%	69	72	73	74	76	76
Baseline aged 65+	33%	164	171	187	205	223	219
Recipients: receiving institutional care aged 65+	4%	16	16	17	18	18	16
receiving home care aged 65+	4%	11	11	11	12	12	11
receiving cash benefits aged 65+	38%	38	40	44	49	53	53
Education							
Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	3.7	3.7	3.6	3.8	4.0	3.8
Number of students (in thousands)							
Total	-28%	933	896	775	734	713	667
as % of population 5-24	-2.5	69.7	67.6	66.7	67.9	67.7	67.2
Higher enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.1		0.5	0.8	1.0	1.0	1.1
Total cost of ageing							
Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.6	18.2	19.2	18.4	18.8	19.3	18.8
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	3.3		0.4	1.0	1.6	2.4	3.3
High life expectancy (+2 years)	0.6		0.0	0.2	0.3	0.4	0.6
Higher migration (+33%)	-0.5		-0.1	-0.2	-0.3	-0.5	-0.5
Lower migration (-33%)	0.5		0.1	0.2	0.4	0.5	0.5
Lower fertility (-20%)	0.5		0.0	-0.4	-0.4	0.0	0.5
Higher employment rate of older workers (+10 pps)	-0.4		-0.4	-0.7	-0.6	-0.5	-0.4
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower TFP growth (-0.2 pps)	0.2		0.0	0.1	0.2	0.2	0.2

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

3. CZECHIA

Czechia

Main demographic and macroeconomic assumptions

Czechia							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.0	1.72	1.73	1.74	1.75	1.75	1.75
Life expectancy at birth							
males	8.9	75.9	77.9	79.8	81.6	83.3	84.8
females	7.3	81.9	83.5	85.1	86.6	87.9	89.2
Life expectancy at 65 (years)							
males	6.5	15.9	17.4	18.8	20.0	21.3	22.4
females	6.0	19.7	21.0	22.3	23.5	24.6	25.7
Net migration (thousands)	-445.9	470.8	-1.8	29.7	26.2	23.8	24.8
Net migration as % of population in t-1	-4.2	4.4	0.0	0.3	0.2	0.2	0.2
Population (million)	-0.2	10.7	10.8	10.7	10.7	10.7	10.6
share of prime-age population (25-54y)	-6.6	41.8	38.4	35.9	35.1	35.7	35.2
share of working-age population (20-64y)	-5.3	58.4	57.8	56.1	52.9	51.4	53.2
share of elderly population (+65y)	7.0	20.4	21.5	24.3	27.3	28.6	27.4
share of very elderly population (+80y)	7.6	4.3	6.1	7.4	8.1	11.3	11.9
share of very elderly population (+80y) in elderly population (+65y)	22.5	21.0	28.5	30.6	29.7	39.4	43.5
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.5	2.1	1.3	1.6	1.6	1.6	1.2
Employment (15-74y; growth rate)	-0.2	1.5	-0.3	-0.7	-0.4	0.0	0.0
Labour input: hours worked (growth rate)	-0.2	1.6	-0.2	-0.7	-0.4	0.0	0.0
Labour productivity per hour (growth rate)	1.7	0.5	1.6	2.3	2.0	1.6	1.2
TFP (growth rate)	1.1	0.4	0.9	1.5	1.3	1.1	0.8
capital deepening (contribution to labour productivity growth)	0.6	0.1	0.6	0.8	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.5	0.9	1.6	1.6	1.6	1.8	1.3
Potential GDP per worker (growth rate)	1.7	0.6	1.6	2.3	2.0	1.6	1.2
HICP (growth rate)	2.5	14.8	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.3	4.3	4.7	4.4	4.1	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-659	6,275	6,268	6,016	5,684	5,505	5,616
Working-age population (growth rate)	-0.5	0.5	-0.4	-0.8	-0.4	0.0	0.1
Labour force (20-64y; thousands)	-635	5,214	5,133	4,870	4,627	4,521	4,579
Participation rate (20-64y)	-1.6	83.1	81.9	81.0	81.4	82.1	81.5
Participation rate (20-74y)	-0.9	70.9	70.3	68.1	66.8	68.3	70.0
young (20-24y)	2.0	50.7	52.2	52.7	52.9	52.5	52.7
prime-age (25-54y)	-0.8	89.1	88.9	88.1	88.0	88.5	88.3
older (55-64y)	0.3	74.7	74.5	74.2	74.5	75.2	75.0
oldest (65-74y)	-1.5	10.7	7.2	9.9	8.5	8.7	9.2
Participation rate (20-64y) - female	-1.0	75.8	75.4	74.3	74.3	75.3	74.8
Participation rate (20-74y) - female	0.5	63.5	63.9	61.9	60.4	62.2	64.0
young (20-24y)	1.3	42.3	43.2	43.6	43.7	43.4	43.6
prime-age (25-54y)	-1.3	81.6	81.7	80.0	79.6	80.6	80.3
older (55-64y)	4.2	68.8	71.4	72.5	72.2	73.0	73.0
oldest (65-74y)	0.3	8.6	5.9	9.5	8.2	8.4	8.9
Participation rate (20-64y) - male	-2.5	90.2	88.1	87.2	87.9	88.4	87.7
Participation rate (20-74y) - male	-2.9	78.4	76.7	74.1	72.8	74.1	75.4
young (20-24y)	2.4	58.9	60.8	61.3	61.5	61.0	61.3
prime-age (25-54y)	-0.7	96.2	95.7	95.6	95.7	95.6	95.6
older (55-64y)	-3.9	80.7	77.5	75.9	76.7	77.1	76.9
oldest (65-74y)	-3.7	13.2	8.6	10.3	8.8	9.1	9.4
Average labour market exit age (1)	1.8	62.2	63.8	64.0	64.0	64.0	64.0
male	1.3	62.6	63.9	63.9	63.9	63.9	63.9
female	2.2	61.7	63.7	64.0	64.0	64.0	64.0
Employment rate (20-64y)	-1.9	81.3	79.7	78.8	79.2	79.9	79.4
Employment rate (20-74y)	-1.3	69.4	68.5	66.4	65.0	66.5	68.1
Unemployment rate (20-64y)	0.5	2.2	2.6	2.7	2.7	2.6	2.6
Unemployment rate (20-74y)	0.5	2.1	2.6	2.6	2.6	2.6	2.6
Employment (20-64y; millions)	-0.6	5.1	5.0	4.7	4.5	4.4	4.5
Employment (20-74y; millions)	-0.7	5.2	5.1	4.9	4.6	4.5	4.6
share of young (20-24y)	1.6	4.6	6.0	6.1	5.8	6.0	6.2
share of prime-age (25-54y)	-4.5	74.8	71.2	67.9	69.9	73.0	70.3
share of older (55-64y)	3.3	18.1	21.3	23.3	21.6	18.5	21.4
share of oldest (65-74y)	-0.4	2.6	1.6	2.7	2.6	2.4	2.1
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.1	20.6	23.7	26.0	24.2	20.7	23.7
Old-age dependency ratio (3)	16.6	34.9	37.2	43.2	51.7	55.7	51.5
Total dependency ratio (4)	16.9	71.2	72.9	78.2	89.1	94.5	88.1
Total economic dependency ratio (5)	26.8	105.1	113.4	120.1	132.4	137.3	131.9
Economic old-age dependency ratio (20-64y) (6)	22.5	40.2	45.0	52.1	62.5	67.1	62.7
Economic old-age dependency ratio (20-74y) (7)	22.2	39.2	44.2	50.7	60.9	65.5	61.3

Czechia							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	1.7	8.7	8.0	9.1	10.6	11.0	10.4
Of which: Old-age and early pensions	1.8	7.3	6.8	7.9	9.4	9.7	9.2
Disability pensions	-0.2	0.9	0.7	0.7	0.6	0.6	0.6
Survivors' pensions	0.1	0.5	0.5	0.6	0.6	0.7	0.6
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	1.3	5.7	5.1	6.0	7.1	7.4	6.9
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.3	0.4	0.6	0.5	0.4	0.4
Public pensions, contributions	-0.6	8.2	7.7	7.7	7.7	7.7	7.7
Balance of the pension system (contributions - gross expenditure)	-2.3	-0.5	-0.4	-1.5	-2.9	-3.3	-2.8
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	462	2,844	2,865	3,066	3,342	3,434	3,306
Pensioners aged 65+ (1000 persons)	652	2,142	2,247	2,469	2,817	2,954	2,794
Share of pensioners below age 65 as % of all pensioners	-9.2	24.7	21.6	19.5	15.7	14.0	15.5
Benefit ratio (total public pensions, gross)	-2.3	42.7	40.0	40.7	41.1	40.6	40.3
Gross replacement rate at retirement (earnings-related public pensions)	0.4	47.9	53.1	51.4	50.3	49.3	48.3
Average accrual rate (new earnings-related pensions)	0.1	1.6	1.7	1.6	1.7	1.7	1.7
Average contributory period (new earnings-related pensions)	-2.5	44.3	46.3	46.8	42.8	41.8	41.8
Contributors (public pensions, 1000 persons)	-646	5,228	5,108	4,899	4,650	4,539	4,582
Support ratio (contributors/100 pensioners, public pensions)	-45	184	178	160	139	132	139
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.7		0.0	0.2	0.3	0.5	0.7
Higher migration (+33%)	-0.3		-0.1	-0.2	-0.4	-0.4	-0.3
Lower migration (-33%)	0.4		0.0	0.2	0.4	0.5	0.4
Lower fertility (-20%)	0.6		0.0	0.0	0.0	0.3	0.6
Higher employment rate of older workers (+10 pps)	0.0		-0.4	-0.8	-0.5	-0.1	0.0
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.3		0.0	0.1	0.2	0.3	0.3
Retirement age linked to increases in life expectancy	-1.4		0.0	-0.4	-0.8	-1.1	-1.4
Constant retirement age	1.2		0.7	1.4	1.3	1.1	1.2
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	1.7		-0.7	0.4	1.9	2.3	1.7
Dependency ratio	3.6		0.5	1.8	3.6	4.4	3.6
Coverage ratio	-1.0		-0.4	-0.8	-1.1	-1.3	-1.0
Of which: Old-age	-0.1		-0.1	-0.2	-0.2	-0.1	-0.1
Early-age	-2.4		-2.2	-2.2	-1.8	-2.0	-2.4
Cohort effect	-2.1		0.9	-0.3	-2.8	-3.9	-2.1
Benefit ratio	-0.9		-1.0	-0.8	-0.7	-0.9	-0.9
Labour market ratio	0.3		0.3	0.3	0.2	0.1	0.3
Of which: Employment rate	0.2		0.2	0.3	0.2	0.1	0.2
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.1		0.1	0.0	0.0	0.0	0.1
Interaction effect (residual)	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	1.7		-0.7	1.1	1.5	0.4	-0.6
Dependency ratio	3.6		0.5	1.3	1.8	0.8	-0.8
Coverage ratio	-1.0		-0.4	-0.3	-0.3	-0.2	0.2
Of which: Old-age	-0.1		-0.1	-0.1	0.1	0.1	0.0
Early-age	-2.4		-2.2	0.0	0.4	-0.3	-0.3
Cohort effect	-2.1		0.9	-1.1	-2.5	-1.1	1.7
Benefit ratio	-0.9		-1.0	0.2	0.1	-0.2	-0.1
Labour market ratio	0.3		0.3	0.0	-0.1	-0.1	0.1
Of which: Employment rate	0.2		0.2	0.1	-0.1	-0.1	0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.1		0.1	-0.1	0.0	0.0	0.0
Interaction effect (residual)	-0.1		0.0	0.0	0.0	0.0	0.0

Czechia**Health care**

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.2	6.4	6.0	6.3	6.6	6.7	6.6
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.2	0.5	0.8	0.9	1.0
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.5		-0.2	-0.3	-0.4	-0.4	-0.5
No healthy ageing scenario	0.6		0.2	0.3	0.4	0.5	0.6
Labour intensity scenario	0.7		0.0	0.3	0.7	0.8	0.7
Sector-specific composite indexation scenario	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.4	1.5	1.7	2.1	2.3	2.7	2.9
of which on institutional care - baseline	0.8	0.9	1.0	1.2	1.4	1.6	1.7
of which on home care - baseline	0.1	0.1	0.1	0.2	0.2	0.2	0.2
of which on cash benefits - baseline	0.4	0.5	0.5	0.6	0.7	0.8	0.9
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.6		0.1	0.3	0.6	1.0	1.6
Healthy ageing scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.2	0.2
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	1.6		0.1	0.3	0.6	1.0	1.6
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	26%	741	808	848	869	924	933
Recipients: receiving institutional care	77%	120	138	161	172	196	213
receiving home care	101%	105	126	151	165	196	211
receiving cash benefits	76%	365	425	488	520	599	641
Baseline aged 65+	65%	395	451	515	574	650	653
Recipients: receiving institutional care aged 65+	113%	86	102	126	141	167	183
receiving home care aged 65+	115%	94	114	139	155	187	201
receiving cash benefits aged 65+	113%	253	305	374	414	498	539

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.3	4.1	4.3	4.2	4.3	4.5	4.4
Number of students (in thousands)							
Total	-6%	1,787	1,845	1,717	1,691	1,736	1,678
as % of population 5-24	-2.2	81.2	78.7	78.6	79.4	79.5	79.0
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.3		0.5	0.9	1.2	1.2	1.3

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	3.7	20.6	20.1	21.7	23.8	24.9	24.3
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.5		0.3	0.8	1.3	2.0	2.5
High life expectancy (+2 years)	1.0		0.0	0.2	0.4	0.7	1.0
Higher migration (+33%)	-0.6		-0.1	-0.3	-0.5	-0.7	-0.6
Lower migration (-33%)	0.7		0.1	0.3	0.6	0.7	0.7
Lower fertility (-20%)	0.6		0.0	-0.3	-0.4	0.0	0.6
Higher employment rate of older workers (+10 pps)	-0.1		-0.5	-0.8	-0.5	-0.2	-0.1
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.3		0.0	0.1	0.2	0.3	0.3

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

4. DENMARK

Denmark

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.68	1.69	1.71	1.72	1.72	1.73
Life expectancy at birth							
males	6.5	79.9	80.9	82.4	83.8	85.1	86.4
females	6.5	83.6	84.9	86.3	87.7	88.9	90.1
Life expectancy at 65 (years)							
males	4.7	18.7	19.5	20.5	21.5	22.5	23.4
females	5.2	21.3	22.3	23.4	24.5	25.5	26.5
Net migration (thousands)	-41.8	55.1	12.4	12.5	12.4	14.4	13.3
Net migration as % of population in t-1	-0.7	0.9	0.2	0.2	0.2	0.2	0.2
Population (million)	0.3	5.9	6.1	6.1	6.2	6.2	6.2
share of prime-age population (25-54y)	-3.6	38.3	37.4	37.4	36.1	35.2	34.6
share of working-age population (20-64y)	-6.3	57.7	56.2	53.9	54.6	53.3	51.4
share of elderly population (+65y)	8.6	20.4	22.5	24.8	25.3	27.1	29.0
share of very elderly population (+80y)	5.8	5.1	7.0	8.0	9.7	10.4	10.9
share of very elderly population (+80y) in elderly population (+65y)	12.8	24.8	31.1	32.2	38.4	38.5	37.5
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.3	2.2	0.9	1.6	1.6	1.2	1.1
Employment (15-74y; growth rate)	0.1	1.2	-0.1	0.1	0.3	-0.1	-0.2
Labour input: hours worked (growth rate)	0.1	1.2	-0.1	0.1	0.3	-0.1	-0.2
Labour productivity per hour (growth rate)	1.3	1.0	1.1	1.5	1.4	1.3	1.2
TFP (growth rate)	0.8	0.2	0.7	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.5	0.7	0.4	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.2	1.4	0.7	1.6	1.6	1.2	1.1
Potential GDP per worker (growth rate)	1.3	0.9	1.1	1.5	1.4	1.3	1.2
HICP (growth rate)	2.2	8.5	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.4	1.5	2.6	3.2	3.9	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-224	3,402	3,406	3,313	3,358	3,287	3,178
Working-age population (growth rate)	-0.9	0.6	-0.3	-0.2	0.2	-0.5	-0.2
Labour force (20-64y; thousands)	-47	2,843	2,883	2,849	2,910	2,875	2,796
Participation rate (20-64y)	4.4	83.6	84.6	86.0	86.6	87.5	88.0
Participation rate (20-74y)	4.9	73.1	73.3	74.6	77.1	77.7	78.0
young (20-24y)	3.5	75.1	78.6	78.6	78.6	78.6	78.6
prime-age (25-54y)	2.1	87.7	88.3	89.1	89.7	89.8	89.8
older (55-64y)	11.1	75.5	76.7	79.1	81.8	84.9	86.6
oldest (65-74y)	19.6	16.3	16.1	22.2	27.0	34.5	35.9
Participation rate (20-64y) - female	5.7	80.8	82.4	83.9	84.9	86.1	86.5
Participation rate (20-74y) - female	7.1	69.3	70.8	72.4	74.9	75.9	76.4
young (20-24y)	3.9	73.4	77.3	77.3	77.3	77.3	77.3
prime-age (25-54y)	3.0	85.3	86.1	87.3	88.2	88.2	88.3
older (55-64y)	14.0	71.5	74.2	75.8	79.2	83.9	85.5
oldest (65-74y)	26.2	9.2	14.2	21.8	25.2	32.8	35.4
Participation rate (20-64y) - male	3.1	86.3	86.8	88.0	88.3	88.8	89.3
Participation rate (20-74y) - male	2.5	76.9	75.8	76.8	79.2	79.4	79.5
young (20-24y)	3.1	76.7	79.8	79.8	79.8	79.8	79.8
prime-age (25-54y)	1.1	90.1	90.5	90.8	91.0	91.2	91.3
older (55-64y)	8.2	79.6	79.2	82.4	84.3	85.9	87.8
oldest (65-74y)	12.5	24.0	18.0	22.7	28.9	36.1	36.4
Average labour market exit age (1)	4.1	64.9	65.6	66.8	67.7	68.5	69.0
male	3.7	65.3	65.8	66.9	67.8	68.6	69.0
female	4.4	64.5	65.4	66.6	67.5	68.4	69.0
Employment rate (20-64y)	4.6	80.2	81.5	82.9	83.5	84.3	84.8
Employment rate (20-74y)	5.0	70.1	70.6	71.9	74.4	74.9	75.2
Unemployment rate (20-64y)	-0.5	4.1	3.7	3.6	3.6	3.6	3.6
Unemployment rate (20-74y)	-0.5	4.1	3.7	3.6	3.6	3.6	3.6
Employment (20-64y; millions)	0.0	2.7	2.8	2.7	2.8	2.8	2.7
Employment (20-74y; millions)	0.1	2.8	2.9	2.9	3.0	3.0	3.0
share of young (20-24y)	-1.4	9.0	8.9	8.3	8.6	7.8	7.6
share of prime-age (25-54y)	-4.6	67.5	67.3	68.3	64.8	62.3	62.9
share of older (55-64y)	0.6	20.0	20.2	18.1	21.1	21.6	20.6
share of oldest (65-74y)	5.4	3.5	3.6	5.3	5.6	8.2	8.9
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	0.1	22.7	22.9	20.6	23.4	24.0	22.8
Old-age dependency ratio (3)	21.1	35.4	40.0	45.9	46.4	50.9	56.5
Total dependency ratio (4)	21.2	73.4	78.1	85.4	83.1	87.6	94.7
Total economic dependency ratio (5)	0.4	108.8	110.6	111.7	106.9	104.1	109.2
Economic old-age dependency ratio (20-64y) (6)	16.3	40.3	45.2	49.5	49.3	51.1	56.6
Economic old-age dependency ratio (20-74y) (7)	12.7	38.9	43.5	46.9	46.6	46.9	51.6

Denmark

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-1.4	8.3	9.3	8.8	7.8	6.9	6.8
Of which: Old-age and early pensions	-1.7	6.5	7.3	6.8	5.7	4.8	4.8
Disability pensions	0.3	1.8	2.0	2.0	2.1	2.1	2.1
Survivors' pensions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	-1.0	1.1	1.1	0.7	0.3	0.2	0.1
Private occupational pensions, gross	2.3	4.0	3.9	4.6	5.2	5.7	6.3
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.2	0.2	0.2	0.2	0.2	0.3
Public pensions, contributions	:	:	:	:	:	:	:
Balance of the pension system (contributions - gross expenditure)	:	:	:	:	:	:	:
Public pension scheme, tax revenues	-0.6	2.3	2.4	2.3	2.0	1.7	1.7
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	92	1,340	1,420	1,450	1,436	1,386	1,432
Pensioners aged 65+ (1000 persons)	141	1,113	1,217	1,262	1,242	1,201	1,254
Share of pensioners below age 65 as % of all pensioners	-4.5	16.9	14.3	13.0	13.5	13.4	12.4
Benefit ratio (total public pensions, gross)	-11.0	41.1	40.0	37.7	34.4	31.8	30.1
Gross replacement rate at retirement (earnings-related public pensions)	-5.8	29.4	29.6	28.8	26.9	24.8	23.7
Average accrual rate (new earnings-related pensions)	:	:	:	:	:	:	:
Average contributory period (new earnings-related pensions)	:	:	:	:	:	:	:
Contributors (public pensions, 1000 persons)	-148	254	145	113	103	106	106
Support ratio (contributors/100 pensioners, public pensions)	-12	19	10	8	7	8	7
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.2		0.0	0.1	0.2	0.2	0.2
Higher migration (+33%)	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Lower migration (-33%)	0.3		0.1	0.2	0.3	0.3	0.3
Lower fertility (-20%)	0.5		0.0	0.0	0.2	0.4	0.5
Higher employment rate of older workers (+10 pps)	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	-0.1	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.3	0.5	0.7
Retirement age linked to increases in life expectancy	:		:	:	:	:	:
Constant retirement age	2.0		0.2	0.9	1.1	1.7	2.0
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-1.4		1.0	0.5	-0.5	-1.4	-1.4
Dependency ratio	4.0		1.1	2.4	2.5	3.2	4.0
Coverage ratio	-2.7		-0.6	-1.4	-1.6	-2.4	-2.7
Of which: Old-age	-2.3		-0.3	-1.0	-1.3	-2.1	-2.3
Early-age	-1.5		-0.8	-0.8	-1.6	-1.7	-1.5
Cohort effect	-3.6		-1.2	-2.8	-1.9	-2.6	-3.6
Benefit ratio	-1.6		0.6	0.1	-0.7	-1.2	-1.6
Labour market ratio	-0.9		-0.1	-0.5	-0.6	-0.9	-0.9
Of which: Employment rate	-0.5		-0.1	-0.3	-0.4	-0.4	-0.5
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.5		0.0	-0.2	-0.2	-0.4	-0.5
Interaction effect (residual)	-0.2		0.0	-0.1	-0.1	-0.1	-0.2
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-1.4		1.0	-0.4	-1.0	-0.9	0.0
Dependency ratio	4.0		1.1	1.3	0.1	0.7	0.7
Coverage ratio	-2.7		-0.6	-0.8	-0.3	-0.8	-0.3
Of which: Old-age	-2.3		-0.3	-0.7	-0.3	-0.8	-0.2
Early-age	-1.5		-0.8	0.0	-0.8	-0.2	0.2
Cohort effect	-3.6		-1.2	-1.6	0.9	-0.7	-1.0
Benefit ratio	-1.6		0.6	-0.6	-0.8	-0.5	-0.4
Labour market ratio	-0.9		-0.1	-0.3	-0.1	-0.3	-0.1
Of which: Employment rate	-0.5		-0.1	-0.2	-0.1	-0.1	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.5		0.0	-0.2	0.0	-0.2	0.0
Interaction effect (residual)	-0.2		0.0	-0.1	0.0	0.0	0.0

Denmark

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	7.4	7.2	7.4	7.6	7.7	7.8
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.9		0.1	0.4	0.7	0.8	0.9
Demographic scenario	-0.2		0.0	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.2	-0.3	-0.4
No healthy ageing scenario	0.4		0.1	0.1	0.2	0.3	0.4
Labour intensity scenario	0.4		0.4	0.4	0.3	0.2	0.4
Sector-specific composite indexation scenario	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	3.3	3.0	3.9	4.7	5.2	5.8	6.2
of which on institutional care - baseline	1.4	1.0	1.4	1.7	1.9	2.2	2.4
of which on home care - baseline	1.9	2.0	2.5	3.0	3.3	3.6	3.8
of which on cash benefits - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.4		0.0	0.1	0.2	0.3	0.4
Healthy ageing scenario	-0.3		0.0	-0.1	-0.2	-0.3	-0.3
No healthy ageing scenario	0.4		0.0	0.1	0.2	0.3	0.4
Coverage convergence scenario	0.4		0.0	0.1	0.2	0.2	0.4
Cost convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	21%	370	402	420	435	446	449
Recipients: receiving institutional care	112%	46	59	73	83	94	98
receiving home care	80%	195	241	278	310	337	350
receiving cash benefits	:	0	0	0	0	0	0
Baseline aged 65+	76%	140	173	199	214	233	245
Recipients: receiving institutional care aged 65+	118%	44	57	71	80	91	96
receiving home care aged 65+	97%	164	209	249	279	307	322
receiving cash benefits aged 65+	:	0	0	0	0	0	0

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.9	5.8	5.4	5.4	5.1	4.9	4.9
Number of students (in thousands)							
Total	-11%	1,229	1,162	1,178	1,135	1,089	1,091
as % of population 5-24	-2.2	90.7	87.9	88.1	87.3	88.3	88.5
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.0		0.3	0.7	1.1	1.0	1.0

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.4	24.4	25.8	26.3	25.7	25.2	25.8
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	1.3		0.2	0.5	0.9	1.1	1.3
High life expectancy (+2 years)	0.8		0.0	0.2	0.4	0.6	0.8
Higher migration (+33%)	-0.8		-0.2	-0.4	-0.6	-0.7	-0.8
Lower migration (-33%)	0.9		0.2	0.4	0.6	0.8	0.9
Lower fertility (-20%)	0.7		0.0	-0.3	-0.1	0.3	0.7
Higher employment rate of older workers (+10 pps)	-0.4		-0.2	-0.4	-0.3	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	-0.1	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.3	0.5	0.7

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

5. GERMANY

Germany

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.53	1.55	1.57	1.59	1.61	1.63
Life expectancy at birth							
males	7.0	79.0	80.1	81.8	83.3	84.7	86.0
females	6.2	83.8	84.7	86.2	87.6	88.8	90.0
Life expectancy at 65 (years)							
males	5.0	18.3	19.1	20.2	21.3	22.3	23.3
females	4.9	21.5	22.3	23.4	24.4	25.4	26.4
Net migration (thousands)	-1395.5	1,631.3	249.6	263.0	266.2	253.6	235.7
Net migration as % of population in t-1		2.0	0.3	0.3	0.3	0.3	0.3
Population (million)	0.3	83.9	85.3	85.2	84.8	84.3	84.2
share of prime-age population (25-54y)	-2.8	38.3	37.3	36.7	36.0	35.8	35.5
share of working-age population (20-64y)	-6.8	59.2	55.8	54.2	54.4	53.1	52.4
share of elderly population (+65y)	6.7	22.1	24.8	26.8	27.1	28.0	28.8
share of very elderly population (+80y)	4.4	7.3	6.9	8.6	11.2	10.5	11.7
share of very elderly population (+80y) in elderly population (+65y)	7.7	33.0	28.0	32.0	41.5	37.5	40.7
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	0.5	0.7	1.6	1.3	1.1	1.2
Employment (15-74y; growth rate)	-0.1	0.1	-0.5	0.1	-0.1	-0.2	0.0
Labour input: hours worked (growth rate)	-0.1	-0.4	-0.5	0.1	-0.1	-0.2	0.0
Labour productivity per hour (growth rate)	1.3	0.9	1.2	1.5	1.4	1.3	1.2
TFP (growth rate)	0.8	0.5	0.8	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.4	0.5	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.1	-0.3	0.7	1.6	1.3	1.2	1.2
Potential GDP per worker (growth rate)	1.2	0.5	1.2	1.5	1.4	1.3	1.2
HICP (growth rate)	2.3	8.7	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.3	1.1	2.5	3.1	3.9	4.0	4.0
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-5,511	49,652	47,586	46,174	46,089	44,767	44,141
Working-age population (growth rate)	-0.4	0.4	-0.9	0.2	-0.2	-0.2	0.0
Labour force (20-64y; thousands)	-3,742	41,343	39,644	39,013	38,945	38,036	37,601
Participation rate (20-64y)	1.9	83.3	83.3	84.5	84.5	85.0	85.2
Participation rate (20-74y)	0.2	72.4	69.9	71.4	72.7	71.8	72.6
young (20-24y)	0.3	73.6	73.9	73.9	74.0	73.9	73.9
prime-age (25-54y)	1.4	87.8	88.3	88.8	89.1	89.3	89.3
older (55-64y)	2.6	75.3	72.9	76.3	76.0	77.0	77.9
oldest (65-74y)	1.2	14.5	13.0	12.7	15.0	14.9	15.6
Participation rate (20-64y) - female	3.8	79.0	79.6	81.4	81.8	82.5	82.8
Participation rate (20-74y) - female	2.4	67.7	65.9	68.0	69.6	69.1	70.1
young (20-24y)	-0.1	70.8	70.8	70.8	70.8	70.8	70.7
prime-age (25-54y)	3.0	83.4	84.5	85.7	86.1	86.3	86.4
older (55-64y)	6.2	71.1	69.7	73.7	74.7	76.3	77.3
oldest (65-74y)	3.3	11.3	11.4	11.5	13.7	13.8	14.6
Participation rate (20-64y) - male	0.0	87.4	86.9	87.4	87.0	87.3	87.4
Participation rate (20-74y) - male	-2.2	77.1	73.7	74.7	75.7	74.5	75.0
young (20-24y)	0.6	76.1	76.8	76.8	76.8	76.8	76.7
prime-age (25-54y)	-0.2	92.2	91.9	91.6	91.9	92.1	92.0
older (55-64y)	-1.1	79.5	76.2	79.0	77.3	77.7	78.4
oldest (65-74y)	-1.4	18.0	14.7	14.0	16.5	16.1	16.6
Average labour market exit age (1)	1.2	64.2	64.9	65.1	65.2	65.4	65.5
male	1.1	64.4	65.1	65.2	65.3	65.4	65.5
female	1.4	64.0	64.8	65.1	65.2	65.3	65.5
Employment rate (20-64y)	1.2	80.7	80.4	81.3	81.2	81.7	81.9
Employment rate (20-74y)	-0.4	70.3	67.4	68.7	70.0	69.1	69.9
Unemployment rate (20-64y)	0.8	3.1	3.5	3.8	3.8	3.8	3.8
Unemployment rate (20-74y)	0.7	3.0	3.5	3.8	3.8	3.8	3.7
Employment (20-64y; millions)	-3.9	40.1	38.2	37.5	37.4	36.6	36.2
Employment (20-74y; millions)	-3.7	41.4	39.7	38.8	38.8	38.1	37.7
share of young (20-24y)	0.5	7.6	7.7	8.5	8.2	7.9	8.1
share of prime-age (25-54y)	2.1	66.2	68.5	68.9	67.4	68.1	68.2
share of older (55-64y)	-3.3	23.0	20.2	19.3	20.8	20.1	19.7
share of oldest (65-74y)	0.8	3.2	3.6	3.3	3.6	4.0	4.0
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	-3.8	26.1	23.9	22.0	23.9	23.0	22.3
Old-age dependency ratio (3)	17.6	37.4	44.4	49.5	49.9	52.7	55.0
Total dependency ratio (4)	21.9	69.0	79.2	84.5	84.0	88.3	90.8
Total economic dependency ratio (5)	21.1	102.6	114.9	119.5	118.3	121.4	123.7
Economic old-age dependency ratio (20-64y) (6)	20.0	42.9	51.4	57.4	57.6	60.3	62.9
Economic old-age dependency ratio (20-74y) (7)	18.9	41.5	49.5	55.5	55.5	57.9	60.4

Germany

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	1.2	10.2	10.8	11.1	11.0	11.2	11.4
Of which: Old-age and early pensions	1.7	8.2	8.7	9.2	9.2	9.5	9.9
Disability pensions	0.0	0.6	0.7	0.6	0.6	0.6	0.5
Survivors' pensions	-0.5	1.5	1.4	1.3	1.2	1.1	1.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	1.7	8.2	8.7	9.2	9.2	9.5	9.9
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.2	0.2	0.1	0.2	0.2	0.1
Public pensions, contributions	0.9	9.9	10.3	10.6	10.5	10.6	10.8
Balance of the pension system (contributions - gross expenditure)	-0.3	-0.3	-0.5	-0.5	-0.5	-0.5	-0.5
Public pension scheme, tax revenues	0.5	1.0	1.2	1.4	1.4	1.4	1.5
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	6,372	23,083	24,813	27,544	28,501	29,206	29,455
Pensioners aged 65+ (1000 persons)	7,163	20,355	22,336	25,369	26,277	27,129	27,518
Share of pensioners below age 65 as % of all pensioners	-5.2	11.8	10.0	7.9	7.8	7.1	6.6
Benefit ratio (total public pensions, gross)	-8.0	43.0	41.6	37.6	36.0	35.0	35.0
Gross replacement rate at retirement (earnings-related public pensions)	-1.7	36.8	36.9	35.1	35.3	35.5	35.1
Average accrual rate (new earnings-related pensions)	0.1	0.8	0.8	0.8	0.8	0.8	0.8
Average contributory period (new earnings-related pensions)	1.1	45.9	47.0	47.0	47.0	47.0	47.0
Contributors (public pensions, 1000 persons)	-3,759	37,037	35,400	34,311	34,276	33,613	33,277
Support ratio (contributors/100 pensioners, public pensions)	-47	160	143	125	120	115	113
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.3		0.0	0.1	0.1	0.2	0.3
Higher migration (+33%)	-0.6		-0.1	-0.3	-0.5	-0.5	-0.6
Lower migration (-33%)	0.6		0.1	0.3	0.5	0.6	0.6
Lower fertility (-20%)	0.6		0.0	0.0	0.2	0.4	0.6
Higher employment rate of older workers (+10 pps)	-0.2		-0.2	-0.3	-0.3	-0.3	-0.2
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.0		0.0	0.0	0.0	0.1	0.0
Retirement age linked to increases in life expectancy	-0.9		0.0	-0.2	-0.4	-0.6	-0.9
Constant retirement age	0.4		0.2	0.3	0.3	0.4	0.4
Constant benefit ratio	0.7		0.0	0.1	0.4	0.7	0.7
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	1.2		0.6	0.9	0.8	1.0	1.2
Dependency ratio	4.3		1.9	3.1	3.2	3.8	4.3
Coverage ratio	-0.2		-0.6	-0.3	0.0	0.0	-0.2
Of which: Old-age	0.4		-0.4	0.2	0.5	0.6	0.4
Early-age	-1.2		0.6	-0.5	-0.6	-0.5	-1.2
Cohort effect	-4.9		-2.7	-3.7	-3.5	-4.6	-4.9
Benefit ratio	-2.4		-0.6	-1.7	-2.1	-2.4	-2.4
Labour market ratio	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Of which: Employment rate	-0.2		0.0	-0.1	-0.1	-0.1	-0.2
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	0.0	0.0	-0.1	-0.1
Interaction effect (residual)	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	1.2		0.6	0.3	-0.1	0.2	0.2
Dependency ratio	4.3		1.9	1.2	0.1	0.6	0.5
Coverage ratio	-0.2		-0.6	0.3	0.3	0.0	-0.2
Of which: Old-age	0.4		-0.4	0.5	0.3	0.1	-0.2
Early-age	-1.2		0.6	-1.1	-0.1	0.1	-0.7
Cohort effect	-4.9		-2.7	-1.0	0.3	-1.1	-0.3
Benefit ratio	-2.4		-0.6	-1.1	-0.5	-0.3	0.0
Labour market ratio	-0.2		0.0	-0.1	0.0	-0.1	0.0
Of which: Employment rate	-0.2		0.0	-0.1	0.0	-0.1	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.2		-0.1	-0.1	0.0	0.0	0.0

Germany

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	8.0	7.7	7.9	8.1	8.1	8.2
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.8		0.1	0.4	0.6	0.7	0.8
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Healthy ageing scenario	-0.5		-0.1	-0.2	-0.3	-0.4	-0.5
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.8		0.2	0.5	0.6	0.7	0.8
Sector-specific composite indexation scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.5	1.9	2.2	2.3	2.4	2.3	2.3
of which on institutional care - baseline	0.4	0.7	0.9	1.0	1.1	1.2	1.1
of which on home care - baseline	0.1	0.4	0.5	0.5	0.5	0.5	0.5
of which on cash benefits - baseline	0.0	0.7	0.8	0.8	0.7	0.7	0.7
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.9		0.1	0.3	0.5	0.7	0.9
Healthy ageing scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.1	0.2
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	0.9		0.1	0.3	0.5	0.7	0.9
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	14%	5,931	6,093	6,295	6,738	6,662	6,782
Recipients: receiving institutional care	50%	861	932	1,008	1,193	1,256	1,291
receiving home care	36%	807	854	944	1,040	1,050	1,098
receiving cash benefits	36%	2,971	3,144	3,475	3,826	3,864	4,042
Baseline aged 65+	47%	3,049	3,363	3,694	4,190	4,276	4,483
Recipients: receiving institutional care aged 65+	67%	691	769	852	1,040	1,112	1,152
receiving home care aged 65+	52%	612	657	756	856	874	927
receiving cash benefits aged 65+	52%	2,252	2,420	2,784	3,149	3,216	3,413

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.2	4.3	4.4	4.5	4.4	4.4	4.5
Number of students (in thousands)							
Total	1%	13,858	14,525	14,522	13,961	13,958	13,992
as % of population 5-24	-0.8	85.5	85.4	84.3	84.7	85.0	84.7
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.0		0.3	0.7	1.0	1.0	1.0

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	2.0	24.3	25.0	25.8	25.9	26.0	26.4
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	1.7		0.3	0.7	1.2	1.5	1.7
High life expectancy (+2 years)	0.5		0.0	0.1	0.2	0.4	0.5
Higher migration (+33%)	-0.8		-0.2	-0.4	-0.7	-0.7	-0.8
Lower migration (-33%)	0.9		0.2	0.5	0.7	0.9	0.9
Lower fertility (-20%)	0.5		0.0	-0.3	-0.2	0.2	0.5
Higher employment rate of older workers (+10 pps)	-0.2		-0.3	-0.4	-0.3	-0.3	-0.2
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower TFP growth (-0.2 pps)	0.1		0.0	0.0	0.0	0.1	0.1

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

6. ESTONIA

Estonia

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.57	1.64	1.69	1.71	1.72	1.73
Life expectancy at birth							
males	9.8	74.3	76.0	78.3	80.4	82.3	84.1
females	6.8	83.0	84.3	85.8	87.2	88.5	89.8
Life expectancy at 65 (years)							
males	6.4	15.8	16.9	18.3	19.7	21.0	22.2
females	5.4	20.9	21.9	23.1	24.2	25.3	26.3
Net migration (thousands)	-41.5	45.4	1.0	3.8	4.1	3.6	3.9
Net migration as % of population in t-1	-3.1	3.4	0.1	0.3	0.3	0.3	0.3
Population (million)	0.0	1.4	1.4	1.3	1.3	1.3	1.3
share of prime-age population (25-54y)	-7.0	40.7	38.8	37.3	34.7	34.8	33.7
share of working-age population (20-64y)	-6.2	58.1	57.5	56.8	53.8	50.9	51.9
share of elderly population (+65y)	9.5	20.3	22.2	24.5	27.2	30.2	29.8
share of very elderly population (+80y)	7.3	6.0	6.2	8.0	9.1	10.7	13.3
share of very elderly population (+80y) in elderly population (+65y)	15.4	29.3	28.2	32.6	33.4	35.3	44.7
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.6	2.4	1.4	2.0	1.6	1.3	1.4
Employment (15-74y; growth rate)	-0.1	1.8	-0.4	0.0	-0.3	-0.2	0.2
Labour input: hours worked (growth rate)	0.0	2.4	-0.4	0.0	-0.3	-0.2	0.2
Labour productivity per hour (growth rate)	1.6	0.1	1.8	2.0	1.9	1.6	1.2
TFP (growth rate)	1.0	-0.2	1.0	1.3	1.2	1.0	0.8
capital deepening (contribution to labour productivity growth)	0.6	0.2	0.8	0.7	0.7	0.5	0.4
Potential GDP per capita (growth rate)	1.6	0.8	1.7	2.0	1.6	1.5	1.5
Potential GDP per worker (growth rate)	1.7	0.6	1.8	2.0	1.9	1.6	1.2
HICP (growth rate)	2.5	19.4	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.7	2.3	3.4	3.6	3.9	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-106	786	780	762	722	676	680
Working-age population (growth rate)	-1.4	1.3	-0.1	-0.3	-0.8	-0.1	-0.1
Labour force (20-64y; thousands)	-56	680	675	668	644	616	623
Participation rate (20-64y)	5.1	86.5	86.5	87.6	89.3	91.0	91.7
Participation rate (20-74y)	4.3	77.3	75.0	76.2	77.1	77.6	81.6
young (20-24y)	4.2	75.2	79.0	79.5	79.5	79.2	79.4
prime-age (25-54y)	3.5	90.8	92.1	93.4	94.3	94.3	94.3
older (55-64y)	12.6	77.1	73.1	75.1	80.2	86.2	89.7
oldest (65-74y)	4.6	28.7	17.3	20.5	26.0	27.2	33.3
Participation rate (20-64y) - female	7.1	84.5	84.9	86.3	88.9	91.0	91.7
Participation rate (20-74y) - female	7.4	74.0	72.2	73.9	75.9	77.2	81.4
young (20-24y)	3.3	78.2	81.2	81.5	81.6	81.4	81.6
prime-age (25-54y)	6.3	87.4	90.1	92.5	93.8	93.8	93.8
older (55-64y)	12.0	78.2	72.1	72.1	79.3	86.5	90.3
oldest (65-74y)	4.7	27.7	18.3	20.4	25.0	26.4	32.5
Participation rate (20-64y) - male	3.1	88.5	88.0	88.8	89.6	91.0	91.6
Participation rate (20-74y) - male	0.9	80.8	77.8	78.3	78.2	78.1	81.8
young (20-24y)	5.0	72.3	76.9	77.5	77.5	77.0	77.3
prime-age (25-54y)	0.8	93.9	93.9	94.3	94.8	94.7	94.8
older (55-64y)	13.5	75.7	74.2	78.0	80.9	85.9	89.2
oldest (65-74y)	4.0	30.0	16.0	20.7	27.2	28.1	34.0
Average labour market exit age (1)	4.6	63.8	64.6	65.8	67.0	67.7	68.4
male	4.8	63.6	64.6	65.8	67.0	67.7	68.4
female	4.5	63.9	64.7	65.9	67.1	67.7	68.4
Employment rate (20-64y)	4.3	81.8	81.5	82.3	83.8	85.6	86.1
Employment rate (20-74y)	3.6	73.3	70.8	71.7	72.6	73.2	76.9
Unemployment rate (20-64y)	0.6	5.4	5.8	6.1	6.1	6.0	6.0
Unemployment rate (20-74y)	0.5	5.2	5.6	5.9	5.8	5.7	5.7
Employment (20-64y; millions)	-0.1	0.6	0.6	0.6	0.6	0.6	0.6
Employment (20-74y; millions)	-0.1	0.7	0.7	0.7	0.6	0.6	0.6
share of young (20-24y)	1.2	5.9	8.1	7.6	6.6	7.0	7.1
share of prime-age (25-54y)	-7.0	69.5	69.7	67.4	64.2	66.1	62.5
share of older (55-64y)	4.7	18.4	18.2	20.1	22.4	19.2	23.1
share of oldest (65-74y)	1.2	6.1	4.0	4.8	6.8	7.7	7.3
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.4	21.8	22.2	24.4	26.5	21.8	25.2
Old-age dependency ratio (3)	22.4	34.9	38.6	43.2	50.6	59.3	57.3
Total dependency ratio (4)	20.5	72.0	74.0	76.1	85.7	96.5	92.5
Total economic dependency ratio (5)	9.8	97.4	105.0	103.7	106.5	112.0	107.2
Economic old-age dependency ratio (20-64y) (6)	22.6	35.9	43.1	47.4	52.9	60.8	58.5
Economic old-age dependency ratio (20-74y) (7)	20.5	33.7	41.4	45.1	49.3	56.2	54.2

Estonia

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-0.7	7.4	7.8	7.6	7.5	7.5	6.7
Of which: Old-age and early pensions	-0.3	6.0	6.5	6.3	6.3	6.4	5.7
Disability pensions	-0.3	1.1	1.1	1.0	0.9	0.9	0.8
Survivors' pensions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	-0.1	0.2	0.2	0.2	0.2	0.2	0.2
Earnings-related pensions, gross	-1.0	3.4	3.4	3.2	3.1	2.9	2.5
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	1.1	0.2	0.1	0.4	0.6	1.0	1.2
New old-age and early pensions, gross	0.0	0.2	0.2	0.2	0.2	0.2	0.1
Public pensions, contributions	-0.2	6.1	6.1	6.1	6.1	6.0	6.0
Balance of the pension system (contributions - gross expenditure)	0.5	-1.3	-1.7	-1.5	-1.4	-1.4	-0.8
Public pension scheme, tax revenues	-0.2	0.3	0.1	0.1	0.1	0.2	0.2
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	11	327	326	329	338	360	338
Pensioners aged 65+ (1000 persons)	38	288	304	312	324	347	326
Share of pensioners below age 65 as % of all pensioners	-8.4	12.0	6.8	5.2	4.2	3.4	3.6
Benefit ratio (total public pensions, gross)	-4.4	28.8	30.4	28.9	27.6	25.6	24.4
Gross replacement rate at retirement (earnings-related public pensions)	-6.9	45.6	49.3	48.2	42.3	39.6	38.7
Average accrual rate (new earnings-related pensions)	-0.2	1.0	1.0	1.1	0.9	0.9	0.9
Average contributory period (new earnings-related pensions)	0.0	40.0	40.0	40.0	40.0	40.0	40.0
Contributors (public pensions, 1000 persons)	-28	668	672	667	656	635	640
Support ratio (contributors/100 pensioners, public pensions)	-15	204	206	203	194	176	189
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.5	0.0	0.0	0.1	0.2	0.4	0.5
Higher migration (+33%)	0.2	0.0	0.0	0.0	0.0	0.1	0.2
Lower migration (-33%)	-0.2	0.0	0.0	0.0	0.0	-0.1	-0.2
Lower fertility (-20%)	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Higher employment rate of older workers (+10 pps)	0.1	-0.1	0.0	0.0	0.0	0.1	0.1
Higher TFP growth (+0.2 pps)	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.2	0.0	0.0	0.0	0.1	0.1	0.2
Retirement age linked to increases in life expectancy	:	:	:	:	:	:	:
Constant retirement age	2.4	0.5	1.2	1.9	2.1	2.1	2.4
Constant benefit ratio	:	:	:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-0.7	0.4	0.1	0.1	0.1	0.1	-0.7
Dependency ratio	3.9	0.8	1.7	2.9	4.2	3.9	3.9
Coverage ratio	-2.4	-0.7	-1.3	-1.9	-2.1	-2.4	-2.4
Of which: Old-age	-1.7	-0.3	-0.8	-1.3	-1.4	-1.7	-1.7
Early-age	-7.9	-3.9	-6.4	-6.9	-7.2	-7.9	-7.9
Cohort effect	-2.6	-0.6	-0.5	-2.0	-3.4	-2.6	-2.6
Benefit ratio	-1.5	0.2	-0.2	-0.6	-1.3	-1.5	-1.5
Labour market ratio	-0.4	0.2	0.1	-0.2	-0.4	-0.4	-0.4
Of which: Employment rate	-0.4	0.0	0.0	-0.2	-0.3	-0.4	-0.4
Labour intensity	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Career shift	-0.1	0.2	0.1	-0.1	-0.1	-0.1	-0.1
Interaction effect (residual)	-0.2	0.0	-0.1	-0.1	-0.2	-0.2	-0.2
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-0.7	0.4	-0.3	-0.1	0.0	-0.7	-0.7
Dependency ratio	3.9	0.8	0.9	1.2	1.2	-0.2	-0.2
Coverage ratio	-2.4	-0.7	-0.6	-0.6	-0.2	-0.2	-0.2
Of which: Old-age	-1.7	-0.3	-0.5	-0.5	-0.2	-0.3	-0.3
Early-age	-7.9	-3.9	-2.5	-0.5	-0.2	-0.7	-0.7
Cohort effect	-2.6	-0.6	0.1	-1.5	-1.4	0.8	0.8
Benefit ratio	-1.5	0.2	-0.4	-0.4	-0.7	-0.2	-0.2
Labour market ratio	-0.4	0.2	-0.1	-0.3	-0.2	0.0	0.0
Of which: Employment rate	-0.4	0.0	-0.1	-0.1	-0.2	0.0	0.0
Labour intensity	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Career shift	-0.1	0.2	-0.1	-0.2	-0.1	0.0	0.0
Interaction effect (residual)	-0.2	0.0	0.0	-0.1	-0.1	0.0	0.0

Estonia							
Health care							
Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.6	5.1	5.2	5.4	5.5	5.6	5.7
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.2	0.6	0.8	0.9	1.0
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
No healthy ageing scenario	0.4		0.1	0.2	0.3	0.4	0.4
Labour intensity scenario	0.2		0.1	0.1	0.2	0.3	0.2
Sector-specific composite indexation scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Long-term care							
Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.7	0.4	0.6	0.8	0.9	1.0	1.1
of which on institutional care - baseline	0.5	0.2	0.4	0.5	0.6	0.7	0.8
of which on home care - baseline	0.2	0.2	0.2	0.2	0.3	0.3	0.3
of which on cash benefits - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	5.2		0.3	0.7	1.5	2.9	5.2
Healthy ageing scenario	-0.1		0.0	0.0	0.0	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.0	0.1	0.1
Coverage convergence scenario	1.0		0.1	0.2	0.4	0.6	1.0
Cost convergence scenario	2.4		0.2	0.4	0.8	1.5	2.4
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	23%	134	141	150	156	160	165
Recipients: receiving institutional care	79%	13	14	17	19	21	23
receiving home care	68%	9	10	12	13	14	16
receiving cash benefits	37%	11	12	13	14	15	15
Baseline aged 65+	54%	78	85	95	105	116	120
Recipients: receiving institutional care aged 65+	89%	12	13	15	18	20	22
receiving home care aged 65+	83%	8	9	10	12	13	14
receiving cash benefits aged 65+	66%	7	8	9	10	11	12
Education							
Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.6	3.9	3.7	3.4	3.4	3.6	3.4
Number of students (in thousands)							
Total	-19%	222	212	190	187	190	181
as % of population 5-24	-5.1	77.9	72.2	72.2	73.7	73.5	72.8
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.1		0.6	0.8	1.0	1.1	1.1
Total cost of ageing							
Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.0	16.8	17.4	17.1	17.3	17.7	16.9
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	6.2		0.5	1.3	2.3	3.9	6.2
High life expectancy (+2 years)	0.6		0.0	0.1	0.2	0.4	0.6
Higher migration (+33%)	0.1		-0.1	-0.1	-0.1	-0.1	0.1
Lower migration (-33%)	-0.1		0.1	0.1	0.1	0.1	-0.1
Lower fertility (-20%)	-0.2		0.0	-0.3	-0.3	-0.2	-0.2
Higher employment rate of older workers (+10 pps)	0.0		-0.1	0.0	0.0	0.0	0.0
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.1		0.0	0.0	0.1	0.1	0.1

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

7. IRELAND

Ireland							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.60	1.62	1.64	1.66	1.67	1.69
Life expectancy at birth							
males	6.1	80.8	81.7	83.2	84.5	85.7	86.9
females	6.0	84.6	85.6	87.0	88.3	89.5	90.6
Life expectancy at 65 (years)							
males	4.5	19.4	20.1	21.1	22.1	23.0	23.9
females	4.9	22.1	22.9	24.0	25.0	26.0	27.0
Net migration (thousands)	-81.3	93.2	17.0	17.8	13.7	11.2	11.9
Net migration as % of population in t-1	-1.7	1.9	0.3	0.3	0.2	0.2	0.2
Population (million)	1.0	5.1	5.4	5.8	6.0	6.1	6.1
share of prime-age population (25-54y)	-7.5	41.2	40.1	38.6	37.5	35.5	33.6
share of working-age population (20-64y)	-6.2	58.7	59.3	58.1	53.8	53.1	52.5
share of elderly population (+65y)	14.0	15.1	17.8	21.5	25.6	27.3	29.2
share of very elderly population (+80y)	8.7	3.6	4.8	6.4	8.2	10.8	12.3
share of very elderly population (+80y) in elderly population (+65y)	18.2	23.9	26.7	29.6	31.9	39.6	42.1
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	2.1	7.3	3.3	1.7	1.2	1.3	0.9
Employment (15-74y; growth rate)	0.3	3.1	0.6	0.1	-0.1	0.0	-0.3
Labour input: hours worked (growth rate)	0.3	2.7	0.6	0.1	-0.1	0.0	-0.3
Labour productivity per hour (growth rate)	1.8	4.5	2.7	1.6	1.4	1.3	1.2
TFP (growth rate)	1.4	5.0	1.9	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	-0.5	0.8	0.6	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.7	5.6	2.7	1.1	1.0	1.3	0.9
Potential GDP per worker (growth rate)	1.8	4.2	2.7	1.6	1.4	1.3	1.2
HICP (growth rate)	2.2	8.1	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.7	1.7	3.5	3.8	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	183	3,006	3,224	3,348	3,235	3,232	3,189
Working-age population (growth rate)	-1.9	1.6	0.8	0.0	-0.3	0.1	-0.3
Labour force (20-64y; thousands)	285	2,452	2,688	2,841	2,791	2,792	2,737
Participation rate (20-64y)	4.3	81.6	83.4	84.9	86.3	86.4	85.8
Participation rate (20-74y)	0.1	72.9	73.9	74.0	73.0	74.4	73.0
young (20-24y)	3.2	74.4	77.3	77.7	77.5	77.4	77.6
prime-age (25-54y)	5.5	86.1	88.7	90.7	91.6	91.6	91.6
older (55-64y)	5.8	69.0	69.5	71.6	72.5	75.3	74.8
oldest (65-74y)	3.1	13.4	15.2	16.0	15.4	15.6	16.5
Participation rate (20-64y) - female	7.8	75.8	79.6	81.9	83.6	84.1	83.6
Participation rate (20-74y) - female	3.6	67.0	70.2	71.1	70.0	71.8	70.6
young (20-24y)	5.0	72.3	77.0	77.4	77.1	77.1	77.3
prime-age (25-54y)	8.2	80.4	84.4	87.2	88.5	88.6	88.6
older (55-64y)	13.1	60.8	65.1	69.1	70.5	74.3	73.8
oldest (65-74y)	9.0	6.3	13.1	14.2	13.9	14.1	15.3
Participation rate (20-64y) - male	0.6	87.5	87.3	88.0	89.0	88.7	88.1
Participation rate (20-74y) - male	-3.6	79.1	77.7	77.0	76.0	77.0	75.5
young (20-24y)	1.5	76.5	77.6	78.1	77.8	77.8	78.0
prime-age (25-54y)	2.6	92.0	93.2	94.2	94.8	94.6	94.6
older (55-64y)	-1.8	77.6	74.0	74.3	74.7	76.3	75.9
oldest (65-74y)	-3.0	20.9	17.4	17.8	17.1	17.2	17.9
Average labour market exit age (1)	0.7	64.2	64.8	64.8	64.8	64.8	64.8
male	0.6	64.3	64.8	64.8	64.8	64.8	64.8
female	0.8	64.1	64.8	64.8	64.8	64.8	64.8
Employment rate (20-64y)	3.1	78.2	79.4	80.3	81.7	81.8	81.3
Employment rate (20-74y)	-0.7	69.9	70.4	70.1	69.1	70.5	69.2
Unemployment rate (20-64y)	1.2	4.2	4.8	5.3	5.3	5.3	5.3
Unemployment rate (20-74y)	1.1	4.1	4.8	5.3	5.2	5.2	5.2
Employment (20-64y; millions)	0.2	2.3	2.6	2.7	2.6	2.6	2.6
Employment (20-74y; millions)	0.3	2.4	2.6	2.8	2.8	2.7	2.7
share of young (20-24y)	-0.9	9.1	10.0	8.4	7.3	8.2	8.2
share of prime-age (25-54y)	-6.8	72.5	70.1	68.8	71.3	68.6	65.6
share of older (55-64y)	5.8	16.0	17.0	19.4	17.3	19.6	21.9
share of oldest (65-74y)	1.9	2.4	2.9	3.5	4.1	3.6	4.3
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	6.7	19.2	20.8	23.5	21.3	23.2	25.9
Old-age dependency ratio (3)	29.8	25.7	30.1	37.0	47.7	51.5	55.6
Total dependency ratio (4)	20.3	70.2	68.5	72.1	86.0	88.4	90.5
Total economic dependency ratio (5)	11.7	112.7	106.1	106.8	118.5	121.9	124.4
Economic old-age dependency ratio (20-64y) (6)	33.3	30.4	34.8	42.3	54.0	59.0	63.8
Economic old-age dependency ratio (20-74y) (7)	31.3	29.7	33.8	40.9	51.8	56.9	61.0

Ireland							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross (including POPS)	2.8	3.8	4.2	5.0	6.0	6.5	6.6
Of which: Old-age and early pensions	2.8	1.6	1.9	2.6	3.6	4.1	4.4
Disability pensions	0.3	0.6	0.7	0.8	0.8	0.8	0.9
Survivors' pensions	-0.1	0.4	0.3	0.3	0.3	0.2	0.2
Other	0.0	0.4	0.4	0.4	0.4	0.4	0.4
Earnings-related pensions, gross	:	:	:	:	:	:	:
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.0	0.1	0.1	0.1	0.1	0.1
Public pensions, contributions	2.1	2.7	2.8	3.0	4.0	4.5	4.8
Balance of the pension system (contributions - gross expenditure)	-0.9	-0.2	-0.5	-1.0	-1.0	-1.0	-1.1
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	1,277	1,066	1,319	1,671	2,036	2,220	2,343
Pensioners aged 65+ (1000 persons)	1,140	703	888	1,183	1,553	1,720	1,843
Share of pensioners below age 65 as % of all pensioners	-12.7	34.0	32.7	29.2	23.7	22.5	21.3
Benefit ratio (total public pensions, gross)	0.6	29.7	29.3	29.5	29.9	30.6	30.3
Gross replacement rate at retirement (earnings-related public pensions)	2.0	34.6	34.8	35.1	36.9	36.9	36.6
Average accrual rate (new earnings-related pensions)	:	:	:	:	:	:	:
Average contributory period (new earnings-related pensions)	:	:	:	:	:	:	:
Contributors (public pensions, 1000 persons)	243	2,763	3,005	3,119	3,052	3,068	3,006
Support ratio (contributors/100 pensioners, public pensions)	-131	259	228	187	150	138	128
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.3		0.0	0.0	0.1	0.2	0.3
Higher migration (+33%)	-0.2		-0.1	-0.1	-0.2	-0.3	-0.2
Lower migration (-33%)	0.3		0.1	0.2	0.3	0.3	0.3
Lower fertility (-20%)	0.4		0.0	0.0	0.1	0.3	0.4
Higher employment rate of older workers (+10 pps)	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Higher TFP growth (+0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Lower TFP growth (-0.2 pps)	0.1		0.0	0.0	0.0	0.1	0.1
Retirement age linked to increases in life expectancy	-1.2		-0.1	-0.3	-0.6	-0.7	-1.2
Constant retirement age	0.1		0.0	0.0	0.1	0.1	0.1
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	2.8		0.3	1.2	2.2	2.6	2.8
Dependency ratio	4.0		0.6	1.6	3.0	3.5	4.0
Coverage ratio	-0.2		0.0	-0.1	-0.2	-0.1	-0.2
Of which: Old-age	0.7		0.0	0.2	0.5	0.7	0.7
Early-age	0.1		0.1	0.3	0.7	0.3	0.1
Cohort effect	-2.5		-0.3	-1.0	-2.5	-2.3	-2.5
Benefit ratio	-0.7		-0.2	-0.1	-0.3	-0.4	-0.7
Labour market ratio	-0.2		-0.1	-0.1	-0.3	-0.2	-0.2
Of which: Employment rate	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	0.0	-0.1	0.0	-0.1
Interaction effect (residual)	-0.1		0.0	0.0	-0.1	-0.1	-0.1
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	2.8		0.3	0.9	0.9	0.5	0.2
Dependency ratio	4.0		0.6	1.0	1.4	0.5	0.5
Coverage ratio	-0.2		0.0	0.0	-0.1	0.1	-0.1
Of which: Old-age	0.7		0.0	0.2	0.3	0.2	0.0
Early-age	0.1		0.1	0.3	0.4	-0.4	-0.2
Cohort effect	-2.5		-0.3	-0.8	-1.4	0.2	-0.2
Benefit ratio	-0.7		-0.2	0.0	-0.2	-0.1	-0.3
Labour market ratio	-0.2		-0.1	-0.1	-0.1	0.0	0.0
Of which: Employment rate	-0.2		-0.1	-0.1	-0.1	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.1		0.0	0.0	-0.1	0.0	0.0

Ireland							
Health care							
Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.5	4.1	4.3	4.7	5.0	5.4	5.6
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.1		0.5	0.7	0.8	1.0	1.1
Demographic scenario	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.3		0.0	-0.1	-0.2	-0.3	-0.3
No healthy ageing scenario	0.3		0.0	0.1	0.2	0.3	0.3
Labour intensity scenario	0.5		-0.1	0.0	0.3	0.4	0.5
Sector-specific composite indexation scenario	-0.7		-0.3	-0.5	-0.6	-0.7	-0.7

Long-term care							
Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.4	1.2	1.4	1.6	2.0	2.3	2.6
of which on institutional care - baseline	0.8	0.5	0.6	0.7	0.9	1.1	1.3
of which on home care - baseline	0.4	0.4	0.5	0.6	0.7	0.8	0.9
of which on cash benefits - baseline	0.2	0.3	0.3	0.4	0.4	0.4	0.5
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.6		0.0	0.1	0.2	0.4	0.6
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	0.6		0.0	0.1	0.2	0.4	0.6
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	78%	258	300	346	391	433	460
Recipients: receiving institutional care	202%	32	39	52	66	81	96
receiving home care	148%	92	113	142	173	206	229
receiving cash benefits	131%	101	120	147	178	210	232
Baseline aged 65+	184%	110	141	186	238	279	311
Recipients: receiving institutional care aged 65+	279%	23	30	42	57	72	87
receiving home care aged 65+	225%	60	79	107	140	172	196
receiving cash benefits aged 65+	227%	59	76	104	136	167	192

Education							
Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.7	2.8	2.5	2.2	2.3	2.3	2.1
Number of students (in thousands)							
Total	-17%	1,234	1,162	1,065	1,115	1,105	1,025
as % of population 5-24	-2.4	90.9	86.7	88.6	90.9	88.7	88.5
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.5		0.3	0.4	0.4	0.5	0.5

Total cost of ageing							
Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	4.9	12.0	12.3	13.6	15.2	16.4	16.9
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	1.7		0.5	0.8	1.1	1.4	1.7
High life expectancy (+2 years)	0.5		0.0	0.0	0.1	0.3	0.5
Higher migration (+33%)	-0.5		-0.1	-0.3	-0.4	-0.5	-0.5
Lower migration (-33%)	0.6		0.1	0.3	0.5	0.6	0.6
Lower fertility (-20%)	0.6		0.0	-0.2	-0.1	0.3	0.6
Higher employment rate of older workers (+10 pps)	-0.3		-0.1	-0.2	-0.2	-0.2	-0.3
Higher TFP growth (+0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Lower TFP growth (-0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.
(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.
(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.
(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.
(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.
(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.
(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.
Source: European commission, EPC.

8. GREECE

Greece							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.41	1.44	1.47	1.50	1.52	1.55
Life expectancy at birth							
males	7.7	78.8	80.5	82.2	83.7	85.2	86.5
females	6.2	84.2	85.5	86.8	88.1	89.3	90.4
Life expectancy at 65 (years)							
males	5.2	18.7	19.8	20.9	22.0	23.0	23.9
females	5.0	21.7	22.7	23.8	24.8	25.8	26.7
Net migration (thousands)	-2.0	21.5	-4.3	5.2	8.2	12.6	19.5
Net migration as % of population in t-1	0.0	0.2	0.0	0.1	0.1	0.2	0.2
Population (million)	-2.7	10.4	10.0	9.5	8.9	8.3	7.8
share of prime-age population (25-54y)	-7.1	39.7	35.7	32.1	31.9	32.4	32.5
share of working-age population (20-64y)	-8.5	58.5	56.6	52.0	47.7	48.3	50.0
share of elderly population (+65y)	10.2	22.8	26.1	31.5	35.5	34.9	33.0
share of very elderly population (+80y)	9.1	7.1	8.0	10.4	13.5	16.4	16.2
share of very elderly population (+80y) in elderly population (+65y)	17.7	31.3	30.6	32.9	37.9	47.0	49.0
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	0.4	0.6	1.1	1.1	1.3	1.0
Employment (15-74y; growth rate)	-0.5	-0.3	-0.8	-0.9	-0.8	-0.3	-0.2
Labour input: hours worked (growth rate)	-0.6	-0.5	-0.8	-0.9	-0.8	-0.3	-0.2
Labour productivity per hour (growth rate)	1.6	0.9	1.3	2.1	2.0	1.6	1.2
TFP (growth rate)	1.1	0.7	0.8	1.4	1.3	1.0	0.8
capital deepening (contribution to labour productivity growth)	0.5	0.2	0.5	0.7	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.7	1.6	1.1	1.7	1.8	2.1	1.6
Potential GDP per worker (growth rate)	1.6	0.7	1.3	2.1	2.0	1.6	1.2
HICP (growth rate)	2.2	9.3	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.5	4.5	4.3	4.1	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-2,215	6,106	5,667	4,925	4,266	4,019	3,891
Working-age population (growth rate)	0.6	-1.0	-1.0	-1.5	-1.1	-0.4	-0.4
Labour force (20-64y; thousands)	-1,495	4,606	4,321	3,823	3,375	3,198	3,111
Participation rate (20-64y)	4.5	75.4	76.3	77.6	79.1	79.6	79.9
Participation rate (20-74y)	4.9	64.7	63.9	63.4	64.3	68.1	69.7
young (20-24y)	3.4	46.6	49.5	50.0	49.9	49.8	50.0
prime-age (25-54y)	-0.1	85.3	85.1	85.0	85.2	85.2	85.2
older (55-64y)	20.8	57.4	65.5	70.9	74.0	76.5	78.2
oldest (65-74y)	15.0	9.3	9.9	13.9	16.8	19.9	24.3
Participation rate (20-64y) - female	7.3	66.6	69.4	71.3	73.0	73.5	73.9
Participation rate (20-74y) - female	7.3	56.4	57.1	57.3	58.4	62.1	63.7
young (20-24y)	3.3	43.3	46.0	46.5	46.5	46.3	46.6
prime-age (25-54y)	1.7	77.4	78.1	78.8	79.2	79.0	79.1
older (55-64y)	26.4	44.8	57.9	63.3	66.6	69.6	71.2
oldest (65-74y)	15.8	6.0	7.0	12.1	15.0	17.8	21.7
Participation rate (20-64y) - male	1.3	84.3	83.1	83.9	85.1	85.3	85.6
Participation rate (20-74y) - male	2.0	73.3	70.9	69.6	70.3	74.0	75.4
young (20-24y)	3.3	49.8	52.7	53.1	53.0	52.9	53.1
prime-age (25-54y)	-2.4	93.2	92.0	91.0	90.9	90.8	90.8
older (55-64y)	14.0	71.1	73.7	79.1	82.0	83.7	85.1
oldest (65-74y)	13.9	13.2	13.2	16.0	18.9	22.2	27.1
Average labour market exit age (1)	3.7	63.8	64.6	65.6	66.4	66.9	67.5
male	3.7	63.8	64.6	65.6	66.4	66.9	67.5
female	3.8	63.7	64.6	65.5	66.3	66.9	67.5
Employment rate (20-64y)	8.6	66.1	68.7	71.1	73.9	74.4	74.7
Employment rate (20-74y)	8.4	56.8	57.7	58.1	60.2	63.8	65.2
Unemployment rate (20-64y)	-5.8	12.4	9.9	8.5	6.6	6.5	6.5
Unemployment rate (20-74y)	-5.9	12.3	9.8	8.3	6.5	6.4	6.3
Employment (20-64y; millions)	-1.1	4.0	3.9	3.5	3.2	3.0	2.9
Employment (20-74y; millions)	-1.0	4.1	4.0	3.7	3.4	3.2	3.1
share of young (20-24y)	1.2	4.2	5.4	5.1	5.3	5.5	5.3
share of prime-age (25-54y)	-10.4	75.1	68.5	64.3	67.4	67.8	64.8
share of older (55-64y)	5.0	18.3	23.1	25.5	20.9	20.9	23.3
share of oldest (65-74y)	4.2	2.4	3.0	5.1	6.4	5.8	6.6
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.3	23.7	27.0	28.7	23.4	22.7	25.0
Old-age dependency ratio (3)	27.0	39.0	46.0	60.6	74.4	72.1	66.0
Total dependency ratio (4)	28.9	70.9	76.5	92.4	109.5	107.0	99.8
Total economic dependency ratio (5)	-2.6	152.2	149.2	157.0	165.4	162.1	149.7
Economic old-age dependency ratio (20-64y) (6)	24.7	56.2	63.7	79.6	93.6	90.6	80.9
Economic old-age dependency ratio (20-74y) (7)	20.8	54.8	61.8	75.6	87.6	85.4	75.6

Greece							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-2.5	14.5	12.7	13.7	14.0	12.7	12.0
Of which: Old-age and early pensions	-0.8	10.5	9.5	10.6	11.2	10.1	9.8
Disability pensions	-0.4	0.9	0.7	0.7	0.6	0.6	0.5
Survivors' pensions	-0.7	2.2	2.2	2.2	2.0	1.8	1.5
Other	-0.7	0.9	0.2	0.2	0.2	0.2	0.2
Earnings-related pensions, gross	0.2	6.9	6.1	6.7	7.3	6.9	7.2
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	0.2	0.0	0.0	0.0	0.0	0.0	0.2
New old-age and early pensions, gross	0.0	0.5	0.5	0.7	0.6	0.5	0.5
Public pensions, contributions	-2.1	12.5	12.1	12.4	12.2	11.3	10.4
Balance of the pension system (contributions - gross expenditure)	0.4	-2.0	-0.6	-1.3	-1.8	-1.4	-1.6
Public pension scheme, tax revenues	-0.2	1.9	1.7	1.8	1.9	1.7	1.6
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	50	2,460	2,503	2,765	2,959	2,742	2,511
Pensioners aged 65+ (1000 persons)	420	2,001	2,200	2,556	2,821	2,631	2,421
Share of pensioners below age 65 as % of all pensioners	-15.1	18.7	12.1	7.5	4.6	4.1	3.6
Benefit ratio (total public pensions, gross)	-23.4	76.4	73.0	65.3	57.1	52.3	53.0
Gross replacement rate at retirement (earnings-related public pensions)	-10.7	75.9	77.2	70.0	67.3	65.3	65.2
Average accrual rate (new earnings-related pensions)	0.1	1.1	1.1	1.1	1.1	1.1	1.2
Average contributory period (new earnings-related pensions)	6.6	31.9	32.4	31.5	34.3	35.9	38.4
Contributors (public pensions, 1000 persons)	-1,213	4,962	4,830	4,440	4,056	3,822	3,749
Support ratio (contributors/100 pensioners, public pensions)	-52	202	193	161	137	139	149
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.0		0.0	0.2	0.0	0.1	0.0
Higher migration (+33%)	-1.0		-0.1	-0.3	-0.6	-0.9	-1.0
Lower migration (-33%)	1.2		0.1	0.3	0.7	1.0	1.2
Lower fertility (-20%)	0.7		0.0	0.0	0.1	0.5	0.7
Higher employment rate of older workers (+10 pps)	-0.1		-0.3	-0.5	-0.5	-0.3	-0.1
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.2	-0.3
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.4	0.6	0.7
Retirement age linked to increases in life expectancy	:		:	:	:	:	:
Constant retirement age	1.0		0.4	1.2	1.2	1.3	1.0
Constant benefit ratio	3.5		0.0	0.8	2.8	4.0	3.5
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-2.5		-1.8	-0.8	-0.5	-1.8	-2.5
Dependency ratio	7.7		2.4	6.2	9.2	8.8	7.7
Coverage ratio	-0.7		-1.0	-1.4	-1.4	-1.2	-0.7
Of which: Old-age	1.5		0.1	0.3	0.8	1.1	1.5
Early-age	-16.5		-5.3	-8.3	-10.6	-13.6	-16.5
Cohort effect	-6.6		-0.9	-4.5	-9.0	-8.1	-6.6
Benefit ratio	-6.6		-2.4	-3.8	-5.6	-6.8	-6.6
Labour market ratio	-2.2		-0.6	-1.3	-2.0	-2.0	-2.2
Of which: Employment rate	-1.7		-0.5	-1.0	-1.5	-1.6	-1.7
Labour intensity	0.0		0.0	0.0	0.1	0.0	0.0
Career shift	-0.6		-0.1	-0.4	-0.6	-0.5	-0.6
Interaction effect (residual)	-0.7		-0.2	-0.5	-0.7	-0.7	-0.7
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-2.5		-1.8	1.0	0.3	-1.4	-0.7
Dependency ratio	7.7		2.4	3.8	3.0	-0.4	-1.1
Coverage ratio	-0.7		-1.0	-0.5	0.1	0.2	0.4
Of which: Old-age	1.5		0.1	0.2	0.5	0.3	0.5
Early-age	-16.5		-5.3	-2.9	-2.4	-3.0	-2.9
Cohort effect	-6.6		-0.9	-3.6	-4.5	1.0	1.5
Benefit ratio	-6.6		-2.4	-1.4	-1.8	-1.2	0.2
Labour market ratio	-2.2		-0.6	-0.7	-0.7	0.0	-0.2
Of which: Employment rate	-1.7		-0.5	-0.4	-0.5	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.6		-0.1	-0.3	-0.2	0.1	-0.1
Interaction effect (residual)	-0.7		-0.2	-0.3	-0.2	0.0	0.0

Greece							
Health care							
Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.6	5.4	5.4	5.8	6.0	6.1	5.9
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.3	0.5	0.8	0.9	1.0
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
No healthy ageing scenario	0.4		0.1	0.2	0.2	0.3	0.4
Labour intensity scenario	-0.3		-0.4	-0.2	0.0	-0.1	-0.3
Sector-specific composite indexation scenario	0.0		0.0	0.0	0.0	0.0	0.0
Long-term care							
Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.0	0.1	0.1	0.1	0.1	0.2	0.1
of which on institutional care - baseline	0.0	0.1	0.1	0.1	0.1	0.1	0.1
of which on home care - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
of which on cash benefits - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	3.1		0.0	0.1	0.5	1.3	3.1
Healthy ageing scenario	0.0		0.0	0.0	0.0	0.0	0.0
No healthy ageing scenario	0.0		0.0	0.0	0.0	0.0	0.0
Coverage convergence scenario	0.1		0.0	0.0	0.1	0.1	0.1
Cost convergence scenario	1.4		0.0	0.1	0.3	0.7	1.4
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0%	1,012	1,035	1,096	1,131	1,103	1,009
Recipients: receiving institutional care	-31%	11	10	9	9	8	8
receiving home care	27%	284	294	327	363	382	361
receiving cash benefits	:	0	0	0	0	0	0
Baseline aged 65+	22%	670	715	826	915	906	820
Recipients: receiving institutional care aged 65+	34%	1	1	1	2	2	2
receiving home care aged 65+	49%	218	233	274	320	343	323
receiving cash benefits aged 65+	:	0	0	0	0	0	0
Education							
Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.5	3.4	3.0	2.9	3.1	3.0	2.9
Number of students (in thousands)							
Total	-33%	1,912	1,721	1,533	1,448	1,366	1,278
as % of population 5-24	-1.6	93.3	89.9	92.0	92.2	91.4	91.7
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.1		0.0	0.1	0.1	0.1	0.1
Total cost of ageing							
Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-2.4	23.4	21.2	22.5	23.3	21.9	21.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.1		0.3	0.7	1.2	2.2	4.1
High life expectancy (+2 years)	0.0		0.0	0.2	0.0	0.2	0.0
Higher migration (+33%)	-1.1		-0.1	-0.4	-0.7	-1.0	-1.1
Lower migration (-33%)	1.3		0.1	0.4	0.8	1.2	1.3
Lower fertility (-20%)	0.6		0.0	-0.3	-0.1	0.3	0.6
Higher employment rate of older workers (+10 pps)	-0.1		-0.2	-0.5	-0.5	-0.3	-0.1
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.2	-0.3
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.4	0.6	0.7

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

9. SPAIN

Spain

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.19	1.23	1.29	1.33	1.38	1.42
Life expectancy at birth							
males	6.3	80.8	82.1	83.5	84.8	86.0	87.1
females	5.0	86.5	87.5	88.6	89.7	90.6	91.5
Life expectancy at 65 (years)							
males	4.6	19.5	20.5	21.5	22.4	23.3	24.1
females	4.1	23.6	24.5	25.4	26.2	26.9	27.7
Net migration (thousands)	-483.5	677.2	221.2	231.7	196.2	185.9	193.7
Net migration as % of population in t-1	-1.0	1.4	0.4	0.5	0.4	0.4	0.4
Population (million)	0.0	47.7	49.3	50.3	50.4	49.2	47.7
share of prime-age population (25-54y)	-8.5	41.5	38.4	36.1	35.3	34.1	33.0
share of working-age population (20-64y)	-9.3	60.6	59.5	55.4	51.3	51.4	51.4
share of elderly population (+65y)	12.9	20.2	23.7	29.1	32.7	32.9	33.1
share of very elderly population (+80y)	8.8	6.1	7.1	9.1	12.2	15.2	14.9
share of very elderly population (+80y) in elderly population (+65y)	14.9	30.0	29.9	31.3	37.4	46.3	45.0
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.2	1.1	0.8	1.6	1.3	1.3	0.8
Employment (15-74y; growth rate)	-0.1	1.1	0.0	-0.2	-0.4	-0.2	-0.4
Labour input: hours worked (growth rate)	-0.1	1.0	0.1	-0.2	-0.4	-0.2	-0.4
Labour productivity per hour (growth rate)	1.3	0.1	0.8	1.8	1.8	1.5	1.2
TFP (growth rate)	0.8	0.2	0.4	1.2	1.1	1.0	0.8
capital deepening (contribution to labour productivity growth)	0.5	0.0	0.4	0.6	0.6	0.5	0.4
Potential GDP per capita (growth rate)	1.2	0.5	0.6	1.5	1.4	1.6	1.1
Potential GDP per worker (growth rate)	1.3	0.0	0.8	1.8	1.8	1.5	1.2
HICP (growth rate)	2.2	8.3	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.0	2.2	4.2	4.3	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-4,432	28,933	29,332	27,853	25,848	25,295	24,501
Working-age population (growth rate)	-0.9	0.4	-0.2	-0.9	-0.4	-0.1	-0.5
Labour force (20-64y; thousands)	-3,028	23,032	23,654	22,821	21,260	20,716	20,005
Participation rate (20-64y)	2.0	79.6	80.6	81.9	82.2	81.9	81.6
Participation rate (20-74y)	0.5	69.1	69.2	69.0	68.8	70.5	69.6
young (20-24y)	1.2	55.3	56.4	57.1	56.3	56.3	56.5
prime-age (25-54y)	-0.5	87.4	87.4	86.9	87.0	86.9	86.9
older (55-64y)	12.1	65.4	72.9	77.8	77.4	77.9	77.5
oldest (65-74y)	14.1	6.4	13.8	18.9	18.8	19.6	20.5
Participation rate (20-64y) - female	3.7	75.0	77.1	79.0	79.3	79.0	78.7
Participation rate (20-74y) - female	1.9	64.5	65.4	65.9	65.6	67.2	66.4
young (20-24y)	1.4	52.6	53.8	54.5	53.8	53.7	54.0
prime-age (25-54y)	0.4	83.3	83.9	83.7	83.8	83.7	83.7
older (55-64y)	16.2	59.0	68.8	75.1	75.1	75.5	75.1
oldest (65-74y)	13.5	5.3	11.6	16.7	17.3	18.0	18.8
Participation rate (20-64y) - male	0.3	84.2	84.2	85.0	85.3	84.9	84.6
Participation rate (20-74y) - male	-1.0	73.8	73.1	72.3	72.1	73.9	72.8
young (20-24y)	1.1	57.9	58.8	59.5	58.8	58.7	59.0
prime-age (25-54y)	-1.4	91.6	91.0	90.1	90.3	90.1	90.2
older (55-64y)	7.9	72.1	77.3	80.7	79.9	80.5	80.0
oldest (65-74y)	14.8	7.6	16.3	21.3	20.4	21.5	22.3
Average labour market exit age (1)	2.4	64.0	65.6	66.4	66.4	66.4	66.4
male	2.5	64.0	65.6	66.4	66.4	66.4	66.4
female	2.3	64.0	65.6	66.4	66.4	66.4	66.4
Employment rate (20-64y)	6.8	69.6	72.0	74.5	76.8	76.6	76.4
Employment rate (20-74y)	4.8	60.4	62.0	63.0	64.4	66.0	65.2
Unemployment rate (20-64y)	-6.2	12.6	10.7	9.1	6.6	6.4	6.4
Unemployment rate (20-74y)	-6.3	12.5	10.5	8.8	6.4	6.2	6.2
Employment (20-64y; millions)	-1.4	20.1	21.1	20.7	19.9	19.4	18.7
Employment (20-74y; millions)	-0.5	20.4	21.9	22.0	21.1	20.5	19.9
share of young (20-24y)	0.6	5.0	5.8	5.2	5.0	5.5	5.5
share of prime-age (25-54y)	-10.2	74.8	68.0	65.5	68.8	67.0	64.6
share of older (55-64y)	5.0	18.8	22.6	23.4	20.2	22.1	23.9
share of oldest (65-74y)	4.6	1.4	3.6	5.9	6.0	5.3	6.0
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.6	23.1	25.7	26.0	22.8	24.5	26.6
Old-age dependency ratio (3)	31.2	33.3	39.9	52.6	63.9	64.0	64.5
Total dependency ratio (4)	29.8	64.9	68.1	80.5	95.1	94.6	94.6
Total economic dependency ratio (5)	5.9	133.6	124.9	128.1	138.7	140.4	139.5
Economic old-age dependency ratio (20-64y) (6)	31.5	46.3	51.4	64.1	76.5	77.7	77.8
Economic old-age dependency ratio (20-74y) (7)	27.5	45.7	49.5	60.3	72.0	73.5	73.1

Spain

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	3.6	13.1	14.3	16.2	17.3	16.9	16.7
Of which: Old-age and early pensions	4.1	9.7	11.0	13.0	14.3	13.9	13.8
Disability pensions	-0.2	1.1	1.0	0.9	0.8	0.9	0.9
Survivors' pensions	-0.3	2.3	2.3	2.3	2.2	2.1	2.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	4.0	9.6	10.8	12.8	14.1	13.7	13.6
Private occupational pensions, gross	-0.1	0.2	0.2	0.3	0.2	0.1	0.1
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.3	0.3	0.4	0.3	0.3	0.3
Public pensions, contributions	1.1	12.9	13.8	14.3	14.6	14.0	14.0
Balance of the pension system (contributions - gross expenditure)	-2.6	-0.2	-0.5	-1.9	-2.7	-2.8	-2.7
Public pension scheme, tax revenues	0.3	1.1	1.2	1.3	1.4	1.4	1.4
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	5,652	9,984	11,137	13,493	15,605	15,999	15,637
Pensioners aged 65+ (1000 persons)	5,965	8,126	9,191	11,728	14,123	14,468	14,090
Share of pensioners below age 65 as % of all pensioners	-8.7	18.6	17.5	13.1	9.5	9.6	9.9
Benefit ratio (total public pensions, gross)	-12.7	64.1	69.0	63.8	56.5	52.1	51.4
Gross replacement rate at retirement (earnings-related public pensions)	-13.2	77.2	76.0	71.1	64.6	63.9	64.0
Average accrual rate (new earnings-related pensions)	-0.7	2.5	2.4	2.2	2.0	1.9	1.9
Average contributory period (new earnings-related pensions)	4.8	37.8	38.4	39.4	40.4	41.5	42.6
Contributors (public pensions, 1000 persons)	-2,159	23,636	24,796	24,414	22,811	22,094	21,478
Support ratio (contributors/100 pensioners, public pensions)	-99	237	223	181	146	138	137
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.8		0.0	0.2	0.4	0.6	0.8
Higher migration (+33%)	-1.0		-0.3	-0.7	-1.1	-1.2	-1.0
Lower migration (-33%)	1.4		0.3	0.8	1.4	1.6	1.4
Lower fertility (-20%)	1.1		0.0	0.0	0.2	0.6	1.1
Higher employment rate of older workers (+10 pps)	-1.2		-0.9	-1.7	-1.4	-1.2	-1.2
Higher TFP growth (+0.2 pps)	-0.6		0.0	0.0	-0.1	-0.3	-0.6
Lower TFP growth (-0.2 pps)	1.0		0.0	0.2	0.6	0.9	1.0
Retirement age linked to increases in life expectancy	-1.9		0.0	0.0	-0.5	-1.0	-1.9
Constant retirement age	2.1		1.3	2.9	2.6	2.1	2.1
Constant benefit ratio	2.3		0.0	0.0	0.5	2.0	2.3
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	3.6		1.2	3.1	4.2	3.8	3.6
Dependency ratio	10.5		2.6	7.0	10.4	10.4	10.5
Coverage ratio	-0.3		-1.1	-1.6	-1.2	-0.4	-0.3
Of which: Old-age	1.2		-0.9	-0.6	0.5	1.3	1.2
Early-age	-1.2		-0.7	-0.4	-0.9	-1.6	-1.2
Cohort effect	-8.1		-1.3	-6.0	-9.9	-8.3	-8.1
Benefit ratio	-3.9		0.7	-0.3	-2.3	-3.6	-3.9
Labour market ratio	-2.0		-0.7	-1.6	-2.1	-1.9	-2.0
Of which: Employment rate	-1.4		-0.5	-1.0	-1.5	-1.4	-1.4
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.7		-0.3	-0.7	-0.7	-0.5	-0.7
Interaction effect (residual)	-0.7		-0.2	-0.4	-0.7	-0.7	-0.7
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	3.6		1.2	1.9	1.1	-0.4	-0.2
Dependency ratio	10.5		2.6	4.4	3.4	0.0	0.1
Coverage ratio	-0.3		-1.1	-0.5	0.4	0.8	0.0
Of which: Old-age	1.2		-0.9	0.3	1.1	0.8	0.0
Early-age	-1.2		-0.7	0.3	-0.6	-0.7	0.4
Cohort effect	-8.1		-1.3	-4.7	-4.0	1.6	0.2
Benefit ratio	-3.9		0.7	-0.9	-2.0	-1.4	-0.2
Labour market ratio	-2.0		-0.7	-0.8	-0.5	0.2	-0.1
Of which: Employment rate	-1.4		-0.5	-0.5	-0.5	0.0	0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.7		-0.3	-0.4	0.0	0.1	-0.1
Interaction effect (residual)	-0.7		-0.2	-0.3	-0.2	0.0	0.0

Spain

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.2	5.9	6.2	6.7	7.0	7.2	7.1
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.8		0.2	0.4	0.6	0.7	0.8
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.2	-0.3	-0.4
No healthy ageing scenario	0.4		0.1	0.2	0.2	0.3	0.4
Labour intensity scenario	0.2		-0.3	-0.2	0.2	0.2	0.2
Sector-specific composite indexation scenario	-0.7		-0.2	-0.3	-0.5	-0.6	-0.7

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.9	0.8	0.9	1.0	1.3	1.6	1.7
of which on institutional care - baseline	0.6	0.5	0.6	0.7	0.9	1.1	1.1
of which on home care - baseline	0.2	0.2	0.2	0.2	0.3	0.4	0.4
of which on cash benefits - baseline	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.8		0.2	0.5	1.0	1.9	2.8
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	1.6		0.1	0.3	0.7	1.1	1.6
Cost convergence scenario	0.7		0.1	0.1	0.3	0.5	0.7
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	49%	2,181	2,415	2,757	3,122	3,343	3,259
Recipients: receiving institutional care	92%	369	411	494	602	693	707
receiving home care	104%	420	481	599	752	866	858
receiving cash benefits	67%	433	509	571	662	728	724
Baseline aged 65+	96%	1,316	1,540	1,955	2,399	2,633	2,580
Recipients: receiving institutional care aged 65+	135%	267	310	399	516	611	629
receiving home care aged 65+	120%	371	430	552	710	825	818
receiving cash benefits aged 65+	117%	255	298	381	480	549	555

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.6	4.1	3.7	3.3	3.5	3.6	3.5
Number of students (in thousands)							
Total	-20%	8,574	8,064	7,264	7,363	7,245	6,849
as % of population 5-24	-0.4	87.6	85.9	87.8	88.2	87.0	87.2
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.6		0.4	0.4	0.5	0.6	0.6

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	5.1	23.9	25.1	27.3	29.2	29.2	29.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	3.5		0.3	0.8	1.6	2.6	3.5
High life expectancy (+2 years)	1.0		0.0	0.2	0.4	0.7	1.0
Higher migration (+33%)	-1.3		-0.4	-0.8	-1.4	-1.5	-1.3
Lower migration (-33%)	1.7		0.4	1.0	1.7	1.9	1.7
Lower fertility (-20%)	1.0		0.0	-0.3	-0.1	0.4	1.0
Higher employment rate of older workers (+10 pps)	-1.2		-0.9	-1.7	-1.5	-1.2	-1.2
Higher TFP growth (+0.2 pps)	-0.5		0.0	0.0	-0.1	-0.3	-0.5
Lower TFP growth (-0.2 pps)	1.0		0.0	0.2	0.6	0.8	1.0

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

10. FRANCE

France

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.0	1.82	1.81	1.80	1.80	1.79	1.79
Life expectancy at birth							
males	7.0	79.7	81.1	82.7	84.1	85.5	86.7
females	5.4	85.9	86.9	88.2	89.3	90.4	91.3
Life expectancy at 65 (years)							
males	4.4	19.7	20.6	21.5	22.4	23.3	24.1
females	3.9	23.8	24.5	25.4	26.2	27.0	27.7
Net migration (thousands)	-176.6	275.1	80.0	80.8	83.2	85.2	98.5
Net migration as % of population in t-1	-0.3	0.4	0.1	0.1	0.1	0.1	0.1
Population (million)	1.6	68.0	69.5	70.6	70.6	70.1	69.7
share of prime-age population (25-54y)	-3.5	36.7	35.6	35.3	34.6	34.0	33.2
share of working-age population (20-64y)	-4.5	55.3	54.1	52.3	51.4	51.3	50.7
share of elderly population (+65y)	8.2	21.1	23.7	26.2	27.4	28.3	29.3
share of very elderly population (+80y)	6.5	6.0	7.5	9.5	11.0	11.7	12.6
share of very elderly population (+80y) in elderly population (+65y)	14.3	28.5	31.6	36.3	40.0	41.6	42.8
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	1.1	0.6	1.5	1.3	1.3	0.9
Employment (15-74y; growth rate)	0.1	0.9	0.3	0.0	-0.1	0.0	-0.3
Labour input: hours worked (growth rate)	0.1	1.1	0.3	0.0	-0.1	0.0	-0.3
Labour productivity per hour (growth rate)	1.0	0.1	0.3	1.5	1.4	1.3	1.2
TFP (growth rate)	0.7	-0.1	0.1	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.2	0.1	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.1	0.7	0.4	1.4	1.4	1.3	1.0
Potential GDP per worker (growth rate)	1.0	0.2	0.3	1.5	1.4	1.3	1.2
HICP (growth rate)	2.2	5.9	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.7	1.7	3.5	3.8	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-2,270	37,604	37,578	36,915	36,321	35,981	35,333
Working-age population (growth rate)	-0.5	0.2	-0.1	-0.2	-0.2	0.0	-0.3
Labour force (20-64y; thousands)	-134	29,923	30,577	30,803	30,561	30,373	29,790
Participation rate (20-64y)	4.7	79.6	81.4	83.4	84.1	84.4	84.3
Participation rate (20-74y)	3.2	67.3	68.4	70.0	71.0	71.1	70.6
young (20-24y)	2.5	66.8	69.1	69.3	69.1	69.1	69.2
prime-age (25-54y)	1.5	88.2	88.5	89.1	89.7	89.7	89.8
older (55-64y)	15.5	60.4	67.0	72.7	74.4	76.2	75.9
oldest (65-74y)	3.6	6.8	6.9	8.9	10.0	9.8	10.4
Participation rate (20-64y) - female	6.3	76.3	78.5	81.1	82.3	82.8	82.6
Participation rate (20-74y) - female	5.0	63.9	65.6	67.6	68.9	69.1	68.8
young (20-24y)	2.2	64.3	66.4	66.7	66.4	66.5	66.6
prime-age (25-54y)	3.5	84.3	85.4	86.8	87.7	87.8	87.8
older (55-64y)	16.7	58.8	64.8	70.5	73.3	75.6	75.5
oldest (65-74y)	4.9	5.4	7.0	8.5	9.7	9.6	10.3
Participation rate (20-64y) - male	3.0	82.9	84.3	85.9	86.1	86.1	86.0
Participation rate (20-74y) - male	1.3	71.0	71.4	72.5	73.2	73.1	72.3
young (20-24y)	2.7	69.1	71.6	71.9	71.6	71.7	71.8
prime-age (25-54y)	-0.6	92.3	91.7	91.5	91.7	91.6	91.7
older (55-64y)	14.3	62.1	69.4	75.0	75.7	76.8	76.4
oldest (65-74y)	2.2	8.4	6.9	9.4	10.3	10.1	10.5
Average labour market exit age (1)	2.2	62.6	63.8	64.6	64.8	64.8	64.8
male	2.4	62.4	63.7	64.6	64.8	64.8	64.8
female	2.1	62.7	63.8	64.6	64.8	64.8	64.8
Employment rate (20-64y)	5.0	74.0	75.6	77.8	78.9	79.1	79.0
Employment rate (20-74y)	3.5	62.7	63.6	65.3	66.5	66.6	66.2
Unemployment rate (20-64y)	-0.7	7.0	7.1	6.7	6.3	6.3	6.3
Unemployment rate (20-74y)	-0.7	6.9	7.1	6.7	6.2	6.2	6.2
Employment (20-64y; millions)	0.1	27.8	28.4	28.7	28.6	28.5	27.9
Employment (20-74y; millions)	0.4	28.3	28.9	29.4	29.4	29.2	28.7
share of young (20-24y)	-0.5	7.9	8.4	7.4	7.5	7.7	7.4
share of prime-age (25-54y)	-4.8	73.0	70.8	70.9	70.3	69.1	68.2
share of older (55-64y)	4.2	17.4	19.0	19.3	19.7	20.7	21.5
share of oldest (65-74y)	1.1	1.7	1.8	2.4	2.6	2.5	2.8
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.4	23.0	23.2	22.4	22.6	23.3	24.4
Old-age dependency ratio (3)	19.7	38.2	43.8	50.1	53.2	55.0	57.8
Total dependency ratio (4)	16.2	81.0	84.8	91.1	94.4	94.8	97.2
Total economic dependency ratio (5)	2.3	140.2	140.1	139.8	140.3	139.9	142.5
Economic old-age dependency ratio (20-64y) (6)	20.5	49.7	55.9	61.9	64.8	66.8	70.2
Economic old-age dependency ratio (20-74y) (7)	19.4	48.8	54.9	60.4	63.1	65.1	68.2

France

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-0.9	14.4	14.3	14.1	13.7	13.5	13.6
Of which: Old-age and early pensions	-0.3	12.0	11.8	11.8	11.6	11.5	11.7
Disability pensions	-0.2	1.0	1.0	1.0	0.9	0.9	0.9
Survivors' pensions	-0.4	1.5	1.5	1.4	1.2	1.1	1.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	-0.7	11.8	11.6	11.4	11.2	11.0	11.1
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.3	0.3	0.4	0.4	0.4	0.4
Public pensions, contributions	-0.1	11.1	10.9	11.0	11.0	11.0	11.0
Balance of the pension system (contributions - gross expenditure)	0.8	-3.3	-3.4	-3.1	-2.7	-2.5	-2.5
Public pension scheme, tax revenues	-0.1	1.6	1.6	1.6	1.5	1.5	1.5
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	4,386	20,263	21,034	22,510	23,450	23,993	24,649
Pensioners aged 65+ (1000 persons)	6,029	15,395	17,285	19,244	20,147	20,623	21,424
Share of pensioners below age 65 as % of all pensioners	-10.9	24.0	17.8	14.5	14.1	14.0	13.1
Benefit ratio (total public pensions, gross)	-9.8	47.1	46.6	43.5	40.6	38.8	37.3
Gross replacement rate at retirement (earnings-related public pensions)	-7.2	41.6	39.4	41.0	34.4	35.7	34.4
Average accrual rate (new earnings-related pensions)	-0.1	1.5	1.4	1.4	1.4	1.4	1.4
Average contributory period (new earnings-related pensions)	0.5	33.9	31.1	31.6	31.7	33.9	34.3
Contributors (public pensions, 1000 persons)	368	28,708	29,563	30,256	30,068	29,686	29,076
Support ratio (contributors/100 pensioners, public pensions)	-24	142	141	134	128	124	118
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.7		0.1	0.2	0.4	0.5	0.7
Higher migration (+33%)	-0.6		-0.1	-0.2	-0.4	-0.5	-0.6
Lower migration (-33%)	0.7		0.1	0.3	0.5	0.7	0.7
Lower fertility (-20%)	1.2		0.0	-0.1	0.3	0.8	1.2
Higher employment rate of older workers (+10 pps)	-0.5		-0.3	-0.4	-0.4	-0.4	-0.5
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	0.0	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.4	0.6	0.7
Retirement age linked to increases in life expectancy	-1.0		0.0	-0.1	-0.4	-0.7	-1.0
Constant retirement age	0.9		0.6	0.9	0.9	1.0	0.9
Constant benefit ratio	1.9		0.0	0.0	0.8	1.4	1.9
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-0.9		-0.1	-0.3	-0.7	-1.0	-0.9
Dependency ratio	6.0		2.0	4.1	4.9	5.4	6.0
Coverage ratio	-2.2		-1.4	-2.1	-2.1	-2.1	-2.2
Of which: Old-age	-0.3		-0.3	-0.4	-0.4	-0.4	-0.3
Early-age	-5.0		-3.2	-4.8	-4.4	-4.6	-5.0
Cohort effect	-5.4		-2.2	-4.1	-5.0	-4.8	-5.4
Benefit ratio	-3.4		-0.4	-1.3	-2.3	-2.9	-3.4
Labour market ratio	-1.0		-0.3	-0.8	-1.0	-1.0	-1.0
Of which: Employment rate	-0.9		-0.3	-0.7	-0.9	-0.9	-0.9
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Interaction effect (residual)	-0.3		-0.1	-0.2	-0.2	-0.2	-0.3
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-0.9		-0.1	-0.2	-0.4	-0.2	0.1
Dependency ratio	6.0		2.0	2.0	0.8	0.5	0.7
Coverage ratio	-2.2		-1.4	-0.7	0.0	0.0	-0.1
Of which: Old-age	-0.3		-0.3	-0.2	0.0	0.0	0.1
Early-age	-5.0		-3.2	-1.6	0.4	-0.2	-0.4
Cohort effect	-5.4		-2.2	-2.0	-0.8	0.1	-0.6
Benefit ratio	-3.4		-0.4	-0.9	-1.0	-0.6	-0.5
Labour market ratio	-1.0		-0.3	-0.5	-0.2	0.0	0.0
Of which: Employment rate	-0.9		-0.3	-0.4	-0.2	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	-0.1	0.0	0.0	0.0
Interaction effect (residual)	-0.3		-0.1	-0.1	0.0	0.0	0.0

France

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.3	8.8	8.5	8.8	8.9	9.0	9.1
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.8		0.1	0.3	0.6	0.8	0.8
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.1		0.0	0.0	0.0	0.0	0.1
Sector-specific composite indexation scenario	-0.3		0.0	-0.1	-0.2	-0.2	-0.3

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.7	1.9	2.0	2.3	2.4	2.5	2.6
of which on institutional care - baseline	0.5	1.1	1.1	1.3	1.5	1.6	1.6
of which on home care - baseline	0.2	0.7	0.7	0.8	0.9	0.9	0.9
of which on cash benefits - baseline	-0.1	0.1	0.1	0.1	0.1	0.1	0.1
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.2		0.2	0.5	0.9	1.5	2.2
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.1	0.1	0.1	0.1
Coverage convergence scenario	1.4		0.1	0.3	0.6	0.9	1.4
Cost convergence scenario	0.5		0.1	0.2	0.3	0.4	0.5
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	28%	6,196	6,679	7,353	7,689	7,849	7,919
Recipients: receiving institutional care	63%	888	960	1,196	1,331	1,407	1,448
receiving home care	42%	1,404	1,527	1,762	1,887	1,951	1,989
receiving cash benefits	-13%	460	448	437	432	416	400
Baseline aged 65+	60%	3,425	3,941	4,719	5,110	5,314	5,466
Recipients: receiving institutional care aged 65+	94%	628	700	947	1,086	1,169	1,217
receiving home care aged 65+	78%	833	960	1,214	1,352	1,428	1,481
receiving cash benefits aged 65+	:	0	0	0	0	0	0

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.9	4.8	4.4	4.1	4.1	4.0	3.9
Number of students (in thousands)							
Total	-16%	12,989	12,208	11,736	11,774	11,315	10,869
as % of population 5-24	-1.7	78.9	76.6	77.6	77.7	77.0	77.1
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.1		0.5	0.8	1.1	1.2	1.1

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.7	29.9	29.2	29.2	29.2	29.0	29.2
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	3.0		0.3	0.8	1.5	2.2	3.0
High life expectancy (+2 years)	0.8		0.0	0.2	0.4	0.6	0.8
Higher migration (+33%)	-0.8		-0.2	-0.3	-0.5	-0.7	-0.8
Lower migration (-33%)	0.9		0.1	0.4	0.7	0.9	0.9
Lower fertility (-20%)	1.2		0.0	-0.4	0.0	0.7	1.2
Higher employment rate of older workers (+10 pps)	-0.6		-0.3	-0.5	-0.5	-0.5	-0.6
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	0.0	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.4	0.6	0.7

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

11. CROATIA

Croatia							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.49	1.51	1.53	1.55	1.57	1.59
Life expectancy at birth							
males	9.3	74.9	76.7	78.8	80.8	82.6	84.2
females	7.7	81.2	82.9	84.5	86.1	87.5	88.9
Life expectancy at 65 (years)							
males	6.4	15.6	16.9	18.2	19.5	20.8	22.0
females	6.0	19.3	20.5	21.8	23.0	24.2	25.3
Net migration (thousands)	-4.4	14.5	2.0	4.8	6.8	8.3	10.1
Net migration as % of population in t-1	0.0	0.4	0.1	0.1	0.2	0.3	0.3
Population (million)	-0.8	3.9	3.7	3.5	3.3	3.1	3.0
share of prime-age population (25-54y)	-4.5	38.3	37.4	36.0	35.7	34.8	33.8
share of working-age population (20-64y)	-6.3	58.2	56.3	55.2	53.4	52.6	51.9
share of elderly population (+65y)	9.7	22.6	25.6	27.8	30.0	31.1	32.3
share of very elderly population (+80y)	7.6	5.5	6.3	9.1	10.4	11.7	13.1
share of very elderly population (+80y) in elderly population (+65y)	16.2	24.3	24.7	32.7	34.6	37.5	40.5
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.5	3.2	1.5	1.7	1.4	1.1	0.7
Employment (15-74y; growth rate)	-0.4	1.3	-0.5	-0.6	-0.7	-0.6	-0.6
Labour input: hours worked (growth rate)	-0.4	1.5	-0.5	-0.6	-0.7	-0.6	-0.6
Labour productivity per hour (growth rate)	1.9	1.8	2.1	2.2	2.1	1.7	1.2
TFP (growth rate)	1.2	1.5	1.1	1.5	1.4	1.1	0.8
capital deepening (contribution to labour productivity growth)	0.7	0.2	0.9	0.8	0.8	0.6	0.4
Potential GDP per capita (growth rate)	2.0	5.7	2.1	1.9	1.9	1.8	1.5
Potential GDP per worker (growth rate)	1.9	1.9	2.0	1.9	2.1	2.0	1.7
HICP (growth rate)	2.3	10.7	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	2.7	4.5	4.4	4.1	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-682	2,244	2,072	1,923	1,764	1,653	1,562
Working-age population (growth rate)	3.0	-3.6	-0.8	-0.7	-0.9	-0.6	-0.5
Labour force (20-64y; thousands)	-413	1,681	1,628	1,548	1,436	1,345	1,268
Participation rate (20-64y)	6.2	74.9	78.6	80.5	81.4	81.3	81.2
Participation rate (20-74y)	4.8	62.0	64.7	67.0	66.7	67.3	66.7
young (20-24y)	6.4	55.5	61.6	61.7	61.9	61.8	61.9
prime-age (25-54y)	4.1	86.0	88.7	89.8	90.2	90.1	90.1
older (55-64y)	12.4	53.0	57.2	63.5	64.3	65.0	65.4
oldest (65-74y)	5.0	5.0	7.4	9.0	10.0	10.0	10.0
Participation rate (20-64y) - female	8.4	70.5	75.0	77.4	78.8	79.0	78.9
Participation rate (20-74y) - female	7.6	57.2	60.2	63.1	63.4	64.6	64.7
young (20-24y)	5.5	48.6	53.9	54.1	54.1	54.1	54.1
prime-age (25-54y)	5.7	82.6	86.1	87.8	88.3	88.3	88.3
older (55-64y)	16.2	47.7	53.9	60.5	62.4	63.3	63.9
oldest (65-74y)	6.9	3.3	6.3	8.8	10.0	10.1	10.3
Participation rate (20-64y) - male	3.7	79.4	82.0	83.3	83.7	83.3	83.1
Participation rate (20-74y) - male	1.4	67.0	69.1	70.6	69.7	69.5	68.4
young (20-24y)	7.0	61.9	68.8	68.8	68.9	68.9	68.9
prime-age (25-54y)	2.3	89.3	91.1	91.5	91.7	91.6	91.6
older (55-64y)	7.8	58.8	60.6	66.5	66.1	66.5	66.6
oldest (65-74y)	2.8	6.9	8.7	9.2	10.0	9.8	9.7
Average labour market exit age (1)	0.8	62.9	63.4	63.7	63.7	63.7	63.7
male	0.4	63.3	63.6	63.7	63.7	63.7	63.7
female	1.1	62.5	63.2	63.7	63.7	63.7	63.7
Employment rate (20-64y)	6.1	70.0	73.7	75.3	76.3	76.2	76.1
Employment rate (20-74y)	4.7	57.9	60.7	62.7	62.5	63.1	62.6
Unemployment rate (20-64y)	-0.3	6.6	6.2	6.5	6.3	6.3	6.3
Unemployment rate (20-74y)	-0.3	6.6	6.2	6.4	6.2	6.2	6.2
Employment (20-64y; millions)	-0.4	1.6	1.5	1.4	1.3	1.3	1.2
Employment (20-74y; millions)	-0.4	1.6	1.6	1.5	1.4	1.3	1.2
share of young (20-24y)	-0.1	6.0	6.7	6.0	5.8	5.8	5.9
share of prime-age (25-54y)	-4.4	74.7	73.6	71.1	72.0	71.3	70.3
share of older (55-64y)	2.9	17.8	17.4	20.2	19.1	19.9	20.7
share of oldest (65-74y)	1.6	1.5	2.3	2.6	3.2	3.0	3.1
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.0	25.1	24.0	25.8	24.5	25.2	26.1
Old-age dependency ratio (3)	23.3	38.9	45.6	50.5	56.2	59.1	62.2
Total dependency ratio (4)	20.9	72.0	77.7	81.2	87.1	90.0	92.8
Total economic dependency ratio (5)	3.6	142.0	135.7	134.5	137.6	141.8	145.6
Economic old-age dependency ratio (20-64y) (6)	24.6	53.9	59.4	64.3	70.3	74.3	78.5
Economic old-age dependency ratio (20-74y) (7)	23.0	53.0	58.0	62.6	68.1	72.1	76.0

Croatia							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-0.2	9.0	10.1	9.6	9.1	8.8	8.8
Of which: Old-age and early pensions	0.7	6.2	7.2	7.0	6.9	6.9	6.9
Disability pensions	-0.9	1.4	1.3	1.0	0.7	0.5	0.5
Survivors' pensions	0.0	1.4	1.7	1.6	1.5	1.4	1.4
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	0.7	6.2	7.2	7.0	6.9	6.9	6.9
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	0.3	0.0	0.1	0.2	0.3	0.3	0.3
New old-age and early pensions, gross	0.0	0.1	0.1	0.2	0.2	0.1	0.1
Public pensions, contributions	0.9	5.7	6.1	6.5	6.6	6.5	6.6
Balance of the pension system (contributions - gross expenditure)	1.2	-3.3	-4.0	-3.1	-2.5	-2.3	-2.2
Public pension scheme, tax revenues	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	-133	1,228	1,204	1,180	1,149	1,116	1,095
Pensioners aged 65+ (1000 persons)	30	961	1,036	1,049	1,033	1,006	991
Share of pensioners below age 65 as % of all pensioners	-12.2	21.7	14.0	11.1	10.1	9.9	9.5
Benefit ratio (total public pensions, gross)	-5.6	29.7	32.4	29.7	26.9	25.1	24.1
Gross replacement rate at retirement (earnings-related public pensions)	-5.4	29.2	28.9	27.1	25.7	24.5	23.7
Average accrual rate (new earnings-related pensions)	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Average contributory period (new earnings-related pensions)	1.7	32.2	33.1	33.8	33.9	33.9	33.9
Contributors (public pensions, 1000 persons)	-364	1,613	1,602	1,515	1,415	1,323	1,249
Support ratio (contributors/100 pensioners, public pensions)	-17	131	133	128	123	119	114
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.7		0.0	0.2	0.4	0.5	0.7
Higher migration (+33%)	-0.2		-0.1	-0.2	-0.3	-0.3	-0.2
Lower migration (-33%)	0.2		0.1	0.2	0.3	0.3	0.2
Lower fertility (-20%)	0.8		0.0	0.0	0.1	0.5	0.8
Higher employment rate of older workers (+10 pps)	-0.7		-0.3	-0.5	-0.6	-0.7	-0.7
Higher TFP growth (+0.2 pps)	-0.3		0.0	-0.1	-0.1	-0.2	-0.3
Lower TFP growth (-0.2 pps)	0.2		0.0	0.0	0.1	0.2	0.2
Retirement age linked to increases in life expectancy	-1.3		0.0	-0.4	-0.8	-1.1	-1.3
Constant retirement age	0.2		0.1	0.1	0.2	0.2	0.2
Constant benefit ratio	0.9		0.0	0.0	0.1	0.5	0.9
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-0.2		1.1	0.6	0.1	-0.2	-0.2
Dependency ratio	4.6		1.6	2.7	3.7	4.2	4.6
Coverage ratio	-2.1		-0.9	-1.4	-1.9	-2.0	-2.1
Of which: Old-age	-0.7		-0.1	-0.2	-0.5	-0.7	-0.7
Early-age	-5.7		-3.4	-5.3	-5.5	-5.6	-5.7
Cohort effect	-3.9		-1.5	-2.2	-3.3	-3.6	-3.9
Benefit ratio	-1.6		1.1	0.3	-0.6	-1.2	-1.6
Labour market ratio	-1.0		-0.6	-0.8	-1.0	-1.0	-1.0
Of which: Employment rate	-0.8		-0.5	-0.7	-0.8	-0.8	-0.8
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		-0.1	-0.1	-0.2	-0.1	-0.2
Interaction effect (residual)	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-0.2		1.1	-0.5	-0.5	-0.3	0.0
Dependency ratio	4.6		1.6	1.1	1.1	0.5	0.5
Coverage ratio	-2.1		-0.9	-0.5	-0.5	-0.1	-0.1
Of which: Old-age	-0.7		-0.1	-0.2	-0.3	-0.1	-0.1
Early-age	-5.7		-3.4	-2.0	-0.2	-0.1	-0.1
Cohort effect	-3.9		-1.5	-0.7	-1.2	-0.2	-0.4
Benefit ratio	-1.6		1.1	-0.8	-0.9	-0.6	-0.4
Labour market ratio	-1.0		-0.6	-0.2	-0.2	0.0	0.0
Of which: Employment rate	-0.8		-0.5	-0.2	-0.1	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		-0.1	0.0	-0.1	0.0	0.0
Interaction effect (residual)	-0.2		-0.1	0.0	0.0	0.0	0.0

Croatia**Health care**

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.7	5.8	5.9	6.2	6.3	6.4	6.5
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.4		0.4	0.8	1.1	1.3	1.4
Demographic scenario	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Healthy ageing scenario	-0.3		-0.1	-0.1	-0.2	-0.2	-0.3
No healthy ageing scenario	0.4		0.1	0.2	0.2	0.3	0.4
Labour intensity scenario	-0.1		-0.4	-0.4	-0.3	-0.2	-0.1
Sector-specific composite indexation scenario	0.0		0.0	0.0	0.0	0.0	0.0

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	0.5	0.5	0.6	0.6	0.6	0.6
of which on institutional care - baseline	0.1	0.3	0.3	0.3	0.3	0.3	0.3
of which on home care - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
of which on cash benefits - baseline	0.1	0.2	0.2	0.3	0.3	0.3	0.3
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.2		0.1	0.2	0.4	0.7	1.2
Healthy ageing scenario	-0.1		0.0	0.0	0.0	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.0	0.1	0.1
Coverage convergence scenario	0.3		0.0	0.1	0.1	0.2	0.3
Cost convergence scenario	0.8		0.1	0.2	0.3	0.5	0.8
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-2%	371	378	386	377	368	361
Recipients: receiving institutional care	-3%	14	14	15	14	14	14
receiving home care	-3%	5	5	5	5	5	5
receiving cash benefits	-3%	118	121	124	120	118	115
Baseline aged 65+	20%	230	251	271	276	275	275
Recipients: receiving institutional care aged 65+	21%	8	9	10	10	10	10
receiving home care aged 65+	21%	3	3	4	4	4	4
receiving cash benefits aged 65+	21%	72	79	85	87	87	86

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.7	3.4	3.1	2.8	2.7	2.8	2.7
Number of students (in thousands)							
Total	-38%	602	535	467	426	402	375
as % of population 5-24	-3.2	78.2	75.1	75.0	75.4	75.4	75.1
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.3		0.0	0.2	0.3	0.3	0.3

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.2	18.8	19.7	19.2	18.8	18.6	18.7
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.5		0.5	1.0	1.6	2.0	2.5
High life expectancy (+2 years)	0.5		0.0	0.1	0.3	0.4	0.5
Higher migration (+33%)	-0.3		-0.2	-0.3	-0.4	-0.4	-0.3
Lower migration (-33%)	0.4		0.2	0.3	0.4	0.5	0.4
Lower fertility (-20%)	0.7		0.0	-0.3	-0.2	0.3	0.7
Higher employment rate of older workers (+10 pps)	-0.7		-0.3	-0.5	-0.6	-0.7	-0.7
Higher TFP growth (+0.2 pps)	-0.3		0.0	-0.1	-0.1	-0.2	-0.3
Lower TFP growth (-0.2 pps)	0.2		0.0	0.0	0.1	0.1	0.2

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

12. ITALY

Italy							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.24	1.28	1.33	1.37	1.41	1.45
Life expectancy at birth							
males	6.0	81.1	82.4	83.7	85.0	86.1	87.1
females	5.5	85.5	86.8	87.9	89.0	90.1	91.0
Life expectancy at 65 (years)							
males	4.5	19.5	20.5	21.4	22.3	23.2	24.0
females	4.5	22.7	23.7	24.7	25.5	26.4	27.2
Net migration (thousands)	-108.3	348.5	270.2	270.8	239.8	233.8	240.1
Net migration as % of population in t-1	-0.1	0.6	0.5	0.5	0.4	0.4	0.4
Population (million)	-5.8	59.0	58.8	58.5	57.4	55.2	53.3
share of prime-age population (25-54y)	-5.5	38.6	35.7	35.3	34.9	34.0	33.1
share of working-age population (20-64y)	-7.2	58.6	57.0	53.1	51.1	51.7	51.4
share of elderly population (+65y)	9.8	23.9	27.4	32.3	33.7	33.4	33.7
share of very elderly population (+80y)	6.9	7.6	8.7	10.3	13.7	15.3	14.5
share of very elderly population (+80y) in elderly population (+65y)	11.1	32.0	31.9	32.1	40.7	45.9	43.1
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	0.9	0.6	1.4	1.4	1.3	1.1
Employment (15-74y; growth rate)	-0.1	0.3	-0.1	-0.2	-0.1	0.0	-0.2
Labour input: hours worked (growth rate)	-0.1	0.4	-0.1	-0.2	-0.1	0.0	-0.2
Labour productivity per hour (growth rate)	1.2	0.5	0.7	1.6	1.5	1.4	1.2
TFP (growth rate)	0.8	0.3	0.4	1.1	1.0	0.9	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.2	0.2	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.3	1.1	0.6	1.4	1.7	1.8	1.4
Potential GDP per worker (growth rate)	1.2	0.6	0.7	1.6	1.5	1.4	1.2
HICP (growth rate)	2.3	8.7	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.2	4.5	4.4	4.1	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-7,209	34,605	33,519	31,034	29,354	28,539	27,396
Working-age population (growth rate)	-0.3	-0.3	-0.6	-0.9	-0.4	-0.2	-0.6
Labour force (20-64y; thousands)	-3,487	24,377	24,079	22,914	22,114	21,636	20,890
Participation rate (20-64y)	5.8	70.4	71.8	73.8	75.3	75.8	76.3
Participation rate (20-74y)	7.1	60.3	60.8	61.4	64.5	66.5	67.4
young (20-24y)	0.4	45.2	45.4	45.8	45.5	45.4	45.6
prime-age (25-54y)	1.8	78.6	79.1	79.8	80.6	80.5	80.4
older (55-64y)	18.4	57.9	64.5	67.5	70.3	74.2	76.3
oldest (65-74y)	23.7	9.4	14.7	18.5	21.5	27.0	33.0
Participation rate (20-64y) - female	7.4	60.5	63.2	65.5	67.0	67.6	68.0
Participation rate (20-74y) - female	9.1	51.0	52.7	53.9	56.8	59.0	60.1
young (20-24y)	0.5	37.5	37.9	38.2	37.9	37.9	38.0
prime-age (25-54y)	3.2	68.6	69.7	70.9	72.0	71.9	71.8
older (55-64y)	20.9	47.6	57.0	60.4	62.7	66.9	68.5
oldest (65-74y)	24.8	6.0	11.3	16.7	19.6	24.7	30.8
Participation rate (20-64y) - male	3.5	80.4	80.3	81.8	83.1	83.3	83.8
Participation rate (20-74y) - male	4.4	69.7	69.0	68.8	71.8	73.5	74.1
young (20-24y)	0.3	52.1	52.3	52.6	52.3	52.3	52.4
prime-age (25-54y)	-0.4	88.6	88.0	88.0	88.4	88.3	88.1
older (55-64y)	14.9	68.7	72.4	75.0	78.0	81.1	83.6
oldest (65-74y)	22.1	13.1	18.5	20.5	23.6	29.3	35.2
Average labour market exit age (1)	4.5	64.2	65.4	66.2	66.9	67.8	68.8
male	4.6	64.0	65.2	66.0	66.7	67.6	68.6
female	4.5	64.5	65.6	66.3	67.1	68.0	69.0
Employment rate (20-64y)	6.5	64.8	65.3	67.9	70.4	70.9	71.3
Employment rate (20-74y)	7.8	55.6	55.5	56.7	60.4	62.4	63.3
Unemployment rate (20-64y)	-1.5	8.0	9.1	8.1	6.5	6.4	6.4
Unemployment rate (20-74y)	-1.8	7.8	8.9	7.7	6.3	6.1	6.0
Employment (20-64y; millions)	-2.9	22.4	21.9	21.1	20.7	20.2	19.5
Employment (20-74y; millions)	-1.2	23.1	23.0	22.7	22.2	22.0	21.8
share of young (20-24y)	-0.4	4.5	4.7	4.2	4.0	4.3	4.1
share of prime-age (25-54y)	-11.0	71.5	65.4	66.8	67.8	64.2	60.6
share of older (55-64y)	3.7	21.2	25.0	21.9	21.1	23.5	24.9
share of oldest (65-74y)	7.7	2.7	4.9	7.1	7.0	8.1	10.4
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.4	25.7	28.2	25.0	23.7	25.4	27.0
Old-age dependency ratio (3)	24.7	40.8	48.0	60.8	66.0	64.7	65.5
Total dependency ratio (4)	23.8	70.6	75.3	88.5	95.7	93.6	94.4
Total economic dependency ratio (5)	-12.0	156.0	155.3	158.0	158.4	150.9	144.0
Economic old-age dependency ratio (20-64y) (6)	20.0	60.0	68.1	81.7	86.0	82.2	79.9
Economic old-age dependency ratio (20-74y) (7)	13.2	58.3	64.8	75.9	80.0	75.6	71.6

Italy

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-1.9	15.6	16.6	17.1	15.5	13.7	13.7
Of which: Old-age and early pensions	-1.1	12.9	14.0	14.4	13.0	11.6	11.8
Disability pensions	0.0	0.3	0.3	0.3	0.3	0.3	0.3
Survivors' pensions	-0.8	2.3	2.4	2.4	2.1	1.8	1.5
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	-1.2	12.7	13.7	14.0	12.6	11.2	11.4
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.6	0.7	0.8	0.5	0.6	0.7
Public pensions, contributions	0.4	10.9	11.2	11.2	11.3	11.4	11.3
Balance of the pension system (contributions - gross expenditure)	2.3	-4.7	-5.5	-5.8	-4.2	-2.3	-2.4
Public pension scheme, tax revenues	-0.4	3.0	3.2	3.2	2.9	2.6	2.6
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	697	14,760	15,755	17,222	17,523	16,406	15,457
Pensioners aged 65+ (1000 persons)	2,015	12,729	14,083	16,153	16,703	15,622	14,744
Share of pensioners below age 65 as % of all pensioners	-9.1	13.8	10.6	6.2	4.7	4.8	4.6
Benefit ratio (total public pensions, gross)	-13.6	69.3	70.6	64.8	56.6	53.2	55.7
Gross replacement rate at retirement (earnings-related public pensions)	-7.1	59.3	54.8	49.6	46.2	49.8	52.3
Average accrual rate (new earnings-related pensions)	-0.1	1.8	1.8	1.7	1.7	1.7	1.7
Average contributory period (new earnings-related pensions)	2.2	35.5	34.6	34.6	34.4	36.0	37.7
Contributors (public pensions, 1000 persons)	-644	24,198	24,610	24,203	23,964	24,017	23,554
Support ratio (contributors/100 pensioners, public pensions)	-12	164	156	141	137	146	152
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	-0.1		0.0	0.0	0.1	0.1	-0.1
Higher migration (+33%)	-0.6		-0.2	-0.4	-0.6	-0.6	-0.6
Lower migration (-33%)	0.7		0.2	0.4	0.7	0.8	0.7
Lower fertility (-20%)	0.6		0.0	0.0	0.1	0.4	0.6
Higher employment rate of older workers (+10 pps)	0.3		-1.2	-0.7	0.3	0.5	0.3
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	-0.1	-0.3	-0.4
Lower TFP growth (-0.2 pps)	0.6		0.0	0.2	0.5	0.6	0.6
Retirement age linked to increases in life expectancy	:		:	:	:	:	:
Constant retirement age	1.2		0.3	0.9	0.7	1.0	1.2
Constant benefit ratio	1.5		0.0	0.0	1.4	2.2	1.5
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-1.9		1.1	1.5	-0.1	-1.8	-1.9
Dependency ratio	8.3		2.7	7.0	8.4	8.1	8.3
Coverage ratio	-3.0		-1.0	-2.2	-2.3	-2.6	-3.0
Of which: Old-age	-1.4		-0.5	-0.8	-0.7	-1.0	-1.4
Early-age	-12.3		-2.8	-6.9	-10.1	-11.5	-12.3
Cohort effect	-7.6		-2.1	-7.5	-9.0	-7.5	-7.6
Benefit ratio	-3.8		0.0	-1.3	-3.5	-4.4	-3.8
Labour market ratio	-2.8		-0.5	-1.5	-2.1	-2.4	-2.8
Of which: Employment rate	-1.6		-0.1	-0.8	-1.4	-1.5	-1.6
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-1.3		-0.4	-0.7	-0.7	-0.9	-1.3
Interaction effect (residual)	-0.5		-0.1	-0.4	-0.5	-0.5	-0.5
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-1.9		1.1	0.4	-1.6	-1.7	-0.1
Dependency ratio	8.3		2.7	4.3	1.4	-0.3	0.2
Coverage ratio	-3.0		-1.0	-1.2	-0.1	-0.3	-0.4
Of which: Old-age	-1.4		-0.5	-0.4	0.1	-0.3	-0.4
Early-age	-12.3		-2.8	-4.1	-3.2	-1.4	-0.8
Cohort effect	-7.6		-2.1	-5.4	-1.5	1.5	-0.1
Benefit ratio	-3.8		0.0	-1.3	-2.2	-0.9	0.6
Labour market ratio	-2.8		-0.5	-1.0	-0.6	-0.3	-0.4
Of which: Employment rate	-1.6		-0.1	-0.7	-0.6	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-1.3		-0.4	-0.4	0.0	-0.2	-0.4
Interaction effect (residual)	-0.5		-0.1	-0.3	-0.1	0.0	0.0

Italy

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	6.3	5.9	6.3	6.5	6.5	6.4
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.7		0.1	0.3	0.5	0.7	0.7
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Healthy ageing scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
No healthy ageing scenario	0.3		0.1	0.2	0.2	0.3	0.3
Labour intensity scenario	-0.3		0.0	0.1	0.1	-0.1	-0.3
Sector-specific composite indexation scenario	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.5	1.6	1.6	1.8	2.1	2.2	2.1
of which on institutional care - baseline	0.1	0.4	0.4	0.4	0.5	0.5	0.5
of which on home care - baseline	0.1	0.3	0.3	0.4	0.5	0.5	0.5
of which on cash benefits - baseline	0.3	0.9	0.8	1.0	1.1	1.2	1.2
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.1	0.3	0.5	0.8	1.0
Healthy ageing scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.1	0.2
Coverage convergence scenario	0.1		0.0	0.0	0.1	0.1	0.1
Cost convergence scenario	0.8		0.1	0.2	0.4	0.6	0.8
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	19%	3,337	3,554	3,871	4,204	4,240	3,962
Recipients: receiving institutional care	41%	448	484	548	640	685	634
receiving home care	38%	956	1,038	1,180	1,357	1,422	1,322
receiving cash benefits	31%	1,935	2,063	2,296	2,627	2,739	2,537
Baseline aged 65+	40%	2,292	2,547	2,997	3,398	3,455	3,219
Recipients: receiving institutional care aged 65+	60%	353	392	467	565	612	565
receiving home care aged 65+	55%	759	845	1,006	1,196	1,268	1,174
receiving cash benefits aged 65+	53%	1,413	1,567	1,852	2,210	2,340	2,157

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.8	3.8	3.4	3.1	3.2	3.1	3.0
Number of students (in thousands)							
Total	-25%	9,115	8,238	7,411	7,452	7,220	6,804
as % of population 5-24	-0.6	81.8	80.2	81.6	82.2	81.2	81.2
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.6		0.3	0.4	0.5	0.6	0.6

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-2.0	27.3	27.6	28.3	27.3	25.6	25.3
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	1.8		0.2	0.6	1.0	1.5	1.8
High life expectancy (+2 years)	0.0		0.0	0.0	0.1	0.2	0.0
Higher migration (+33%)	-0.8		-0.2	-0.5	-0.8	-0.9	-0.8
Lower migration (-33%)	1.0		0.2	0.5	0.9	1.0	1.0
Lower fertility (-20%)	0.6		0.0	-0.3	-0.2	0.2	0.6
Higher employment rate of older workers (+10 pps)	0.2		-1.2	-0.7	0.2	0.4	0.2
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	-0.1	-0.3	-0.4
Lower TFP growth (-0.2 pps)	0.6		0.0	0.2	0.5	0.6	0.6

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

13. CYPRUS

Cyprus

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.37	1.40	1.43	1.46	1.49	1.51
Life expectancy at birth							
males	6.3	80.5	81.8	83.2	84.4	85.6	86.8
females	5.7	84.6	85.8	87.0	88.1	89.2	90.3
Life expectancy at 65 (years)							
males	4.6	19.1	19.9	20.9	21.9	22.8	23.7
females	4.6	21.8	22.6	23.6	24.6	25.5	26.4
Net migration (thousands)	-15.9	18.2	0.0	1.0	1.7	2.1	2.3
Net migration as % of population in t-1	-1.8	2.0	0.0	0.1	0.2	0.2	0.2
Population (million)	0.1	0.9	1.0	1.0	1.0	1.0	1.0
share of prime-age population (25-54y)	-7.8	43.7	42.5	40.4	37.5	36.8	35.9
share of working-age population (20-64y)	-9.4	62.1	59.6	58.4	57.3	53.9	52.6
share of elderly population (+65y)	12.6	16.6	19.1	21.5	24.1	27.8	29.2
share of very elderly population (+80y)	7.8	4.0	5.1	6.8	8.3	9.3	11.8
share of very elderly population (+80y) in elderly population (+65y)	16.5	23.9	26.5	31.7	34.3	33.4	40.4
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.6	3.5	1.6	1.9	1.5	1.1	1.3
Employment (15-74y; growth rate)	0.1	1.9	-0.2	0.2	0.0	-0.2	0.0
Labour input: hours worked (growth rate)	0.1	2.2	-0.2	0.2	0.0	-0.2	0.0
Labour productivity per hour (growth rate)	1.5	1.3	1.8	1.8	1.5	1.4	1.2
TFP (growth rate)	0.9	0.9	0.7	1.1	1.0	0.9	0.8
capital deepening (contribution to labour productivity growth)	0.6	0.4	1.1	0.6	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.4	1.8	1.3	1.8	1.4	1.0	1.3
Potential GDP per worker (growth rate)	1.5	1.6	1.8	1.8	1.5	1.4	1.2
HICP (growth rate)	2.2	8.1	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.2	3.0	4.6	4.4	4.1	4.0	4.0
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-43	568	572	569	563	535	525
Working-age population (growth rate)	-1.5	1.5	-0.1	0.1	-0.3	-0.5	0.0
Labour force (20-64y; thousands)	-21	473	480	480	474	457	452
Participation rate (20-64y)	3.0	83.2	84.0	84.3	84.2	85.4	86.1
Participation rate (20-74y)	0.6	74.4	73.6	74.0	73.3	72.8	75.0
young (20-24y)	3.3	68.8	71.8	72.1	72.3	72.3	72.1
prime-age (25-54y)	1.9	89.4	90.5	90.7	91.2	91.4	91.4
older (55-64y)	8.1	68.0	65.4	69.2	70.4	72.8	76.1
oldest (65-74y)	6.9	16.5	13.0	14.3	18.3	20.7	23.4
Participation rate (20-64y) - female	4.3	77.7	79.4	79.9	79.8	81.2	82.0
Participation rate (20-74y) - female	2.0	68.8	69.2	69.6	68.5	68.3	70.8
young (20-24y)	1.2	65.4	66.3	66.6	66.9	66.7	66.6
prime-age (25-54y)	2.5	85.0	86.4	86.7	87.3	87.5	87.5
older (55-64y)	15.3	56.8	59.3	64.2	65.6	68.5	72.1
oldest (65-74y)	11.5	9.5	9.5	12.1	16.0	18.2	21.0
Participation rate (20-64y) - male	1.1	89.0	88.9	89.1	88.6	89.6	90.2
Participation rate (20-74y) - male	-1.1	80.4	78.2	78.7	78.3	77.3	79.2
young (20-24y)	5.2	72.3	77.3	77.5	77.6	77.5	77.4
prime-age (25-54y)	0.8	94.3	94.9	94.7	95.0	95.1	95.1
older (55-64y)	0.7	79.6	72.0	75.0	75.7	77.4	80.3
oldest (65-74y)	2.1	24.0	16.6	16.8	21.1	23.5	26.1
Average labour market exit age (1)	3.0	63.7	64.0	64.6	65.2	65.9	66.7
male	2.7	64.0	64.3	64.8	65.4	66.0	66.7
female	3.2	63.5	63.8	64.4	65.1	65.9	66.7
Employment rate (20-64y)	3.3	77.5	77.4	78.2	78.9	80.1	80.8
Employment rate (20-74y)	1.1	69.4	67.9	68.8	68.8	68.4	70.5
Unemployment rate (20-64y)	-0.6	6.8	7.8	7.3	6.3	6.2	6.2
Unemployment rate (20-74y)	-0.7	6.7	7.7	7.1	6.1	6.0	6.0
Employment (20-64y; millions)	0.0	0.4	0.4	0.4	0.4	0.4	0.4
Employment (20-74y; millions)	0.0	0.5	0.5	0.5	0.5	0.5	0.4
share of young (20-24y)	-0.6	7.6	7.3	7.4	7.7	7.0	7.0
share of prime-age (25-54y)	-5.2	73.9	75.6	72.8	68.3	69.3	68.7
share of older (55-64y)	3.1	15.4	14.3	16.9	19.6	17.9	18.5
share of oldest (65-74y)	2.7	3.1	2.7	3.0	4.3	5.8	5.8
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	2.8	19.0	18.5	20.8	24.1	22.0	21.8
Old-age dependency ratio (3)	28.8	26.7	32.1	36.7	42.1	51.5	55.5
Total dependency ratio (4)	28.8	61.1	67.8	71.2	74.5	85.5	90.0
Total economic dependency ratio (5)	20.0	101.5	110.9	112.3	111.6	118.3	121.6
Economic old-age dependency ratio (20-64y) (6)	31.3	31.1	38.6	43.8	48.7	58.1	62.4
Economic old-age dependency ratio (20-74y) (7)	28.7	30.2	37.6	42.5	46.6	54.7	58.8

Cyprus

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	3.6	8.2	9.3	10.4	11.0	12.0	11.8
Of which: Old-age and early pensions	2.7	6.9	7.5	8.4	8.9	9.8	9.6
Disability pensions	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Survivors' pensions	0.9	1.2	1.6	1.9	2.0	2.1	2.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	2.9	6.6	7.2	8.1	8.6	9.6	9.5
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.3	0.4	0.4	0.4	0.5	0.3
Public pensions, contributions	1.9	8.2	9.0	10.0	10.0	10.0	10.0
Balance of the pension system (contributions - gross expenditure)	-1.8	0.0	-0.3	-0.5	-1.0	-2.0	-1.8
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	119	173	204	243	280	310	291
Pensioners aged 65+ (1000 persons)	128	155	192	231	269	301	283
Share of pensioners below age 65 as % of all pensioners	-7.5	10.3	5.7	4.6	4.0	3.0	2.8
Benefit ratio (total public pensions, gross)	-7.9	57.2	56.1	53.0	49.1	47.4	49.3
Gross replacement rate at retirement (earnings-related public pensions)	11.5	37.5	46.8	45.1	41.4	47.8	49.0
Average accrual rate (new earnings-related pensions)	-0.1	1.3	1.3	1.2	1.2	1.2	1.2
Average contributory period (new earnings-related pensions)	:	:	:	:	:	:	:
Contributors (public pensions, 1000 persons)	-25	556	543	544	550	538	531
Support ratio (contributors/100 pensioners, public pensions)	-140	322	266	224	196	174	182
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.1		0.0	0.0	0.0	0.2	0.1
Higher migration (+33%)	-1.2		-0.3	-0.6	-1.0	-1.3	-1.2
Lower migration (-33%)	1.8		0.3	0.7	1.2	1.7	1.8
Lower fertility (-20%)	0.8		0.0	0.0	0.2	0.5	0.8
Higher employment rate of older workers (+10 pps)	-0.3		-0.2	-0.3	-0.4	-0.5	-0.3
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.2	0.3	0.4
Retirement age linked to increases in life expectancy	:		:	:	:	:	:
Constant retirement age	2.5		0.1	0.4	1.4	2.4	2.5
Constant benefit ratio	2.1		0.0	0.4	1.7	2.4	2.1
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	3.6		1.1	2.2	2.8	3.8	3.6
Dependency ratio	7.8		1.7	3.0	4.5	6.9	7.8
Coverage ratio	-1.6		-0.2	0.2	0.4	-0.2	-1.6
Of which: Old-age	-0.8		0.2	0.8	1.0	0.5	-0.8
Early-age	-7.5		-3.2	-4.9	-5.6	-6.3	-7.5
Cohort effect	-5.8		-1.5	-1.4	-2.1	-5.1	-5.8
Benefit ratio	-1.5		-0.4	-0.8	-1.7	-2.0	-1.5
Labour market ratio	-0.8		0.1	-0.1	-0.3	-0.7	-0.8
Of which: Employment rate	-0.5		0.0	-0.1	-0.2	-0.4	-0.5
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.3		0.0	0.0	-0.1	-0.3	-0.3
Interaction effect (residual)	-0.3		-0.1	-0.1	-0.1	-0.3	-0.3
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	3.6		1.1	1.1	0.6	1.0	-0.2
Dependency ratio	7.8		1.7	1.3	1.5	2.4	0.9
Coverage ratio	-1.6		-0.2	0.4	0.2	-0.6	-1.4
Of which: Old-age	-0.8		0.2	0.5	0.3	-0.5	-1.4
Early-age	-7.5		-3.2	-1.7	-0.6	-0.7	-1.2
Cohort effect	-5.8		-1.5	0.1	-0.7	-3.0	-0.7
Benefit ratio	-1.5		-0.4	-0.5	-0.8	-0.4	0.5
Labour market ratio	-0.8		0.1	-0.1	-0.2	-0.4	-0.1
Of which: Employment rate	-0.5		0.0	-0.1	-0.1	-0.2	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.3		0.0	0.0	-0.1	-0.2	0.0
Interaction effect (residual)	-0.3		-0.1	0.0	-0.1	-0.1	-0.1

Cyprus

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.8	7.5	7.6	7.9	8.1	8.2	8.3
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.1		0.3	0.6	0.9	1.1	1.1
Demographic scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
Healthy ageing scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.2	0.2
Labour intensity scenario	0.6		0.1	0.2	0.1	0.4	0.6
Sector-specific composite indexation scenario	0.0		0.0	0.0	0.0	0.0	0.0

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	0.2	0.2	0.2	0.3	0.3	0.3
of which on institutional care - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
of which on home care - baseline	0.1	0.1	0.1	0.1	0.1	0.1	0.2
of which on cash benefits - baseline	0.0	0.1	0.1	0.1	0.1	0.2	0.2
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	3.5		0.1	0.2	0.5	1.3	3.5
Healthy ageing scenario	0.0		0.0	0.0	0.0	0.0	0.0
No healthy ageing scenario	0.0		0.0	0.0	0.0	0.0	0.0
Coverage convergence scenario	0.1		0.0	0.0	0.0	0.0	0.1
Cost convergence scenario	2.3		0.1	0.2	0.4	1.0	2.3
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	61%	65	74	83	90	97	105
Recipients: receiving institutional care	102%	9	11	13	14	16	18
receiving home care	127%	10	12	15	18	20	23
receiving cash benefits	56%	6	7	8	9	9	10
Baseline aged 65+	122%	35	43	52	60	69	78
Recipients: receiving institutional care aged 65+	154%	6	8	10	12	13	16
receiving home care aged 65+	157%	8	10	13	16	18	21
receiving cash benefits aged 65+	116%	3	4	5	6	6	7

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.5	5.0	4.9	4.9	4.4	4.4	4.5
Number of students (in thousands)							
Total	-11%	164	162	160	148	146	146
as % of population 5-24	-2.5	79.4	76.8	76.3	75.2	77.0	76.9
Higher enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.0		0.4	0.8	1.2	1.0	1.0

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	4.1	20.9	22.0	23.4	23.7	24.9	25.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.6		0.3	0.8	1.5	2.4	4.6
High life expectancy (+2 years)	0.2		0.0	0.0	0.0	0.2	0.2
Higher migration (+33%)	-1.3		-0.4	-0.8	-1.0	-1.4	-1.3
Lower migration (-33%)	2.0		0.4	0.9	1.3	1.9	2.0
Lower fertility (-20%)	0.2		0.0	-0.7	-0.4	0.0	0.2
Higher employment rate of older workers (+10 pps)	-0.3		-0.2	-0.3	-0.4	-0.5	-0.3
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.2	0.3	0.4

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

14. LATVIA

Latvia

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.53	1.59	1.63	1.66	1.68	1.70
Life expectancy at birth							
males	12.2	70.3	72.6	75.4	78.0	80.4	82.5
females	8.6	79.8	81.5	83.4	85.2	86.9	88.4
Life expectancy at 65 (years)							
males	7.4	14.1	15.5	17.1	18.6	20.1	21.5
females	6.4	19.0	20.3	21.7	23.0	24.2	25.4
Net migration (thousands)	-31.0	32.9	-7.4	-2.4	-0.4	0.2	1.9
Net migration as % of population in t-1	-1.6	1.7	-0.4	-0.2	0.0	0.0	0.1
Population (million)	-0.6	1.9	1.7	1.6	1.5	1.4	1.3
share of prime-age population (25-54y)	-6.7	39.5	36.5	34.6	32.3	33.5	32.8
share of working-age population (20-64y)	-6.8	58.0	55.8	54.9	51.6	48.2	51.2
share of elderly population (+65y)	10.3	20.9	23.9	27.3	30.3	33.3	31.2
share of very elderly population (+80y)	8.9	6.0	6.3	8.5	10.5	12.0	15.0
share of very elderly population (+80y) in elderly population (+65y)	19.0	28.9	26.5	31.2	34.5	36.1	47.9
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	1.7	1.4	1.2	0.4	0.9	0.9
Employment (15-74y; growth rate)	-1.0	-0.4	-1.6	-1.0	-1.6	-0.7	-0.3
Labour input: hours worked (growth rate)	-1.0	-0.2	-1.7	-1.0	-1.6	-0.7	-0.3
Labour productivity per hour (growth rate)	2.1	1.9	3.1	2.2	2.0	1.6	1.2
TFP (growth rate)	1.3	1.0	1.8	1.4	1.3	1.0	0.8
capital deepening (contribution to labour productivity growth)	0.8	0.9	1.4	0.8	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.9	1.7	2.6	2.1	1.2	1.8	1.5
Potential GDP per worker (growth rate)	2.1	2.1	3.1	2.2	2.0	1.6	1.2
HICP (growth rate)	2.4	17.2	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.8	2.3	3.6	3.8	4.0	4.0	4.0
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-451	1,094	975	867	753	652	643
Working-age population (growth rate)	0.2	-0.4	-1.5	-1.2	-1.7	-0.5	-0.3
Labour force (20-64y; thousands)	-369	905	806	717	624	548	536
Participation rate (20-64y)	0.6	82.7	82.7	82.7	82.8	84.1	83.3
Participation rate (20-74y)	-1.6	73.0	69.1	68.9	67.7	66.9	71.4
young (20-24y)	3.2	67.4	70.1	71.3	70.7	70.0	70.5
prime-age (25-54y)	1.2	87.7	88.0	88.2	89.2	89.0	88.9
older (55-64y)	0.9	73.7	73.5	74.0	72.5	74.3	74.6
oldest (65-74y)	-11.7	22.8	10.8	11.0	11.1	9.8	11.1
Participation rate (20-64y) - female	0.1	79.9	79.4	79.0	79.4	80.8	80.0
Participation rate (20-74y) - female	-0.4	68.7	64.5	64.2	63.5	63.2	68.4
young (20-24y)	1.8	61.1	62.5	63.5	63.0	62.3	62.9
prime-age (25-54y)	1.3	84.4	84.4	84.9	85.9	85.8	85.7
older (55-64y)	-1.0	73.9	73.6	71.5	70.5	72.9	73.0
oldest (65-74y)	-9.7	20.5	10.7	10.8	10.6	9.4	10.8
Participation rate (20-64y) - male	0.7	85.6	86.0	86.2	86.0	87.1	86.3
Participation rate (20-74y) - male	-3.6	77.8	74.1	73.7	71.7	70.3	74.2
young (20-24y)	4.3	73.4	77.4	78.4	77.8	77.1	77.6
prime-age (25-54y)	0.9	90.9	91.5	91.3	92.2	91.9	91.8
older (55-64y)	2.6	73.4	73.3	76.5	74.4	75.7	76.0
oldest (65-74y)	-15.1	26.4	11.1	11.2	11.8	10.2	11.3
Average labour market exit age (1)	0.7	64.2	64.9	64.9	64.9	64.9	64.9
male	0.7	64.2	64.9	64.9	64.9	64.9	64.9
female	0.7	64.2	64.9	64.9	64.9	64.9	64.9
Employment rate (20-64y)	1.0	77.0	77.1	77.0	77.5	78.7	78.0
Employment rate (20-74y)	-1.2	68.2	64.6	64.3	63.4	62.7	66.9
Unemployment rate (20-64y)	-0.5	6.9	6.8	6.9	6.5	6.4	6.5
Unemployment rate (20-74y)	-0.3	6.7	6.6	6.7	6.3	6.3	6.3
Employment (20-64y; millions)	-0.3	0.8	0.8	0.7	0.6	0.5	0.5
Employment (20-74y; millions)	-0.4	0.9	0.8	0.7	0.6	0.5	0.5
share of young (20-24y)	2.4	5.5	7.7	8.5	6.8	7.5	7.9
share of prime-age (25-54y)	-1.8	68.5	67.8	65.4	65.3	71.2	66.7
share of older (55-64y)	2.0	20.7	21.4	22.8	24.3	17.8	22.7
share of oldest (65-74y)	-2.6	5.3	3.1	3.2	3.6	3.5	2.7
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.6	24.2	24.5	26.0	28.5	20.6	25.8
Old-age dependency ratio (3)	25.0	36.0	42.8	49.8	58.8	69.0	61.0
Total dependency ratio (4)	23.0	72.3	79.1	82.3	94.0	107.4	95.4
Total economic dependency ratio (5)	31.9	112.0	125.1	129.1	141.3	154.2	144.0
Economic old-age dependency ratio (20-64y) (6)	34.5	41.0	52.3	61.3	72.0	84.0	75.5
Economic old-age dependency ratio (20-74y) (7)	34.7	38.8	50.7	59.4	69.4	81.0	73.5

Latvia

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-1.7	7.2	6.9	6.5	6.3	6.1	5.4
Of which: Old-age and early pensions	-1.7	6.3	6.2	5.8	5.6	5.5	4.7
Disability pensions	-0.1	0.7	0.6	0.6	0.6	0.5	0.6
Survivors' pensions	0.0	0.1	0.2	0.1	0.1	0.1	0.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	-1.7	6.3	6.2	5.8	5.6	5.4	4.7
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	2.1	0.1	0.2	0.5	1.2	1.9	2.2
New old-age and early pensions, gross	-0.1	0.2	0.2	0.1	0.1	0.1	0.1
Public pensions, contributions	-0.8	7.9	7.3	7.2	7.2	7.2	7.1
Balance of the pension system (contributions - gross expenditure)	0.9	0.8	0.4	0.7	0.9	1.0	1.7
Public pension scheme, tax revenues	-0.1	0.3	0.3	0.2	0.2	0.2	0.2
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	-68	543	541	538	540	535	474
Pensioners aged 65+ (1000 persons)	-23	413	427	434	446	455	391
Share of pensioners below age 65 as % of all pensioners	-6.2	23.8	21.0	19.3	17.4	14.9	17.6
Benefit ratio (total public pensions, gross)	-12.0	25.5	22.9	19.0	16.1	13.9	13.5
Gross replacement rate at retirement (earnings-related public pensions)	-32.5	56.3	39.5	27.7	23.8	22.6	23.7
Average accrual rate (new earnings-related pensions)	-0.5	1.1	1.0	0.8	0.7	0.6	0.6
Average contributory period (new earnings-related pensions)	0.0	36.0	36.0	36.0	36.0	36.0	36.0
Contributors (public pensions, 1000 persons)	-391	939	827	734	650	571	548
Support ratio (contributors/100 pensioners, public pensions)	-57	173	153	137	120	107	116
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.1	0.0	0.0	0.1	0.1	0.1	0.1
Higher migration (+33%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower migration (-33%)	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Lower fertility (-20%)	0.2	0.0	0.0	0.0	0.0	0.1	0.2
Higher employment rate of older workers (+10 pps)	0.0	0.0	-0.1	0.0	0.1	0.1	0.0
Higher TFP growth (+0.2 pps)	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.1	0.0	0.2	0.2	0.2	0.2	0.1
Retirement age linked to increases in life expectancy	-0.2	0.0	-0.1	-0.3	-0.4	-0.2	-0.2
Constant retirement age	0.1	0.0	0.2	0.1	0.1	0.0	0.1
Constant benefit ratio	3.9	0.0	0.1	1.4	2.8	4.2	3.9
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-1.7	0.0	-0.2	-0.7	-0.8	-1.0	-1.7
Dependency ratio	3.8	0.0	1.3	2.4	3.5	4.5	3.8
Coverage ratio	-0.9	0.0	-0.4	-0.7	-0.8	-1.0	-0.9
Of which: Old-age	-0.4	0.0	-0.2	-0.3	-0.3	-0.3	-0.4
Early-age	0.2	0.0	-0.2	-0.7	0.1	0.7	0.2
Cohort effect	-2.6	0.0	-1.1	-1.4	-2.9	-4.4	-2.6
Benefit ratio	-4.4	0.0	-1.1	-2.3	-3.3	-4.2	-4.4
Labour market ratio	0.1	0.0	0.2	0.2	0.1	0.0	0.1
Of which: Employment rate	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1
Labour intensity	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Career shift	0.2	0.0	0.2	0.2	0.1	0.1	0.2
Interaction effect (residual)	-0.4	0.0	-0.1	-0.2	-0.3	-0.4	-0.4
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-1.7	0.0	-0.2	-0.4	-0.2	-0.2	-0.7
Dependency ratio	3.8	0.0	1.3	1.1	1.1	1.1	-0.7
Coverage ratio	-0.9	0.0	-0.4	-0.3	-0.1	-0.2	0.1
Of which: Old-age	-0.4	0.0	-0.2	-0.1	0.0	0.0	-0.1
Early-age	0.2	0.0	-0.2	-0.5	0.8	0.6	-0.6
Cohort effect	-2.6	0.0	-1.1	-0.3	-1.5	-1.5	1.8
Benefit ratio	-4.4	0.0	-1.1	-1.2	-1.0	-0.9	-0.2
Labour market ratio	0.1	0.0	0.2	0.0	-0.1	-0.1	0.1
Of which: Employment rate	-0.1	0.0	0.0	0.0	0.0	-0.1	0.1
Labour intensity	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Career shift	0.2	0.0	0.2	0.0	0.0	0.0	0.1
Interaction effect (residual)	-0.4	0.0	-0.1	-0.1	-0.1	-0.1	0.0

Latvia							
Health care							
Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.3	6.0	5.4	5.6	5.8	5.9	5.8
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.3		0.4	0.9	1.1	1.2	1.3
Demographic scenario	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
No healthy ageing scenario	0.6		0.1	0.3	0.4	0.5	0.6
Labour intensity scenario	0.6		0.0	0.1	0.5	0.8	0.6
Sector-specific composite indexation scenario	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1
Long-term care							
Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.3	0.5	0.5	0.6	0.7	0.8	0.8
of which on institutional care - baseline	0.1	0.3	0.3	0.3	0.4	0.4	0.4
of which on home care - baseline	0.1	0.1	0.1	0.1	0.1	0.2	0.2
of which on cash benefits - baseline	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.3		0.1	0.3	0.8	1.4	2.3
Healthy ageing scenario	-0.1		0.0	0.0	0.0	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.0	0.1	0.1
Coverage convergence scenario	0.5		0.0	0.1	0.2	0.3	0.5
Cost convergence scenario	1.1		0.1	0.2	0.4	0.8	1.1
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-12%	164	160	159	156	150	144
Recipients: receiving institutional care	-7%	12	12	12	12	12	11
receiving home care	20%	18	18	19	20	21	21
receiving cash benefits	5%	24	24	24	25	25	25
Baseline aged 65+	11%	101	105	111	116	119	112
Recipients: receiving institutional care aged 65+	22%	7	7	8	9	9	9
receiving home care aged 65+	35%	14	15	16	18	19	19
receiving cash benefits aged 65+	35%	15	16	17	19	20	20
Education							
Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.2	3.6	3.6	3.3	3.3	3.6	3.4
Number of students (in thousands)							
Total	-43%	317	297	236	209	204	181
as % of population 5-24	-4.0	81.5	78.3	76.4	78.7	78.6	77.5
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.9		0.4	0.8	0.8	0.8	0.9
Total cost of ageing							
Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-1.9	17.2	16.4	16.0	16.1	16.4	15.4
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	3.5		0.5	1.2	1.9	2.6	3.5
High life expectancy (+2 years)	0.2		0.0	0.0	0.1	0.2	0.2
Higher migration (+33%)	-0.1		0.0	-0.1	-0.1	-0.2	-0.1
Lower migration (-33%)	0.1		0.0	0.1	0.1	0.2	0.1
Lower fertility (-20%)	0.0		0.0	-0.3	-0.3	-0.2	0.0
Higher employment rate of older workers (+10 pps)	0.0		-0.1	0.0	0.0	0.1	0.0
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.1		0.0	0.1	0.2	0.1	0.1

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

15. LITHUANIA

Lithuania

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.44	1.49	1.55	1.59	1.62	1.65
Life expectancy at birth							
males	12.0	70.8	73.3	76.0	78.5	80.8	82.8
females	8.4	80.5	82.4	84.2	85.9	87.5	88.9
Life expectancy at 65 (years)							
males	7.3	14.4	15.9	17.5	18.9	20.3	21.7
females	6.2	19.5	20.9	22.2	23.4	24.6	25.7
Net migration (thousands)	-76.2	81.8	-7.7	-0.5	2.8	4.3	5.5
Net migration as % of population in t-1	-2.6	2.9	-0.3	0.0	0.1	0.2	0.3
Population (million)	-0.8	2.8	2.7	2.5	2.3	2.2	2.0
share of prime-age population (25-54y)	-8.5	40.2	38.4	36.7	33.1	32.5	31.7
share of working-age population (20-64y)	-11.1	60.4	57.4	55.7	53.5	49.3	49.2
share of elderly population (+65y)	15.7	20.0	23.8	28.0	31.0	35.1	35.6
share of very elderly population (+80y)	9.6	5.6	6.0	8.5	11.3	12.5	15.2
share of very elderly population (+80y) in elderly population (+65y)	14.6	28.2	25.1	30.4	36.3	35.5	42.8
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	3.5	1.5	1.2	0.6	0.3	0.7
Employment (15-74y; growth rate)	-1.0	1.5	-1.5	-1.0	-1.3	-1.2	-0.6
Labour input: hours worked (growth rate)	-1.0	1.3	-1.5	-1.0	-1.3	-1.2	-0.6
Labour productivity per hour (growth rate)	2.1	2.1	3.0	2.2	1.9	1.6	1.2
TFP (growth rate)	1.2	0.9	1.5	1.4	1.2	1.0	0.8
capital deepening (contribution to labour productivity growth)	0.9	1.2	1.5	0.8	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.8	2.1	2.4	2.0	1.4	1.1	1.3
Potential GDP per worker (growth rate)	2.1	1.9	3.0	2.2	2.0	1.6	1.2
HICP (growth rate)	2.5	18.9	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.5	0.6	2.9	3.4	3.9	4.0	4.0
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-723	1,713	1,565	1,400	1,246	1,065	990
Working-age population (growth rate)	-1.6	1.1	-1.3	-1.1	-1.5	-1.2	-0.4
Labour force (20-64y; thousands)	-598	1,442	1,321	1,187	1,054	910	845
Participation rate (20-64y)	1.2	84.2	84.4	84.8	84.6	85.4	85.4
Participation rate (20-74y)	-4.4	74.6	70.8	70.9	70.2	67.6	70.2
young (20-24y)	1.7	64.1	64.6	66.5	66.1	65.5	65.8
prime-age (25-54y)	2.0	90.0	91.0	91.4	92.2	92.2	92.0
older (55-64y)	0.4	75.3	73.2	74.1	74.0	74.5	75.7
oldest (65-74y)	-8.1	20.6	13.4	12.9	13.7	12.7	12.5
Participation rate (20-64y) - female	0.8	83.4	83.2	83.1	83.0	84.2	84.2
Participation rate (20-74y) - female	-3.0	72.3	67.8	67.3	67.2	65.4	69.3
young (20-24y)	0.9	64.2	63.9	65.9	65.4	64.8	65.2
prime-age (25-54y)	1.5	88.9	89.0	89.5	90.5	90.5	90.4
older (55-64y)	0.1	75.6	75.3	73.7	73.2	74.2	75.7
oldest (65-74y)	-6.8	18.9	13.1	12.9	13.2	12.2	12.2
Participation rate (20-64y) - male	1.2	85.0	85.4	86.3	85.9	86.4	86.3
Participation rate (20-74y) - male	-6.3	77.3	74.0	74.3	72.7	69.4	71.0
young (20-24y)	2.4	64.0	65.2	67.1	66.7	66.1	66.4
prime-age (25-54y)	2.2	91.1	92.8	92.9	93.5	93.5	93.3
older (55-64y)	0.7	75.0	70.6	74.5	74.7	74.7	75.7
oldest (65-74y)	-10.3	23.1	13.9	12.9	14.3	13.2	12.8
Average labour market exit age (1)	0.7	64.1	64.8	64.9	64.9	64.9	64.9
male	0.7	64.1	64.8	64.9	64.9	64.9	64.9
female	0.8	64.1	64.8	64.9	64.9	64.9	64.9
Employment rate (20-64y)	0.8	79.1	79.1	79.2	79.1	79.9	79.8
Employment rate (20-74y)	-4.5	70.2	66.6	66.3	65.7	63.4	65.8
Unemployment rate (20-64y)	0.4	6.1	6.2	6.6	6.5	6.5	6.5
Unemployment rate (20-74y)	0.4	5.9	6.0	6.4	6.3	6.2	6.3
Employment (20-64y; millions)	-0.6	1.4	1.2	1.1	1.0	0.9	0.8
Employment (20-74y; millions)	-0.6	1.4	1.3	1.2	1.0	0.9	0.8
share of young (20-24y)	0.4	5.6	5.9	6.4	5.7	5.5	6.0
share of prime-age (25-54y)	-1.4	68.6	69.9	68.8	65.0	68.2	67.2
share of older (55-64y)	1.5	21.4	20.4	21.1	25.1	21.5	22.9
share of oldest (65-74y)	-0.5	4.4	3.8	3.7	4.2	4.9	3.9
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.8	25.3	24.6	25.3	30.2	26.1	27.0
Old-age dependency ratio (3)	39.3	33.1	41.5	50.3	57.9	71.2	72.4
Total dependency ratio (4)	37.5	65.7	74.3	79.4	86.9	102.8	103.1
Total economic dependency ratio (5)	44.2	100.4	112.0	118.2	126.3	141.5	144.5
Economic old-age dependency ratio (20-64y) (6)	49.4	37.2	48.5	59.6	68.8	84.0	86.6
Economic old-age dependency ratio (20-74y) (7)	47.6	35.5	46.7	57.4	65.9	79.9	83.2

Lithuania

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	3.2	6.4	8.1	9.3	9.8	10.2	9.7
Of which: Old-age and early pensions	2.5	5.2	6.1	7.2	7.7	8.1	7.7
Disability pensions	0.7	0.9	1.4	1.6	1.7	1.7	1.6
Survivors' pensions	0.1	0.2	0.4	0.4	0.4	0.3	0.3
Other	-0.1	0.1	0.1	0.1	0.1	0.1	0.1
Earnings-related pensions, gross	2.8	1.7	2.8	3.8	4.3	4.7	4.5
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	1.2	0.0	0.1	0.2	0.5	0.9	1.2
New old-age and early pensions, gross	0.0	0.1	0.2	0.1	0.2	0.1	0.1
Public pensions, contributions	0.8	6.8	7.7	7.8	7.8	7.8	7.6
Balance of the pension system (contributions - gross expenditure)	-2.4	0.3	-0.3	-1.4	-2.0	-2.4	-2.1
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	-63	939	921	931	930	930	876
Pensioners aged 65+ (1000 persons)	91	637	679	712	730	767	728
Share of pensioners below age 65 as % of all pensioners	-15.3	32.2	26.2	23.5	21.5	17.6	17.0
Benefit ratio (total public pensions, gross)	-0.6	23.8	29.1	29.3	27.7	25.0	23.2
Gross replacement rate at retirement (earnings-related public pensions)	-8.2	26.7	26.6	23.6	21.4	19.5	18.5
Average accrual rate (new earnings-related pensions)	-0.1	1.2	1.1	1.1	1.1	1.1	1.1
Average contributory period (new earnings-related pensions)	2.8	35.5	38.6	38.6	38.4	38.3	38.3
Contributors (public pensions, 1000 persons)	-658	1,414	1,191	1,063	948	823	757
Support ratio (contributors/100 pensioners, public pensions)	-64	151	129	114	102	88	86
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.2		0.1	0.1	0.2	0.2	0.2
Higher migration (+33%)	0.2		0.0	0.1	0.1	0.1	0.2
Lower migration (-33%)	0.3		0.2	0.2	0.3	0.4	0.3
Lower fertility (-20%)	0.2		0.1	0.1	0.1	0.1	0.2
Higher employment rate of older workers (+10 pps)	0.1		0.0	0.0	0.1	0.0	0.1
Higher TFP growth (+0.2 pps)	-0.2		0.0	-0.1	-0.2	-0.3	-0.2
Lower TFP growth (-0.2 pps)	0.5		-0.1	-0.1	0.1	0.2	0.5
Retirement age linked to increases in life expectancy	-0.2		0.1	0.0	0.0	-0.2	-0.2
Constant retirement age	0.2		0.1	0.2	0.2	0.3	0.2
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	3.2		1.7	2.8	3.4	3.7	3.2
Dependency ratio	7.1		1.7	3.4	4.8	6.9	7.1
Coverage ratio	-2.4		-1.1	-1.6	-1.9	-2.4	-2.4
Of which: Old-age	-0.7		-0.5	-0.8	-0.8	-0.8	-0.7
Early-age	-1.9		-0.7	-1.4	-1.8	-1.2	-1.9
Cohort effect	-5.6		-1.7	-2.5	-3.1	-6.0	-5.6
Benefit ratio	-1.0		1.1	1.2	0.7	-0.3	-1.0
Labour market ratio	-0.1		0.0	0.0	0.0	-0.2	-0.1
Of which: Employment rate	-0.1		0.0	0.0	0.0	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	0.0	-0.1	0.0
Interaction effect (residual)	-0.4		-0.1	-0.2	-0.2	-0.4	-0.4
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	3.2		1.7	1.2	0.5	0.4	-0.5
Dependency ratio	7.1		1.7	1.7	1.4	2.2	0.2
Coverage ratio	-2.4		-1.1	-0.6	-0.2	-0.5	0.0
Of which: Old-age	-0.7		-0.5	-0.3	0.0	0.0	0.0
Early-age	-1.9		-0.7	-0.7	-0.3	0.6	-0.7
Cohort effect	-5.6		-1.7	-0.8	-0.7	-2.8	0.4
Benefit ratio	-1.0		1.1	0.1	-0.5	-1.0	-0.8
Labour market ratio	-0.1		0.0	0.0	0.0	-0.2	0.1
Of which: Employment rate	-0.1		0.0	0.0	0.0	-0.1	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	0.0	-0.1	0.1
Interaction effect (residual)	-0.4		-0.1	-0.1	-0.1	-0.1	0.0

Lithuania**Health care**

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.8	4.3	4.5	4.8	5.0	5.1	5.1
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.1		0.3	0.7	0.9	1.0	1.1
Demographic scenario	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
No healthy ageing scenario	0.4		0.1	0.2	0.3	0.4	0.4
Labour intensity scenario	0.9		0.0	0.2	0.4	0.8	0.9
Sector-specific composite indexation scenario	-0.5		-0.2	-0.4	-0.5	-0.5	-0.5

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.9	1.0	1.1	1.3	1.6	1.7	1.9
of which on institutional care - baseline	0.4	0.5	0.6	0.7	0.8	0.9	1.0
of which on home care - baseline	0.1	0.1	0.1	0.1	0.1	0.1	0.1
of which on cash benefits - baseline	0.4	0.4	0.4	0.5	0.6	0.7	0.8
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	7.5		0.3	1.0	2.2	4.2	7.5
Healthy ageing scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.1	0.2
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	7.5		0.3	1.0	2.2	4.2	7.5
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	2%	259	265	274	279	272	265
Recipients: receiving institutional care	2%	112	115	119	121	118	114
receiving home care	40%	85	90	101	115	117	119
receiving cash benefits	27%	118	126	135	147	149	150
Baseline aged 65+	35%	159	174	196	210	216	214
Recipients: receiving institutional care aged 65+	34%	69	76	85	91	94	93
receiving home care aged 65+	62%	68	74	87	103	108	110
receiving cash benefits aged 65+	62%	79	86	102	118	124	128

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.3	3.0	2.9	2.7	2.6	2.7	2.8
Number of students (in thousands)							
Total	-45%	461	429	348	294	276	253
as % of population 5-24	-1.4	80.9	80.5	79.0	79.3	80.5	79.5
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.9		0.5	0.8	0.9	0.9	0.9

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	4.6	14.8	16.6	18.0	18.9	19.7	19.4
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	8.6		0.6	1.7	3.1	5.3	8.6
High life expectancy (+2 years)	0.3		0.1	0.1	0.2	0.3	0.3
Higher migration (+33%)	0.0		0.0	0.0	0.0	-0.1	0.0
Lower migration (-33%)	0.5		0.2	0.4	0.5	0.6	0.5
Lower fertility (-20%)	0.0		0.1	-0.1	-0.2	-0.1	0.0
Higher employment rate of older workers (+10 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Higher TFP growth (+0.2 pps)	-0.2		0.0	-0.1	-0.2	-0.3	-0.2
Lower TFP growth (-0.2 pps)	0.4		-0.1	-0.1	0.0	0.2	0.4

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

16. LUXEMBOURG

Luxembourg

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.38	1.42	1.47	1.51	1.54	1.56
Life expectancy at birth							
males	6.2	80.7	81.6	83.1	84.5	85.7	86.9
females	5.8	85.0	86.0	87.4	88.6	89.8	90.8
Life expectancy at 65 (years)							
males	4.5	19.4	20.2	21.1	22.1	23.0	23.9
females	4.6	22.5	23.3	24.3	25.3	26.2	27.1
Net migration (thousands)	-11.2	15.0	7.6	6.2	5.1	4.4	3.9
Net migration as % of population in t-1	-2.0	2.4	1.0	0.8	0.6	0.5	0.4
Population (million)	0.3	0.7	0.7	0.8	0.9	0.9	1.0
share of prime-age population (25-54y)	-10.0	45.5	44.4	42.3	39.0	36.9	35.5
share of working-age population (20-64y)	-11.4	64.1	62.4	60.0	58.1	55.2	52.7
share of elderly population (+65y)	14.4	14.8	17.0	20.0	22.9	26.5	29.2
share of very elderly population (+80y)	7.2	3.9	4.3	5.6	7.7	9.1	11.1
share of very elderly population (+80y) in elderly population (+65y)	11.4	26.6	25.3	27.9	33.5	34.3	37.9
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.8	2.2	1.6	2.2	1.8	1.4	1.2
Employment (15-74y; growth rate)	0.8	2.9	1.2	0.8	0.4	0.1	0.0
Labour input: hours worked (growth rate)	0.8	2.9	1.2	0.8	0.4	0.1	0.0
Labour productivity per hour (growth rate)	0.9	-0.7	0.4	1.5	1.4	1.3	1.2
TFP (growth rate)	0.6	-0.4	0.1	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.3	-0.3	0.3	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	0.9	0.0	0.2	1.3	1.2	1.0	1.0
Potential GDP per worker (growth rate)	1.0	-0.7	0.4	1.5	1.4	1.3	1.2
HICP (growth rate)	2.2	8.2	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.6	1.7	3.2	3.6	3.9	4.0	4.0
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	95	419	465	501	523	522	514
Working-age population (growth rate)	-2.1	2.0	0.9	0.6	0.3	-0.2	-0.1
Labour force (20-64y; thousands)	78	325	366	395	407	405	403
Participation rate (20-64y)	0.8	77.6	78.8	78.9	77.8	77.7	78.4
Participation rate (20-74y)	-5.1	69.4	68.9	67.9	66.2	64.2	64.3
young (20-24y)	7.0	46.9	54.1	54.1	54.0	54.0	53.9
prime-age (25-54y)	0.7	89.8	90.3	90.3	90.3	90.4	90.5
older (55-64y)	4.9	48.4	48.5	50.5	51.7	51.4	53.3
oldest (65-74y)	-1.3	5.6	4.3	4.0	4.2	4.3	4.3
Participation rate (20-64y) - female	4.3	74.1	77.9	78.8	78.1	77.9	78.4
Participation rate (20-74y) - female	-1.5	65.8	67.7	67.5	66.0	64.1	64.3
young (20-24y)	6.4	49.2	55.8	55.8	55.7	55.8	55.7
prime-age (25-54y)	3.5	86.8	89.3	90.3	90.2	90.3	90.3
older (55-64y)	13.3	40.1	46.8	50.2	52.2	51.5	53.3
oldest (65-74y)	0.7	3.8	3.1	3.6	3.9	4.3	4.5
Participation rate (20-64y) - male	-2.6	80.9	79.6	78.9	77.6	77.6	78.3
Participation rate (20-74y) - male	-8.6	73.0	70.1	68.2	66.3	64.3	64.4
young (20-24y)	7.5	44.8	52.4	52.5	52.3	52.4	52.3
prime-age (25-54y)	-2.0	92.7	91.3	90.4	90.3	90.5	90.6
older (55-64y)	-3.0	56.2	50.2	50.8	51.3	51.3	53.2
oldest (65-74y)	-3.3	7.5	5.5	4.5	4.5	4.4	4.2
Average labour market exit age (1)							
male	0.8	60.7	60.8	61.0	61.2	61.3	61.5
female	0.6	60.6	60.7	61.0	61.2	61.3	61.5
Employment rate (20-64y)	0.0	74.5	74.9	74.9	73.9	73.8	74.5
Employment rate (20-74y)	-5.5	66.6	65.5	64.5	62.9	61.0	61.1
Unemployment rate (20-64y)	1.0	4.0	4.9	5.0	5.0	5.0	5.0
Unemployment rate (20-74y)	1.0	4.1	5.0	5.0	5.0	5.0	5.0
Employment (20-64y; millions)	0.1	0.3	0.3	0.4	0.4	0.4	0.4
Employment (20-74y; millions)	0.1	0.3	0.4	0.4	0.4	0.4	0.4
share of young (20-24y)	0.5	5.0	5.3	5.2	5.6	5.5	5.5
share of prime-age (25-54y)	-4.3	81.9	81.7	80.7	77.9	77.6	77.5
share of older (55-64y)	3.5	12.2	12.2	13.2	15.6	15.7	15.7
share of oldest (65-74y)	0.4	0.9	0.8	0.9	1.0	1.2	1.3
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.7	19.8	20.1	21.0	23.8	24.2	23.5
Old-age dependency ratio (3)	32.3	23.1	27.2	33.4	39.5	48.0	55.4
Total dependency ratio (4)	33.6	56.0	60.4	66.6	72.0	81.2	89.6
Total economic dependency ratio (5)	43.9	107.6	112.4	120.6	130.4	142.5	151.5
Economic old-age dependency ratio (20-64y) (6)	43.0	30.0	35.4	43.6	52.3	63.7	73.1
Economic old-age dependency ratio (20-74y) (7)	42.4	29.7	35.2	43.3	51.8	62.9	72.1

Luxembourg

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	8.3	9.2	9.7	11.2	12.5	15.0	17.5
Of which: Old-age and early pensions	8.1	7.2	7.9	9.3	10.5	12.9	15.3
Disability pensions	0.2	0.6	0.6	0.7	0.7	0.8	0.8
Survivors' pensions	0.0	1.4	1.2	1.2	1.3	1.3	1.4
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	8.1	7.2	7.9	9.3	10.5	12.9	15.3
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.2	0.5	0.5	0.5	0.5	0.7	0.6
Public pensions, contributions	-0.4	9.8	9.2	9.3	9.4	9.4	9.4
Balance of the pension system (contributions - gross expenditure)	-8.6	0.6	-0.6	-1.9	-3.1	-5.6	-8.0
Public pension scheme, tax revenues	1.4	1.6	1.7	1.9	2.1	2.6	3.0
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	552	227	306	415	532	666	780
Pensioners aged 65+ (1000 persons)	498	165	228	329	430	546	663
Share of pensioners below age 65 as % of all pensioners	-12.6	27.5	25.6	20.5	19.1	18.1	15.0
Benefit ratio (total public pensions, gross)	-9.6	52.1	52.6	47.7	43.8	42.7	42.5
Gross replacement rate at retirement (earnings-related public pensions)	-4.2	51.0	46.6	45.6	45.1	46.3	46.8
Average accrual rate (new earnings-related pensions)	-0.4	2.3	2.1	2.0	1.9	1.9	1.9
Average contributory period (new earnings-related pensions)	0.3	25.2	24.3	24.6	24.6	25.3	25.5
Contributors (public pensions, 1000 persons)	220	525	630	686	729	744	745
Support ratio (contributors/100 pensioners, public pensions)	-135	231	206	166	137	112	96
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.5		0.0	0.1	0.2	0.3	0.5
Higher migration (+33%)	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Lower migration (-33%)	0.2		0.1	0.1	0.2	0.3	0.2
Lower fertility (-20%)	1.1		0.0	0.0	0.1	0.6	1.1
Higher employment rate of older workers (+10 pps)	-0.3		-0.2	-0.4	-0.5	-0.6	-0.3
Higher TFP growth (+0.2 pps)	-0.5		0.0	0.0	-0.1	-0.3	-0.5
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.3	0.6	0.7
Retirement age linked to increases in life expectancy	-2.2		-0.1	-0.2	-0.6	-1.3	-2.2
Constant retirement age	4.9		0.1	0.9	2.3	3.7	4.9
Constant benefit ratio	1.8		0.0	0.0	0.9	1.5	1.8
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	8.3		0.6	2.0	3.3	5.8	8.3
Dependency ratio	10.8		1.6	3.8	5.8	8.5	10.8
Coverage ratio	1.8		0.3	0.5	1.0	1.4	1.8
Of which: Old-age	3.8		0.5	1.5	2.1	2.7	3.8
Early-age	3.6		1.2	0.6	1.0	3.7	3.6
Cohort effect	-8.6		-1.5	-2.8	-3.6	-6.2	-8.6
Benefit ratio	-4.1		-1.2	-2.1	-3.3	-3.9	-4.1
Labour market ratio	0.0		0.0	0.0	0.2	0.1	0.0
Of which: Employment rate	0.0		0.0	-0.1	0.1	0.1	0.0
Labour intensity	0.1		0.0	0.0	0.1	0.1	0.1
Career shift	0.0		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	8.3		0.6	1.5	1.3	2.4	2.5
Dependency ratio	10.8		1.6	2.2	2.0	2.7	2.3
Coverage ratio	1.8		0.3	0.3	0.4	0.4	0.4
Of which: Old-age	3.8		0.5	0.9	0.7	0.6	1.0
Early-age	3.6		1.2	-0.6	0.4	2.6	-0.1
Cohort effect	-8.6		-1.5	-1.3	-0.8	-2.6	-2.4
Benefit ratio	-4.1		-1.2	-0.9	-1.2	-0.6	-0.1
Labour market ratio	0.0		0.0	0.0	0.2	0.0	-0.1
Of which: Employment rate	0.0		0.0	0.0	0.2	0.0	-0.1
Labour intensity	0.1		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.3		-0.1	-0.1	-0.1	0.0	0.0

Luxembourg

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.2	3.9	4.2	4.4	4.7	4.9	5.1
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.4		0.1	0.2	0.3	0.4	0.4
Demographic scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
Healthy ageing scenario	-0.3		-0.1	-0.1	-0.2	-0.2	-0.3
No healthy ageing scenario	0.3		0.0	0.1	0.2	0.3	0.3
Labour intensity scenario	0.2		-0.3	-0.1	-0.1	0.1	0.2
Sector-specific composite indexation scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.6	1.1	1.1	1.4	1.8	2.2	2.7
of which on institutional care - baseline	1.0	0.7	0.7	0.8	1.1	1.4	1.7
of which on home care - baseline	0.5	0.4	0.4	0.5	0.6	0.7	0.8
of which on cash benefits - baseline	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.5		0.1	0.3	0.5	0.9	1.5
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	1.0		0.1	0.2	0.4	0.7	1.0
Cost convergence scenario	0.4		0.0	0.1	0.1	0.3	0.4
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	102%	55	66	79	92	102	111
Recipients: receiving institutional care	263%	5	6	8	12	15	18
receiving home care	198%	7	9	11	15	18	21
receiving cash benefits	158%	7	9	11	14	16	18
Baseline aged 65+	217%	22	28	38	49	60	71
Recipients: receiving institutional care aged 65+	293%	4	5	8	11	14	17
receiving home care aged 65+	254%	5	6	9	12	15	18
receiving cash benefits aged 65+	247%	4	5	7	10	12	14

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.4	3.0	2.7	2.7	2.6	2.6	2.6
Number of students (in thousands)							
Total	25%	100	107	118	121	122	125
as % of population 5-24	-1.0	70.2	69.3	69.8	68.6	69.0	69.2
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.6		0.5	1.0	1.6	1.6	1.6

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	10.7	17.2	17.8	19.8	21.7	24.7	27.9
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	1.9		0.2	0.4	0.8	1.3	1.9
High life expectancy (+2 years)	0.8		0.0	0.1	0.3	0.5	0.8
Higher migration (+33%)	-0.2		-0.1	-0.2	-0.2	-0.3	-0.2
Lower migration (-33%)	0.3		0.1	0.2	0.3	0.3	0.3
Lower fertility (-20%)	1.1		0.0	-0.3	-0.1	0.5	1.1
Higher employment rate of older workers (+10 pps)	-0.4		-0.2	-0.4	-0.6	-0.7	-0.4
Higher TFP growth (+0.2 pps)	-0.5		0.0	0.0	-0.1	-0.3	-0.5
Lower TFP growth (-0.2 pps)	0.7		0.0	0.1	0.3	0.5	0.7

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

17. HUNGARY

Hungary

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.62	1.67	1.70	1.71	1.72	1.72
Life expectancy at birth							
males	11.1	72.5	74.7	77.2	79.5	81.6	83.6
females	9.2	79.3	81.2	83.3	85.2	86.9	88.5
Life expectancy at 65 (years)							
males	7.3	14.5	16.0	17.5	19.0	20.5	21.8
females	7.0	18.4	19.8	21.3	22.7	24.1	25.4
Net migration (thousands)	-22.0	47.6	19.4	27.6	24.6	25.4	25.7
Net migration as % of population in t-1	-0.2	0.5	0.2	0.3	0.3	0.3	0.3
Population (million)	-0.7	9.7	9.5	9.3	9.2	9.1	9.0
share of prime-age population (25-54y)	-7.6	42.6	39.7	36.6	35.3	35.1	35.0
share of working-age population (20-64y)	-7.4	59.7	59.4	56.7	53.9	52.2	52.3
share of elderly population (+65y)	7.8	20.6	21.0	23.8	26.9	28.5	28.4
share of very elderly population (+80y)	6.8	4.7	5.6	7.2	7.9	10.9	11.5
share of very elderly population (+80y) in elderly population (+65y)	17.8	22.6	26.6	30.3	29.5	38.4	40.4
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.7	3.4	2.1	1.6	1.7	1.4	1.1
Employment (15-74y; growth rate)	-0.2	1.3	-0.3	-0.7	-0.4	-0.3	-0.1
Labour input: hours worked (growth rate)	-0.3	0.8	-0.4	-0.7	-0.4	-0.3	-0.1
Labour productivity per hour (growth rate)	2.0	2.6	2.5	2.3	2.1	1.7	1.2
TFP (growth rate)	1.3	1.5	1.4	1.5	1.4	1.1	0.8
capital deepening (contribution to labour productivity growth)	0.8	1.1	1.0	0.8	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.9	3.6	2.3	1.8	1.8	1.5	1.2
Potential GDP per worker (growth rate)	2.0	2.1	2.4	2.3	2.1	1.7	1.2
HICP (growth rate)	3.6	15.3	3.0	3.0	3.0	3.0	3.0
Nominal interest rate	6.0	7.6	7.3	6.2	5.2	5.0	5.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-1,065	5,786	5,649	5,294	4,972	4,773	4,721
Working-age population (growth rate)	0.5	-0.6	-0.3	-1.1	-0.3	-0.4	-0.1
Labour force (20-64y; thousands)	-727	4,817	4,797	4,515	4,299	4,139	4,089
Participation rate (20-64y)	3.4	83.2	84.9	85.3	86.5	86.7	86.6
Participation rate (20-74y)	2.5	70.8	73.6	71.9	71.5	72.4	73.3
young (20-24y)	2.2	54.5	56.9	56.7	56.9	56.7	56.7
prime-age (25-54y)	3.1	91.0	93.1	94.1	94.1	94.1	94.1
older (55-64y)	9.8	68.0	72.8	74.0	78.2	77.9	77.8
oldest (65-74y)	1.9	9.7	9.3	11.3	10.8	11.7	11.6
Participation rate (20-64y) - female	6.0	78.1	81.1	82.1	83.9	84.2	84.1
Participation rate (20-74y) - female	6.3	64.5	68.6	67.9	68.3	69.8	70.8
young (20-24y)	1.3	49.3	50.8	50.7	50.8	50.7	50.6
prime-age (25-54y)	4.9	87.7	91.0	92.5	92.4	92.5	92.6
older (55-64y)	16.5	57.8	65.7	68.5	74.7	74.4	74.3
oldest (65-74y)	4.3	7.3	7.8	10.3	10.5	11.7	11.6
Participation rate (20-64y) - male	0.6	88.4	88.7	88.4	88.9	89.1	89.0
Participation rate (20-74y) - male	-1.8	77.5	78.6	75.8	74.7	75.0	75.7
young (20-24y)	3.0	59.4	62.7	62.5	62.6	62.5	62.5
prime-age (25-54y)	1.3	94.3	95.1	95.5	95.6	95.6	95.6
older (55-64y)	1.6	79.6	80.5	79.7	81.5	81.2	81.2
oldest (65-74y)	-1.4	12.9	11.3	12.4	11.1	11.8	11.6
Average labour market exit age (1)	0.7	63.6	63.9	64.3	64.3	64.3	64.3
male	0.2	64.4	64.6	64.6	64.6	64.6	64.6
female	1.1	62.9	63.3	64.0	64.0	64.0	64.0
Employment rate (20-64y)	3.3	80.3	82.3	82.3	83.5	83.7	83.6
Employment rate (20-74y)	2.4	68.4	71.3	69.4	69.1	70.0	70.8
Unemployment rate (20-64y)	-0.1	3.5	3.1	3.5	3.5	3.5	3.5
Unemployment rate (20-74y)	-0.1	3.5	3.1	3.4	3.4	3.4	3.4
Employment (20-64y; millions)	-0.7	4.6	4.6	4.4	4.2	4.0	3.9
Employment (20-74y; millions)	-0.7	4.8	4.7	4.5	4.3	4.1	4.1
share of young (20-24y)	0.7	5.3	5.8	5.9	6.0	6.0	6.1
share of prime-age (25-54y)	-5.5	76.4	72.1	69.3	69.3	71.0	70.8
share of older (55-64y)	4.3	15.9	20.1	21.9	21.7	19.9	20.2
share of oldest (65-74y)	0.5	2.3	1.9	2.9	3.0	3.1	2.8
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.2	19.9	23.8	25.8	24.6	22.7	23.1
Old-age dependency ratio (3)	19.8	34.5	35.3	41.9	49.8	54.5	54.3
Total dependency ratio (4)	23.6	67.4	68.5	76.3	85.6	91.5	91.1
Total economic dependency ratio (5)	18.4	103.6	100.8	108.0	115.6	121.6	122.0
Economic old-age dependency ratio (20-64y) (6)	21.5	40.4	40.9	47.9	56.6	61.8	62.0
Economic old-age dependency ratio (20-74y) (7)	20.7	39.5	40.1	46.5	54.9	59.9	60.2

Hungary

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	4.3	7.7	7.7	9.0	10.7	11.5	12.0
Of which: Old-age and early pensions	4.7	6.3	6.4	8.0	9.7	10.5	11.1
Disability pensions	-0.2	0.6	0.5	0.5	0.4	0.4	0.4
Survivors' pensions	-0.3	0.8	0.6	0.5	0.5	0.5	0.5
Other	0.0	0.1	0.0	0.1	0.1	0.1	0.1
Earnings-related pensions, gross	4.7	6.3	6.4	8.0	9.7	10.5	11.1
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.2	0.2	0.3	0.3	0.3	0.3
Public pensions, contributions	0.0	6.8	6.9	6.9	6.8	6.8	6.8
Balance of the pension system (contributions - gross expenditure)	-4.3	-0.9	-0.8	-2.1	-3.8	-4.7	-5.2
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	586	2,549	2,610	2,832	3,057	3,160	3,135
Pensioners aged 65+ (1000 persons)	717	1,914	1,969	2,155	2,507	2,640	2,631
Share of pensioners below age 65 as % of all pensioners	-8.8	24.9	24.5	23.9	18.0	16.5	16.1
Benefit ratio (total public pensions, gross)	3.4	38.2	37.1	38.2	39.8	39.9	41.5
Gross replacement rate at retirement (earnings-related public pensions)	8.5	39.9	46.8	47.5	48.2	47.4	48.3
Average accrual rate (new earnings-related pensions)	-0.2	2.3	2.2	2.1	2.1	2.1	2.0
Average contributory period (new earnings-related pensions)	3.1	35.9	37.1	38.5	38.4	38.1	39.0
Contributors (public pensions, 1000 persons)	-655	4,701	4,765	4,543	4,298	4,125	4,046
Support ratio (contributors/100 pensioners, public pensions)	-55	184	183	160	141	131	129
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.7		0.0	0.1	0.3	0.5	0.7
Higher migration (+33%)	-0.3		0.0	-0.2	-0.3	-0.4	-0.3
Lower migration (-33%)	1.0		0.1	0.2	0.5	0.8	1.0
Lower fertility (-20%)	1.0		0.0	0.0	0.1	0.5	1.0
Higher employment rate of older workers (+10 pps)	-0.4		-0.1	-0.3	-0.4	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.6		0.0	0.1	0.3	0.4	0.6
Retirement age linked to increases in life expectancy	-2.3		-0.2	-0.8	-1.1	-1.9	-2.3
Constant retirement age	0.2		0.0	0.1	0.2	0.2	0.2
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	4.3		-0.1	1.3	2.9	3.7	4.3
Dependency ratio	4.3		0.2	1.6	3.3	4.3	4.3
Coverage ratio	-0.4		0.2	0.0	-0.3	-0.5	-0.4
Of which: Old-age	0.7		0.2	0.1	0.5	0.5	0.7
Early-age	-1.0		-1.0	0.0	-0.9	-0.6	-1.0
Cohort effect	-3.3		1.2	-0.2	-2.1	-3.4	-3.3
Benefit ratio	0.8		-0.3	-0.1	0.3	0.4	0.8
Labour market ratio	-0.4		-0.1	-0.2	-0.4	-0.4	-0.4
Of which: Employment rate	-0.3		-0.2	-0.2	-0.3	-0.4	-0.3
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	-0.1	-0.1	0.0
Interaction effect (residual)	0.0		0.0	0.0	0.0	0.0	0.0
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	4.3		-0.1	1.4	1.6	0.8	0.6
Dependency ratio	4.3		0.2	1.4	1.7	1.0	0.0
Coverage ratio	-0.4		0.2	-0.2	-0.3	-0.2	0.1
Of which: Old-age	0.7		0.2	-0.1	0.4	0.0	0.1
Early-age	-1.0		-1.0	1.1	-0.9	0.2	-0.4
Cohort effect	-3.3		1.2	-1.4	-2.0	-1.3	0.2
Benefit ratio	0.8		-0.3	0.3	0.4	0.0	0.5
Labour market ratio	-0.4		-0.1	-0.1	-0.1	-0.1	0.0
Of which: Employment rate	-0.3		-0.2	0.0	-0.1	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	-0.1	0.0	0.0	0.0
Interaction effect (residual)	0.0		0.0	0.0	0.0	0.0	0.0

Hungary

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.5	4.3	4.4	4.5	4.7	4.8	4.7
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.3	0.6	0.8	1.0	1.0
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.5		-0.1	-0.2	-0.3	-0.4	-0.5
No healthy ageing scenario	0.6		0.1	0.3	0.4	0.5	0.6
Labour intensity scenario	0.5		0.0	0.1	0.3	0.5	0.5
Sector-specific composite indexation scenario	-0.4		-0.2	-0.3	-0.4	-0.4	-0.4

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	0.5	0.6	0.7	0.8	0.9	0.9
of which on institutional care - baseline	0.3	0.4	0.4	0.5	0.5	0.6	0.6
of which on home care - baseline	0.1	0.1	0.1	0.1	0.1	0.1	0.1
of which on cash benefits - baseline	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	3.1		0.1	0.4	0.9	1.7	3.1
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	1.1		0.1	0.2	0.4	0.6	1.1
Cost convergence scenario	0.9		0.1	0.2	0.3	0.6	0.9
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	14%	705	735	756	772	811	806
Recipients: receiving institutional care	34%	92	97	103	108	118	123
receiving home care	44%	91	98	106	115	129	131
receiving cash benefits	12%	33	35	36	36	38	38
Baseline aged 65+	44%	417	437	484	536	597	600
Recipients: receiving institutional care aged 65+	69%	59	64	73	81	95	100
receiving home care aged 65+	51%	83	90	99	109	124	125
receiving cash benefits aged 65+	42%	19	20	22	25	27	27

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	3.5	3.3	3.4	3.5	3.6	3.6
Number of students (in thousands)							
Total	-9%	1,467	1,430	1,401	1,355	1,345	1,329
as % of population 5-24	-1.1	75.2	73.6	73.8	73.8	74.2	74.1
Higher enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.8		0.2	0.5	0.8	0.8	0.8

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	5.2	16.0	15.9	17.7	19.6	20.7	21.3
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.0		0.4	1.0	1.7	2.7	4.0
High life expectancy (+2 years)	0.8		0.0	0.1	0.3	0.5	0.8
Higher migration (+33%)	-0.4		-0.1	-0.3	-0.4	-0.5	-0.4
Lower migration (-33%)	1.1		0.1	0.3	0.6	0.9	1.1
Lower fertility (-20%)	0.7		0.0	-0.4	-0.3	0.2	0.7
Higher employment rate of older workers (+10 pps)	-0.4		-0.1	-0.3	-0.4	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.5		0.0	0.1	0.3	0.4	0.5

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

18. MALTA

Malta							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.3	1.15	1.25	1.33	1.40	1.45	1.49
Life expectancy at birth							
males	6.1	80.9	81.9	83.4	84.7	85.9	87.0
females	6.2	84.6	85.6	87.1	88.5	89.7	90.8
Life expectancy at 65 (years)							
males	4.5	19.5	20.3	21.3	22.2	23.1	24.0
females	4.6	22.5	23.4	24.4	25.3	26.3	27.1
Net migration (thousands)	-7.5	11.5	9.4	7.5	6.0	5.1	4.0
Net migration as % of population in t-1	-1.7	2.2	1.6	1.1	0.8	0.6	0.5
Population (million)	0.3	0.5	0.6	0.7	0.7	0.8	0.8
share of prime-age population (25-54y)	-12.3	46.4	48.2	46.2	40.6	36.5	34.2
share of working-age population (20-64y)	-11.8	63.2	63.3	64.2	61.7	55.7	51.5
share of elderly population (+65y)	14.4	19.3	19.6	19.6	22.8	29.3	33.6
share of very elderly population (+80y)	8.1	4.3	6.0	6.9	7.0	8.7	12.4
share of very elderly population (+80y) in elderly population (+65y)	14.7	22.2	30.7	35.3	30.5	29.5	36.9
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	2.1	5.9	3.8	2.5	1.3	0.7	0.8
Employment (15-74y; growth rate)	0.6	4.4	1.9	0.9	-0.1	-0.6	-0.4
Labour input: hours worked (growth rate)	0.5	3.3	1.9	0.9	-0.1	-0.6	-0.4
Labour productivity per hour (growth rate)	1.6	2.6	1.9	1.6	1.4	1.3	1.2
TFP (growth rate)	1.0	1.1	1.2	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.6	1.5	0.6	0.6	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.2	4.2	2.1	1.5	0.6	0.3	0.7
Potential GDP per worker (growth rate)	1.5	1.5	1.8	1.6	1.4	1.3	1.2
HICP (growth rate)	2.2	6.1	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.0	2.4	4.2	4.2	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	84	333	386	442	461	440	417
Working-age population (growth rate)	-1.7	1.3	1.8	0.8	0.1	-0.7	-0.4
Labour force (20-64y; thousands)	86	277	338	390	402	381	363
Participation rate (20-64y)	3.8	83.3	87.7	88.2	87.2	86.6	87.0
Participation rate (20-74y)	-2.5	72.8	77.0	78.6	74.7	70.1	70.3
young (20-24y)	0.3	80.0	80.5	80.7	80.4	80.4	80.3
prime-age (25-54y)	3.2	90.6	93.1	93.7	93.8	93.8	93.7
older (55-64y)	16.5	55.3	66.1	71.8	73.0	70.9	71.8
oldest (65-74y)	-2.4	11.1	6.6	8.9	9.5	9.4	8.6
Participation rate (20-64y) - female	9.3	75.5	82.8	85.1	84.8	84.4	84.8
Participation rate (20-74y) - female	4.4	64.5	71.5	75.1	72.4	68.5	68.9
young (20-24y)	0.8	79.1	80.0	80.3	80.0	80.0	79.9
prime-age (25-54y)	6.7	83.7	88.4	90.2	90.4	90.4	90.4
older (55-64y)	28.4	43.0	59.4	69.3	72.2	70.5	71.4
oldest (65-74y)	2.9	5.4	5.0	7.9	8.9	9.0	8.4
Participation rate (20-64y) - male	-1.1	90.0	91.7	90.7	89.1	88.4	88.9
Participation rate (20-74y) - male	-8.8	80.1	81.6	81.3	76.5	71.4	71.4
young (20-24y)	0.0	80.7	81.0	81.1	80.8	80.8	80.7
prime-age (25-54y)	0.2	96.3	96.7	96.5	96.4	96.5	96.5
older (55-64y)	5.1	67.0	72.0	73.7	73.5	71.1	72.1
oldest (65-74y)	-8.0	16.9	8.3	9.7	9.9	9.7	8.9
Average labour market exit age (1)	0.6	63.0	63.5	63.6	63.6	63.6	63.6
male	0.7	62.9	63.4	63.6	63.6	63.6	63.6
female	0.5	63.1	63.6	63.6	63.6	63.6	63.6
Employment rate (20-64y)	2.5	81.0	84.5	84.6	83.6	83.1	83.5
Employment rate (20-74y)	-3.4	70.8	74.2	75.3	71.7	67.3	67.4
Unemployment rate (20-64y)	1.3	2.7	3.7	4.1	4.1	4.1	4.0
Unemployment rate (20-74y)	1.3	2.7	3.7	4.1	4.1	4.1	4.1
Employment (20-64y; millions)	0.1	0.3	0.3	0.4	0.4	0.4	0.3
Employment (20-74y; millions)	0.1	0.3	0.3	0.4	0.4	0.4	0.4
share of young (20-24y)	-1.0	7.7	6.2	6.0	6.2	6.3	6.7
share of prime-age (25-54y)	-8.4	78.2	80.2	75.7	69.4	69.2	69.8
share of older (55-64y)	9.0	11.8	12.5	16.9	22.4	21.6	20.8
share of oldest (65-74y)	0.4	2.2	1.1	1.4	2.0	2.8	2.6
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	7.5	18.0	16.5	20.7	26.9	26.8	25.5
Old-age dependency ratio (3)	34.9	30.5	31.0	30.5	37.0	52.6	65.4
Total dependency ratio (4)	36.1	58.2	58.0	55.9	62.0	79.6	94.3
Total economic dependency ratio (5)	35.7	90.9	84.9	81.7	89.8	110.0	126.6
Economic old-age dependency ratio (20-64y) (6)	40.3	35.2	35.5	34.6	42.1	60.3	75.5
Economic old-age dependency ratio (20-74y) (7)	39.1	34.4	35.1	34.1	41.2	58.6	73.5

Malta							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	4.4	6.2	5.4	5.2	6.4	8.8	10.5
Of which: Old-age and early pensions	4.9	4.2	3.9	3.9	5.1	7.4	9.1
Disability pensions	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Survivors' pensions	-0.2	1.0	0.9	0.8	0.8	0.8	0.8
Other	-0.3	0.8	0.5	0.4	0.3	0.4	0.5
Earnings-related pensions, gross	5.0	3.9	3.6	3.7	4.9	7.2	8.9
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.3	0.1	0.2	0.3	0.4	0.5	0.4
Public pensions, contributions	-0.4	7.6	8.4	8.1	7.7	7.4	7.2
Balance of the pension system (contributions - gross expenditure)	-4.8	1.4	3.0	2.9	1.4	-1.4	-3.4
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	173	101	116	137	175	232	273
Pensioners aged 65+ (1000 persons)	166	85	103	119	152	208	251
Share of pensioners below age 65 as % of all pensioners	-7.2	15.2	11.4	13.3	13.3	10.5	8.0
Benefit ratio (total public pensions, gross)	-6.7	38.7	36.0	33.3	33.1	32.9	32.0
Gross replacement rate at retirement (earnings-related public pensions)	-2.2	51.8	50.3	49.0	49.0	49.3	49.6
Average accrual rate (new earnings-related pensions)	-0.3	1.9	1.7	1.7	1.7	1.7	1.7
Average contributory period (new earnings-related pensions)	0.6	36.4	35.6	36.0	36.4	36.7	37.0
Contributors (public pensions, 1000 persons)	86	282	336	387	403	386	368
Support ratio (contributors/100 pensioners, public pensions)	-146	281	290	282	230	166	135
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.5		0.0	0.1	0.1	0.3	0.5
Higher migration (+33%)	-1.3		-0.2	-0.4	-0.6	-1.0	-1.3
Lower migration (-33%)	0.8		0.3	0.4	0.7	1.0	0.8
Lower fertility (-20%)	0.6		0.0	0.0	0.1	0.3	0.6
Higher employment rate of older workers (+10 pps)	-0.4		-0.1	-0.1	-0.2	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.5		0.0	0.0	0.1	0.3	0.5
Retirement age linked to increases in life expectancy	-0.7		0.0	-0.1	-0.2	-0.5	-0.7
Constant retirement age	0.2		0.1	0.1	0.2	0.3	0.2
Constant benefit ratio	0.4		0.0	0.0	0.0	0.1	0.4
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	4.4		-0.7	-0.9	0.2	2.6	4.4
Dependency ratio	5.9		0.1	0.0	1.1	3.8	5.9
Coverage ratio	0.0		-0.1	0.1	0.2	0.0	0.0
Of which: Old-age	0.6		0.1	0.3	0.3	0.4	0.6
Early-age	-1.0		-1.6	-1.8	-1.6	-0.8	-1.0
Cohort effect	-3.3		0.0	1.3	1.2	-1.3	-3.3
Benefit ratio	-1.3		-0.5	-0.9	-0.9	-1.0	-1.3
Labour market ratio	-0.2		-0.2	-0.2	-0.2	-0.2	-0.2
Of which: Employment rate	-0.2		-0.3	-0.3	-0.2	-0.2	-0.2
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.1	0.1	0.0	0.0	0.0
Interaction effect (residual)	-0.1		0.0	0.0	0.0	0.0	-0.1
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	4.4		-0.7	-0.2	1.1	2.4	1.8
Dependency ratio	5.9		0.1	-0.1	1.1	2.7	2.1
Coverage ratio	0.0		-0.1	0.3	0.1	-0.2	0.0
Of which: Old-age	0.6		0.1	0.1	0.1	0.1	0.2
Early-age	-1.0		-1.6	-0.2	0.2	0.9	-0.2
Cohort effect	-3.3		0.0	1.3	-0.1	-2.5	-2.1
Benefit ratio	-1.3		-0.5	-0.4	-0.1	-0.1	-0.3
Labour market ratio	-0.2		-0.2	0.0	0.0	0.0	0.0
Of which: Employment rate	-0.2		-0.3	0.0	0.1	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.1	0.0	0.0	-0.1	0.0
Interaction effect (residual)	-0.1		0.0	0.0	0.0	0.0	0.0

Malta

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	2.1	5.1	5.2	5.4	5.8	6.4	7.2
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.1		0.3	0.7	0.8	1.0	1.1
Demographic scenario	-0.2		-0.1	-0.2	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.5		-0.1	-0.2	-0.3	-0.4	-0.5
No healthy ageing scenario	0.6		0.1	0.2	0.3	0.4	0.6
Labour intensity scenario	1.6		-0.1	-0.2	0.1	0.8	1.6
Sector-specific composite indexation scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	2.3	1.2	1.4	1.6	1.8	2.4	3.4
of which on institutional care - baseline	2.1	1.0	1.3	1.5	1.7	2.2	3.1
of which on home care - baseline	0.1	0.1	0.1	0.1	0.1	0.2	0.2
of which on cash benefits - baseline	0.1	0.0	0.0	0.0	0.0	0.1	0.1
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	3.2		0.0	0.2	0.5	1.2	3.2
Healthy ageing scenario	-0.3		0.0	-0.1	-0.1	-0.2	-0.3
No healthy ageing scenario	0.3		0.0	0.1	0.1	0.2	0.3
Coverage convergence scenario	0.1		0.0	0.0	0.0	0.0	0.1
Cost convergence scenario	2.8		0.0	0.2	0.4	1.1	2.8
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	153%	18	23	29	33	38	47
Recipients: receiving institutional care	273%	5	7	9	10	13	18
receiving home care	201%	21	27	33	38	48	63
receiving cash benefits	323%	1	1	2	2	3	4
Baseline aged 65+	225%	11	15	19	22	28	37
Recipients: receiving institutional care aged 65+	281%	5	6	9	10	12	17
receiving home care aged 65+	220%	18	24	29	34	44	59
receiving cash benefits aged 65+	326%	1	1	2	2	3	4

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.1	4.5	4.0	3.8	3.8	4.1	4.4
Number of students (in thousands)							
Total	29%	73	80	88	90	92	94
as % of population 5-24	-0.1	75.3	75.8	74.9	74.1	75.1	75.3
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.6		0.4	0.9	1.4	1.5	1.6

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	8.6	16.9	16.0	16.1	17.8	21.6	25.6
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.3		0.4	0.8	1.3	2.2	4.3
High life expectancy (+2 years)	0.8		0.0	0.1	0.2	0.4	0.8
Higher migration (+33%)	-1.9		-0.5	-0.8	-1.1	-1.6	-1.9
Lower migration (-33%)	1.6		0.6	0.9	1.3	1.7	1.6
Lower fertility (-20%)	0.4		-0.1	-0.4	-0.3	0.0	0.4
Higher employment rate of older workers (+10 pps)	-0.6		-0.1	-0.2	-0.3	-0.5	-0.6
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.5		0.0	0.0	0.1	0.3	0.5

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

19. THE NETHERLANDS

The Netherlands

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.53	1.55	1.58	1.60	1.61	1.63
Life expectancy at birth							
males	6.4	80.3	81.6	83.0	84.3	85.5	86.7
females	6.4	83.6	84.8	86.2	87.6	88.8	90.0
Life expectancy at 65 (years)							
males	4.8	18.8	19.8	20.8	21.7	22.7	23.6
females	5.1	21.3	22.3	23.4	24.4	25.4	26.4
Net migration (thousands)	-192.7	234.9	45.3	44.3	42.4	44.3	42.1
Net migration as % of population in t-1	-1.1	1.3	0.2	0.2	0.2	0.2	0.2
Population (million)	1.0	17.7	18.4	18.7	18.7	18.7	18.7
share of prime-age population (25-54y)	-3.6	38.4	38.0	38.2	36.9	35.6	34.9
share of working-age population (20-64y)	-6.7	58.7	56.8	54.5	55.0	54.3	52.0
share of elderly population (+65y)	9.1	20.1	22.9	25.3	25.5	26.9	29.3
share of very elderly population (+80y)	6.1	4.9	6.5	8.2	10.2	10.2	10.9
share of very elderly population (+80y) in elderly population (+65y)	13.2	24.2	28.5	32.4	39.8	37.8	37.4
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.3	2.2	0.8	1.6	1.6	1.2	1.0
Employment (15-74y; growth rate)	0.2	2.1	0.0	0.1	0.2	-0.1	-0.2
Labour input: hours worked (growth rate)	0.2	2.0	0.0	0.1	0.2	-0.1	-0.2
Labour productivity per hour (growth rate)	1.1	0.1	0.8	1.5	1.4	1.3	1.2
TFP (growth rate)	0.7	0.2	0.4	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	-0.1	0.4	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.2	1.2	0.5	1.5	1.6	1.2	1.0
Potential GDP per worker (growth rate)	1.1	0.1	0.8	1.5	1.4	1.3	1.2
HICP (growth rate)	2.3	11.6	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.4	1.4	2.7	3.3	3.9	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-650	10,396	10,440	10,206	10,301	10,144	9,747
Working-age population (growth rate)	-1.3	0.9	-0.3	0.0	0.0	-0.3	-0.4
Labour force (20-64y; thousands)	-69	8,881	9,004	8,992	9,152	9,104	8,812
Participation rate (20-64y)	5.0	85.4	86.2	88.1	88.8	89.7	90.4
Participation rate (20-74y)	4.0	74.6	74.2	75.5	78.3	78.3	78.6
young (20-24y)	3.7	85.4	89.0	89.1	89.1	89.1	89.1
prime-age (25-54y)	3.7	89.1	90.5	91.6	92.4	92.7	92.8
older (55-64y)	8.9	75.3	72.5	75.6	78.4	82.0	84.2
oldest (65-74y)	13.0	17.0	16.8	17.3	22.2	26.4	30.0
Participation rate (20-64y) - female	7.1	81.5	83.0	85.6	86.8	88.0	88.6
Participation rate (20-74y) - female	6.6	70.2	71.3	73.2	76.2	76.5	76.8
young (20-24y)	2.3	85.9	88.2	88.2	88.2	88.2	88.2
prime-age (25-54y)	5.3	85.5	87.6	89.2	90.5	90.8	90.8
older (55-64y)	13.9	68.5	67.2	71.8	75.5	80.3	82.4
oldest (65-74y)	18.3	11.6	17.0	17.6	21.9	25.6	29.9
Participation rate (20-64y) - male	2.9	89.3	89.5	90.6	90.9	91.5	92.2
Participation rate (20-74y) - male	1.4	78.9	77.1	77.9	80.4	80.2	80.4
young (20-24y)	5.1	84.8	89.9	89.9	89.9	89.9	89.9
prime-age (25-54y)	2.0	92.6	93.4	93.8	94.3	94.6	94.6
older (55-64y)	3.8	82.1	77.9	79.6	81.4	83.7	85.9
oldest (65-74y)	7.6	22.6	16.6	17.0	22.6	27.2	30.2
Average labour market exit age (1)	2.9	64.9	65.3	65.9	66.6	67.2	67.8
male	2.8	65.0	65.4	65.9	66.6	67.3	67.8
female	3.0	64.8	65.2	65.9	66.6	67.2	67.8
Employment rate (20-64y)	4.8	82.9	83.6	85.5	86.2	87.0	87.7
Employment rate (20-74y)	3.7	72.4	71.9	73.2	75.9	75.9	76.1
Unemployment rate (20-64y)	0.1	2.9	3.0	3.0	3.0	3.0	3.0
Unemployment rate (20-74y)	0.2	3.0	3.1	3.1	3.1	3.1	3.2
Employment (20-64y; millions)	-0.1	8.6	8.7	8.7	8.9	8.8	8.5
Employment (20-74y; millions)	0.3	8.9	9.1	9.1	9.3	9.4	9.2
share of young (20-24y)	-1.7	10.4	9.9	9.2	9.4	9.1	8.6
share of prime-age (25-54y)	-2.1	66.1	67.8	70.2	67.0	64.0	64.1
share of older (55-64y)	0.0	20.0	18.5	16.7	19.3	21.0	20.0
share of oldest (65-74y)	3.8	3.6	3.8	4.0	4.4	5.9	7.3
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	-0.3	23.5	22.8	20.2	22.8	24.4	23.2
Old-age dependency ratio (3)	22.0	34.3	40.3	46.4	46.4	49.6	56.3
Total dependency ratio (4)	22.0	70.3	75.9	83.4	81.9	84.2	92.4
Total economic dependency ratio (5)	5.2	98.1	102.3	106.0	101.8	99.1	103.3
Economic old-age dependency ratio (20-64y) (6)	18.6	37.3	44.0	49.9	49.0	50.4	55.9
Economic old-age dependency ratio (20-74y) (7)	15.8	36.0	42.4	48.0	46.8	47.4	51.8

The Netherlands

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	2.0	6.5	7.3	8.0	7.9	8.0	8.5
Of which: Old-age and early pensions	1.6	4.7	5.2	6.0	5.8	5.8	6.3
Disability pensions	0.4	1.8	2.0	2.0	2.1	2.2	2.2
Survivors' pensions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	:	:	:	:	:	:	:
Private occupational pensions, gross	0.8	5.1	5.3	5.5	5.1	5.1	5.9
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.1	0.2	0.3	0.3	0.3	0.2	0.3
Public pensions, contributions	1.9	6.9	7.8	8.4	8.2	8.2	8.7
Balance of the pension system (contributions - gross expenditure)	-0.1	0.3	0.5	0.5	0.4	0.2	0.2
Public pension scheme, tax revenues	0.3	1.0	1.1	1.2	1.2	1.2	1.3
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	1,230	4,075	4,560	5,068	4,998	5,008	5,305
Pensioners aged 65+ (1000 persons)	1,305	3,303	3,789	4,310	4,229	4,269	4,608
Share of pensioners below age 65 as % of all pensioners	-5.8	19.0	16.9	15.0	15.4	14.8	13.1
Benefit ratio (total public pensions, gross)	1.3	37.8	38.6	38.0	39.0	39.6	39.1
Gross replacement rate at retirement (earnings-related public pensions)	0.0	27.2	27.2	27.2	27.2	27.2	27.2
Average accrual rate (new earnings-related pensions)	:	:	:	:	:	:	:
Average contributory period (new earnings-related pensions)	:	:	:	:	:	:	:
Contributors (public pensions, 1000 persons)	229	9,984	10,135	10,121	10,363	10,416	10,213
Support ratio (contributors/100 pensioners, public pensions)	-53	245	222	200	207	208	193
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.0		0.0	0.0	0.0	0.1	0.0
Higher migration (+33%)	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Lower migration (-33%)	0.2		0.1	0.1	0.2	0.2	0.2
Lower fertility (-20%)	0.7		0.0	0.0	0.3	0.5	0.7
Higher employment rate of older workers (+10 pps)	-0.1		0.0	0.0	0.0	0.0	-0.1
Higher TFP growth (+0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Lower TFP growth (-0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Retirement age linked to increases in life expectancy	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Constant retirement age	1.1		0.1	0.2	0.4	0.8	1.1
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	2.0		0.7	1.4	1.3	1.4	2.0
Dependency ratio	3.8		1.2	2.2	2.2	2.8	3.8
Coverage ratio	-1.2		-0.4	-0.4	-0.6	-1.0	-1.2
Of which: Old-age	-0.7		-0.2	-0.1	-0.3	-0.7	-0.7
Early-age	0.0		0.6	0.9	0.1	-0.3	0.0
Cohort effect	-3.6		-1.6	-2.8	-2.0	-2.3	-3.6
Benefit ratio	0.2		0.1	-0.1	0.1	0.3	0.2
Labour market ratio	-0.7		-0.1	-0.2	-0.3	-0.5	-0.7
Of which: Employment rate	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.3		0.0	0.0	-0.1	-0.2	-0.3
Interaction effect (residual)	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	2.0		0.7	0.7	-0.1	0.1	0.5
Dependency ratio	3.8		1.2	1.1	0.0	0.5	1.1
Coverage ratio	-1.2		-0.4	-0.1	-0.2	-0.4	-0.2
Of which: Old-age	-0.7		-0.2	0.1	-0.2	-0.3	-0.1
Early-age	0.0		0.6	0.3	-0.7	-0.4	0.2
Cohort effect	-3.6		-1.6	-1.2	0.8	-0.3	-1.3
Benefit ratio	0.2		0.1	-0.1	0.2	0.2	-0.1
Labour market ratio	-0.7		-0.1	-0.2	-0.1	-0.2	-0.2
Of which: Employment rate	-0.4		-0.1	-0.2	-0.1	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.3		0.0	0.0	0.0	-0.1	-0.1
Interaction effect (residual)	-0.1		0.0	0.0	0.0	0.0	0.0

The Netherlands

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.7	5.7	5.9	6.1	6.3	6.4	6.5
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.7		0.1	0.3	0.5	0.6	0.7
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.1	-0.2
Healthy ageing scenario	-0.3		-0.1	-0.1	-0.2	-0.3	-0.3
No healthy ageing scenario	0.3		0.1	0.1	0.2	0.3	0.3
Labour intensity scenario	0.0		0.0	0.1	0.0	-0.1	0.0
Sector-specific composite indexation scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.9	3.8	4.2	4.8	5.3	5.5	5.7
of which on institutional care - baseline	1.3	2.0	2.2	2.7	3.0	3.1	3.3
of which on home care - baseline	0.3	0.6	0.7	0.8	0.9	0.9	0.9
of which on cash benefits - baseline	0.3	1.2	1.3	1.4	1.5	1.5	1.5
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.0		0.1	0.4	0.8	1.3	2.0
Healthy ageing scenario	-0.4		-0.1	-0.1	-0.2	-0.3	-0.4
No healthy ageing scenario	0.4		0.1	0.2	0.3	0.3	0.4
Coverage convergence scenario	0.1		0.0	0.0	0.0	0.0	0.1
Cost convergence scenario	1.9		0.1	0.4	0.8	1.2	1.9
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	29%	1,133	1,249	1,341	1,421	1,449	1,461
Recipients: receiving institutional care	79%	261	310	374	428	458	467
receiving home care	59%	928	1,096	1,265	1,390	1,428	1,475
receiving cash benefits	59%	99	107	124	142	158	156
Baseline aged 65+	84%	501	634	757	827	873	922
Recipients: receiving institutional care aged 65+	122%	179	229	298	352	384	398
receiving home care aged 65+	93%	633	807	991	1,115	1,161	1,225
receiving cash benefits aged 65+	157%	42	54	74	89	106	108

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-1.0	4.9	4.2	4.2	4.1	3.9	3.9
Number of students (in thousands)							
Total	-14%	3,553	3,248	3,264	3,230	3,076	3,043
as % of population 5-24	-3.7	88.2	84.2	84.6	83.8	83.9	84.5
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.5		0.3	0.4	0.6	0.6	0.5

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	3.5	21.0	21.7	23.1	23.5	23.7	24.5
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.6		0.3	0.7	1.3	1.9	2.6
High life expectancy (+2 years)	0.4		0.0	0.1	0.2	0.4	0.4
Higher migration (+33%)	-0.5		-0.1	-0.3	-0.4	-0.5	-0.5
Lower migration (-33%)	0.6		0.1	0.3	0.4	0.5	0.6
Lower fertility (-20%)	0.8		0.0	-0.3	0.0	0.4	0.8
Higher employment rate of older workers (+10 pps)	-0.2		-0.1	-0.1	-0.1	-0.2	-0.2
Higher TFP growth (+0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Lower TFP growth (-0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

20. AUSTRIA

Austria

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.44	1.46	1.49	1.52	1.55	1.57
Life expectancy at birth							
males	6.8	79.5	80.8	82.4	83.8	85.1	86.3
females	6.0	84.2	85.3	86.7	88.0	89.1	90.2
Life expectancy at 65 (years)							
males	4.9	18.6	19.5	20.6	21.6	22.6	23.5
females	4.8	21.8	22.6	23.7	24.7	25.6	26.6
Net migration (thousands)	-69.0	103.7	36.1	37.3	37.0	35.9	34.7
Net migration as % of population in t-1	-0.8	1.2	0.4	0.4	0.4	0.4	0.4
Population (million)	0.5	9.0	9.2	9.4	9.5	9.5	9.5
share of prime-age population (25-54y)	-5.9	40.9	38.6	37.6	36.1	35.6	35.0
share of working-age population (20-64y)	-8.7	61.1	57.9	55.5	54.6	53.0	52.4
share of elderly population (+65y)	10.3	19.5	22.9	26.2	27.6	29.1	29.9
share of very elderly population (+80y)	6.3	5.9	6.4	7.9	10.8	11.0	12.1
share of very elderly population (+80y) in elderly population (+65y)	10.6	30.1	28.0	30.2	39.2	37.7	40.7
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.3	1.4	1.3	1.6	1.2	1.1	1.1
Employment (15-74y; growth rate)	0.1	1.1	0.3	0.1	-0.2	-0.2	-0.1
Labour input: hours worked (growth rate)	0.0	0.6	0.2	0.1	-0.2	-0.2	-0.1
Labour productivity per hour (growth rate)	1.2	0.8	1.0	1.5	1.4	1.3	1.2
TFP (growth rate)	0.8	0.4	0.6	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.4	0.4	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.1	0.6	1.0	1.4	1.2	1.1	1.1
Potential GDP per worker (growth rate)	1.2	0.3	1.0	1.5	1.4	1.3	1.2
HICP (growth rate)	2.3	8.6	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.6	1.7	3.1	3.5	3.9	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-516	5,514	5,343	5,231	5,200	5,057	4,999
Working-age population (growth rate)	-0.4	0.3	-0.5	0.0	-0.2	-0.2	-0.1
Labour force (20-64y; thousands)	-210	4,463	4,403	4,428	4,410	4,301	4,253
Participation rate (20-64y)	4.1	80.9	82.4	84.6	84.8	85.0	85.1
Participation rate (20-74y)	0.4	70.7	69.2	70.5	71.6	70.6	71.1
young (20-24y)	2.0	75.9	77.9	78.0	78.0	77.9	77.9
prime-age (25-54y)	2.0	89.6	90.8	91.3	91.6	91.6	91.6
older (55-64y)	10.7	58.6	60.9	67.5	68.9	69.0	69.4
oldest (65-74y)	1.0	8.3	7.7	8.1	9.4	9.4	9.3
Participation rate (20-64y) - female	7.3	76.6	79.9	83.0	83.5	83.8	83.9
Participation rate (20-74y) - female	3.5	66.0	66.1	68.2	69.7	68.9	69.5
young (20-24y)	4.2	72.9	77.1	77.1	77.1	77.0	77.0
prime-age (25-54y)	3.1	86.6	88.4	89.3	89.7	89.8	89.8
older (55-64y)	19.7	50.4	58.1	66.9	69.2	69.8	70.1
oldest (65-74y)	1.9	6.0	4.8	6.5	7.8	7.9	7.9
Participation rate (20-64y) - male	1.0	85.3	84.9	86.3	86.1	86.2	86.3
Participation rate (20-74y) - male	-2.8	75.5	72.4	72.9	73.5	72.2	72.7
young (20-24y)	-0.1	78.8	78.8	78.8	78.8	78.8	78.7
prime-age (25-54y)	0.8	92.6	93.2	93.2	93.4	93.5	93.4
older (55-64y)	1.6	67.1	63.9	68.2	68.5	68.2	68.7
oldest (65-74y)	-0.2	11.0	10.9	9.9	11.0	10.9	10.8
Average labour market exit age (1)	1.3	62.2	63.0	63.4	63.5	63.5	63.5
male	0.5	63.0	63.2	63.4	63.6	63.6	63.6
female	2.1	61.4	62.8	63.4	63.5	63.5	63.5
Employment rate (20-64y)	4.2	77.3	78.7	81.0	81.1	81.4	81.4
Employment rate (20-74y)	0.6	67.5	66.1	67.6	68.6	67.6	68.1
Unemployment rate (20-64y)	-0.2	4.5	4.5	4.3	4.3	4.3	4.3
Unemployment rate (20-74y)	-0.3	4.5	4.4	4.2	4.2	4.2	4.2
Employment (20-64y; millions)	-0.2	4.3	4.2	4.2	4.2	4.1	4.1
Employment (20-74y; millions)	-0.2	4.3	4.3	4.3	4.3	4.2	4.2
share of young (20-24y)	0.3	8.0	8.2	8.5	8.1	8.1	8.3
share of prime-age (25-54y)	-2.7	73.0	72.1	71.5	70.0	70.6	70.3
share of older (55-64y)	1.6	17.3	17.6	17.8	19.5	18.7	18.9
share of oldest (65-74y)	0.8	1.7	2.0	2.2	2.4	2.6	2.5
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	-0.6	24.1	24.1	22.5	24.4	23.4	23.5
Old-age dependency ratio (3)	25.0	32.0	39.5	47.2	50.6	54.8	57.0
Total dependency ratio (4)	27.3	63.7	72.7	80.1	83.3	88.7	90.9
Total economic dependency ratio (5)	20.4	108.2	114.9	117.4	120.5	125.7	128.6
Economic old-age dependency ratio (20-64y) (6)	27.9	39.5	48.1	56.0	59.9	64.6	67.4
Economic old-age dependency ratio (20-74y) (7)	26.9	38.9	47.1	54.8	58.5	62.9	65.7

Austria**Pension expenditure projections**

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	0.4	13.7	15.0	14.6	14.0	14.0	14.0
Of which: Old-age and early pensions	1.1	11.4	12.8	12.5	12.0	12.3	12.5
Disability pensions	-0.1	0.4	0.3	0.3	0.3	0.3	0.2
Survivors' pensions	-0.7	1.6	1.6	1.4	1.3	1.0	0.9
Other	0.1	0.3	0.4	0.4	0.4	0.4	0.4
Earnings-related pensions, gross	1.1	11.4	12.8	12.5	12.0	12.3	12.5
Private occupational pensions, gross	:	0.4	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	-0.1	0.3	0.3	0.3	0.3	0.3	0.3
Public pensions, contributions	0.0	9.8	9.8	9.7	9.7	9.8	9.8
Balance of the pension system (contributions - gross expenditure)	-0.3	-3.6	-4.8	-4.5	-3.8	-3.8	-3.8
Public pension scheme, tax revenues	-0.2	2.4	2.5	2.3	2.2	2.2	2.2
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	551	2,550	2,797	2,962	3,028	3,060	3,101
Pensioners aged 65+ (1000 persons)	794	1,975	2,349	2,628	2,672	2,714	2,768
Share of pensioners below age 65 as % of all pensioners	-11.8	22.6	16.0	11.3	11.7	11.3	10.7
Benefit ratio (total public pensions, gross)	-9.5	55.5	55.9	52.1	48.5	47.0	46.0
Gross replacement rate at retirement (earnings-related public pensions)	1.2	53.2	55.6	53.8	54.3	54.3	54.4
Average accrual rate (new earnings-related pensions)	0.0	1.8	1.8	1.8	1.8	1.8	1.8
Average contributory period (new earnings-related pensions)	0.7	38.7	39.3	39.1	39.2	39.4	39.3
Contributors (public pensions, 1000 persons)	-125	4,453	4,396	4,444	4,442	4,364	4,328
Support ratio (contributors/100 pensioners, public pensions)	-35	175	157	150	147	143	140
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.7		0.1	0.2	0.4	0.6	0.7
Higher migration (+33%)	-0.4		-0.1	-0.3	-0.4	-0.5	-0.4
Lower migration (-33%)	0.4		0.1	0.3	0.5	0.5	0.4
Lower fertility (-20%)	0.6		0.0	0.0	0.3	0.4	0.6
Higher employment rate of older workers (+10 pps)	-0.5		-0.3	-0.5	-0.4	-0.5	-0.5
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.2		0.0	0.0	0.2	0.2	0.2
Retirement age linked to increases in life expectancy	-2.0		-0.3	-0.6	-1.0	-1.6	-2.0
Constant retirement age	1.1		0.6	0.8	1.0	0.9	1.1
Constant benefit ratio	1.4		0.0	0.0	0.7	1.1	1.4
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	0.4		1.3	1.0	0.3	0.3	0.4
Dependency ratio	8.7		3.2	6.0	7.0	8.2	8.7
Coverage ratio	-4.0		-1.2	-2.7	-3.3	-3.8	-4.0
Of which: Old-age	-2.0		-0.1	-0.8	-1.4	-1.9	-2.0
Early-age	-5.9		-2.3	-6.1	-5.6	-5.2	-5.9
Cohort effect	-8.2		-3.4	-5.9	-6.4	-7.9	-8.2
Benefit ratio	-3.0		-0.2	-1.3	-2.3	-2.7	-3.0
Labour market ratio	-0.8		-0.3	-0.7	-0.8	-0.8	-0.8
Of which: Employment rate	-0.8		-0.3	-0.7	-0.7	-0.8	-0.8
Labour intensity	0.0		0.0	0.0	0.1	0.0	0.0
Career shift	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Interaction effect (residual)	-0.5		-0.2	-0.4	-0.4	-0.5	-0.5
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	0.4		1.3	-0.4	-0.7	0.0	0.1
Dependency ratio	8.7		3.2	2.8	1.0	1.2	0.6
Coverage ratio	-4.0		-1.2	-1.5	-0.6	-0.6	-0.2
Of which: Old-age	-2.0		-0.1	-0.7	-0.6	-0.5	-0.1
Early-age	-5.9		-2.3	-3.8	0.5	0.4	-0.6
Cohort effect	-8.2		-3.4	-2.6	-0.4	-1.5	-0.3
Benefit ratio	-3.0		-0.2	-1.1	-1.0	-0.4	-0.3
Labour market ratio	-0.8		-0.3	-0.4	0.0	-0.1	0.0
Of which: Employment rate	-0.8		-0.3	-0.4	0.0	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.5		-0.2	-0.2	0.0	0.0	0.0

Austria

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.1	7.8	8.0	8.4	8.8	8.8	8.9
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.2	0.5	0.8	0.9	1.0
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.5		-0.1	-0.2	-0.3	-0.4	-0.5
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.3		-0.2	-0.1	0.0	0.2	0.3
Sector-specific composite indexation scenario	0.1		0.0	0.1	0.1	0.1	0.1

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.5	1.6	1.8	2.1	2.6	2.9	3.1
of which on institutional care - baseline	0.7	0.6	0.7	0.9	1.1	1.3	1.3
of which on home care - baseline	0.1	0.2	0.2	0.2	0.3	0.3	0.3
of which on cash benefits - baseline	0.6	0.8	0.9	1.0	1.2	1.4	1.4
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.4		0.1	0.3	0.6	0.9	1.4
Healthy ageing scenario	-0.2		0.0	-0.1	-0.1	-0.1	-0.2
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.1	0.2
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	1.4		0.1	0.3	0.6	0.9	1.4
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	34%	819	885	968	1,062	1,076	1,099
Recipients: receiving institutional care	109%	67	80	96	123	133	139
receiving home care	89%	93	110	130	159	169	177
receiving cash benefits	76%	451	517	601	717	768	795
Baseline aged 65+	78%	439	513	616	716	749	780
Recipients: receiving institutional care aged 65+	121%	61	74	90	117	128	134
receiving home care aged 65+	106%	80	96	117	147	157	165
receiving cash benefits aged 65+	102%	349	413	504	621	677	706

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.4	4.6	4.3	4.2	4.1	4.2	4.2
Number of students (in thousands)							
Total	-5%	1,464	1,454	1,423	1,390	1,395	1,387
as % of population 5-24	-2.4	80.8	78.7	77.9	78.3	78.6	78.3
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.6		0.2	0.4	0.6	0.6	0.6

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	2.6	27.7	29.1	29.3	29.5	29.9	30.2
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.4		0.3	0.8	1.4	1.8	2.4
High life expectancy (+2 years)	1.1		0.1	0.3	0.5	0.9	1.1
Higher migration (+33%)	-0.6		-0.2	-0.4	-0.6	-0.7	-0.6
Lower migration (-33%)	0.7		0.2	0.4	0.7	0.8	0.7
Lower fertility (-20%)	0.7		0.0	-0.3	0.0	0.4	0.7
Higher employment rate of older workers (+10 pps)	-0.5		-0.3	-0.5	-0.5	-0.5	-0.5
Higher TFP growth (+0.2 pps)	-0.1		0.0	0.0	0.0	0.0	-0.1
Lower TFP growth (-0.2 pps)	0.1		0.0	0.0	0.2	0.2	0.1

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

21. POLAND

Poland

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.2	1.39	1.45	1.51	1.56	1.59	1.61
Life expectancy at birth							
males	10.9	73.2	75.7	78.1	80.3	82.3	84.1
females	8.2	81.3	83.2	85.0	86.6	88.1	89.5
Life expectancy at 65 (years)							
males	7.0	15.4	17.1	18.5	19.9	21.2	22.4
females	6.3	19.8	21.3	22.7	23.9	25.0	26.1
Net migration (thousands)	-931.4	1,000.9	-44.5	43.5	62.5	57.5	69.5
Net migration as % of population in t-1	-2.4	2.7	-0.1	0.1	0.2	0.2	0.2
Population (million)	-6.2	38.1	37.3	35.8	34.6	33.3	31.8
share of prime-age population (25-54y)	-9.9	42.8	40.7	36.5	33.9	33.7	32.9
share of working-age population (20-64y)	-9.8	60.3	58.5	57.9	52.9	49.5	50.5
share of elderly population (+65y)	13.0	19.2	22.0	24.5	29.3	32.7	32.2
share of very elderly population (+80y)	10.7	4.3	5.4	8.7	9.1	11.8	15.0
share of very elderly population (+80y) in elderly population (+65y)	24.4	22.4	24.7	35.3	30.9	36.0	46.7
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.5	3.4	2.2	1.4	0.9	1.0	0.8
Employment (15-74y; growth rate)	-0.7	0.5	-0.9	-0.9	-1.2	-0.6	-0.4
Labour input: hours worked (growth rate)	-0.7	0.8	-0.9	-0.9	-1.2	-0.6	-0.4
Labour productivity per hour (growth rate)	2.2	2.6	3.2	2.3	2.0	1.6	1.2
TFP (growth rate)	1.4	1.6	1.8	1.4	1.3	1.1	0.8
capital deepening (contribution to labour productivity growth)	0.8	0.9	1.3	0.9	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.8	2.5	2.8	1.8	1.2	1.5	1.3
Potential GDP per worker (growth rate)	2.2	2.9	3.2	2.3	2.1	1.6	1.2
HICP (growth rate)	3.0	13.2	2.5	2.5	2.5	2.5	2.5
Nominal interest rate	5.3	6.1	6.4	5.7	4.7	4.5	4.5
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-6,868	22,946	21,821	20,711	18,301	16,491	16,078
Working-age population (growth rate)	-0.1	-0.1	-0.4	-0.8	-1.4	-0.6	-0.2
Labour force (20-64y; thousands)	-5,401	18,156	17,466	16,259	14,396	13,198	12,755
Participation rate (20-64y)	0.2	79.1	80.0	78.5	78.7	80.0	79.3
Participation rate (20-74y)	-0.6	67.6	68.4	67.5	63.7	64.7	67.0
young (20-24y)	1.1	57.9	58.2	59.0	59.2	58.8	59.0
prime-age (25-54y)	1.3	87.8	88.7	88.8	89.2	89.3	89.1
older (55-64y)	4.1	57.8	61.2	61.6	60.1	61.0	61.9
oldest (65-74y)	0.8	9.2	9.2	10.5	10.3	9.6	10.0
Participation rate (20-64y) - female	1.3	72.5	74.6	72.7	72.8	74.7	73.9
Participation rate (20-74y) - female	1.0	60.5	62.2	61.2	57.4	59.1	61.5
young (20-24y)	1.8	50.1	51.2	51.9	52.0	51.6	51.9
prime-age (25-54y)	2.2	83.4	85.0	85.3	85.6	85.8	85.6
older (55-64y)	6.5	45.8	51.8	52.0	50.4	51.2	52.3
oldest (65-74y)	0.4	6.0	5.6	6.7	6.6	6.2	6.4
Participation rate (20-64y) - male	-1.3	85.8	85.4	84.2	84.3	85.0	84.5
Participation rate (20-74y) - male	-2.9	75.1	74.8	73.8	69.9	70.1	72.2
young (20-24y)	0.4	65.4	65.1	65.9	66.1	65.6	65.9
prime-age (25-54y)	0.2	92.2	92.3	92.2	92.7	92.5	92.4
older (55-64y)	-0.1	71.1	71.2	71.5	69.9	70.4	71.0
oldest (65-74y)	0.2	13.4	13.7	15.0	14.5	13.4	13.6
Average labour market exit age (1)	0.0	63.0	63.0	63.0	63.0	63.0	63.0
male	0.0	64.5	64.5	64.5	64.5	64.5	64.5
female	0.0	61.6	61.6	61.6	61.6	61.6	61.6
Employment rate (20-64y)	0.1	76.9	78.0	76.1	76.3	77.6	76.9
Employment rate (20-74y)	-0.7	65.7	66.6	65.5	61.8	62.8	65.0
Unemployment rate (20-64y)	0.1	2.9	2.6	3.0	3.0	3.0	3.0
Unemployment rate (20-74y)	0.1	2.8	2.5	3.0	2.9	2.9	3.0
Employment (20-64y; millions)	-5.3	17.6	17.0	15.8	14.0	12.8	12.4
Employment (20-74y; millions)	-5.3	18.1	17.4	16.2	14.5	13.2	12.7
share of young (20-24y)	1.1	5.5	6.3	6.5	5.9	6.2	6.6
share of prime-age (25-54y)	-5.8	77.3	75.7	69.8	70.2	73.7	71.4
share of older (55-64y)	4.3	15.0	15.8	21.2	20.3	16.7	19.3
share of oldest (65-74y)	0.4	2.3	2.3	2.6	3.6	3.3	2.7
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	4.4	20.7	20.9	27.4	27.2	22.5	25.1
Old-age dependency ratio (3)	31.9	31.9	37.6	42.3	55.4	66.0	63.7
Total dependency ratio (4)	32.2	65.9	71.0	72.8	88.9	102.0	98.1
Total economic dependency ratio (5)	39.5	110.9	114.4	121.0	138.6	151.5	150.4
Economic old-age dependency ratio (20-64y) (6)	41.0	39.0	45.8	52.9	68.8	81.5	80.0
Economic old-age dependency ratio (20-74y) (7)	39.7	38.1	44.8	51.5	66.3	78.8	77.8

Poland							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-0.2	10.2	11.3	10.6	10.7	10.6	10.1
Of which: Old-age and early pensions	0.1	9.5	10.7	10.0	10.1	10.1	9.6
Disability pensions	0.0	0.4	0.4	0.4	0.4	0.4	0.4
Survivors' pensions	-0.2	0.3	0.3	0.2	0.2	0.1	0.1
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	-1.8	9.0	10.1	9.1	8.7	8.1	7.2
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	-0.1	0.2	0.2	0.2	0.2	0.1	0.1
Public pensions, contributions	0.4	8.0	8.3	8.5	8.5	8.4	8.4
Balance of the pension system (contributions - gross expenditure)	0.6	-2.2	-3.0	-2.1	-2.3	-2.2	-1.6
Public pension scheme, tax revenues	0.0	1.3	1.4	1.3	1.4	1.3	1.3
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	2,174	9,696	10,344	11,200	12,357	12,557	11,870
Pensioners aged 65+ (1000 persons)	3,118	7,318	8,391	9,056	10,489	11,168	10,437
Share of pensioners below age 65 as % of all pensioners	-12.4	24.5	18.9	19.1	15.1	11.1	12.1
Benefit ratio (total public pensions, gross)	-19.8	44.5	43.8	35.1	28.8	25.7	24.7
Gross replacement rate at retirement (earnings-related public pensions)	-31.4	58.2	47.1	32.2	27.4	27.0	26.8
Average accrual rate (new earnings-related pensions)	-0.3	1.0	0.9	0.9	0.8	0.8	0.7
Average contributory period (new earnings-related pensions)	2.5	36.6	37.3	38.1	38.0	39.1	39.1
Contributors (public pensions, 1000 persons)	-5,281	17,404	16,831	15,689	13,947	12,694	12,123
Support ratio (contributors/100 pensioners, public pensions)	-77	179	163	140	113	101	102
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.3		0.0	0.1	0.2	0.2	0.3
Higher migration (+33%)	-0.1		-0.1	-0.1	-0.2	-0.2	-0.1
Lower migration (-33%)	0.1		0.1	0.1	0.2	0.2	0.1
Lower fertility (-20%)	0.8		0.0	0.0	0.2	0.5	0.8
Higher employment rate of older workers (+10 pps)	-0.2		-0.2	-0.3	-0.3	-0.2	-0.2
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.3		0.0	0.1	0.3	0.3	0.3
Retirement age linked to increases in life expectancy	-1.1		-0.3	-0.6	-0.9	-0.8	-1.1
Constant retirement age	0.0		0.0	0.0	0.0	0.0	0.0
Constant benefit ratio	4.6		0.0	1.4	3.5	4.7	4.6
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-0.2		1.1	0.3	0.5	0.4	-0.2
Dependency ratio	7.9		1.8	3.2	6.3	8.2	7.9
Coverage ratio	-1.4		-0.5	-0.4	-0.9	-1.5	-1.4
Of which: Old-age	0.2		0.2	0.4	0.4	0.3	0.2
Early-age	-3.6		-2.5	-2.8	-2.3	-3.4	-3.6
Cohort effect	-4.5		-0.6	0.1	-3.2	-5.7	-4.5
Benefit ratio	-5.9		-0.1	-2.3	-4.3	-5.5	-5.9
Labour market ratio	0.0		-0.1	0.1	0.0	-0.2	0.0
Of which: Employment rate	0.0		-0.2	0.1	0.1	-0.1	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	-0.1	-0.1	0.0
Interaction effect (residual)	-0.7		-0.1	-0.2	-0.5	-0.7	-0.7
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-0.2		1.1	-0.7	0.1	-0.1	-0.6
Dependency ratio	7.9		1.8	1.4	3.1	2.0	-0.4
Coverage ratio	-1.4		-0.5	0.1	-0.5	-0.6	0.0
Of which: Old-age	0.2		0.2	0.1	0.0	-0.1	-0.1
Early-age	-3.6		-2.5	-0.3	0.6	-1.1	-0.2
Cohort effect	-4.5		-0.6	0.7	-3.3	-2.5	1.2
Benefit ratio	-5.9		-0.1	-2.3	-2.0	-1.2	-0.4
Labour market ratio	0.0		-0.1	0.2	-0.1	-0.2	0.2
Of which: Employment rate	0.0		-0.2	0.3	0.0	-0.2	0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	-0.1	0.0	0.1
Interaction effect (residual)	-0.7		-0.1	-0.2	-0.3	-0.1	0.0

Poland

Health care*

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.1	4.4	4.7	5.0	5.2	5.5	5.5
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.1		0.3	0.7	1.0	1.1	1.1
Demographic scenario	-0.3		-0.1	-0.2	-0.2	-0.2	-0.3
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.3	-0.4
No healthy ageing scenario	0.4		0.1	0.2	0.3	0.4	0.4
Labour intensity scenario	1.1		0.1	0.3	0.8	1.2	1.1
Sector-specific composite indexation scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.9	0.5	0.6	0.8	1.0	1.2	1.4
of which on institutional care - baseline	0.6	0.3	0.4	0.6	0.7	0.8	1.0
of which on home care - baseline	0.2	0.2	0.2	0.3	0.3	0.4	0.4
of which on cash benefits - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	3.3		0.1	0.5	1.0	1.9	3.3
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	3.0		0.1	0.5	1.0	1.8	3.0
Cost convergence scenario	0.2		0.0	0.0	0.0	0.1	0.2
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	23%	2,556	2,718	2,940	2,984	3,088	3,145
Recipients: receiving institutional care	102%	171	195	250	273	301	345
receiving home care	92%	235	266	335	361	398	453
receiving cash benefits	92%	70	80	100	108	119	136
Baseline aged 65+	70%	1,428	1,650	1,907	2,106	2,344	2,426
Recipients: receiving institutional care aged 65+	123%	148	173	228	253	286	330
receiving home care aged 65+	122%	191	224	293	325	368	424
receiving cash benefits aged 65+	122%	57	67	88	97	110	127

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.1	3.9	3.9	3.7	3.8	4.1	4.0
Number of students (in thousands)							
Total	-28%	6,310	6,170	5,319	4,930	4,879	4,563
as % of population 5-24	-1.6	80.3	79.0	78.2	79.1	79.3	78.8
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.8		0.3	0.5	0.7	0.7	0.8

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.9	19.1	20.5	20.1	20.8	21.4	21.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.4		0.5	1.2	2.0	3.0	4.4
High life expectancy (+2 years)	0.5		0.0	0.1	0.2	0.3	0.5
Higher migration (+33%)	-0.2		-0.1	-0.2	-0.3	-0.3	-0.2
Lower migration (-33%)	0.3		0.1	0.2	0.3	0.3	0.3
Lower fertility (-20%)	0.5		0.0	-0.4	-0.3	0.1	0.5
Higher employment rate of older workers (+10 pps)	-0.3		-0.2	-0.3	-0.4	-0.3	-0.3
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.3		0.0	0.1	0.2	0.3	0.3

* Health care expenditure projections for PL consider future demographic and macroeconomic changes but do not take into account a future convergence of public spending on health care to a threshold of 7% of GDP as included in the Polish law.

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

22. PORTUGAL

Portugal

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.41	1.44	1.47	1.50	1.52	1.55
Life expectancy at birth							
males	7.3	79.6	81.9	83.3	84.6	85.8	86.9
females	5.4	85.0	86.0	87.2	88.3	89.4	90.4
Life expectancy at 65 (years)							
males	5.1	18.9	20.5	21.5	22.4	23.2	24.0
females	4.4	22.3	23.0	24.0	24.9	25.8	26.7
Net migration (thousands)	-43.1	81.6	16.2	25.9	27.3	32.7	38.5
Net migration as % of population in t-1	-0.4	0.8	0.2	0.3	0.3	0.4	0.4
Population (million)	-1.4	10.4	10.2	10.0	9.6	9.3	9.0
share of prime-age population (25-54y)	-6.0	38.9	36.5	33.5	32.9	32.4	32.9
share of working-age population (20-64y)	-8.8	58.4	56.2	52.1	49.5	49.8	49.6
share of elderly population (+65y)	9.8	23.8	27.0	31.2	34.0	33.8	33.6
share of very elderly population (+80y)	7.8	6.9	8.4	10.6	12.9	15.2	14.8
share of very elderly population (+80y) in elderly population (+65y)	14.8	29.2	30.9	34.1	38.0	45.1	44.0
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.2	1.8	0.7	1.2	1.4	1.4	1.1
Employment (15-74y; growth rate)	-0.4	0.7	-0.9	-0.8	-0.5	-0.2	-0.2
Labour input: hours worked (growth rate)	-0.4	0.3	-0.8	-0.8	-0.5	-0.2	-0.2
Labour productivity per hour (growth rate)	1.7	1.5	1.5	2.0	2.0	1.6	1.2
TFP (growth rate)	1.1	1.5	0.9	1.3	1.3	1.0	0.8
capital deepening (contribution to labour productivity growth)	0.5	0.0	0.6	0.7	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.5	1.3	0.9	1.5	1.9	1.8	1.3
Potential GDP per worker (growth rate)	1.7	1.0	1.5	2.0	2.0	1.6	1.2
HICP (growth rate)	2.2	8.1	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.9	2.2	3.9	4.1	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-1,616	6,055	5,748	5,200	4,766	4,609	4,438
Working-age population (growth rate)	-0.2	-0.1	-0.8	-1.2	-0.5	-0.3	-0.3
Labour force (20-64y; thousands)	-1,172	4,994	4,787	4,374	4,056	3,940	3,822
Participation rate (20-64y)	3.6	82.5	83.3	84.1	85.1	85.5	86.1
Participation rate (20-74y)	2.8	70.7	70.5	70.0	70.5	73.1	73.5
young (20-24y)	0.8	53.6	54.4	54.5	54.2	54.4	54.4
prime-age (25-54y)	1.3	91.3	92.1	92.3	92.5	92.5	92.6
older (55-64y)	11.3	69.3	71.1	74.1	76.5	79.0	80.6
oldest (65-74y)	10.8	14.3	16.1	18.4	19.3	22.5	25.1
Participation rate (20-64y) - female	5.3	79.9	81.3	82.6	84.0	84.5	85.2
Participation rate (20-74y) - female	5.0	67.2	68.0	68.0	68.7	71.8	72.3
young (20-24y)	1.5	49.7	51.3	51.4	51.1	51.2	51.2
prime-age (25-54y)	2.9	89.5	91.2	91.9	92.3	92.3	92.4
older (55-64y)	13.4	64.9	67.4	71.0	73.6	76.8	78.3
oldest (65-74y)	14.4	9.6	15.0	17.7	18.4	21.4	24.0
Participation rate (20-64y) - male	1.8	85.3	85.3	85.6	86.2	86.4	87.1
Participation rate (20-74y) - male	0.3	74.5	73.1	72.1	72.3	74.5	74.8
young (20-24y)	0.2	57.3	57.4	57.5	57.3	57.4	57.4
prime-age (25-54y)	-0.5	93.2	93.1	92.8	92.7	92.7	92.7
older (55-64y)	8.8	74.3	75.3	77.5	79.5	81.4	83.0
oldest (65-74y)	6.3	20.0	17.5	19.3	20.3	23.7	26.3
Average labour market exit age (1)	2.3	64.4	64.8	65.2	65.7	66.2	66.7
male	2.3	64.6	64.9	65.4	65.8	66.4	66.9
female	2.3	64.2	64.7	65.1	65.5	66.0	66.4
Employment rate (20-64y)	3.1	77.6	78.5	78.9	79.8	80.1	80.7
Employment rate (20-74y)	2.5	66.7	66.5	65.8	66.3	68.8	69.2
Unemployment rate (20-64y)	0.3	5.9	5.8	6.2	6.2	6.2	6.2
Unemployment rate (20-74y)	0.2	5.8	5.6	6.0	6.0	6.0	5.9
Employment (20-64y; millions)	-1.1	4.7	4.5	4.1	3.8	3.7	3.6
Employment (20-74y; millions)	-1.0	4.9	4.7	4.4	4.1	3.9	3.9
share of young (20-24y)	-0.3	5.2	4.9	4.6	4.9	5.0	4.8
share of prime-age (25-54y)	-5.0	71.5	69.0	66.7	68.2	66.4	66.5
share of older (55-64y)	1.7	19.7	21.5	22.8	20.6	22.4	21.4
share of oldest (65-74y)	3.7	3.6	4.5	5.9	6.3	6.3	7.4
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	0.3	24.1	26.2	27.2	24.2	25.5	24.4
Old-age dependency ratio (3)	27.0	40.7	48.2	59.8	68.6	67.8	67.8
Total dependency ratio (4)	30.5	71.3	78.1	91.8	102.1	100.7	101.8
Total economic dependency ratio (5)	18.8	112.7	116.7	128.9	137.2	134.7	131.5
Economic old-age dependency ratio (20-64y) (6)	27.2	48.6	56.5	69.4	79.1	77.7	75.8
Economic old-age dependency ratio (20-74y) (7)	23.4	46.9	54.0	65.3	74.1	72.8	70.3

Portugal**Pension expenditure projections**

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-1.8	12.2	13.5	14.7	14.6	11.8	10.4
Of which: Old-age and early pensions	-1.1	9.6	10.9	12.2	12.4	9.7	8.5
Disability pensions	0.0	0.5	0.4	0.5	0.4	0.4	0.5
Survivors' pensions	-0.7	1.9	1.9	1.8	1.5	1.3	1.2
Other	0.0	0.2	0.2	0.2	0.3	0.3	0.2
Earnings-related pensions, gross	-1.2	9.4	10.8	12.0	12.1	9.4	8.2
Private occupational pensions, gross	-0.2	0.3	0.2	0.2	0.2	0.2	0.2
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	-0.1	0.3	0.5	0.6	0.2	0.2	0.2
Public pensions, contributions	-3.8	14.2	14.1	14.2	14.2	11.9	10.3
Balance of the pension system (contributions - gross expenditure)	-2.0	1.9	0.5	-0.5	-0.4	0.2	-0.1
Public pension scheme, tax revenues	-0.1	1.0	1.1	1.2	1.2	1.0	0.9
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	210	2,776	2,955	3,169	3,263	3,123	2,987
Pensioners aged 65+ (1000 persons)	402	2,349	2,585	2,842	2,997	2,868	2,751
Share of pensioners below age 65 as % of all pensioners	-7.5	15.4	12.5	10.3	8.1	8.2	7.9
Benefit ratio (total public pensions, gross)	-18.6	52.9	55.3	51.4	46.2	37.8	34.3
Gross replacement rate at retirement (earnings-related public pensions)	-30.5	69.4	79.9	90.1	38.5	40.1	38.9
Average accrual rate (new earnings-related pensions)	0.0	2.2	2.2	2.3	2.3	2.2	2.2
Average contributory period (new earnings-related pensions)	3.9	34.3	35.8	36.8	36.1	37.8	38.3
Contributors (public pensions, 1000 persons)	-1,237	4,592	4,377	3,893	3,531	3,421	3,356
Support ratio (contributors/100 pensioners, public pensions)	-53	165	148	123	108	110	112
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.5		0.0	-0.1	0.1	0.4	0.5
Higher migration (+33%)	-0.4		-0.1	-0.2	-0.4	-0.4	-0.4
Lower migration (-33%)	0.4		0.1	0.3	0.5	0.5	0.4
Lower fertility (-20%)	0.8		0.0	0.0	0.2	0.5	0.8
Higher employment rate of older workers (+10 pps)	-0.4		-0.3	-0.5	-0.5	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	0.0	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.8		0.0	0.2	0.6	0.7	0.8
Retirement age linked to increases in life expectancy	-0.1		0.0	-0.1	-0.2	-0.1	-0.1
Constant retirement age	1.9		-0.1	0.1	1.1	1.7	1.9
Constant benefit ratio	4.3		0.0	0.0	0.7	3.3	4.3
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-1.8		1.3	2.5	2.4	-0.5	-1.8
Dependency ratio	7.3		2.2	5.4	7.5	7.3	7.3
Coverage ratio	-1.7		-0.7	-1.3	-1.6	-1.6	-1.7
Of which: Old-age	-0.5		-0.2	-0.5	-0.5	-0.5	-0.5
Early-age	-3.4		-2.1	-2.0	-3.0	-3.5	-3.4
Cohort effect	-6.9		-1.1	-4.3	-6.9	-6.4	-6.9
Benefit ratio	-6.1		0.1	-0.9	-2.4	-5.1	-6.1
Labour market ratio	-1.0		-0.2	-0.5	-0.8	-0.8	-1.0
Of which: Employment rate	-0.5		-0.1	-0.2	-0.4	-0.4	-0.5
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.5		-0.1	-0.3	-0.4	-0.4	-0.5
Interaction effect (residual)	-0.3		-0.1	-0.3	-0.4	-0.4	-0.3
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-1.8		1.3	1.2	-0.1	-2.8	-1.4
Dependency ratio	7.3		2.2	3.2	2.1	-0.2	0.0
Coverage ratio	-1.7		-0.7	-0.6	-0.3	0.0	-0.1
Of which: Old-age	-0.5		-0.2	-0.3	0.1	0.0	0.0
Early-age	-3.4		-2.1	0.1	-1.1	-0.5	0.1
Cohort effect	-6.9		-1.1	-3.2	-2.6	0.5	-0.5
Benefit ratio	-6.1		0.1	-0.9	-1.6	-2.6	-1.1
Labour market ratio	-1.0		-0.2	-0.3	-0.2	-0.1	-0.2
Of which: Employment rate	-0.5		-0.1	-0.1	-0.2	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.5		-0.1	-0.2	-0.1	0.0	-0.1
Interaction effect (residual)	-0.3		-0.1	-0.2	-0.1	0.0	0.0

Portugal

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.0	6.2	6.2	6.7	7.1	7.3	7.2
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.0		0.3	0.5	0.8	1.0	1.0
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.5		-0.1	-0.3	-0.4	-0.4	-0.5
No healthy ageing scenario	0.5		0.1	0.3	0.4	0.5	0.5
Labour intensity scenario	0.5		-0.1	0.3	0.6	0.6	0.5
Sector-specific composite indexation scenario	-0.6		-0.2	-0.3	-0.5	-0.6	-0.6

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	0.5	0.6	0.7	0.9	0.9	0.9
of which on institutional care - baseline	0.3	0.3	0.4	0.5	0.5	0.6	0.5
of which on home care - baseline	0.2	0.2	0.2	0.3	0.3	0.4	0.3
of which on cash benefits - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	7.9		0.3	0.9	2.2	4.5	7.9
Healthy ageing scenario	-0.1		0.0	0.0	0.0	0.0	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.0	0.0	0.1
Coverage convergence scenario	8.1		0.3	0.9	2.3	4.6	8.1
Cost convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	8%	839	885	938	962	953	904
Recipients: receiving institutional care	34%	33	37	42	45	47	45
receiving home care	44%	17	19	22	24	25	25
receiving cash benefits	3%	13	14	15	15	15	14
Baseline aged 65+	34%	520	582	669	728	730	696
Recipients: receiving institutional care aged 65+	48%	28	31	37	41	43	41
receiving home care aged 65+	56%	15	17	20	22	24	23
receiving cash benefits aged 65+	29%	8	9	10	11	11	10

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.1	4.4	4.1	4.3	4.4	4.3	4.3
Number of students (in thousands)							
Total	-22%	1,635	1,486	1,419	1,376	1,306	1,283
as % of population 5-24	0.7	81.7	81.6	82.6	82.4	82.0	82.4
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.5		0.1	0.3	0.5	0.6	0.5

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.5	23.3	24.4	26.4	27.0	24.3	22.8
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	8.9		0.5	1.4	3.0	5.4	8.9
High life expectancy (+2 years)	0.7		0.0	-0.1	0.1	0.5	0.7
Higher migration (+33%)	-0.6		-0.1	-0.3	-0.5	-0.6	-0.6
Lower migration (-33%)	0.6		0.1	0.4	0.6	0.6	0.6
Lower fertility (-20%)	0.7		0.0	-0.4	-0.3	0.3	0.7
Higher employment rate of older workers (+10 pps)	-0.4		-0.3	-0.6	-0.6	-0.5	-0.4
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	0.0	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.8		0.0	0.2	0.6	0.7	0.8

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

23. ROMANIA

Romania

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.0	1.81	1.80	1.79	1.78	1.78	1.77
Life expectancy at birth							
males	12.4	70.9	73.7	76.4	79.0	81.3	83.3
females	9.9	78.6	80.9	83.0	85.0	86.8	88.5
Life expectancy at 65 (years)							
males	7.8	14.2	16.0	17.6	19.2	20.6	22.0
females	7.3	18.1	19.7	21.3	22.7	24.1	25.4
Net migration (thousands)	-50.6	78.7	-37.5	-4.8	5.7	13.1	28.2
Net migration as % of population in t-1	-0.2	0.4	-0.2	0.0	0.0	0.1	0.2
Population (million)	-4.0	19.0	18.2	17.2	16.4	15.7	15.0
share of prime-age population (25-54y)	-7.7	41.8	37.4	34.9	33.8	34.5	34.1
share of working-age population (20-64y)	-6.5	58.6	58.3	54.9	51.8	50.8	52.1
share of elderly population (+65y)	9.5	19.6	21.0	25.5	28.7	30.0	29.1
share of very elderly population (+80y)	8.6	4.4	5.3	7.7	9.3	11.9	13.1
share of very elderly population (+80y) in elderly population (+65y)	22.3	22.7	25.1	30.0	32.5	39.7	45.0
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.7	2.9	2.3	1.4	1.3	1.4	0.9
Employment (15-74y; growth rate)	-0.7	-0.2	-1.2	-1.0	-0.9	-0.3	-0.3
Labour input: hours worked (growth rate)	-0.7	0.0	-1.3	-1.0	-0.9	-0.3	-0.3
Labour productivity per hour (growth rate)	2.4	2.9	3.6	2.4	2.2	1.7	1.2
TFP (growth rate)	1.4	1.3	2.1	1.5	1.4	1.1	0.8
capital deepening (contribution to labour productivity growth)	1.0	1.6	1.5	0.9	0.8	0.6	0.4
Potential GDP per capita (growth rate)	2.2	3.3	3.0	1.9	1.8	1.9	1.3
Potential GDP per worker (growth rate)	2.4	3.1	3.6	2.4	2.2	1.7	1.2
HICP (growth rate)	2.9	12.0	2.5	2.5	2.5	2.5	2.5
Nominal interest rate	6.2	7.5	8.7	7.3	5.0	4.5	4.5
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-3,337	11,163	10,580	9,441	8,489	7,945	7,826
Working-age population (growth rate)	1.1	-1.4	-0.4	-1.2	-0.9	-0.2	-0.3
Labour force (20-64y; thousands)	-2,326	8,044	7,592	6,835	6,179	5,852	5,718
Participation rate (20-64y)	1.0	72.1	71.8	72.4	72.8	73.7	73.1
Participation rate (20-74y)	1.9	60.5	61.5	59.9	59.9	61.1	62.4
young (20-24y)	0.9	44.6	45.0	45.4	45.4	45.3	45.5
prime-age (25-54y)	-0.3	82.0	82.0	81.5	81.9	81.8	81.8
older (55-64y)	12.4	48.6	56.8	60.8	59.5	61.4	61.0
oldest (65-74y)	7.6	3.4	6.8	10.0	10.4	9.9	11.0
Participation rate (20-64y) - female	1.0	61.7	62.0	62.8	62.5	63.1	62.7
Participation rate (20-74y) - female	2.9	50.5	51.8	51.0	50.9	51.9	53.3
young (20-24y)	0.8	34.0	34.3	34.8	34.7	34.6	34.8
prime-age (25-54y)	-2.5	72.4	71.4	69.8	70.0	70.0	69.9
older (55-64y)	17.4	37.6	50.0	56.9	53.8	55.2	55.0
oldest (65-74y)	7.4	2.3	4.4	8.6	9.4	8.6	9.7
Participation rate (20-64y) - male	0.3	82.3	81.2	81.5	82.4	83.4	82.6
Participation rate (20-74y) - male	-0.1	70.9	71.4	68.6	68.6	69.8	70.8
young (20-24y)	0.8	54.6	54.9	55.4	55.3	55.2	55.4
prime-age (25-54y)	1.4	91.3	91.9	92.4	92.9	92.7	92.7
older (55-64y)	5.8	60.8	63.9	64.7	65.0	67.2	66.6
oldest (65-74y)	7.4	5.0	10.0	11.7	11.5	11.2	12.4
Average labour market exit age (1)	1.2	62.8	63.2	64.0	64.0	64.0	64.0
male	0.5	63.2	63.4	63.6	63.6	63.6	63.6
female	2.0	62.5	63.0	64.4	64.4	64.4	64.4
Employment rate (20-64y)	0.5	68.3	67.9	68.2	68.6	69.4	68.8
Employment rate (20-74y)	1.5	57.3	58.3	56.5	56.6	57.7	58.8
Unemployment rate (20-64y)	0.6	5.2	5.3	5.8	5.8	5.8	5.8
Unemployment rate (20-74y)	0.5	5.2	5.3	5.7	5.6	5.6	5.7
Employment (20-64y; millions)	-2.2	7.6	7.2	6.4	5.8	5.5	5.4
Employment (20-74y; millions)	-2.1	7.7	7.3	6.7	6.0	5.7	5.6
share of young (20-24y)	0.5	4.5	5.2	5.3	4.9	5.1	5.0
share of prime-age (25-54y)	-9.4	80.8	72.4	69.5	71.3	73.5	71.4
share of older (55-64y)	6.7	13.8	20.6	21.7	20.2	18.1	20.4
share of oldest (65-74y)	2.2	1.0	1.8	3.5	3.7	3.3	3.2
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	4.5	20.3	26.0	26.2	25.0	21.9	24.8
Old-age dependency ratio (3)	22.3	33.5	36.0	46.5	55.4	59.1	55.8
Total dependency ratio (4)	21.3	70.5	71.6	82.1	93.2	97.0	91.9
Total economic dependency ratio (5)	22.7	147.2	148.1	157.7	171.3	174.5	169.9
Economic old-age dependency ratio (20-64y) (6)	29.8	47.9	51.2	64.4	76.8	81.7	77.7
Economic old-age dependency ratio (20-74y) (7)	27.8	47.5	50.2	62.2	74.0	79.0	75.3

Romania

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-0.9	8.5	10.4	10.3	10.5	9.6	7.6
Of which: Old-age and early pensions	0.0	6.4	8.3	8.6	9.0	8.2	6.5
Disability pensions	0.0	0.4	0.5	0.4	0.4	0.4	0.4
Survivors' pensions	0.0	0.4	0.6	0.5	0.5	0.5	0.4
Other	-0.8	1.2	1.1	0.8	0.7	0.5	0.4
Earnings-related pensions, gross	-0.1	6.3	8.2	8.5	8.7	7.9	6.2
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	0.9	0.0	0.5	0.6	0.8	0.7	0.9
New old-age and early pensions, gross	-0.1	0.3	0.4	0.4	0.4	0.2	0.2
Public pensions, contributions	-0.7	6.0	5.5	5.2	5.2	5.3	5.2
Balance of the pension system (contributions - gross expenditure)	0.1	-2.6	-5.0	-5.1	-5.3	-4.3	-2.4
Public pension scheme, tax revenues	-0.1	0.2	0.2	0.2	0.2	0.1	0.1
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	-1,036	4,998	5,087	5,161	5,230	4,833	3,962
Pensioners aged 65+ (1000 persons)	79	3,507	3,850	4,531	4,759	4,412	3,586
Share of pensioners below age 65 as % of all pensioners	-20.4	29.8	24.3	12.2	9.0	8.7	9.5
Benefit ratio (total public pensions, gross)	-5.0	33.9	41.0	35.9	32.8	30.4	28.9
Gross replacement rate at retirement (earnings-related public pensions)	-7.4	38.0	42.8	38.7	34.7	32.4	30.7
Average accrual rate (new earnings-related pensions)	0.1	0.9	1.0	1.0	1.0	1.0	1.0
Average contributory period (new earnings-related pensions)	3.6	35.4	37.7	38.8	38.8	38.9	39.0
Contributors (public pensions, 1000 persons)	-1,760	5,850	5,572	4,902	4,393	4,216	4,089
Support ratio (contributors/100 pensioners, public pensions)	-14	117	110	95	84	87	103
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.6		0.0	0.2	0.4	0.5	0.6
Higher migration (+33%)	-0.3		-0.1	-0.2	-0.3	-0.4	-0.3
Lower migration (-33%)	0.2		0.1	0.2	0.3	0.4	0.2
Lower fertility (-20%)	0.6		0.0	0.0	0.1	0.5	0.6
Higher employment rate of older workers (+10 pps)	-0.3		-0.2	-0.4	-0.4	-0.3	-0.3
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.3	0.4	0.4
Retirement age linked to increases in life expectancy	-0.6		0.0	-0.2	-0.3	-0.4	-0.6
Constant retirement age	0.2		0.4	1.0	1.0	0.6	0.2
Constant benefit ratio	0.6		0.0	0.0	0.0	0.4	0.6
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-0.9		1.9	1.8	2.0	1.1	-0.9
Dependency ratio	5.6		0.7	3.5	5.4	6.1	5.6
Coverage ratio	-3.7		0.0	-1.3	-1.8	-2.6	-3.7
Of which: Old-age	-1.2		0.7	0.9	0.7	-0.1	-1.2
Early-age	-9.8		-2.3	-7.3	-8.1	-8.3	-9.8
Cohort effect	-4.2		0.6	-1.8	-4.6	-5.4	-4.2
Benefit ratio	-2.1		1.2	0.0	-0.9	-1.7	-2.1
Labour market ratio	-0.3		0.0	-0.2	-0.3	-0.4	-0.3
Of which: Employment rate	-0.1		0.1	0.1	0.0	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		-0.1	-0.3	-0.3	-0.2	-0.2
Interaction effect (residual)	-0.4		0.0	-0.3	-0.4	-0.4	-0.4
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-0.9		1.9	-0.1	0.2	-1.0	-1.9
Dependency ratio	5.6		0.7	2.8	1.9	0.7	-0.5
Coverage ratio	-3.7		0.0	-1.3	-0.6	-0.8	-1.1
Of which: Old-age	-1.2		0.7	0.2	-0.2	-0.8	-1.2
Early-age	-9.8		-2.3	-5.1	-0.8	-0.2	-1.4
Cohort effect	-4.2		0.6	-2.5	-2.7	-0.8	1.2
Benefit ratio	-2.1		1.2	-1.2	-0.9	-0.8	-0.5
Labour market ratio	-0.3		0.0	-0.2	-0.1	-0.1	0.1
Of which: Employment rate	-0.1		0.1	0.0	-0.1	-0.1	0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		-0.1	-0.2	0.0	0.0	0.0
Interaction effect (residual)	-0.4		0.0	-0.3	-0.1	0.0	0.1

Romania

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.7	4.4	4.7	4.9	5.1	5.2	5.2
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.3		0.5	0.9	1.1	1.3	1.3
Demographic scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.3	-0.4
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.8		0.1	0.5	0.8	0.9	0.8
Sector-specific composite indexation scenario	0.3		0.1	0.2	0.2	0.3	0.3

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	0.3	0.4	0.5	0.6	0.7	0.7
of which on institutional care - baseline	0.2	0.2	0.2	0.2	0.3	0.3	0.3
of which on home care - baseline	0.2	0.2	0.2	0.3	0.3	0.4	0.4
of which on cash benefits - baseline	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.7		0.1	0.3	0.8	1.6	2.7
Healthy ageing scenario	-0.1		0.0	0.0	0.0	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.0	0.1	0.1	0.1
Coverage convergence scenario	0.1		0.0	0.0	0.0	0.0	0.1
Cost convergence scenario	2.5		0.1	0.3	0.7	1.4	2.5
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	12%	1,177	1,222	1,283	1,314	1,351	1,319
Recipients: receiving institutional care	38%	208	221	244	262	283	286
receiving home care	54%	236	259	293	325	358	362
receiving cash benefits	31%	319	335	362	386	415	418
Baseline aged 65+	44%	745	801	929	1,022	1,103	1,075
Recipients: receiving institutional care aged 65+	70%	147	162	194	219	247	251
receiving home care aged 65+	73%	196	220	260	297	334	339
receiving cash benefits aged 65+	73%	201	223	268	303	343	349

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.0	2.5	2.5	2.5	2.6	2.6	2.5
Number of students (in thousands)							
Total	-31%	2,829	2,659	2,340	2,203	2,096	1,951
as % of population 5-24	-1.4	68.6	67.1	66.8	67.7	67.4	67.2
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.1		0.3	0.7	1.1	1.1	1.1

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.2	15.8	18.1	18.3	18.8	18.1	16.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.0		0.6	1.2	1.9	2.9	4.0
High life expectancy (+2 years)	0.7		0.0	0.2	0.4	0.6	0.7
Higher migration (+33%)	-0.4		-0.1	-0.3	-0.4	-0.5	-0.4
Lower migration (-33%)	0.4		0.1	0.3	0.4	0.5	0.4
Lower fertility (-20%)	0.5		0.0	-0.2	-0.2	0.3	0.5
Higher employment rate of older workers (+10 pps)	-0.3		-0.2	-0.4	-0.4	-0.3	-0.3
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.3	0.3	0.4

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

24. SLOVENIA

Slovenia

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.59	1.62	1.65	1.67	1.68	1.69
Life expectancy at birth							
males	7.5	78.5	80.0	81.7	83.2	84.6	86.0
females	6.1	84.4	85.7	87.0	88.2	89.4	90.5
Life expectancy at 65 (years)							
males	5.5	17.8	18.9	20.1	21.2	22.3	23.3
females	5.0	21.7	22.8	23.9	24.9	25.8	26.7
Net migration (thousands)	-8.6	14.6	6.1	6.7	6.4	5.8	6.0
Net migration as % of population in t-1	-0.4	0.7	0.3	0.3	0.3	0.3	0.3
Population (million)	-0.1	2.1	2.1	2.1	2.1	2.0	2.0
share of prime-age population (25-54y)	-6.2	40.2	37.5	35.4	34.8	34.8	34.0
share of working-age population (20-64y)	-6.7	59.1	56.8	55.3	51.8	51.2	52.4
share of elderly population (+65y)	8.8	21.3	24.5	27.5	30.3	30.9	30.1
share of very elderly population (+80y)	8.1	5.6	6.7	9.3	10.9	12.7	13.8
share of very elderly population (+80y) in elderly population (+65y)	19.2	26.5	27.3	33.8	36.1	41.1	45.7
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.6	3.1	2.2	1.5	1.0	1.3	1.1
Employment (15-74y; growth rate)	-0.2	1.1	-0.1	-0.3	-0.6	-0.1	-0.2
Labour input: hours worked (growth rate)	-0.1	1.2	-0.1	-0.3	-0.6	-0.1	-0.2
Labour productivity per hour (growth rate)	1.7	1.9	2.3	1.8	1.6	1.4	1.2
TFP (growth rate)	1.2	1.6	1.6	1.2	1.0	0.9	0.8
capital deepening (contribution to labour productivity growth)	0.6	0.3	0.7	0.6	0.6	0.5	0.4
Potential GDP per capita (growth rate)	1.7	2.9	2.2	1.6	1.1	1.5	1.3
Potential GDP per worker (growth rate)	1.8	2.0	2.3	1.8	1.6	1.4	1.2
HICP (growth rate)	2.3	9.3	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	4.0	1.9	4.0	4.1	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-199	1,247	1,204	1,166	1,083	1,048	1,048
Working-age population (growth rate)	0.6	-0.6	-0.3	-0.5	-0.7	-0.1	-0.1
Labour force (20-64y; thousands)	-121	1,015	993	981	927	899	895
Participation rate (20-64y)	4.0	81.4	82.5	84.2	85.6	85.8	85.4
Participation rate (20-74y)	2.7	68.9	68.7	69.6	69.1	70.8	71.7
young (20-24y)	2.7	56.6	58.5	59.4	59.2	58.9	59.2
prime-age (25-54y)	-0.1	92.9	92.3	92.5	93.0	92.8	92.8
older (55-64y)	19.4	57.3	65.1	73.2	74.8	76.2	76.6
oldest (65-74y)	-0.8	7.4	6.5	6.0	6.4	6.3	6.6
Participation rate (20-64y) - female	4.5	77.9	79.2	81.2	82.6	82.9	82.4
Participation rate (20-74y) - female	4.5	64.7	64.8	66.0	65.8	67.9	69.2
young (20-24y)	2.5	51.2	53.1	53.9	53.7	53.5	53.7
prime-age (25-54y)	-0.4	90.4	90.0	89.7	90.2	90.1	90.0
older (55-64y)	21.7	52.9	61.9	71.4	72.6	74.1	74.5
oldest (65-74y)	1.4	5.1	6.0	5.6	6.2	6.0	6.4
Participation rate (20-64y) - male	3.3	84.6	85.3	86.8	88.2	88.3	87.9
Participation rate (20-74y) - male	0.9	72.9	72.3	72.9	72.0	73.3	73.8
young (20-24y)	2.9	61.3	63.4	64.4	64.2	63.9	64.2
prime-age (25-54y)	0.1	95.0	94.4	94.8	95.3	95.1	95.1
older (55-64y)	16.8	61.7	68.3	74.8	76.7	77.9	78.4
oldest (65-74y)	-3.2	9.9	7.1	6.4	6.6	6.5	6.8
Average labour market exit age (1)	1.7	62.3	63.0	64.0	64.0	64.0	64.0
male	1.6	62.4	63.0	64.0	64.0	64.0	64.0
female	1.8	62.2	62.9	64.0	64.0	64.0	64.0
Employment rate (20-64y)	2.3	78.3	77.8	79.4	80.8	81.0	80.6
Employment rate (20-74y)	1.3	66.2	64.8	65.7	65.1	66.8	67.6
Unemployment rate (20-64y)	1.8	3.9	5.6	5.7	5.7	5.6	5.7
Unemployment rate (20-74y)	1.8	3.9	5.6	5.7	5.7	5.7	5.7
Employment (20-64y; millions)	-0.1	1.0	0.9	0.9	0.9	0.8	0.8
Employment (20-74y; millions)	-0.1	1.0	1.0	0.9	0.9	0.9	0.9
share of young (20-24y)	1.0	5.3	6.2	6.2	5.6	6.1	6.2
share of prime-age (25-54y)	-6.6	76.5	73.2	69.6	71.9	72.9	69.9
share of older (55-64y)	5.8	16.5	18.9	22.6	20.5	19.4	22.3
share of oldest (65-74y)	-0.2	1.8	1.7	1.6	1.9	1.6	1.6
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.4	23.8	24.2	26.4	24.0	22.2	25.3
Old-age dependency ratio (3)	21.5	36.1	43.1	49.8	58.5	60.3	57.5
Total dependency ratio (4)	21.6	69.3	76.0	81.0	93.1	95.4	90.9
Total economic dependency ratio (5)	20.7	112.5	122.3	124.3	134.7	137.3	133.2
Economic old-age dependency ratio (20-64y) (6)	25.6	44.1	53.5	61.0	70.4	72.6	69.7
Economic old-age dependency ratio (20-74y) (7)	25.3	43.3	52.6	60.1	69.1	71.5	68.6

Slovenia

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	3.8	9.8	10.8	12.1	13.5	13.8	13.7
Of which: Old-age and early pensions	3.4	7.9	8.8	10.0	11.1	11.3	11.3
Disability pensions	0.3	0.9	1.0	1.1	1.2	1.2	1.2
Survivors' pensions	0.3	1.0	1.0	1.1	1.2	1.3	1.2
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	3.4	7.9	8.8	10.0	11.1	11.3	11.3
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Public pensions, contributions	0.0	9.1	9.1	9.1	9.1	9.1	9.1
Balance of the pension system (contributions - gross expenditure)	-3.8	-0.7	-1.6	-3.0	-4.3	-4.6	-4.5
Public pension scheme, tax revenues	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	86	630	672	714	749	739	716
Pensioners aged 65+ (1000 persons)	147	510	576	636	686	684	657
Share of pensioners below age 65 as % of all pensioners	-10.8	19.0	14.4	10.8	8.3	7.5	8.2
Benefit ratio (total public pensions, gross)	3.4	31.6	32.6	34.0	34.2	34.2	34.9
Gross replacement rate at retirement (earnings-related public pensions)	-0.7	34.7	36.3	34.2	32.7	34.0	34.0
Average accrual rate (new earnings-related pensions)	0.0	1.6	1.7	1.7	1.7	1.7	1.7
Average contributory period (new earnings-related pensions)	-1.8	38.1	39.1	36.3	34.6	36.4	36.3
Contributors (public pensions, 1000 persons)	-135	989	950	936	887	859	854
Support ratio (contributors/100 pensioners, public pensions)	-38	157	141	131	118	116	119
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.9		0.0	0.2	0.4	0.7	0.9
Higher migration (+33%)	-0.7		-0.2	-0.6	-0.9	-1.0	-0.7
Lower migration (-33%)	0.9		0.2	0.6	1.1	1.2	0.9
Lower fertility (-20%)	1.1		0.0	0.0	0.2	0.6	1.1
Higher employment rate of older workers (+10 pps)	-0.7		-0.5	-1.0	-0.9	-0.7	-0.7
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.3		0.0	0.1	0.2	0.2	0.3
Retirement age linked to increases in life expectancy	-1.6		0.0	0.0	-0.3	-0.9	-1.6
Constant retirement age	1.0		0.3	1.2	1.2	0.9	1.0
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	3.8		0.9	2.3	3.6	3.9	3.8
Dependency ratio	5.4		1.9	3.6	5.6	6.0	5.4
Coverage ratio	-1.7		-0.8	-1.3	-1.8	-2.0	-1.7
Of which: Old-age	-0.4		-0.2	-0.4	-0.5	-0.5	-0.4
Early-age	-6.2		-2.2	-4.5	-5.0	-6.1	-6.2
Cohort effect	-4.2		-1.2	-2.5	-5.5	-5.9	-4.2
Benefit ratio	0.7		-0.2	0.3	0.4	0.4	0.7
Labour market ratio	-0.3		0.1	-0.1	-0.4	-0.4	-0.3
Of which: Employment rate	-0.3		0.1	-0.2	-0.4	-0.4	-0.3
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	3.8		0.9	1.3	1.4	0.3	-0.1
Dependency ratio	5.4		1.9	1.7	2.1	0.4	-0.6
Coverage ratio	-1.7		-0.8	-0.6	-0.5	-0.1	0.2
Of which: Old-age	-0.4		-0.2	-0.1	-0.2	0.0	0.1
Early-age	-6.2		-2.2	-2.2	-0.6	-1.1	0.0
Cohort effect	-4.2		-1.2	-1.3	-3.0	-0.4	1.7
Benefit ratio	0.7		-0.2	0.5	0.1	0.0	0.3
Labour market ratio	-0.3		0.1	-0.2	-0.3	0.0	0.1
Of which: Employment rate	-0.3		0.1	-0.2	-0.2	0.0	0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	0.0		0.0	0.0	0.0	0.0	0.0
Interaction effect (residual)	-0.2		-0.1	0.0	-0.1	0.0	0.0

Slovenia

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.8	7.0	7.1	7.6	7.8	7.9	7.8
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.3		0.4	0.9	1.1	1.3	1.3
Demographic scenario	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Healthy ageing scenario	-0.5		-0.1	-0.2	-0.3	-0.4	-0.5
No healthy ageing scenario	0.6		0.1	0.3	0.4	0.5	0.6
Labour intensity scenario	0.5		0.1	0.2	0.6	0.6	0.5
Sector-specific composite indexation scenario	-0.5		-0.2	-0.4	-0.5	-0.5	-0.5

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.0	1.0	1.2	1.5	1.7	1.9	2.0
of which on institutional care - baseline	0.6	0.5	0.6	0.8	0.9	1.0	1.1
of which on home care - baseline	0.2	0.3	0.4	0.4	0.5	0.5	0.5
of which on cash benefits - baseline	0.1	0.2	0.2	0.3	0.3	0.3	0.4
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.2		0.1	0.5	0.9	1.5	2.2
Healthy ageing scenario	-0.1		0.0	0.0	-0.1	-0.1	-0.1
No healthy ageing scenario	0.1		0.0	0.1	0.1	0.1	0.1
Coverage convergence scenario	0.3		0.0	0.1	0.2	0.3	0.3
Cost convergence scenario	1.7		0.1	0.3	0.7	1.1	1.7
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	17%	200	215	230	236	236	234
Recipients: receiving institutional care	85%	23	27	33	38	41	43
receiving home care	65%	24	28	33	36	39	40
receiving cash benefits	64%	49	55	65	72	77	81
Baseline aged 65+	54%	103	121	142	157	161	159
Recipients: receiving institutional care aged 65+	109%	19	23	29	34	37	40
receiving home care aged 65+	91%	19	22	28	32	34	35
receiving cash benefits aged 65+	109%	32	38	49	57	63	67

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.3	4.3	4.2	3.8	4.0	4.2	4.0
Number of students (in thousands)							
Total	-15%	361	358	320	320	325	307
as % of population 5-24	-2.4	86.0	83.8	83.4	84.5	84.1	83.6
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.8		0.4	0.6	0.8	0.8	0.8

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	5.4	22.1	23.3	25.0	27.0	27.7	27.5
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	3.6		0.6	1.3	2.0	2.8	3.6
High life expectancy (+2 years)	1.1		0.0	0.2	0.5	0.8	1.1
Higher migration (+33%)	-1.0		-0.4	-0.8	-1.3	-1.4	-1.0
Lower migration (-33%)	1.3		0.4	0.9	1.5	1.7	1.3
Lower fertility (-20%)	1.0		0.0	-0.3	-0.2	0.3	1.0
Higher employment rate of older workers (+10 pps)	-0.7		-0.6	-1.1	-1.0	-0.7	-0.7
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.2		0.0	0.1	0.2	0.2	0.2

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

25. SLOVAKIA

Slovakia

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.60	1.61	1.62	1.63	1.65	1.66
Life expectancy at birth							
males	10.7	73.4	75.8	78.1	80.3	82.3	84.1
females	8.7	80.4	82.4	84.3	86.0	87.7	89.1
Life expectancy at 65 (years)							
males	7.1	15.1	16.7	18.2	19.6	21.0	22.2
females	6.8	19.0	20.6	22.0	23.4	24.6	25.8
Net migration (thousands)	-88.5	96.2	-0.7	7.6	8.5	6.8	7.7
Net migration as % of population in t-1	-1.6	1.8	0.0	0.1	0.2	0.1	0.2
Population (million)	-0.7	5.5	5.4	5.3	5.2	5.0	4.8
share of prime-age population (25-54y)	-10.2	43.7	40.3	35.5	33.4	33.6	33.5
share of working-age population (20-64y)	-10.9	61.5	58.6	56.9	52.3	49.1	50.6
share of elderly population (+65y)	12.7	17.5	20.6	23.9	28.6	31.3	30.2
share of very elderly population (+80y)	10.5	3.4	4.7	7.3	8.5	11.6	13.9
share of very elderly population (+80y) in elderly population (+65y)	26.6	19.5	22.6	30.4	29.7	36.9	46.0
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.4	1.9	1.6	1.5	1.3	1.2	1.3
Employment (15-74y; growth rate)	-0.5	0.8	-0.8	-0.7	-0.8	-0.4	0.1
Labour input: hours worked (growth rate)	-0.5	0.3	-0.9	-0.7	-0.8	-0.4	0.1
Labour productivity per hour (growth rate)	2.0	1.6	2.5	2.2	2.0	1.6	1.2
TFP (growth rate)	1.2	1.1	1.5	1.4	1.3	1.1	0.8
capital deepening (contribution to labour productivity growth)	0.7	0.5	1.0	0.8	0.7	0.6	0.4
Potential GDP per capita (growth rate)	1.7	1.3	1.9	1.7	1.5	1.6	1.7
Potential GDP per worker (growth rate)	1.9	1.1	2.5	2.2	2.0	1.6	1.2
HICP (growth rate)	2.5	12.1	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.9	2.1	3.9	4.0	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-931	3,367	3,191	3,014	2,706	2,467	2,436
Working-age population (growth rate)	0.2	-0.3	-0.6	-0.9	-1.2	-0.5	-0.1
Labour force (20-64y; thousands)	-684	2,751	2,613	2,437	2,233	2,079	2,066
Participation rate (20-64y)	3.1	81.7	81.9	80.9	82.5	84.3	84.8
Participation rate (20-74y)	3.5	70.3	69.9	68.7	67.4	69.7	73.8
young (20-24y)	1.6	47.6	48.9	49.2	49.4	49.0	49.1
prime-age (25-54y)	1.3	89.9	91.2	91.0	91.2	91.4	91.2
older (55-64y)	15.7	67.1	66.5	69.4	73.7	78.4	82.8
oldest (65-74y)	12.9	7.0	8.1	10.3	12.6	15.5	19.9
Participation rate (20-64y) - female	6.0	77.5	79.0	78.4	80.9	83.0	83.6
Participation rate (20-74y) - female	6.7	65.4	66.2	65.6	65.0	67.7	72.1
young (20-24y)	1.8	35.9	37.3	37.7	37.9	37.6	37.7
prime-age (25-54y)	4.6	86.3	89.4	90.4	90.7	91.2	90.9
older (55-64y)	19.2	64.4	64.2	66.2	73.1	78.7	83.6
oldest (65-74y)	12.0	5.9	6.9	8.9	10.7	13.8	18.0
Participation rate (20-64y) - male	0.2	85.8	84.7	83.2	84.1	85.5	86.0
Participation rate (20-74y) - male	0.1	75.3	73.7	71.7	69.7	71.6	75.4
young (20-24y)	1.4	58.8	59.9	60.2	60.4	60.1	60.2
prime-age (25-54y)	-1.8	93.3	92.9	91.6	91.6	91.6	91.5
older (55-64y)	12.0	69.9	68.8	72.5	74.3	78.0	82.0
oldest (65-74y)	13.5	8.3	9.6	11.8	14.6	17.3	21.8
Average labour market exit age (1)	4.0	62.4	63.2	63.8	64.8	65.6	66.4
male	4.0	62.8	63.6	64.2	65.2	65.9	66.8
female	4.0	62.1	62.8	63.5	64.5	65.3	66.1
Employment rate (20-64y)	2.9	76.8	77.3	76.0	77.5	79.2	79.7
Employment rate (20-74y)	3.3	66.1	66.1	64.6	63.4	65.6	69.5
Unemployment rate (20-64y)	0.1	6.0	5.6	6.0	6.1	6.0	6.0
Unemployment rate (20-74y)	-0.1	5.9	5.5	5.9	5.9	5.8	5.8
Employment (20-64y; millions)	-0.6	2.6	2.5	2.3	2.1	2.0	1.9
Employment (20-74y; millions)	-0.6	2.6	2.5	2.4	2.2	2.1	2.0
share of young (20-24y)	1.0	4.2	4.7	5.3	4.9	5.0	5.2
share of prime-age (25-54y)	-9.2	77.2	75.3	68.7	67.7	70.7	68.0
share of older (55-64y)	5.0	17.1	18.0	23.3	23.2	19.4	22.1
share of oldest (65-74y)	3.2	1.6	2.0	2.7	4.2	4.9	4.8
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	2.5	20.8	22.4	27.4	26.6	21.6	23.3
Old-age dependency ratio (3)	31.2	28.5	35.1	42.0	54.7	63.7	59.7
Total dependency ratio (4)	35.0	62.7	70.6	75.7	91.2	103.5	97.7
Total economic dependency ratio (5)	27.8	108.5	116.3	125.0	136.2	144.2	136.2
Economic old-age dependency ratio (20-64y) (6)	34.3	35.4	43.3	52.4	66.1	75.1	69.7
Economic old-age dependency ratio (20-74y) (7)	31.5	34.9	42.5	51.0	63.3	71.4	66.4

Slovakia

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	2.8	8.5	10.2	10.8	11.5	12.1	11.3
Of which: Old-age and early pensions	2.2	6.5	7.7	8.1	8.9	9.5	8.8
Disability pensions	0.6	0.7	1.1	1.3	1.3	1.2	1.3
Survivors' pensions	-0.1	0.8	0.9	0.8	0.8	0.7	0.6
Other	0.2	0.5	0.5	0.6	0.6	0.7	0.6
Earnings-related pensions, gross	2.2	6.5	7.7	8.0	8.8	9.4	8.7
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	-0.1	0.3	0.3	0.4	0.4	0.3	0.2
Public pensions, contributions	-1.0	7.4	7.0	6.9	6.7	6.5	6.4
Balance of the pension system (contributions - gross expenditure)	-3.9	-1.1	-3.2	-3.9	-4.9	-5.6	-5.0
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	279	1,390	1,584	1,733	1,829	1,823	1,669
Pensioners aged 65+ (1000 persons)	503	919	1,109	1,284	1,499	1,563	1,422
Share of pensioners below age 65 as % of all pensioners	-19.1	33.9	30.0	25.9	18.0	14.3	14.8
Benefit ratio (total public pensions, gross)	-4.6	37.9	39.3	35.3	33.3	32.9	33.3
Gross replacement rate at retirement (earnings-related public pensions)	-4.9	39.6	40.6	36.8	36.0	34.3	34.7
Average accrual rate (new earnings-related pensions)	-0.1	0.9	0.9	0.8	0.8	0.8	0.8
Average contributory period (new earnings-related pensions)	3.8	42.0	42.7	43.3	44.2	44.9	45.7
Contributors (public pensions, 1000 persons)	-499	2,264	2,169	2,032	1,893	1,779	1,765
Support ratio (contributors/100 pensioners, public pensions)	-57	163	137	117	104	98	106
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.2		0.0	0.0	0.0	0.1	0.2
Higher migration (+33%)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower migration (-33%)	0.1		0.0	0.0	0.0	0.1	0.1
Lower fertility (-20%)	1.0		0.0	0.0	0.2	0.6	1.0
Higher employment rate of older workers (+10 pps)	-0.2		-0.2	-0.4	-0.4	-0.3	-0.2
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.2	0.3	0.4
Retirement age linked to increases in life expectancy	:		:	:	:	:	:
Constant retirement age	1.5		0.3	0.9	1.5	1.6	1.5
Constant benefit ratio	0.4		0.0	0.0	0.4	0.6	0.4
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	2.8		1.7	2.3	3.0	3.6	2.8
Dependency ratio	8.2		2.0	4.0	7.1	8.9	8.2
Coverage ratio	-2.5		-0.2	-0.5	-1.7	-2.4	-2.5
Of which: Old-age	0.1		0.3	0.6	0.6	0.3	0.1
Early-age	-4.8		-0.8	-1.9	-3.1	-3.4	-4.8
Cohort effect	-5.9		-0.6	-1.2	-4.8	-7.7	-5.9
Benefit ratio	-1.6		0.1	-1.0	-1.6	-1.7	-1.6
Labour market ratio	-0.8		-0.1	0.0	-0.4	-0.7	-0.8
Of which: Employment rate	-0.4		0.0	0.1	-0.1	-0.3	-0.4
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.4		0.0	-0.1	-0.3	-0.4	-0.4
Interaction effect (residual)	-0.5		0.0	-0.2	-0.4	-0.5	-0.5
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	2.8		1.7	0.6	0.8	0.6	-0.8
Dependency ratio	8.2		2.0	2.0	3.1	1.9	-0.8
Coverage ratio	-2.5		-0.2	-0.3	-1.1	-0.7	-0.1
Of which: Old-age	0.1		0.3	0.2	0.0	-0.2	-0.2
Early-age	-4.8		-0.8	-1.1	-1.2	-0.3	-1.4
Cohort effect	-5.9		-0.6	-0.7	-3.6	-2.9	1.8
Benefit ratio	-1.6		0.1	-1.0	-0.6	-0.1	0.1
Labour market ratio	-0.8		-0.1	0.1	-0.4	-0.3	-0.1
Of which: Employment rate	-0.4		0.0	0.2	-0.2	-0.3	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.4		0.0	-0.1	-0.2	-0.1	0.0
Interaction effect (residual)	-0.5		0.0	-0.1	-0.2	-0.1	0.0

Slovakia

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.6	5.7	6.4	6.9	7.2	7.4	7.3
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.3		0.3	0.8	1.1	1.2	1.3
Demographic scenario	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
Healthy ageing scenario	-0.7		-0.2	-0.3	-0.5	-0.6	-0.7
No healthy ageing scenario	0.8		0.2	0.4	0.5	0.7	0.8
Labour intensity scenario	1.2		0.3	0.7	1.2	1.5	1.2
Sector-specific composite indexation scenario	-1.1		-0.3	-0.7	-0.9	-1.1	-1.1

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.4	1.0	1.3	1.6	1.8	2.2	2.4
of which on institutional care - baseline	0.7	0.4	0.5	0.7	0.9	1.0	1.1
of which on home care - baseline	0.2	0.1	0.1	0.2	0.2	0.3	0.3
of which on cash benefits - baseline	0.5	0.5	0.6	0.7	0.7	0.8	0.9
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	3.0		0.2	0.5	1.1	2.0	3.0
Healthy ageing scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.2	0.2
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	3.0		0.2	0.5	1.1	1.9	3.0
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	34%	506	556	614	647	678	678
Recipients: receiving institutional care	106%	73	86	107	121	137	150
receiving home care	120%	62	75	95	108	124	136
receiving cash benefits	65%	133	150	174	189	207	219
Baseline aged 65+	88%	289	349	418	482	540	544
Recipients: receiving institutional care aged 65+	151%	55	70	91	107	126	139
receiving home care aged 65+	154%	51	64	84	99	117	129
receiving cash benefits aged 65+	134%	79	98	125	147	170	184

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.3	3.7	4.0	3.9	3.9	4.2	4.0
Number of students (in thousands)							
Total	-17%	841	863	779	729	738	702
as % of population 5-24	-1.5	74.3	74.0	72.1	73.1	73.7	72.8
Higher enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	1.3		0.4	0.9	1.3	1.3	1.3

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	6.1	19.0	21.9	23.1	24.5	25.9	25.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	4.3		0.5	1.3	2.1	3.2	4.3
High life expectancy (+2 years)	0.4		0.0	0.0	0.0	0.2	0.4
Higher migration (+33%)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Lower migration (-33%)	0.1		0.0	0.0	0.0	0.1	0.1
Lower fertility (-20%)	1.1		0.0	-0.3	-0.1	0.5	1.1
Higher employment rate of older workers (+10 pps)	-0.2		-0.2	-0.4	-0.5	-0.3	-0.2
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.2	0.3	0.4

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

26. FINLAND

Finland

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.39	1.42	1.45	1.48	1.51	1.53
Life expectancy at birth							
males	7.1	79.0	80.5	82.0	83.5	84.9	86.1
females	6.3	84.1	85.7	87.0	88.2	89.4	90.4
Life expectancy at 65 (years)							
males	5.1	18.3	19.5	20.5	21.6	22.5	23.4
females	5.2	21.6	23.0	24.0	25.0	25.9	26.8
Net migration (thousands)	-64.0	77.3	10.7	13.3	13.6	13.6	13.4
Net migration as % of population in t-1	-1.1	1.4	0.2	0.2	0.2	0.3	0.3
Population (million)	-0.3	5.6	5.6	5.6	5.5	5.3	5.2
share of prime-age population (25-54y)	-4.4	37.7	38.2	38.4	36.4	35.1	33.3
share of working-age population (20-64y)	-4.7	56.1	55.6	56.1	54.8	52.8	51.5
share of elderly population (+65y)	9.0	23.1	25.2	26.1	27.5	30.2	32.1
share of very elderly population (+80y)	7.3	5.9	8.1	9.9	10.7	11.2	13.2
share of very elderly population (+80y) in elderly population (+65y)	15.4	25.6	32.1	37.9	38.7	37.0	41.0
Macroeconomic assumptions							
	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.1	1.6	1.0	1.5	1.1	0.9	0.9
Employment (15-74y; growth rate)	-0.1	1.6	-0.3	0.0	-0.3	-0.4	-0.3
Labour input: hours worked (growth rate)	-0.2	1.0	-0.3	0.0	-0.3	-0.4	-0.3
Labour productivity per hour (growth rate)	1.3	0.6	1.3	1.5	1.4	1.3	1.2
TFP (growth rate)	0.8	0.3	0.7	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.5	0.3	0.6	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.2	1.0	1.1	1.7	1.3	1.1	1.1
Potential GDP per worker (growth rate)	1.3	0.0	1.3	1.5	1.4	1.3	1.2
HICP (growth rate)	2.2	7.2	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.6	1.7	3.1	3.5	3.9	4.0	4.0
Labour force assumptions							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-438	3,131	3,131	3,115	2,988	2,822	2,693
Working-age population (growth rate)	-1.0	0.5	-0.1	-0.3	-0.5	-0.6	-0.5
Labour force (20-64y; thousands)	-315	2,619	2,584	2,608	2,525	2,398	2,304
Participation rate (20-64y)	1.9	83.7	82.5	83.7	84.5	85.0	85.6
Participation rate (20-74y)	2.8	70.9	70.2	72.2	72.4	72.3	73.7
young (20-24y)	3.0	68.9	71.7	71.9	71.8	71.8	71.8
prime-age (25-54y)	0.4	88.1	88.3	88.4	88.6	88.6	88.5
older (55-64y)	6.0	77.0	69.0	74.0	78.0	80.2	83.1
oldest (65-74y)	11.4	13.8	12.2	12.8	17.8	21.3	25.2
Participation rate (20-64y) - female	3.9	82.6	82.2	83.9	85.2	85.9	86.5
Participation rate (20-74y) - female	5.5	68.7	68.5	71.4	72.1	72.4	74.3
young (20-24y)	2.9	66.9	69.7	70.0	69.8	69.8	69.9
prime-age (25-54y)	2.3	86.8	87.8	88.8	89.2	89.3	89.0
older (55-64y)	8.9	77.1	70.2	74.5	80.1	82.8	86.0
oldest (65-74y)	14.6	11.0	8.9	10.3	15.3	20.2	25.6
Participation rate (20-64y) - male	0.0	84.7	82.9	83.6	83.8	84.2	84.7
Participation rate (20-74y) - male	0.1	73.1	71.8	73.0	72.7	72.2	73.2
young (20-24y)	2.9	70.7	73.5	73.8	73.6	73.6	73.6
prime-age (25-54y)	-1.3	89.4	88.8	88.1	88.0	88.0	88.0
older (55-64y)	3.3	77.0	67.7	73.6	76.0	77.8	80.3
oldest (65-74y)	7.8	17.0	15.9	15.5	20.3	22.5	24.8
Average labour market exit age (1)	4.0	63.4	63.9	65.2	65.8	66.6	67.4
male	3.8	63.7	64.2	65.6	66.2	66.8	67.4
female	4.2	63.2	63.7	64.8	65.5	66.4	67.4
Employment rate (20-64y)	2.0	78.3	77.7	78.6	79.3	79.8	80.3
Employment rate (20-74y)	2.8	66.5	66.2	67.8	68.1	68.0	69.3
Unemployment rate (20-64y)	-0.2	6.4	5.8	6.1	6.1	6.1	6.2
Unemployment rate (20-74y)	-0.3	6.2	5.7	6.1	6.0	5.9	5.9
Employment (20-64y; millions)	-0.3	2.5	2.4	2.4	2.4	2.3	2.2
Employment (20-74y; millions)	-0.2	2.5	2.5	2.5	2.5	2.4	2.3
share of young (20-24y)	-0.6	7.4	8.4	7.0	6.8	6.9	6.8
share of prime-age (25-54y)	-5.8	68.7	71.7	70.8	67.0	65.6	62.9
share of older (55-64y)	3.2	20.3	16.7	19.2	21.6	21.4	23.5
share of oldest (65-74y)	3.2	3.7	3.2	3.0	4.6	6.1	6.9
Dependency ratios							
	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.1	23.1	20.9	22.6	24.8	24.4	26.2
Old-age dependency ratio (3)	21.3	41.2	45.4	46.5	50.3	57.1	62.4
Total dependency ratio (4)	16.1	78.2	79.8	78.4	82.5	89.2	94.3
Total economic dependency ratio (5)	6.1	119.0	124.0	120.2	119.6	122.7	125.2
Economic old-age dependency ratio (20-64y) (6)	21.7	48.4	55.0	56.1	58.4	64.9	70.1
Economic old-age dependency ratio (20-74y) (7)	18.6	46.6	53.3	54.4	55.8	61.0	65.2

Finland

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	1.4	12.8	13.3	12.6	12.4	13.3	14.1
Of which: Old-age and early pensions	1.5	11.0	11.6	11.0	10.7	11.7	12.5
Disability pensions	0.2	1.0	1.0	1.0	1.1	1.1	1.2
Survivors' pensions	-0.3	0.7	0.7	0.7	0.6	0.5	0.4
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	1.5	10.4	11.0	10.4	10.2	11.1	11.9
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.2	0.2	0.2	0.3	0.3	0.3
Public pensions, contributions	1.5	13.4	14.5	14.3	14.6	15.0	14.9
Balance of the pension system (contributions - gross expenditure)	0.2	0.7	1.2	1.6	2.2	1.7	0.8
Public pension scheme, tax revenues	0.3	2.7	2.8	2.7	2.6	2.8	3.0
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	278	1,601	1,686	1,703	1,734	1,821	1,879
Pensioners aged 65+ (1000 persons)	423	1,317	1,477	1,517	1,566	1,673	1,740
Share of pensioners below age 65 as % of all pensioners	-10.3	17.7	12.4	10.9	9.7	8.1	7.4
Benefit ratio (total public pensions, gross)	-6.8	50.8	50.0	47.0	44.0	44.0	44.0
Gross replacement rate at retirement (earnings-related public pensions)	-7.3	45.3	42.0	38.0	39.0	39.0	38.0
Average accrual rate (new earnings-related pensions)	0.0	1.6	1.5	1.4	1.5	1.6	1.6
Average contributory period (new earnings-related pensions)	1.6	37.6	38.0	36.7	37.7	38.3	39.2
Contributors (public pensions, 1000 persons)	-239	2,475	2,413	2,404	2,372	2,298	2,236
Support ratio (contributors/100 pensioners, public pensions)	-36	155	143	141	137	126	119
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.1		0.0	0.1	0.1	0.0	0.1
Higher migration (+33%)	-0.5		-0.1	-0.2	-0.3	-0.5	-0.5
Lower migration (-33%)	0.6		0.1	0.2	0.4	0.5	0.6
Lower fertility (-20%)	1.0		0.0	0.0	0.3	0.6	1.0
Higher employment rate of older workers (+10 pps)	-0.1		-0.2	-0.3	-0.2	-0.1	-0.1
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	-0.1	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.6		0.0	0.1	0.3	0.5	0.6
Retirement age linked to increases in life expectancy	:		:	:	:	:	:
Constant retirement age	1.0		0.2	0.5	0.8	1.0	1.0
Constant benefit ratio	0.2		0.0	0.0	0.2	0.3	0.2
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	1.4		0.5	-0.1	-0.4	0.5	1.4
Dependency ratio	5.5		1.3	1.7	2.6	4.3	5.5
Coverage ratio	-1.4		-0.6	-0.7	-0.9	-1.2	-1.4
Of which: Old-age	0.2		0.2	0.3	0.3	0.2	0.2
Early-age	-8.5		-3.1	-5.5	-6.9	-7.8	-8.5
Cohort effect	-3.8		-1.9	-1.2	-1.4	-2.8	-3.8
Benefit ratio	-1.9		-0.3	-1.0	-1.7	-1.9	-1.9
Labour market ratio	-0.7		0.2	0.0	-0.3	-0.5	-0.7
Of which: Employment rate	-0.3		0.1	0.0	-0.2	-0.2	-0.3
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.4		0.1	0.1	-0.1	-0.3	-0.4
Interaction effect (residual)	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	1.4		0.5	-0.7	-0.3	0.9	0.8
Dependency ratio	5.5		1.3	0.3	1.0	1.7	1.2
Coverage ratio	-1.4		-0.6	-0.1	-0.2	-0.3	-0.1
Of which: Old-age	0.2		0.2	0.1	0.0	-0.1	0.0
Early-age	-8.5		-3.1	-2.4	-1.3	-1.0	-0.6
Cohort effect	-3.8		-1.9	0.7	-0.2	-1.4	-0.9
Benefit ratio	-1.9		-0.3	-0.7	-0.7	-0.2	0.0
Labour market ratio	-0.7		0.2	-0.1	-0.3	-0.3	-0.2
Of which: Employment rate	-0.3		0.1	-0.1	-0.1	-0.1	-0.1
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.4		0.1	0.0	-0.2	-0.2	-0.1
Interaction effect (residual)	-0.1		0.0	0.0	0.0	0.0	0.0

Finland

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.6	6.2	6.4	6.5	6.6	6.7	6.8
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.8		0.2	0.5	0.7	0.8	0.8
Demographic scenario	-0.2		0.0	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.2	-0.2	-0.3	-0.4	-0.4
No healthy ageing scenario	0.6		0.2	0.3	0.4	0.5	0.6
Labour intensity scenario	0.2		0.1	0.1	0.0	0.1	0.2
Sector-specific composite indexation scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.8	2.1	2.5	3.1	3.2	3.4	3.9
of which on institutional care - baseline	0.2	0.2	0.3	0.3	0.4	0.4	0.4
of which on home care - baseline	1.4	1.6	2.0	2.4	2.5	2.7	3.0
of which on cash benefits - baseline	0.2	0.2	0.3	0.3	0.4	0.4	0.4
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	2.0		0.1	0.4	0.7	1.2	2.0
Healthy ageing scenario	-0.3		-0.1	-0.1	-0.1	-0.2	-0.3
No healthy ageing scenario	0.3		0.1	0.1	0.1	0.2	0.3
Coverage convergence scenario	0.1		0.0	0.0	0.1	0.1	0.1
Cost convergence scenario	1.9		0.1	0.3	0.6	1.1	1.9
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	18%	398	433	454	453	452	469
Recipients: receiving institutional care	71%	22	26	32	33	35	38
receiving home care	62%	127	148	176	184	188	206
receiving cash benefits	33%	275	303	335	343	346	366
Baseline aged 65+	49%	212	248	273	280	291	316
Recipients: receiving institutional care aged 65+	86%	19	23	29	30	32	36
receiving home care aged 65+	86%	98	119	148	157	164	182
receiving cash benefits aged 65+	67%	168	199	235	247	256	281

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-1.1	5.3	4.8	4.4	4.3	4.3	4.2
Number of students (in thousands)							
Total	-27%	1,153	1,060	968	929	886	836
as % of population 5-24	-1.1	94.3	91.3	94.0	92.7	92.5	93.2
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.5		0.4	0.4	0.5	0.6	0.5

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	2.7	26.4	27.0	26.7	26.5	27.6	29.0
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.9		0.3	0.8	1.3	2.0	2.9
High life expectancy (+2 years)	0.3		0.0	0.1	0.2	0.2	0.3
Higher migration (+33%)	-0.7		-0.1	-0.3	-0.5	-0.7	-0.7
Lower migration (-33%)	0.8		0.1	0.3	0.5	0.7	0.8
Lower fertility (-20%)	1.1		0.0	-0.3	-0.1	0.4	1.1
Higher employment rate of older workers (+10 pps)	-0.3		-0.3	-0.4	-0.3	-0.3	-0.3
Higher TFP growth (+0.2 pps)	-0.4		0.0	0.0	-0.1	-0.2	-0.4
Lower TFP growth (-0.2 pps)	0.5		0.0	0.1	0.3	0.4	0.5

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

27. SWEDEN

Sweden

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.68	1.73	1.75	1.76	1.76	1.76
Life expectancy at birth							
males	5.5	81.5	82.4	83.6	84.8	86.0	87.0
females	5.3	85.4	86.2	87.4	88.6	89.7	90.7
Life expectancy at 65 (years)							
males	4.2	19.7	20.4	21.3	22.2	23.0	23.9
females	4.4	22.5	23.2	24.2	25.2	26.1	26.9
Net migration (thousands)	-66.6	98.8	49.9	47.5	42.0	36.9	32.2
Net migration as % of population in t-1	-0.7	0.9	0.5	0.4	0.3	0.3	0.3
Population (million)	2.4	10.5	11.0	11.6	12.2	12.6	12.9
share of prime-age population (25-54y)	-3.7	39.0	37.9	38.5	36.8	36.4	35.3
share of working-age population (20-64y)	-3.4	56.4	56.0	55.8	55.3	53.2	53.1
share of elderly population (+65y)	6.4	20.3	21.4	22.7	23.4	25.9	26.7
share of very elderly population (+80y)	5.3	5.4	7.1	7.6	8.7	9.4	10.7
share of very elderly population (+80y) in elderly population (+65y)	13.3	26.8	33.5	33.4	36.9	36.2	40.1
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.6	1.8	1.5	2.0	1.6	1.4	1.5
Employment (15-74y; growth rate)	0.4	0.8	0.6	0.5	0.2	0.1	0.3
Labour input: hours worked (growth rate)	0.4	0.8	0.6	0.5	0.2	0.1	0.3
Labour productivity per hour (growth rate)	1.2	1.0	0.9	1.5	1.4	1.3	1.2
TFP (growth rate)	0.8	0.4	0.6	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.6	0.3	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.2	0.9	1.0	1.5	1.2	1.1	1.3
Potential GDP per worker (growth rate)	1.2	1.0	0.9	1.5	1.4	1.3	1.2
HICP (growth rate)	2.2	8.1	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.3	1.5	2.4	3.0	3.8	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	918	5,930	6,190	6,481	6,718	6,689	6,848
Working-age population (growth rate)	-0.6	0.7	0.4	0.4	0.2	0.1	0.1
Labour force (20-64y; thousands)	898	5,205	5,436	5,740	5,945	5,957	6,103
Participation rate (20-64y)	1.3	87.8	87.8	88.6	88.5	89.1	89.1
Participation rate (20-74y)	1.9	77.4	77.3	77.9	78.5	78.0	79.3
young (20-24y)	2.0	73.2	75.1	75.2	75.1	75.1	75.1
prime-age (25-54y)	0.7	91.6	92.0	92.1	92.3	92.3	92.3
older (55-64y)	4.3	82.2	81.0	83.6	83.5	85.4	86.5
oldest (65-74y)	9.4	20.3	18.9	21.9	23.8	28.4	29.7
Participation rate (20-64y) - female	1.9	85.0	85.0	85.9	85.9	86.7	86.8
Participation rate (20-74y) - female	3.1	74.1	74.7	75.3	76.0	75.7	77.1
young (20-24y)	1.8	69.0	70.8	70.8	70.8	70.8	70.8
prime-age (25-54y)	1.3	88.9	89.6	89.9	90.1	90.2	90.1
older (55-64y)	5.2	79.4	77.9	80.3	80.4	83.0	84.6
oldest (65-74y)	12.6	16.2	19.6	22.2	24.2	28.2	28.7
Participation rate (20-64y) - male	0.8	90.5	90.5	91.1	90.9	91.3	91.2
Participation rate (20-74y) - male	0.6	80.7	79.8	80.3	80.7	80.1	81.3
young (20-24y)	2.3	76.8	79.0	79.1	79.1	79.1	79.1
prime-age (25-54y)	0.1	94.1	94.4	94.2	94.3	94.3	94.2
older (55-64y)	3.3	84.9	84.1	86.8	86.6	87.6	88.2
oldest (65-74y)	6.0	24.5	18.1	21.5	23.4	28.5	30.6
Average labour market exit age (1)	2.9	65.0	65.8	66.4	66.4	67.1	67.9
male	2.9	65.0	65.8	66.4	66.4	67.2	67.9
female	2.9	65.0	65.7	66.4	66.4	67.1	67.9
Employment rate (20-64y)	1.9	82.3	83.0	83.6	83.6	84.1	84.2
Employment rate (20-74y)	2.4	72.6	73.1	73.6	74.2	73.8	75.0
Unemployment rate (20-64y)	-0.8	6.3	5.5	5.6	5.6	5.5	5.5
Unemployment rate (20-74y)	-0.8	6.2	5.4	5.5	5.5	5.4	5.4
Employment (20-64y; millions)	0.9	4.9	5.1	5.4	5.6	5.6	5.8
Employment (20-74y; millions)	1.1	5.1	5.3	5.7	5.9	6.0	6.2
share of young (20-24y)	0.5	7.2	8.4	8.1	7.6	7.6	7.7
share of prime-age (25-54y)	-4.7	69.6	68.7	69.0	66.5	66.6	64.9
share of older (55-64y)	2.0	19.1	19.1	18.3	21.1	19.0	21.1
share of oldest (65-74y)	2.2	4.1	3.8	4.6	4.8	6.7	6.3
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	2.0	21.0	21.3	20.1	23.3	21.1	23.0
Old-age dependency ratio (3)	14.4	36.0	38.1	40.7	42.4	48.7	50.4
Total dependency ratio (4)	11.2	77.2	78.5	79.1	80.9	88.1	88.4
Total economic dependency ratio (5)	3.1	106.6	106.9	104.4	106.1	108.4	109.7
Economic old-age dependency ratio (20-64y) (6)	13.7	39.1	41.8	43.7	45.5	50.3	52.9
Economic old-age dependency ratio (20-74y) (7)	12.0	37.5	40.2	41.7	43.3	46.9	49.5

Sweden

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	-0.2	7.4	7.6	7.2	7.0	7.3	7.2
Of which: Old-age and early pensions	-0.1	6.5	6.5	6.2	6.1	6.4	6.4
Disability pensions	0.2	0.7	0.9	1.0	0.9	0.9	0.8
Survivors' pensions	-0.2	0.2	0.1	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	-1.2	6.1	5.7	5.2	4.9	5.0	4.9
Private occupational pensions, gross	0.6	1.7	1.8	1.8	1.7	2.0	2.2
Private individual pensions (mandatory), gross	0.6	0.3	0.5	0.7	0.8	0.8	0.8
New old-age and early pensions, gross	-0.1	0.3	0.3	0.3	0.3	0.3	0.2
Public pensions, contributions	0.5	5.4	5.9	5.9	5.9	5.8	5.9
Balance of the pension system (contributions - gross expenditure)	1.7	-0.7	0.1	0.7	1.0	0.8	1.0
Public pension scheme, tax revenues	-0.3	1.5	1.5	1.3	1.2	1.3	1.2
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	1,102	2,701	2,896	3,106	3,331	3,648	3,803
Pensioners aged 65+ (1000 persons)	1,191	2,331	2,556	2,803	3,034	3,372	3,522
Share of pensioners below age 65 as % of all pensioners	-6.3	13.7	11.8	9.8	8.9	7.6	7.4
Benefit ratio (total public pensions, gross)	-5.5	36.0	36.4	34.2	32.4	31.6	30.4
Gross replacement rate at retirement (earnings-related public pensions)	-5.3	30.8	30.8	26.4	24.6	25.7	25.5
Average accrual rate (new earnings-related pensions)	0.0	0.9	0.9	0.9	0.9	0.9	0.9
Average contributory period (new earnings-related pensions)	2.4	40.0	39.7	38.3	39.6	41.5	42.4
Contributors (public pensions, 1000 persons)	1,453	5,785	6,224	6,640	6,902	7,006	7,238
Support ratio (contributors/100 pensioners, public pensions)	-24	214	215	214	207	192	190
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	-0.2		0.0	0.1	-0.1	-0.1	-0.2
Higher migration (+33%)	-0.4		-0.1	-0.2	-0.4	-0.4	-0.4
Lower migration (-33%)	0.5		0.1	0.3	0.4	0.5	0.5
Lower fertility (-20%)	0.7		0.0	0.0	0.2	0.4	0.7
Higher employment rate of older workers (+10 pps)	-0.2		-0.2	-0.2	-0.2	-0.2	-0.2
Higher TFP growth (+0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Lower TFP growth (-0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Retirement age linked to increases in life expectancy	-0.1		-0.1	0.0	-0.2	-0.3	-0.1
Constant retirement age	0.9		0.1	0.3	0.3	0.6	0.9
Constant benefit ratio	0.0		0.0	0.0	0.0	0.0	0.0
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	-0.2		0.2	-0.2	-0.4	-0.1	-0.2
Dependency ratio	2.5		0.5	1.0	1.3	2.2	2.5
Coverage ratio	-1.0		-0.2	-0.5	-0.6	-0.9	-1.0
Of which: Old-age	-0.5		-0.1	-0.2	-0.2	-0.4	-0.5
Early-age	-3.5		-0.8	-2.0	-2.8	-3.1	-3.5
Cohort effect	-1.8		-0.5	-0.9	-0.9	-2.0	-1.8
Benefit ratio	-1.3		0.0	-0.5	-0.8	-1.0	-1.3
Labour market ratio	-0.3		0.0	-0.2	-0.2	-0.4	-0.3
Of which: Employment rate	-0.2		-0.1	-0.1	-0.1	-0.2	-0.2
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		0.0	0.0	-0.1	-0.2	-0.2
Interaction effect (residual)	-0.1		0.0	0.0	0.0	-0.1	-0.1
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	-0.2		0.2	-0.4	-0.1	0.3	-0.1
Dependency ratio	2.5		0.5	0.5	0.3	1.0	0.3
Coverage ratio	-1.0		-0.2	-0.3	-0.1	-0.3	-0.1
Of which: Old-age	-0.5		-0.1	-0.1	0.0	-0.2	-0.1
Early-age	-3.5		-0.8	-1.2	-0.7	-0.3	-0.4
Cohort effect	-1.8		-0.5	-0.4	0.1	-1.1	0.1
Benefit ratio	-1.3		0.0	-0.5	-0.4	-0.2	-0.3
Labour market ratio	-0.3		0.0	-0.1	0.0	-0.2	0.0
Of which: Employment rate	-0.2		-0.1	-0.1	0.0	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.2		0.0	-0.1	0.0	-0.1	0.0
Interaction effect (residual)	-0.1		0.0	0.0	0.0	0.0	0.0

Sweden

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	7.3	7.2	7.3	7.4	7.6	7.7
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.9		0.2	0.5	0.7	0.8	0.9
Demographic scenario	-0.2		0.0	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.3		-0.1	-0.1	-0.2	-0.3	-0.3
No healthy ageing scenario	0.4		0.1	0.1	0.2	0.3	0.4
Labour intensity scenario	-0.1		-0.2	-0.2	-0.2	-0.1	-0.1
Sector-specific composite indexation scenario	-0.2		0.0	-0.1	-0.2	-0.2	-0.2

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.3	3.2	3.5	3.7	3.9	4.2	4.4
of which on institutional care - baseline	0.8	1.7	1.9	2.0	2.2	2.3	2.5
of which on home care - baseline	0.4	1.4	1.5	1.5	1.6	1.7	1.8
of which on cash benefits - baseline	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.9		0.1	0.3	0.5	1.0	1.9
Healthy ageing scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
No healthy ageing scenario	0.3		0.0	0.1	0.2	0.2	0.3
Coverage convergence scenario	0.3		0.0	0.1	0.1	0.2	0.3
Cost convergence scenario	1.6		0.1	0.2	0.4	0.8	1.6
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	46%	471	535	578	614	654	687
Recipients: receiving institutional care	81%	85	101	116	127	141	153
receiving home care	85%	292	354	399	443	494	541
receiving cash benefits	79%	403	483	540	597	661	720
Baseline aged 65+	90%	210	256	293	324	371	401
Recipients: receiving institutional care aged 65+	122%	53	66	80	91	106	118
receiving home care aged 65+	105%	231	287	331	373	425	472
receiving cash benefits aged 65+	100%	307	380	437	490	556	613

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.6	5.8	5.6	5.3	5.2	5.2	5.1
Number of students (in thousands)							
Total	7%	2,253	2,305	2,319	2,372	2,432	2,420
as % of population 5-24	-2.3	92.3	88.9	89.9	90.2	89.8	90.0
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.9		0.3	0.6	0.9	0.9	0.9

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.8	23.6	23.8	23.5	23.6	24.3	24.5
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.7		0.3	0.7	1.2	1.8	2.7
High life expectancy (+2 years)	0.0		0.0	0.1	0.0	0.0	0.0
Higher migration (+33%)	-0.8		-0.2	-0.4	-0.6	-0.8	-0.8
Lower migration (-33%)	0.9		0.2	0.4	0.6	0.9	0.9
Lower fertility (-20%)	0.6		0.0	-0.3	-0.2	0.1	0.6
Higher employment rate of older workers (+10 pps)	-0.4		-0.2	-0.3	-0.4	-0.4	-0.4
Higher TFP growth (+0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0
Lower TFP growth (-0.2 pps)	0.0		0.0	0.0	0.0	0.0	0.0

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

28. NORWAY

Norway							
Main demographic and macroeconomic assumptions							
Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.47	1.49	1.52	1.55	1.57	1.60
Life expectancy at birth							
males	5.2	82.1	82.8	84.1	85.2	86.3	87.3
females	5.6	85.1	86.1	87.3	88.5	89.6	90.7
Life expectancy at 65 (years)							
males	4.0	20.2	20.8	21.7	22.5	23.4	24.2
females	4.6	22.3	23.1	24.1	25.1	26.0	26.9
Net migration (thousands)	-9.1	35.5	27.4	28.2	27.2	26.5	26.4
Net migration as % of population in t-1	-0.2	0.7	0.5	0.5	0.4	0.4	0.4
Population (million)	1.1	5.4	5.7	6.0	6.2	6.4	6.5
share of prime-age population (25-54y)	-5.4	40.6	39.4	39.7	38.1	36.6	35.2
share of working-age population (20-64y)	-5.8	58.9	58.4	56.8	55.9	54.5	53.2
share of elderly population (+65y)	10.6	18.4	20.9	23.7	25.0	27.1	28.9
share of very elderly population (+80y)	6.9	4.5	6.2	7.7	9.3	10.2	11.3
share of very elderly population (+80y) in elderly population (+65y)	14.9	24.4	29.9	32.4	37.1	37.8	39.2
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.5	1.6	1.5	1.8	1.6	1.4	1.2
Employment (15-74y; growth rate)	0.3	3.9	0.6	0.3	0.2	0.1	-0.1
Labour input: hours worked (growth rate)	0.3	3.9	0.6	0.3	0.2	0.1	-0.1
Labour productivity per hour (growth rate)	1.2	-0.1	0.9	1.5	1.4	1.3	1.2
TFP (growth rate)	0.8	0.5	0.7	1.0	0.9	0.8	0.8
capital deepening (contribution to labour productivity growth)	0.4	-0.6	0.2	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.1	0.9	0.9	1.3	1.3	1.1	0.9
Potential GDP per worker (growth rate)	1.2	-2.2	0.9	1.5	1.4	1.3	1.2
HICP (growth rate)	2.2	6.2	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	:	n.a	n.a	n.a	n.a	n.a	n.a
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	256	3,210	3,315	3,404	3,479	3,478	3,466
Working-age population (growth rate)	-0.6	0.5	0.5	0.2	0.1	0.0	-0.1
Labour force (20-64y; thousands)	266	2,663	2,750	2,862	2,936	2,942	2,929
Participation rate (20-64y)	1.5	83.0	82.9	84.1	84.4	84.6	84.5
Participation rate (20-74y)	-1.5	74.2	73.0	72.8	73.7	72.8	72.7
young (20-24y)	2.7	74.2	76.8	77.0	76.9	76.9	76.9
prime-age (25-54y)	3.2	86.6	88.1	89.1	89.8	89.7	89.8
older (55-64y)	-2.3	75.5	70.2	70.2	71.3	72.9	73.2
oldest (65-74y)	-2.0	22.2	17.5	16.8	17.9	19.1	20.2
Participation rate (20-64y) - female	3.6	79.8	80.6	82.4	83.0	83.5	83.5
Participation rate (20-74y) - female	0.8	70.5	70.4	70.8	72.0	71.3	71.3
young (20-24y)	2.1	73.1	75.1	75.3	75.2	75.2	75.2
prime-age (25-54y)	4.8	83.8	86.1	87.6	88.6	88.6	88.6
older (55-64y)	2.8	70.0	66.8	68.2	69.7	72.4	72.8
oldest (65-74y)	1.1	17.0	15.3	14.9	16.0	16.9	18.1
Participation rate (20-64y) - male	-0.5	86.0	85.2	85.7	85.7	85.6	85.5
Participation rate (20-74y) - male	-3.8	77.8	75.4	74.8	75.4	74.3	74.0
young (20-24y)	3.3	75.3	78.4	78.6	78.5	78.5	78.5
prime-age (25-54y)	1.7	89.2	90.0	90.6	90.9	90.8	90.9
older (55-64y)	-7.3	80.7	73.6	72.2	72.8	73.4	73.5
oldest (65-74y)	-5.3	27.6	19.8	18.8	19.7	21.2	22.3
Average labour market exit age (1)	0.6	65.0	65.1	65.2	65.3	65.5	65.6
male	0.6	65.0	65.1	65.2	65.3	65.5	65.6
female	0.7	65.0	65.1	65.2	65.3	65.5	65.6
Employment rate (20-64y)	1.3	80.8	80.4	81.6	81.9	82.1	82.0
Employment rate (20-74y)	-1.7	72.3	70.8	70.7	71.6	70.7	70.6
Unemployment rate (20-64y)	0.3	2.7	3.0	3.0	3.0	2.9	3.0
Unemployment rate (20-74y)	0.3	2.6	3.0	2.9	2.9	2.9	2.9
Employment (20-64y; millions)	0.2	2.6	2.7	2.8	2.8	2.9	2.8
Employment (20-74y; millions)	0.3	2.7	2.8	2.9	3.0	3.0	3.0
share of young (20-24y)	-0.8	8.5	8.9	7.9	7.5	7.7	7.6
share of prime-age (25-54y)	-2.1	68.9	69.1	71.3	69.7	68.0	66.7
share of older (55-64y)	2.2	18.3	18.3	16.8	18.8	19.4	20.4
share of oldest (65-74y)	0.8	4.4	3.7	3.9	4.0	4.8	5.2
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	3.8	20.7	22.0	20.6	22.9	23.3	24.5
Old-age dependency ratio (3)	23.2	31.2	35.8	41.7	44.7	49.7	54.4
Total dependency ratio (4)	18.4	69.7	71.3	75.9	79.0	83.5	88.0
Total economic dependency ratio (5)	16.5	100.9	105.1	107.1	109.8	112.9	117.3
Economic old-age dependency ratio (20-64y) (6)	26.9	33.8	40.6	47.0	50.4	55.5	60.7
Economic old-age dependency ratio (20-74y) (7)	25.2	32.4	39.1	45.1	48.4	52.8	57.6

Norway							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	1.7	10.8	12.1	12.1	12.0	12.2	12.5
Of which: Old-age and early pensions	1.6	7.6	8.5	8.7	8.5	8.9	9.2
Disability pensions	0.1	3.2	3.6	3.4	3.5	3.3	3.3
Survivors' pensions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings-related pensions, gross	3.6	5.1	6.5	7.6	7.9	8.3	8.7
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	-0.1	0.5	0.4	0.4	0.4	0.4	0.4
Public pensions, contributions	-0.1	11.5	11.3	11.3	11.3	11.3	11.3
Balance of the pension system (contributions - gross expenditure)	-1.8	0.6	-0.8	-0.8	-0.7	-0.9	-1.2
Public pension scheme, tax revenues	0.4	2.5	2.8	2.8	2.8	2.8	2.9
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	1,475	1,383	1,787	2,156	2,488	2,791	2,857
Pensioners aged 65+ (1000 persons)	1,379	1,005	1,331	1,715	2,021	2,324	2,384
Share of pensioners below age 65 as % of all pensioners	-10.8	27.3	25.5	20.4	18.8	16.7	16.6
Benefit ratio (total public pensions, gross)	-20.5	56.6	51.7	44.9	39.5	36.1	36.2
Gross replacement rate at retirement (earnings-related public pensions)	-1.8	21.5	21.8	19.0	17.1	17.6	19.6
Average accrual rate (new earnings-related pensions)	-0.1	0.9	0.9	0.9	0.9	0.9	0.8
Average contributory period (new earnings-related pensions)	0.4	33.7	31.2	28.9	26.8	29.0	34.1
Contributors (public pensions, 1000 persons)	268	2,780	2,838	2,943	3,019	3,054	3,048
Support ratio (contributors/100 pensioners, public pensions)	-94	201	159	136	121	109	107
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.3		0.0	0.1	0.2	0.2	0.3
Higher migration (+33%)	-0.5		-0.1	-0.3	-0.4	-0.5	-0.5
Lower migration (-33%)	0.5		0.1	0.2	0.4	0.5	0.5
Lower fertility (-20%)	1.0		0.0	0.0	0.3	0.6	1.0
Higher employment rate of older workers (+10 pps)	-0.5		-0.3	-0.5	-0.5	-0.5	-0.5
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.2		0.0	0.0	0.1	0.2	0.2
Retirement age linked to increases in life expectancy	-0.6		0.0	-0.1	-0.2	-0.4	-0.6
Constant retirement age	0.2		0.0	0.0	0.1	0.1	0.2
Constant benefit ratio	:		:	:	:	:	:
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	1.7		1.2	1.3	1.2	1.3	1.7
Dependency ratio	6.8		1.6	3.6	4.4	5.7	6.8
Coverage ratio	1.1		1.0	1.1	1.7	1.8	1.1
Of which: Old-age	2.8		1.3	2.2	3.1	3.5	2.8
Early-age	0.5		1.8	1.2	0.8	0.4	0.5
Cohort effect	-5.2		-1.5	-3.4	-3.4	-4.2	-5.2
Benefit ratio	-5.6		-1.4	-3.0	-4.5	-5.6	-5.6
Labour market ratio	-0.3		0.1	-0.1	-0.1	-0.3	-0.3
Of which: Employment rate	-0.2		0.0	-0.1	-0.2	-0.2	-0.2
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.1	0.1	0.1	-0.1	-0.1
Interaction effect (residual)	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	1.7		1.2	0.1	-0.1	0.2	0.3
Dependency ratio	6.8		1.6	1.9	0.9	1.3	1.1
Coverage ratio	1.1		1.0	0.1	0.6	0.1	-0.8
Of which: Old-age	2.8		1.3	0.9	0.9	0.4	-0.7
Early-age	0.5		1.8	-0.6	-0.4	-0.4	0.1
Cohort effect	-5.2		-1.5	-1.9	0.0	-0.9	-0.9
Benefit ratio	-5.6		-1.4	-1.6	-1.5	-1.1	0.0
Labour market ratio	-0.3		0.1	-0.2	-0.1	-0.1	0.0
Of which: Employment rate	-0.2		0.0	-0.2	0.0	0.0	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.1		0.1	0.0	0.0	-0.1	-0.1
Interaction effect (residual)	-0.4		-0.1	-0.1	-0.1	-0.1	0.0

Norway							
Health care							
Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.2	7.7	8.0	8.3	8.5	8.7	8.9
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.9		0.2	0.4	0.7	0.8	0.9
Demographic scenario	-0.2		-0.1	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.4	-0.4
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.6		0.1	0.1	0.3	0.4	0.6
Sector-specific composite indexation scenario	0.1		0.0	0.0	0.1	0.1	0.1
Long-term care							
Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	3.5	4.0	4.7	5.5	6.2	7.0	7.5
of which on institutional care - baseline	2.9	2.1	2.6	3.3	3.9	4.5	5.0
of which on home care - baseline	0.6	1.7	1.9	2.0	2.1	2.2	2.3
of which on cash benefits - baseline	0.1	0.1	0.2	0.2	0.2	0.2	0.2
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.1		0.1	0.2	0.4	0.7	1.1
Healthy ageing scenario	-0.4		-0.1	-0.1	-0.2	-0.3	-0.4
No healthy ageing scenario	0.5		0.1	0.1	0.3	0.4	0.5
Coverage convergence scenario	0.0		0.0	0.0	0.0	0.0	0.0
Cost convergence scenario	1.1		0.1	0.2	0.4	0.7	1.1
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	53%	302	343	383	417	444	464
Recipients: receiving institutional care	161%	46	58	77	93	109	120
receiving home care	87%	203	244	287	323	356	379
receiving cash benefits	87%	91	109	129	145	160	170
Baseline aged 65+	125%	121	152	191	220	251	274
Recipients: receiving institutional care aged 65+	178%	41	53	72	88	104	115
receiving home care aged 65+	143%	120	154	198	232	266	291
receiving cash benefits aged 65+	143%	54	69	89	104	119	131
Education							
Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-1.4	7.5	6.9	6.4	6.3	6.2	6.2
Number of students (in thousands)							
Total	-8%	1,153	1,086	1,054	1,075	1,073	1,057
as % of population 5-24	-1.5	89.3	86.7	88.0	88.1	87.5	87.9
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.9		0.3	0.6	0.8	0.9	0.9
Total cost of ageing							
Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	5.0	30.1	31.7	32.4	33.0	34.1	35.1
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.0		0.3	0.7	1.1	1.5	2.0
High life expectancy (+2 years)	0.9		0.0	0.2	0.4	0.7	0.9
Higher migration (+33%)	-0.9		-0.2	-0.4	-0.7	-0.9	-0.9
Lower migration (-33%)	1.0		0.1	0.4	0.7	0.9	1.0
Lower fertility (-20%)	1.1		0.0	-0.4	-0.2	0.4	1.1
Higher employment rate of older workers (+10 pps)	-0.8		-0.4	-0.6	-0.7	-0.8	-0.8
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.2		0.0	0.0	0.1	0.2	0.2

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

29. EURO AREA

Euro area

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.48	1.50	1.53	1.55	1.58	1.60
Life expectancy at birth							
males	6.9	79.6	81.0	82.6	84.0	85.3	86.5
females	5.8	84.8	85.9	87.3	88.5	89.6	90.7
Life expectancy at 65 (years)							
males	4.8	18.9	19.9	20.9	21.9	22.8	23.7
females	4.6	22.4	23.3	24.3	25.2	26.1	27.0
Net migration (thousands)	-2987.5	3,989.9	989.5	1,061.1	1,001.2	979.4	1,002.4
Net migration as % of population in t-1	-0.9	1.2	0.3	0.3	0.3	0.3	0.3
Population (million)	-7.2	348.2	353.1	354.6	352.5	346.5	341.1
share of prime-age population (25-54y)	-4.9	38.8	37.0	36.1	35.3	34.7	33.9
share of working-age population (20-64y)	-6.9	58.5	56.5	54.0	52.5	52.0	51.6
share of elderly population (+65y)	9.2	21.6	24.5	27.8	29.4	30.0	30.7
share of very elderly population (+80y)	6.5	6.5	7.3	9.1	11.6	12.5	13.0
share of very elderly population (+80y) in elderly population (+65y)	12.3	30.1	29.8	32.9	39.4	41.6	42.4
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.2	1.3	0.9	1.5	1.3	1.2	1.0
Employment (15-74y; growth rate)	-0.1	0.7	-0.2	-0.1	-0.2	-0.1	-0.2
Labour input: hours worked (growth rate)	-0.1	0.6	-0.2	-0.1	-0.2	-0.1	-0.2
Labour productivity per hour (growth rate)	1.3	0.7	1.0	1.6	1.5	1.4	1.2
TFP (growth rate)	0.9	0.5	0.6	1.1	1.0	0.9	0.8
capital deepening (contribution to labour productivity growth)	0.4	0.2	0.4	0.5	0.5	0.5	0.4
Potential GDP per capita (growth rate)	1.2	0.8	0.8	1.5	1.4	1.4	1.2
Potential GDP per worker (growth rate)	1.3	0.6	1.0	1.6	1.5	1.4	1.2
HICP (growth rate)	2.2	8.4	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.7	1.8	3.4	3.7	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-27,690	203,560	199,607	191,533	185,063	180,313	175,870
Working-age population (growth rate)	-0.5	0.2	-0.5	-0.4	-0.3	-0.2	-0.3
Labour force (20-64y; thousands)	-15,234	161,408	160,283	156,910	152,894	149,586	146,173
Participation rate (20-64y)	3.8	79.3	80.3	81.9	82.6	83.0	83.1
Participation rate (20-74y)	2.7	68.3	67.9	68.9	70.1	70.7	71.0
young (20-24y)	2.0	63.0	64.0	65.0	65.2	64.9	65.1
prime-age (25-54y)	1.6	86.4	87.0	87.5	87.9	88.0	88.1
older (55-64y)	11.0	65.9	68.9	73.1	74.3	76.2	77.0
oldest (65-74y)	9.0	10.4	12.1	14.3	16.0	17.2	19.3
Participation rate (20-64y) - female	5.8	74.2	76.1	78.3	79.3	79.8	80.0
Participation rate (20-74y) - female	6.2	62.7	64.5	67.2	68.1	68.6	68.9
young (20-24y)	5.4	57.9	62.4	64.7	61.9	62.0	63.3
prime-age (25-54y)	2.2	83.8	84.4	85.7	86.3	86.7	85.9
older (55-64y)	18.2	59.4	68.5	71.5	73.7	73.4	77.6
oldest (65-74y)	10.9	7.0	9.9	13.7	15.1	16.4	18.0
Participation rate (20-64y) - male	2.7	85.1	86.5	87.1	87.1	87.1	87.8
Participation rate (20-74y) - male	1.8	73.0	72.9	74.4	74.6	74.6	74.9
young (20-24y)	5.9	64.2	69.6	71.3	68.5	68.7	70.1
prime-age (25-54y)	-1.3	93.6	92.0	92.3	93.1	93.4	92.4
older (55-64y)	11.7	70.6	77.8	78.1	77.3	77.3	82.3
oldest (65-74y)	8.0	12.1	13.1	16.5	17.4	18.4	20.1
Average labour market exit age (1)	2.4	63.8	64.8	65.3	65.6	65.9	66.1
male	2.4	63.8	64.8	65.3	65.6	65.9	66.1
female	2.4	63.7	64.8	65.3	65.6	65.9	66.1
Employment rate (20-64y)	4.6	74.1	75.0	76.9	78.1	78.5	78.6
Employment rate (20-74y)	3.4	63.9	63.5	64.7	66.4	67.0	67.3
Unemployment rate (20-64y)	-1.2	6.6	6.6	6.2	5.4	5.4	5.4
Unemployment rate (20-74y)	-1.2	6.5	6.5	6.1	5.3	5.3	5.2
Employment (20-64y; millions)	-12.5	150.8	149.7	147.2	144.6	141.5	138.3
Employment (20-74y; millions)	-8.6	154.7	154.8	153.5	151.2	148.4	146.1
share of young (20-24y)	0.0	6.7	7.0	6.8	6.6	6.7	6.7
share of prime-age (25-54y)	-4.6	70.9	69.0	68.7	68.6	67.6	66.2
share of older (55-64y)	1.8	19.9	20.7	20.4	20.4	21.0	21.7
share of oldest (65-74y)	2.8	2.5	3.3	4.1	4.4	4.7	5.3
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	0.3	24.3	24.6	23.6	23.4	23.8	24.6
Old-age dependency ratio (3)	22.7	36.9	43.3	51.5	55.9	57.7	59.6
Total dependency ratio (4)	22.9	71.1	76.9	85.1	90.5	92.2	93.9
Total economic dependency ratio (5)	8.4	125.1	128.0	130.9	133.1	133.4	133.5
Economic old-age dependency ratio (20-64y) (6)	22.9	47.1	54.2	62.6	66.9	68.5	70.0
Economic old-age dependency ratio (20-74y) (7)	20.4	45.9	52.4	60.0	64.0	65.3	66.3

Euro area

Pension expenditure projections

Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	0.6	11.9	12.4	12.8	12.6	12.4	12.5
Of which: Old-age and early pensions	1.1	9.5	10.0	10.5	10.5	10.4	10.6
Disability pensions	0.0	0.8	0.9	0.8	0.8	0.8	0.8
Survivors' pensions	-0.5	1.5	1.5	1.4	1.2	1.1	1.0
Other	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Earnings-related pensions, gross	:	:	:	:	:	:	:
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.3	0.3	0.3	0.3	0.3	0.3
Public pensions, contributions	:	:	:	:	:	:	:
Balance of the pension system (contributions - gross expenditure)	:	:	:	:	:	:	:
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	22,815	91,243	97,730	107,940	113,454	114,320	114,057
Pensioners aged 65+ (1000 persons)	28,555	74,618	83,391	95,589	101,832	102,967	103,173
Share of pensioners below age 65 as % of all pensioners	-8.7	18.2	14.7	11.4	10.2	9.9	9.5
Benefit ratio (total public pensions, gross)	-7.2	42.8	43.2	40.4	37.7	35.9	35.6
Gross replacement rate at retirement (earnings-related public pensions)	-6.1	44.2	44.0	42.1	37.9	38.1	38.1
Average accrual rate (new earnings-related pensions)	:	:	:	:	:	:	:
Average contributory period (new earnings-related pensions)	:	:	:	:	:	:	:
Contributors (public pensions, 1000 persons)	-10,053	157,089	157,660	155,547	152,464	149,819	147,036
Support ratio (contributors/100 pensioners, public pensions)	-43	172	161	144	134	131	129
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.4		0.0	0.1	0.2	0.3	0.4
Higher migration (+33%)	-0.5		-0.1	-0.3	-0.5	-0.6	-0.5
Lower migration (-33%)	0.6		0.1	0.4	0.6	0.7	0.6
Lower fertility (-20%)	0.8		0.0	0.0	0.2	0.5	0.8
Higher employment rate of older workers (+10 pps)	-0.3		-0.4	-0.5	-0.4	-0.3	-0.3
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	-0.1	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.3	0.4	0.4
Retirement age linked to increases in life expectancy	-0.9		0.0	-0.1	-0.4	-0.6	-0.9
Constant retirement age	0.9		0.4	0.8	0.8	0.9	0.9
Constant benefit ratio	1.2		0.0	0.0	0.6	1.1	1.2
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	0.6		0.5	0.9	0.7	0.5	0.6
Dependency ratio	6.2		2.0	4.3	5.4	5.8	6.2
Coverage ratio	-1.3		-0.9	-1.3	-1.2	-1.2	-1.3
Of which: Old-age	-0.1		-0.4	-0.3	-0.1	0.0	-0.1
Early-age	-3.2		-1.4	-2.3	-2.6	-2.9	-3.2
Cohort effect	-5.8		-2.0	-4.4	-5.5	-5.5	-5.8
Benefit ratio	-2.9		-0.3	-1.3	-2.3	-2.8	-2.9
Labour market ratio	-1.1		-0.2	-0.6	-0.9	-1.0	-1.1
Of which: Employment rate	-0.7		-0.1	-0.5	-0.7	-0.7	-0.7
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.4		-0.1	-0.2	-0.2	-0.3	-0.4
Interaction effect (residual)	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	0.6		0.5	0.4	-0.2	-0.2	0.1
Dependency ratio	6.2		2.0	2.3	1.1	0.4	0.4
Coverage ratio	-1.3		-0.9	-0.4	0.0	0.0	-0.1
Of which: Old-age	-0.1		-0.4	0.1	0.2	0.1	-0.1
Early-age	-3.2		-1.4	-1.0	-0.3	-0.3	-0.3
Cohort effect	-5.8		-2.0	-2.4	-1.1	-0.1	-0.3
Benefit ratio	-2.9		-0.3	-1.0	-1.0	-0.6	-0.1
Labour market ratio	-1.1		-0.2	-0.4	-0.2	-0.1	-0.1
Of which: Employment rate	-0.7		-0.1	-0.3	-0.2	-0.1	0.0
Labour intensity	0.0		0.0	0.0	0.0	0.0	0.0
Career shift	-0.4		-0.1	-0.1	0.0	0.0	-0.1
Interaction effect (residual)	-0.3		-0.1	-0.1	0.0	0.0	0.0

Euro area**Health care**

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	7.1	7.0	7.2	7.4	7.5	7.6
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.8		0.2	0.4	0.6	0.8	0.8
Demographic scenario	-0.2		0.0	-0.1	-0.1	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.3	-0.4
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.3		0.0	0.1	0.2	0.3	0.3
Sector-specific composite indexation scenario	-0.3		-0.1	-0.1	-0.2	-0.3	-0.3

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.8	1.8	1.9	2.2	2.4	2.5	2.6
of which on institutional care - baseline	0.5	0.8	0.9	1.0	1.2	1.3	1.3
of which on home care - baseline	0.2	0.5	0.5	0.6	0.6	0.6	0.7
of which on cash benefits - baseline	0.1	0.5	0.5	0.6	0.6	0.6	0.6
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.8		0.1	0.4	0.7	1.2	1.8
Healthy ageing scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.1	0.2
Coverage convergence scenario	0.6		0.0	0.1	0.2	0.4	0.6
Cost convergence scenario	1.0		0.1	0.2	0.5	0.7	1.0
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	24%	24,907	26,541	28,634	30,521	30,974	30,776
Recipients: receiving institutional care	64%	3,384	3,728	4,364	5,053	5,431	5,543
receiving home care	52%	5,967	6,639	7,626	8,508	8,929	9,049
receiving cash benefits	38%	7,490	8,056	8,932	9,953	10,300	10,365
Baseline aged 65+	57%	14,030	15,966	18,699	21,016	21,875	22,033
Recipients: receiving institutional care aged 65+	91%	2,554	2,915	3,600	4,319	4,734	4,876
receiving home care aged 65+	79%	4,223	4,900	5,974	6,910	7,383	7,559
receiving cash benefits aged 65+	65%	5,032	5,602	6,629	7,723	8,166	8,317

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.5	4.3	4.1	3.9	3.9	3.9	3.8
Number of students (in thousands)							
Total	-16%	60,972	57,981	55,052	54,363	53,178	51,499
as % of population 5-24	-1.8	83.8	81.4	82.0	82.3	81.9	82.0
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.8		0.3	0.6	0.8	0.8	0.8

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.4	25.1	25.3	26.1	26.4	26.3	26.5
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.6		0.3	0.8	1.3	1.9	2.6
High life expectancy (+2 years)	0.6		0.0	0.1	0.3	0.5	0.6
Higher migration (+33%)	-0.8		-0.2	-0.4	-0.7	-0.8	-0.8
Lower migration (-33%)	0.9		0.2	0.5	0.8	0.9	0.9
Lower fertility (-20%)	0.8		0.0	-0.3	-0.1	0.4	0.8
Higher employment rate of older workers (+10 pps)	-0.4		-0.5	-0.6	-0.4	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	-0.1	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.3	0.4	0.4

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

30. EUROPEAN UNION

EU

Main demographic and macroeconomic assumptions

Demographic projections - EUROPOP2023 (Eurostat)	Ch 22-70	2022	2030	2040	2050	2060	2070
Fertility rate	0.1	1.50	1.53	1.56	1.58	1.60	1.62
Life expectancy at birth							
males	7.7	78.4	80.0	81.7	83.3	84.8	86.1
females	6.4	84.0	85.3	86.7	88.0	89.3	90.4
Life expectancy at 65 (years)							
males	5.3	18.2	19.3	20.4	21.5	22.5	23.5
females	5.0	21.8	22.8	23.9	24.9	25.9	26.8
Net migration (thousands)	-4690.0	5,901.8	984.6	1,228.6	1,187.5	1,162.9	1,211.8
Net migration as % of population in t-1	-1.0	1.3	0.2	0.3	0.3	0.3	0.3
Population (million)	-17.2	449.1	452.6	451.5	447.6	439.6	431.9
share of prime-age population (25-54y)	-5.5	39.5	37.5	36.2	35.1	34.7	34.0
share of working-age population (20-64y)	-7.0	58.6	56.8	54.5	52.6	51.8	51.6
share of elderly population (+65y)	9.3	21.2	23.9	27.1	29.0	30.0	30.5
share of very elderly population (+80y)	7.0	6.1	7.0	8.9	11.0	12.2	13.0
share of very elderly population (+80y) in elderly population (+65y)	14.2	28.6	29.2	32.8	37.8	40.8	42.7
Macroeconomic assumptions	AVG 22-70	2022	2030	2040	2050	2060	2070
Potential GDP (growth rate)	1.3	1.5	1.0	1.5	1.3	1.2	1.1
Employment (15-74y; growth rate)	-0.1	0.7	-0.3	-0.2	-0.3	-0.2	-0.2
Labour input: hours worked (growth rate)	-0.2	0.6	-0.3	-0.2	-0.3	-0.2	-0.2
Labour productivity per hour (growth rate)	1.4	0.9	1.3	1.8	1.6	1.4	1.3
TFP (growth rate)	0.9	0.6	0.8	1.2	1.1	0.9	0.8
capital deepening (contribution to labour productivity growth)	0.5	0.3	0.5	0.6	0.6	0.5	0.4
Potential GDP per capita (growth rate)	1.3	1.0	1.1	1.6	1.5	1.4	1.2
Potential GDP per worker (growth rate)	1.4	0.8	1.3	1.7	1.6	1.4	1.2
HICP (growth rate)	2.3	9.2	2.0	2.0	2.0	2.0	2.0
Nominal interest rate	3.8	2.2	3.6	3.9	4.0	4.0	4.0
Labour force assumptions	Ch 22-70	2022	2030	2040	2050	2060	2070
Working-age population (20-64y; thousands)	-40,279	263,125	257,303	246,200	235,600	227,753	222,846
Working-age population (growth rate)	-0.3	0.1	-0.4	-0.5	-0.4	-0.2	-0.3
Labour force (20-64y; thousands)	-24,556	208,903	206,534	200,563	193,580	188,310	184,347
Participation rate (20-64y)	3.3	79.4	80.3	81.5	82.2	82.7	82.7
Participation rate (20-74y)	2.4	68.3	68.2	68.7	69.4	70.1	70.7
young (20-24y)	2.1	61.6	62.5	63.4	63.8	63.5	63.7
prime-age (25-54y)	1.5	86.7	87.3	87.7	88.1	88.2	88.2
older (55-64y)	10.1	65.4	68.3	71.6	72.7	74.9	75.5
oldest (65-74y)	8.2	10.2	11.6	13.9	15.1	16.4	18.4
Participation rate (20-64y) - female	5.2	74.0	75.8	77.4	78.4	79.1	79.1
Participation rate (20-74y) - female	4.6	62.6	63.5	64.5	65.4	66.4	67.2
young (20-24y)	2.1	57.4	58.2	59.1	59.6	59.3	59.4
prime-age (25-54y)	3.0	81.5	82.9	83.7	84.3	84.5	84.5
older (55-64y)	13.5	59.1	63.7	67.5	69.3	72.0	72.6
oldest (65-74y)	9.6	7.5	9.8	12.4	13.6	15.0	17.1
Participation rate (20-64y) - male	1.3	84.8	84.7	85.5	85.8	86.1	86.1
Participation rate (20-74y) - male	0.0	74.1	72.9	72.9	73.3	73.7	74.1
young (20-24y)	2.0	65.6	66.6	67.5	67.8	67.5	67.6
prime-age (25-54y)	0.0	91.8	91.6	91.4	91.7	91.7	91.7
older (55-64y)	6.3	72.1	73.2	75.9	76.3	77.8	78.4
oldest (65-74y)	6.3	13.4	13.7	15.5	16.6	17.8	19.8
Average labour market exit age (1)	2.1	63.6	64.5	65.0	65.2	65.6	65.8
male	2.1	63.8	64.7	65.1	65.4	65.7	65.9
female	2.2	63.5	64.4	64.8	65.1	65.5	65.7
Employment rate (20-64y)	3.8	74.7	75.5	76.8	78.0	78.5	78.5
Employment rate (20-74y)	2.9	64.3	64.2	64.8	65.9	66.6	67.2
Unemployment rate (20-64y)	-0.9	5.9	5.9	5.7	5.1	5.1	5.1
Unemployment rate (20-74y)	-0.9	5.9	5.8	5.6	5.0	5.0	5.0
Employment (20-64y; millions)	-21.5	196.5	194.3	189.1	183.7	178.7	175.0
Employment (20-74y; millions)	-17.4	201.5	200.5	196.9	191.8	187.2	184.1
share of young (20-24y)	0.2	6.4	6.9	6.7	6.5	6.6	6.6
share of prime-age (25-54y)	-5.1	72.0	69.8	68.8	68.8	68.4	66.9
share of older (55-64y)	2.3	19.1	20.2	20.5	20.4	20.5	21.4
share of oldest (65-74y)	2.5	2.5	3.1	3.9	4.2	4.5	5.0
Dependency ratios	Ch 22-70	2022	2030	2040	2050	2060	2070
Share of older population in working-age population (2)	1.0	23.5	24.2	24.0	23.9	23.4	24.5
Old-age dependency ratio (3)	23.0	36.1	42.0	49.7	55.2	58.0	59.1
Total dependency ratio (4)	23.1	70.7	75.9	83.4	90.0	93.0	93.8
Total economic dependency ratio (5)	11.7	122.9	125.7	129.3	133.4	134.8	134.5
Economic old-age dependency ratio (20-64y) (6)	24.2	45.7	52.3	60.5	66.2	69.0	69.9
Economic old-age dependency ratio (20-74y) (7)	21.8	44.6	50.7	58.1	63.4	65.9	66.4

EU							
Pension expenditure projections							
Baseline as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross	0.4	11.4	11.9	12.2	12.1	11.8	11.8
Of which: Old-age and early pensions	0.9	9.2	9.7	10.1	10.1	10.0	10.1
Disability pensions	0.0	0.8	0.9	0.8	0.8	0.8	0.8
Survivors' pensions	-0.4	1.3	1.3	1.2	1.1	1.0	0.9
Other	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Earnings-related pensions, gross	:	:	:	:	:	:	:
Private occupational pensions, gross	:	:	:	:	:	:	:
Private individual pensions (mandatory), gross	:	:	:	:	:	:	:
New old-age and early pensions, gross	0.0	0.3	0.3	0.3	0.3	0.3	0.3
Public pensions, contributions	:	:	:	:	:	:	:
Balance of the pension system (contributions - gross expenditure)	:	:	:	:	:	:	:
Public pension scheme, tax revenues	:	:	:	:	:	:	:
Additional indicators	Ch 22-70	2022	2030	2040	2050	2060	2070
Pensioners (public, 1000 persons)	17,346	83,567	88,740	96,876	102,694	102,985	100,914
Pensioners aged 65+ (1000 persons)	24,458	65,660	73,464	83,645	90,814	91,861	90,118
Share of pensioners below age 65 as % of all pensioners	-10.7	21.4	17.2	13.7	11.6	10.8	10.7
Benefit ratio (total public pensions, gross)	-7.3	43.2	43.6	40.7	38.0	36.3	35.8
Gross replacement rate at retirement (earnings-related public pensions)	-6.7	45.0	44.8	42.3	38.5	38.4	38.2
Average accrual rate (new earnings-related pensions)	:	:	:	:	:	:	:
Average contributory period (new earnings-related pensions)	:	:	:	:	:	:	:
Contributors (public pensions, 1000 persons)	-12,255	145,774	147,523	145,044	139,882	136,420	133,519
Support ratio (contributors/100 pensioners, public pensions)	-42	174	166	150	136	132	132
Public pensions, gross as % of GDP (difference from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
High life expectancy (+2 years)	0.4		0.0	0.1	0.2	0.3	0.4
Higher migration (+33%)	-0.5		-0.1	-0.3	-0.5	-0.5	-0.5
Lower migration (-33%)	0.6		0.1	0.3	0.5	0.6	0.6
Lower fertility (-20%)	0.8		0.0	0.0	0.2	0.5	0.8
Higher employment rate of older workers (+10 pps)	-0.3		-0.4	-0.5	-0.4	-0.3	-0.3
Higher TFP growth (+0.2 pps)	-0.2		0.0	0.0	0.0	-0.1	-0.2
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.3	0.4	0.4
Retirement age linked to increases in life expectancy	-0.9		0.0	-0.2	-0.4	-0.6	-0.9
Constant retirement age	0.8		0.4	0.7	0.7	0.8	0.8
Constant benefit ratio	1.3		0.0	0.1	0.7	1.2	1.3
Breakdown of the increase (in pps) in public pension expenditure - cumulated change from 2022	Ch 22-70	2022	2030	2040	2050	2060	2070
Public pensions, gross as % of GDP - pps change from 2022	0.4		0.5	0.8	0.7	0.4	0.4
Dependency ratio	6.1		1.8	3.9	5.2	5.8	6.1
Coverage ratio	-1.5		-0.7	-1.2	-1.3	-1.3	-1.5
Of which: Old-age	-0.2		-0.2	-0.2	-0.1	-0.1	-0.2
Early-age	-3.7		-1.5	-2.5	-2.9	-3.3	-3.7
Cohort effect	-5.5		-1.5	-3.6	-5.0	-5.5	-5.5
Benefit ratio	-3.1		-0.3	-1.3	-2.4	-3.0	-3.1
Labour market ratio	-0.8		-0.2	-0.5	-0.7	-0.8	-0.8
Of which: Employment rate	-0.6		-0.1	-0.3	-0.5	-0.6	-0.6
Labour intensity	0.1		0.0	0.0	0.1	0.1	0.1
Career shift	-0.3		-0.1	-0.2	-0.2	-0.3	-0.3
Interaction effect (residual)	-0.3		-0.1	-0.2	-0.3	-0.3	-0.3
Breakdown of the increase (in pps) in public pension expenditure - change by decade	Ch 22-70	2022	2022-2030	2030-2040	2040-2050	2050-2060	2060-2070
Public pensions, gross as % of GDP - pps change	0.4		0.5	0.3	-0.1	-0.2	0.0
Dependency ratio	6.1		1.8	2.1	1.3	0.6	0.2
Coverage ratio	-1.5		-0.7	-0.4	-0.1	-0.1	-0.1
Of which: Old-age	-0.2		-0.2	0.0	0.1	0.0	-0.1
Early-age	-3.7		-1.5	-1.0	-0.3	-0.5	-0.3
Cohort effect	-5.5		-1.5	-2.0	-1.4	-0.5	0.0
Benefit ratio	-3.1		-0.3	-1.0	-1.1	-0.6	-0.1
Labour market ratio	-0.8		-0.2	-0.3	-0.2	-0.1	-0.1
Of which: Employment rate	-0.6		-0.1	-0.2	-0.2	-0.1	0.0
Labour intensity	0.1		0.0	0.0	0.0	0.0	0.0
Career shift	-0.3		-0.1	-0.1	0.0	0.0	-0.1
Interaction effect (residual)	-0.3		-0.1	-0.1	-0.1	0.0	0.0

EU

Health care

Health care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.4	6.9	6.7	7.0	7.2	7.2	7.3
Health care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	0.9		0.2	0.4	0.7	0.8	0.9
Demographic scenario	-0.2		0.0	-0.1	-0.2	-0.2	-0.2
Healthy ageing scenario	-0.4		-0.1	-0.2	-0.3	-0.3	-0.4
No healthy ageing scenario	0.5		0.1	0.2	0.3	0.4	0.5
Labour intensity scenario	0.4		0.0	0.2	0.3	0.3	0.4
Sector-specific composite indexation scenario	-0.3		-0.1	-0.1	-0.2	-0.3	-0.3

Long-term care

Long-term care spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	0.8	1.7	1.9	2.1	2.3	2.5	2.6
of which on institutional care - baseline	0.5	0.8	0.9	1.0	1.2	1.3	1.3
of which on home care - baseline	0.2	0.5	0.5	0.6	0.7	0.7	0.7
of which on cash benefits - baseline	0.1	0.4	0.5	0.5	0.5	0.5	0.5
Long-term care spending as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario	1.9		0.1	0.4	0.7	1.2	1.9
Healthy ageing scenario	-0.1		0.0	-0.1	-0.1	-0.1	-0.1
No healthy ageing scenario	0.2		0.0	0.1	0.1	0.1	0.2
Coverage convergence scenario	0.7		0.0	0.1	0.3	0.5	0.7
Cost convergence scenario	1.0		0.1	0.2	0.4	0.7	1.0
Number of dependent people (in thousands)	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	23%	31,200	33,239	35,740	37,795	38,539	38,403
Recipients: receiving institutional care	64%	4,142	4,576	5,346	6,110	6,597	6,792
receiving home care	56%	7,141	8,002	9,208	10,247	10,860	11,114
receiving cash benefits	42%	8,751	9,487	10,532	11,674	12,208	12,394
Baseline aged 65+	58%	17,529	19,905	23,214	25,996	27,394	27,652
Recipients: receiving institutional care aged 65+	92%	3,107	3,555	4,389	5,202	5,743	5,970
receiving home care aged 65+	82%	5,191	6,055	7,356	8,460	9,142	9,452
receiving cash benefits aged 65+	70%	5,907	6,638	7,862	9,102	9,754	10,025

Education

Education spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	-0.5	4.4	4.1	4.0	4.0	4.0	3.9
Number of students (in thousands)							
Total	-16%	77,780	74,984	70,567	69,210	67,871	65,574
as % of population 5-24	-1.1	82.7	81.0	81.5	81.9	81.6	81.6
High enrolment rate scenario (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Spending	0.8		0.3	0.6	0.8	0.8	0.8

Total cost of ageing

Total spending as % of GDP	Ch 22-70	2022	2030	2040	2050	2060	2070
Baseline	1.2	24.4	24.6	25.2	25.5	25.5	25.6
Total cost of ageing as % of GDP - (diff. from baseline)	Ch 22-70	2022	2030	2040	2050	2060	2070
Risk scenario (health care & long-term care)	2.7		0.3	0.8	1.4	2.0	2.7
High life expectancy (+2 years)	0.6		0.0	0.1	0.3	0.5	0.6
Higher migration (+33%)	-0.7		-0.2	-0.4	-0.6	-0.7	-0.7
Lower migration (-33%)	0.8		0.2	0.4	0.7	0.9	0.8
Lower fertility (-20%)	0.7		0.0	-0.3	-0.1	0.3	0.7
Higher employment rate of older workers (+10 pps)	-0.4		-0.4	-0.5	-0.4	-0.4	-0.4
Higher TFP growth (+0.2 pps)	-0.3		0.0	0.0	0.0	-0.1	-0.3
Lower TFP growth (-0.2 pps)	0.4		0.0	0.1	0.3	0.4	0.4

(1) Based on the average probabilities of labour force entry and exit. The table reports 2023 instead of 2022.

(2) Share of older population = Population aged 55 to 64 as a % of the population aged 20-64.

(3) Old-age dependency ratio = Population aged 65 and over as a % of the population aged 20-64.

(4) Total dependency ratio = Population under 20 and over 64 as a % of the population aged 20-64.

(5) Total economic dependency ratio = Total population less employed as a % of the employed population 20-74.

(6) Economic old-age dependency ratio (20-64) = Inactive population aged 65+ as a % of the employed population 20-64.

(7) Economic old-age dependency ratio (20-74) = Inactive population aged 65+ as a % of the employed population 20-74.

Source: European commission, EPC.

Part IV

Resources

REFERENCES

- Acemoglu D., Finkelstein A. and M. Notowidigdo (2013), *“Income and Health Spending: Evidence from Oil Price Shocks”*, Review of Economics and Statistics, Vol. 95(4), pp. 1079-1095.
- Andersen Z.J., Bønnelykke K., Hvidberg M., Jensen S.S., Kettel M., Loft S. and O. Raaschou-Nielsen (2012), *“Long-term exposure to air pollution and asthma hospitalisations in older adults: a cohort study”*, Thorax, 67(1), pp. 6-11.
- Azizi K. and C. Pereira (2005), *“Comparaison internationale des dépenses de santé: une analyse des évolutions dans sept pays, 1970-2002”*, DREES, Dossier Solidarité et Santé, Vol. 1.
- Bac C. and G. Cornilleau (2002), *“Comparaison internationale des dépenses de santé: une analyse des évolutions dans sept pays depuis 197”*, DREES, Études et Résultats, Vol. 175.
- Baltagi B.H., Lagravinese R., Moscone F. and E. Tosetti (2017), *“Health care expenditure and income: a global perspective”*, Health Economics 26, pp. 863-874.
- Blakely T. et al. (2019), *“[Health system costs for individual and comorbid noncommunicable diseases: An analysis of publicly funded health events from New Zealand](#)”*, PLoS Med 16(1): e1002716.
- Bremer P. et al. (2017), *“Informal and formal care: Substitutes or complements in care for people with dementia? Empirical evidence for 8 European countries”*, Health Policy, 121(6), pp. 613-622.
- Breyer F. and N. Lorenz (2021), *“The ‘red herring’ after 20 years: ageing and health care expenditures”*, The European Journal of Health Economics 22, pp. 661-667.
- Breyer F., Costa-Font F. and S. Felder (2010), *“Ageing, health, and health care”*, Oxford Review of Economic Policy, Vol. 26(4), pp. 674-690.
- Campitelli M.A., Bronskill S.E., Hogan D.B., Diong C., Amuah J.E., Gill S., Seitz D., Thavorn K., Wodchis W.P. and C.J. Maxwell (2016), *“The prevalence and health consequences of frailty in a population-based older home care cohort: a comparison of different measures”*, BMC Geriatrics 16:133.
- Carreras T. et al. (2017), *“Ageing and healthcare expenditures: Exploring the role of individual health status”*, Health Economics, pp. 865-876.
- Casas I., Gao J., Peng B. and Sh. Xie (2021), *“Time-varying income elasticities of healthcare expenditure for the OECD and Eurozone”*, Journal of Applied Econometrics 36(3), pp. 328-345.
- Chatterji S., Byles J., Cutler D., Seeman T. and E. Verdes (2015), *“Health, functioning, and disability in older adults - present status and future implications”*, Lancet 385, pp. 563-575.
- Clements B., Coady D. and S. Gupta (2012), *“The Economics of Public Health Care Reform in Advanced and Emerging Economies”*, IMF.
- Colombo F., Llena-Nozal A., Mercier J. and F. Tjadens (2011), *“Help Wanted? Providing and Paying for Long – Term Care”*, OECD Health Policy Studies, OECD Publishing.
- Cutler D. (1995), *“Technology, Health Costs and the NIH”*, Cambridge MA: Harvard University and NBER.

- Cutler D., Ghosh K. and M. Landrum (2013), *"Evidence for Significant Compression of Morbidity in the Elderly U.S. Population"*, NBER Working Paper No 19268.
- Cylus J., Figueras J. and C. Norman (2019), *Will population ageing spell the end of the welfare state? A review of evidence and policy options*, Policy brief, WHO Regional Office for Europe and European Observatory on Health Systems and Policies.
- de la Maisonneuve C. and J. Oliveira Martins (2013), *"A projection method of public health and long-term care expenditures"*, OECD Economic Department Working Paper.
- Dybczak K. and B. Przywara (2010), *"The role of technology in health care expenditure in the EU"*, European Economy, Economic Papers No 400.
- Ebi K.L., Boyer C., Bowen K.J., Frumkin H. and J. Hess (2018), *"Monitoring and evaluation indicators for climate change-related health impacts, risks, adaptation, and resilience"*, International journal of environmental research and public health, 15(9), 1943.
- EEA (2022a), *"Global and European temperatures database"*, European Environment Agency. Consulted in March 2023.
- EEA (2022b), *"Climate change as a threat to health and well-being in Europe: focus on heat and infectious diseases"*, EEA Report No. 07/2022. European Environment Agency.
- Estiri H. and E. Zagheni (2019), *"Age matters: Ageing and household energy demand in the United States"*, Energy Research & Social Science, 55, pp. 62-70.
- Eurobarometer (2021), *"Climate Change"*, July 2021, European Commission.
- European Climate and Health Observatory (2022), *"Evidence on climate and health"*.
- European Commission and SPC (2014), *"Adequate social protection for long-term care needs in an ageing society. Report jointly prepared by the Social Protection Committee and the European Commission."*
- European Commission and EPC (2016), *"Joint Report on Health Systems and Long-Term Care systems"*, European Economy, Institutional Paper No 37.
- European Commission and EPC (2021), *"2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019-2070)"*, European Economy, Institutional Paper No 148.
- European Commission and EPC (2023), *"2024 Ageing Report: Underlying assumptions and projection methodologies"*, European Economy, Institutional Paper No 257.
- European Institute for Gender Equality (2019), *"Gender Equality Index 2019"*, online report.
- Eurostat (2017), *"2017 Module on Health and Children's Health (guidelines and questionnaire)"*.
- Feldhaus I. and I. Mathauer (2018), *"Effects of mixed provider payment systems and aligned cost sharing practices on expenditure growth management, efficiency, and equity: a structured review of the literature"*, BMC Health Services Research 18(1): 996.

- Fielding J., Burningham K., Thrush D. and R. Catt (2007), *“Public response to flood warning: R&D”*, Technical Report SC020116, DEFRA–Department for the Environment, Food and Rural Affairs, UK.
- Fortems-Cheiney A., Foret G., Siour G., Vautard R., Szopa S., Dufour G. and M. Beekmann (2017), *“A 3° C global RCP8.5 emission trajectory cancels benefits of European emission reductions on air quality”*, *Nature Communications*, 8(1), 89.
- Forzieri G., Cescatti A., e Silva F.B. and L. Feyen (2017), *“Increasing risk over time of weather-related hazards to the European population: a data-driven prognostic study”*, *The Lancet Planetary Health*, 1(5), e200-e208.
- Fries J.F. (1980), *“Ageing, natural death, and the compression of morbidity”*, *The New England Journal of Medicine*, Vol. 303(3), pp. 130-135.
- Fries J.F. (1989), *“The compression of morbidity: near or far?”*, *Milbank Memorial Fund Quarterly*, Vol. 67(2), pp. 208-232.
- Gabriele S., Cislaghi C., Costantini F., Innocenti F., Lepore V., Tediosi F., Valerio M. and C. Zocchetti (2005), *“Demographic factors and health expenditure profiles by age: the case of Italy”*, A deliverable for ENEPRI AHEAD (Ageing, Health Status and Determinants of Health Expenditure) project.
- Gagliardi N. et al. (2024), *“Climate change and population ageing: A review”*, European Economy Discussion Paper, European Commission, forthcoming.
- Gamble J.L., Hurley B.J., Schultz P.A., Jaglom W.S., Krishnan N. and M. Harris (2013), *“Climate change and older Americans: state of the science”*, *Environmental health perspectives*, 121(1), pp. 15-22.
- Garrido V.M., Zentner A. and R. Busse (2011), *“The effects of gatekeeping: a systematic review of the literature”*, *Scandinavian Journal of Primary Health Care*, 29(1), pp. 28-38.
- Gerdtham U.G. (1995), *“Factors affecting Health spending: a cross-country econometric analysis”*, in *New Direction in Health Care Policies: Improving Cost Control and Effectiveness*, OECD.
- Gerdtham U.G. and B. Jönsson (1991), *“Price and Quantity in International Comparisons of Health Care Expenditure”*, *Applied Economics*, Vol. 23, pp. 1519-1528.
- Getzen T.E. (2000), *“Health care is an individual necessity and a national luxury: Applying multilevel decision models to the analysis of health care expenditure”*, *Journal of Health Economics*, Vol. 19(2), pp. 259-270.
- Gisler A. (2021), *“Allergies in Urban Areas on the Rise: The Combined Effect of Air Pollution and Pollen”*, *Int. J. Public Health* 66.
- Gruenberg E.M. (1977), *“The failure of success”*, *Milbank Memorial Fund Quarterly*, Vol. 55(1), pp. 3-24.
- Hagist C. and L. Kotlikoff (2009), *“Who’s going broke? Comparing growth in Public Healthcare Expenditure in ten OECD countries”*, *Revista de Economía Pública*, Vol. 188(1), pp. 55-72.
- Haq G. (2017), *“Growing old in a changing climate”*, *Public Policy & Aging Report*, 27(1), pp. 8-12.

- Haq G. (2022), *"Flooding and older people"*, In Encyclopedia of Gerontology and Population Aging (pp. 1889-1891). Cham: Springer International Publishing.
- Haq G. and G. Gutman (2014), *"Climate gerontology"*, Zeitschrift für Gerontologie und Geriatrie, 47(6).
- Haq G., Whitelegg J. and M. Kohler (2008), *"Growing old in a changing climate"*, in Meeting the challenges of an ageing population and climate change, Stockholm: Stockholm Environment Institute, pp. 1-38.
- Harper S. (2019), *"The convergence of population ageing with climate change"*, Journal of Population Ageing, 12, pp. 401-403.
- Heger D. and I.W.K. Kolodziej (2016), *"Changes in Morbidity over Time – Evidence from Europe"*, Ruhr Economic Papers No 640.
- Huang Q. and Y. Lu (2015), *"The effect of urban heat island on climate warming in the Yangtze River Delta urban agglomeration in China"*, International journal of environmental research and public health, 12(8), pp. 8773-8789.
- IPCC (2014), *"Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects"*, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, pp. 709-754.
- IPCC (2021), *"Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis"*, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, pp. 3-32.
- IPCC (2023), *"Synthesis report of the IPCC sixth assessment report (AR6)"*, Summary for Policymakers, Intergovernmental Panel on Climate Change, Cambridge University Press.
- Jenkner E., Karpowicz I., Kashiwase K., Shang B., Soto M. and J. Tyson (2010), *"Macro-Fiscal Implications of Health Care Reform in Advanced and Emerging Economies"*, prepared by the IMF Fiscal Affairs Department.
- Katz S., Ford A.B., Moskowitz R.W., Jackson B.A. and M.W. Jaffe (1963), *"Studies of illness in the aged. The index of ADL: A standardized measure of biological and psychosocial function"*, Jama, Vol. 185, pp. 914-919.
- Katz T.F. (1963), *"A.D.L. Activities of Daily Living"*, Journal of American Medical Association, 185, pp. 914-919.
- Lawton M.P. and E.M. Brody (1969), *"Assessment of older people: Self-maintaining and instrumental activities of daily living"*, The Gerontologist, 9(3), pp. 179-186.
- Lenton T.M., Rockström J., Gaffney O., Rahmstorf S., Richardson K., Steffen W. and H.J. Schellnhuber (2019), *"Climate tipping points – too risky to bet against"*, Nature, 575(7784), pp. 592-595.
- Léonard C., Stordeur S. and D. Roberfroid (2009), *"Association between physician density and health care consumption: A systematic review of the evidence"*, Health Policy, Volume 91, Issue 2, pp. 121-134.

- Lindgren B. (2016), [“The Rise in Life Expectancy, Health Trends among the Elderly, and the Demand for Care – A Selected Literature Review”](#), NBER Working Paper No 22521.
- Lubitz J.D. and G.F. Riley (1993), *“Trends in Medicare payment in the last year of life”*, New England Journal of Medicine, 328, 15, pp. 1092-1096.
- Madsen M. (2004), *“Methodologies to incorporate ‘death-related’ costs in projections of health and long-term care based on Danish data”*, Ministry of Finance, Denmark.
- Mahieu R. (2000), *“Les déterminants des dépenses de santé : une approche macroéconomique”*, Série des documents de travail de la Direction des études et synthèses économiques, G2000/01, INSEE.
- Manton K.G. (1982), *“Changing concepts of morbidity and mortality in the elderly population”*, Milbank Memorial Fund Quarterly, Vol. 60(2), pp. 183-244.
- Mavrodaris A., Mattocks C. and C.E. Brayne (2021), *“Healthy ageing for a healthy planet: do sustainable solutions exist?”*, The Lancet Healthy Longevity, 2(1), e10-e11.
- Medeiros J. and C. Schwierz (2013), *“Estimating the drivers and projecting long-term public health expenditure in the European Union: Baumol’s ‘cost disease’ revisited”*, European Economy, Economic Papers No 507.
- Menz T. and H. Welsch (2012), *“Population aging and carbon emissions in OECD countries: Accounting for life-cycle and cohort effects”*, Energy Economics, 34(3), pp. 842-849.
- Newhouse J.P. (1977), *“Medical Care Expenditure: a cross national survey”*, Journal of Human Resources, Vol. 12, No 1, pp. 115-125.
- Newhouse J.P. (1992), *“Medical Care Costs: How Much Welfare Loss?”*, Journal of Economic Perspectives, Summer, Vol. 6(3), pp. 3-21.
- OECD (2006), *“Projecting OECD Health and Long-Term Care Expenditures: What are the Main Drivers?”*, Economic Department Working Paper No 477.
- OECD (2011), *“Health-reform: meeting the challenge of ageing and multiple morbidities”*, OECD Publishing.
- OECD (2023), [“Ready for the Next Crisis? Investing in Health System Resilience”](#), OECD Health Policy Studies, OECD Publishing.
- OECD, Eurostat and WHO (2011), *“A System of Health Accounts”*, SHA Manual 2011 edition.
- OECD/European Union (2022), [“Health at a Glance: Europe 2022: State of Health in the EU Cycle”](#), OECD Publishing.
- Okunade A.A and V.N.R. Murthy (2002), *“Technology as a ‘major driver’ of health care costs: a cointegration analysis of the Newhouse conjecture”*, Journal of Health Economics, Vol. 21(1), pp. 147-159.
- Oliveira Martins J. and C. de la Maisonneuve (2006), *“The Drivers of Public Expenditure on Health and Long-Term Care: An Integrated Approach”*, OECD Economic Studies No 43, 2006/2.

- Olshansky S.J., Rudberg M.A., Carnes B.A., Cassel C.K. and J.A. Brody (1991), "Trading off longer life for worsening health", *Journal of Aging and Health*, Vol. 3(2), pp. 194-216.
- Palangkaraya A. and J. Yong (2009), "Population ageing and its implications on aggregate health care demand: empirical evidence from 22 OECD countries", *International Journal of Health Care Finance and Economics*, Vol. 9(4), pp. 391-402.
- Park C.E., Jeong S., Harrington L.J., Lee M.I. and C. Zheng (2020), "Population ageing determines changes in heat vulnerability to future warming", *Environmental Research Letters*, 15(11), 114043.
- Paterson D.L., Wright H. and P.N. Harris (2018), "Health risks of flood disasters", *Clinical Infectious Diseases*, 67(9), pp. 1450-1454.
- Polgreen P.M. and E.L. Polgreen (2018), "Infectious diseases, weather, and climate", *Clinical infectious diseases*, 66(6), pp. 815-817.
- Raitano M. (2006), "The Impact of Death-Related Costs on Health-Care Expenditure: A Survey", ENEPRI Research Report No 17.
- Rana R.H., Alam K. and J. Gow (2020), "Health expenditure and gross domestic product: causality analysis by income level", *International Journal for Health Economics Management* 20, pp. 55-77.
- Rechel B., Doyle Y. and E. Grundy (2009), "How can health systems respond to population ageing?", *Health Systems and Policy Analysis*, WHO Regional Office for Europe and European Observatory on Health Systems and Policies, Policy Brief 10.
- Salomon J.A. et al. (2012), "Healthy life expectancy for 187 countries, 1990-2010: a systematic analysis for the Global Burden Disease Study 2010", *Lancet* 380, pp. 2144-2162.
- Seshamani M. and A. Gray (2004), "A longitudinal study of the effects of age and time to death on hospital costs", *Journal for Health Economics* 23, pp. 217-235.
- Smith S., Newhouse J. and M. Freeland (2009), "Income, Insurance, and Technology: Why Does Health Spending Outpace Economic Growth?", *Health Affairs*, Vol. 28(5), pp. 1276-84.
- Sripa P., Hayhoe B., Garg P., Majeed A. and G. Greenfield (2019), "Impact of GP gatekeeping on quality of care, and health outcomes, use, and expenditure: a systematic review", *British Journal of General Practice*, 69 (682). pp. 294-303.
- Stadhouders N., Krusea F., Tankea M., Koolmanb X. and P. Jeurissenac (2019), "Effective healthcare cost-containment policies: A systematic review", *Health Policy*, Volume 123, Issue 1, pp. 71-79.
- Steffen W., Richardson K., Rockström J., Cornell S.E., Fetzer I., Bennett E.M. and S. Sörlin (2015), "Planetary boundaries: Guiding human development on a changing planet", *Science*, 347(6223), 1259855.
- Sundberg L., Agahi N., Wastesson J.W., Fritzell J. and S. Fors (2023), "Increasing inequalities in disability-free life expectancy among older adults in Sweden 2002-2014", *Scandinavian Journal of Public Health*, Vol. 51, Issue 6, pp. 835-842.
- UN (2022), "World Population Prospects, 2022", Department of Economic and Social Affairs, United Nations.

- Van Dijk C.E., Van Den Berg B., Verheij R.A., Spreeuwenberg P., Groenenwegen P.P. and D.H. de Bakker (2013), *"Moral hazard and supplier-induced demand: empirical evidence in general practice"*, Health Economics, 22 (3), pp. 340-352.
- Van Vliet R.C. and L.M. Lamers (1998), *"The high costs of death: should health plans get higher payments when members die?"*, Medical Care, 36, pp. 1451-1460.
- Vargas Bustamante A. and S.V. Shimoga (2017), *"Comparing the income elasticity of health spending in middle-income and high-income countries: the role of financial protection"*, International Journal of Health Policy Management 7(3), pp. 255-263.
- Verbrugge L.M. (1984), *"Longer life but worsening health? Trends in health and mortality of middle-aged and older persons"*, Milbank Memorial Fund Quaterly, Health and Society, 62(3), pp. 475-519.
- Wanka A., Arnberger A., Alex B., Eder R., Hutter H.P. and P. Wallner (2014), *"The challenges posed by climate change to successful ageing"*, Zeitschrift für Gerontologie und Geriatrie, 47(6), pp. 468-474.
- Watts N., Amann M., Arnell N., Ayeb-Karlsson S., Beagley J., Belesova K. and A. Costello (2021), *"The 2020 report of the Lancet Countdown on health and climate change: responding to converging crises"*, The Lancet, 397(10269), pp. 129-170.
- WHO (2000), *"Health Systems: Improving Performance"*, The World Health Report 2000.
- WHO (2017), *"Fast facts on climate and health"*, World Health Organization.
- WHO (2021), *"UN decade of healthy ageing 2021-2030"*, World Health Organization.
- WHO (2022), *"[Health and care workforce in Europe: time to act](#)"*, Copenhagen: WHO Regional Office for Europe.
- Willemé P. and M. Dumont (2014), *"Machines that go 'ping': medical technology and health expenditures in the OECD countries"*, Health Economics, Vol. 24 (8), pp. 1027-1041; Corrigendum (2015), Health Economics, Vol. 24 (8), pp. 387-388.
- Xu K., Saksen P. and A. Holly (2011), *"[The determinants of health expenditure: a country-level panel data analysis](#)"*, WHO Working Paper R4D.
- Yach D. (2015), *"The link between ageing and climate change"*, World Economic Forum.
- Zheng H., Long Y., Wood R., Moran D., Zhang Z., Meng J. and D. Guan (2022), *"Ageing society in developed countries challenges carbon mitigation"*, Nature Climate Change, 12(3), pp. 241-248.
- Zweifel P. et al. (2005), *"The Sisyphus syndrome in health revisited"*, International Journal of Health Care Finance and Economics, 5(2), pp. 127-145.

EUROPEAN ECONOMY INSTITUTIONAL PAPERS SERIES

European Economy Institutional Papers series can be accessed and downloaded free of charge from the following address: [Publications \(europa.eu\)](http://ec.europa.eu/economy_finance/publications/european_economy/index_en.htm).

Titles published before July 2015 can be accessed and downloaded free of charge from:

- http://ec.europa.eu/economy_finance/publications/european_economy/index_en.htm
(the main reports, e.g. Economic Forecasts)
- http://ec.europa.eu/economy_finance/publications/occasional_paper/index_en.htm
(the Occasional Papers)
- http://ec.europa.eu/economy_finance/publications/qr_euro_area/index_en.htm
(the Quarterly Reports on the Euro Area)

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct Information Centres. You can find the address of the centre nearest you at: <http://europa.eu/contact>.

On the phone or by e-mail

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by electronic mail via: <http://europa.eu/contact>.

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website at: <http://europa.eu>.

EU Publications

You can download or order free and priced EU publications from EU Bookshop at: <http://publications.europa.eu/bookshop>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <http://europa.eu/contact>).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>.

Open data from the EU

The EU Open Data Portal (<http://data.europa.eu/euodp/en/data>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

