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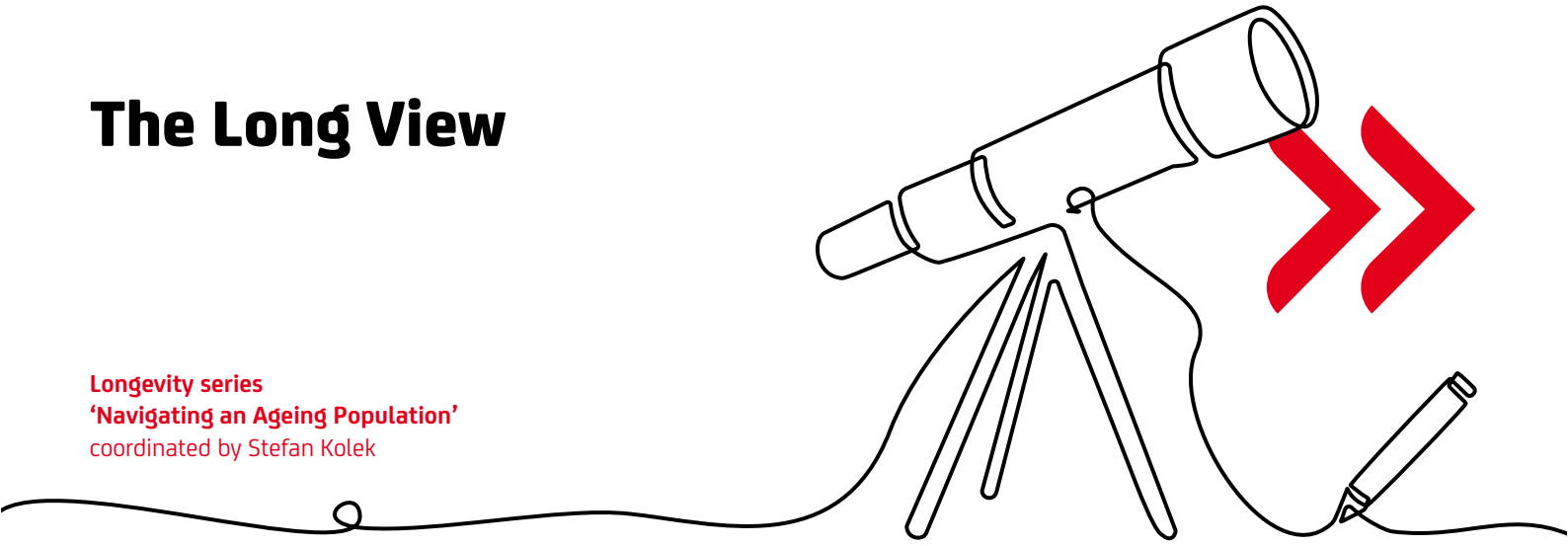
The Long View



Longevity series
'Navigating an Ageing Population'
coordinated by Stefan Kolek

The EU's ageing population: transforming a challenge into an opportunity

4 June 2025

The ageing of the EU's population poses significant economic challenges, which call for more effective implementation of long-agreed policy reforms. However, demographic change also offers a wealth of opportunities.

Shrinking and ageing EU population

The EU's population is likely to peak next year before contracting by at least 5% in 50 years' time. The age structure of the EU's population is also expected to change, with the proportion of people aged 65 or over likely to rise to 60% of the working-age population by 2070.

Economic effects

The economic effects of these demographic changes will be meaningful. EU countries will experience a decline in their workforce, which will weigh on potential growth. Population ageing will also slow potential growth by moderating labour productivity, although this effect is controversial. Softer growth prospects will affect public debt, whose sustainability will be put under pressure by the projected increase in health-care and long-term-care costs.

Stepping up policy efforts

While technological progress might improve growth prospects more than currently thought (thereby alleviating demographic pressure), the EU has an urgent need to step up efforts to address them. The effectiveness of policies aimed at boosting labour-market participation will need to be fostered. Importantly, policies aimed at supporting healthy ageing should play a crucial role in increasing the employability of the EU's oldest workers, by also exploiting the facilitator role of artificial intelligence (AI).

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Setting the scene

Europe faces significant demographic changes related to the ageing of its population and a cohort distribution that is increasingly skewed towards older age groups. These changes pose an enormous economic challenge, as the EU's working-age population is projected to decline under current policies, detracting from GDP growth and weighing on public finances, given the relatively strong role of publicly financed pension and health-care systems in the EU. However, these changes also present a tremendous opportunity, as increases in life expectancy have been accompanied by improvements in health that were unthinkable just a few decades ago. These longevity improvements will act as a silver lining to ageing-related decline in potential growth. Policy measures can shape the way people age, mitigating detrimental effects on GDP and public finances.

In what follows, we first look at long-term projections for fertility, life expectancy and net migration, among others, produced by the EU's Ageing Working Group (AWG) to provide a brief overview of the major demographic changes that are expected to be at play until 2070. We then take a deep dive into the main channels through which these projected demographic changes are expected to impact GDP growth and public finances, highlighting the trade-offs that policymakers are likely to face. Finally, we discuss their policy implications.

Demography of longevity

The EU's population is expected to progressively age and shrink due to increasing life expectancy and low fertility. The key drivers of these demographic changes are the following:

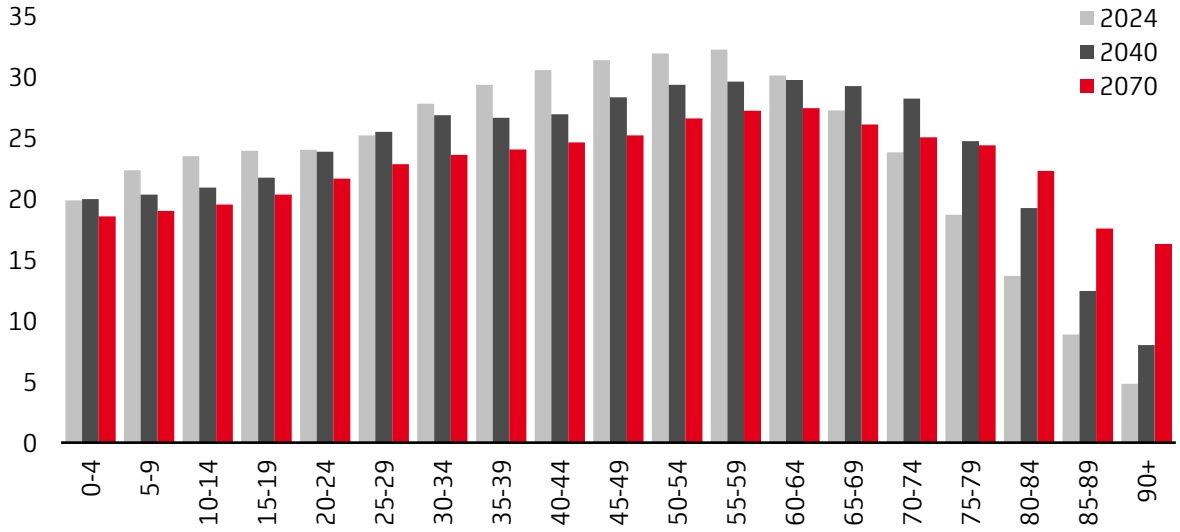
- **Life expectancy at birth** in the EU has increased rapidly in recent decades, rising, on average, by slightly more than two years per decade since the 1990s. This increase can be explained by multiple factors, including a fall in infant mortality, which has more than halved over the last 30 years; rising living standards; improving education and progress in health care. The EU's AWG projects that life expectancy will continue to rise, albeit at a slower pace than in the previous decades, and, importantly, this will occur alongside a gradual narrowing of the gender gap. Life expectancy at birth for EU women was 84 years in 2023 (the latest year for which such data are available), which was 5.3 years longer that for EU men, whose life expectancy at birth stood at 78.7 years. Female life expectancy is projected to rise by 6.4 years, to 90.4 years, by 2070, which would be more than a year per decade, while that of men is estimated to increase by 7.4 years, to 86.1 years.
- **The fertility rate** is expected to change modestly and to converge at about 1.6 live births per woman by 2070, which would be only slightly above the average of previous decades (1.5) and well below the 2.1 natural replacement rate (i.e. the level deemed necessary to maintain a constant population). This trend will continue to drive down the percentage of younger people in the EU's total population and to shrink the EU's working-age population.
- **Net migration flows** have partly prevented a sharp decline in the EU's working-age population in the past and are expected to continue to do so. However, their impact is projected to moderate over the coming decades due to the expected slowing of net migration (annual net migration is projected to amount, on average, to around 1.2 million people per year until 2070 from about 1.5 million in the previous years) and the ageing of the current immigrant population. Still, developments pertaining to immigration are surrounded by a high degree of uncertainty as changes in domestic policies and unpredictable external developments may significantly change them.

Reflecting these trends, the EU's population, including net migration, increased from 420mn in 1994 to 450mn in 2024. It is likely to peak in 2026 before entering a period of broad stabilization and then visibly declining from 2040 onwards, according to Eurostat's projections. The EU's population is projected to decline to 432mn in 2070 and to settle at a level that is 5% lower than it was in 2024.

The age structure of the EU's population is also set to change due to shifts in age distribution. The size of the population of those less than 60 years old is estimated to progressively fall in 2024-70, although this decline will be accompanied by an increase in the size of the older cohort (see Chart 1). These changes will already be visible in 2040, but they are expected to become even more pronounced in 50 years' time. The proportion of the EU's population aged 65 and above is set to increase by about 9pp, to 30%, by 2070, while that of the working-age population (i.e. those aged between 20 and 64) will decline by about 7pp.

CHART 1: THE AGE PROFILE OF THE EU'S POPULATION WILL SHIFT UPWARD

EU POPULATION BY AGE (MILLION)



Source: Eurostat, The Investment Institute by UniCredit

A cohort effect associated with an increase in the number of people aged 65 and over will become prominent, reflecting a combination of the retirement of baby boomers and an increase in life expectancy. Consequently, the EU's **old-age dependency ratio**, which is defined as the number of people aged 65 and over as a percentage of the working-age population, is expected to rise significantly, from 37% in 2024 to around 60% in 2070. Therefore, the EU is expected to face a decline in the number of workers available to contribute to the pensions of its retirees.

Given these demographic changes, the EU's **labour force is expected to shrink** over the coming decades. This will occur through two main channels:

1. fewer young people entering the labour force (as mentioned above) and

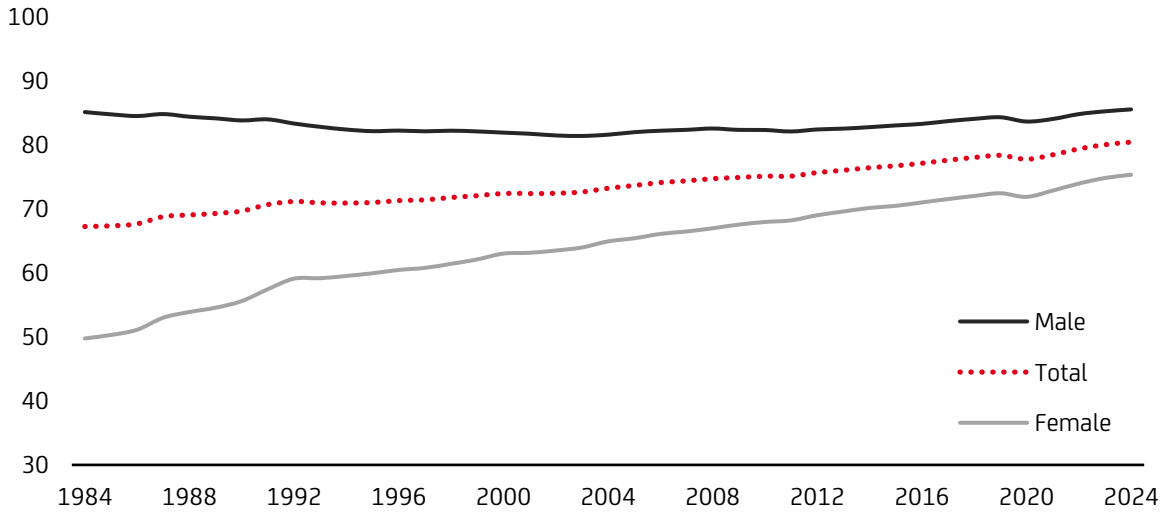
2. a gradual slowing of the rise in the participation rate.

According to the EU's AWG, total labour supply in the EU is projected to decline by about 12% by 2070, meaning that the EU's workforce will shrink by about 25mn, out of a working-age population decline by about 40mn. This implies a progressive reduction in the number of inactive workers, which will translate into an increase in the participation rate of people aged 20-64 years by about 3pp, to 83%, in 2070.

This would be a more moderate increase than that which occurred in previous decades. Chart 2 shows that the EU's participation rate has increased by about 10pp, to close to 80%, since 1994 due to the increase in participation among women of all ages and older workers. The increase in older workers has been mainly driven by pension reforms undertaken across EU countries in recent decades. These incentivised older workers to remain in the labour market longer by postponing retirement.

CHART 2: THE EU'S PARTICIPATION RATE HAS BEEN MOVING HIGHER

LABOUR FORCE PARTICIPATION RATE (%, 20-64 YEARS)



Source: OECD, The Investment Institute by UniCredit

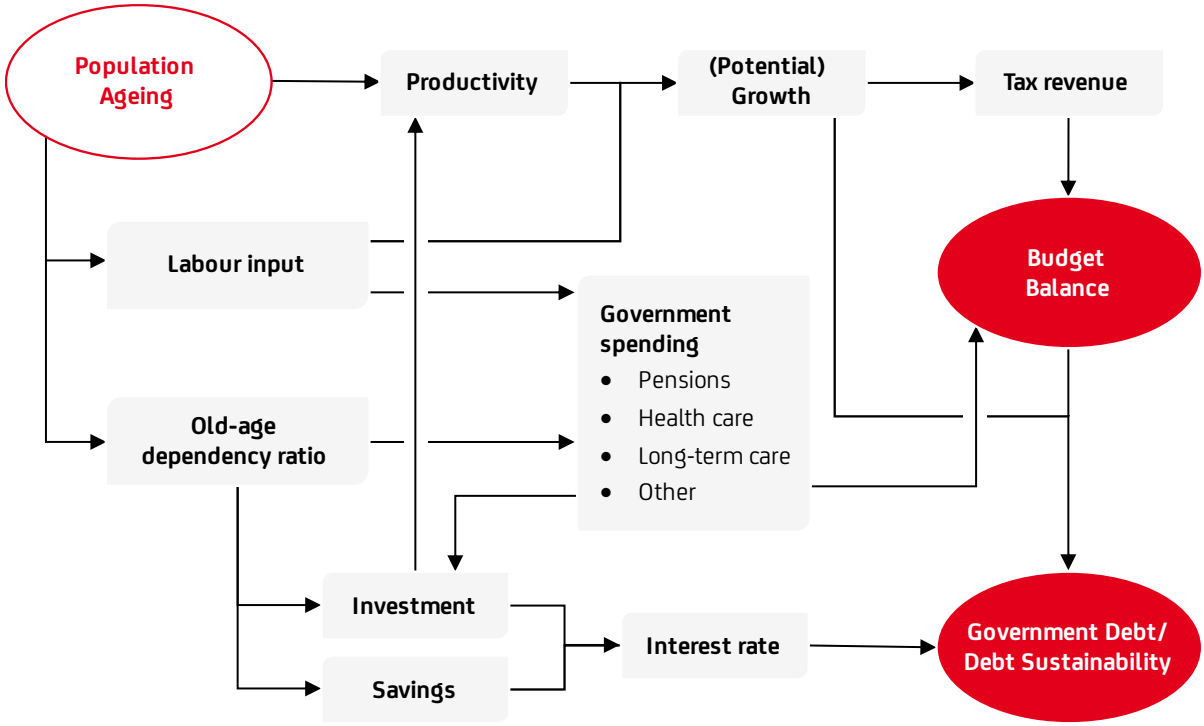
As far as the **rate of participation** is concerned, there is still scope for improvement. The EU's participation rate among prime-age individuals, i.e. those aged 25-54 years, is high (87% in 2024), and is expected to increase further. This will also reflect a reduction of the currently ample gender gap (from about 10pp to 7.2pp): EU women's rate of participation in the labour market was 82% last year, while, for EU men, this figure was about 92%. However, the participation rate among older workers, i.e. those who are 55-64 years of age, is much lower. It currently stands at 65.6%, reflecting a gap of more than 20pp compared to that of prime-age workers.

Economic implications of EU population ageing

The demographic changes outlined above are expected to have a dampening impact on the EU's potential growth in the longer term and to strain its public finances unless mitigating policies are adopted (see the diagram). The former will unfold through a slowdown in labour input growth and, indirectly, through its impact on labour productivity[1]. All other things being equal, lower GDP growth would, in turn, lead to a higher public-debt ratio, while higher spending on pension, health care and long-term care would put pressure on governments' primary balances.

[1] Potential GDP growth can be decomposed into the sum of labor input growth and the rate of labor productivity growth. The latter is in turn determined by the growth of capital per labor input and the growth of total factor productivity, which represents the part of GDP growth that cannot be explained by either capital or labor growth.

DIAGRAM 1: AGEING POPULATION AND THE ECONOMY



Source: OECD, The Investment Institute by UniCredit

SHRINKING LABOUR-INPUT GROWTH TO WEIGH ON POTENTIAL GDP GROWTH

Improvements in labour-force participation since the 1990s, particularly among women of all ages and older workers, have mitigated the adverse impact of slowing growth of the working-age population on labour input, measured by **the aggregate number of hours worked**. These improvements have allowed labour-input growth to remain positive almost uninterruptedly – with only a few exceptions, such as during the financial crisis of 2008-09 and during the sovereign debt crisis – until today, limiting any drag on potential growth. Looking ahead, however, with the EU's working-age population declining, the projected improvement in the participation rate of older workers alone is unlikely to offset a contraction in labour-input growth by an average of 0.2% over 2025-70.

The impact of ageing on overall **labour productivity** is less obvious. It might be argued that shifts in the cohort distribution might result in lower labour productivity, if experience gained early in life becomes less relevant as people age. However, literature on this topic does not provide clear evidence to support this view. In fact, it suggests that the overall impact of population ageing on labour productivity is ultimately determined by the interaction between ageing, health, technology and employment, the individual contributions of which are often difficult to disentangle. Studies, including the IMF's latest *World Economic Outlook*, are, in turn, rather unanimous in pointing out that functional worker capacity has increased over the last few decades owing to longevity and workers living longer and healthier lives, mitigating the negative impact of ageing on labour productivity.

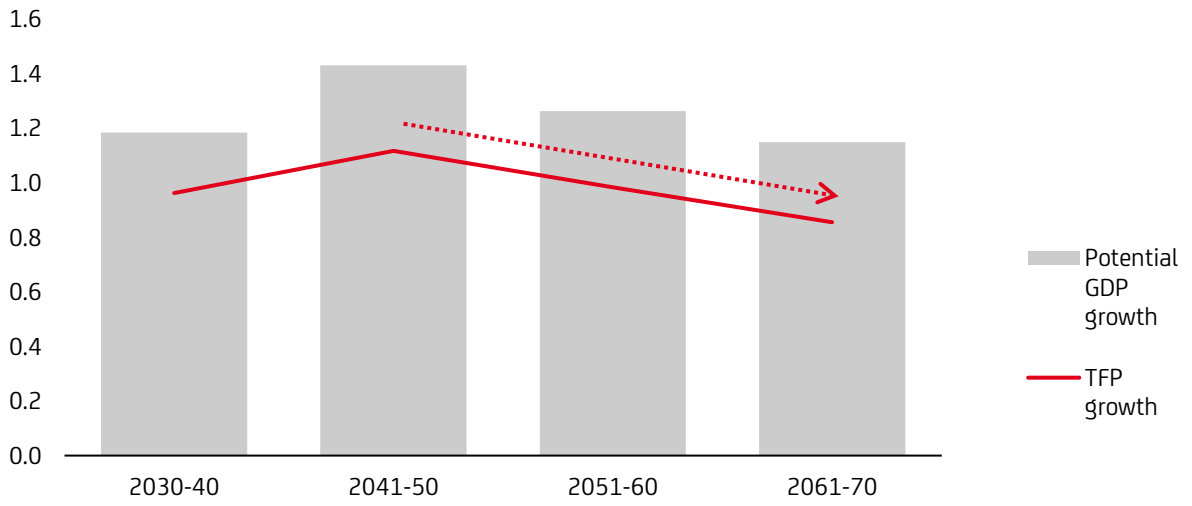
The EU's AWG expects labour productivity to continue to grow, although at a slower pace from 2040 onwards (from 1.8% in 2040 to 1.3% in 2070), as the retirement of baby boomers weighs on both labour productivity's main immediate sources, i.e. capital accumulation and total factor productivity (TFP) growth. The contribution of **capital accumulation** to potential growth slows as ageing populations tend to overall invest less, and firms may refrain from further investing in labour-saving technologies as scarcer labour reduces their marginal return. TFP growth is also projected to ease from 2040 (see Chart 3), although the extent of its decline is probably more uncertain. The EU's AWG assumes that structural factors will prevent the transmission of innovation from being as forceful as

originally expected and thus from being able to fully offset ageing-related downward pressure. Overall, TFP growth will accelerate but moderately so, averaging 1.0% through 2070, compared to an average of 0.7% in 2000-24.

Reflecting these trends, average labour-productivity growth will not be enough to offset a contraction, however modest, in labour-input growth and thus prevent a slowdown in potential growth. The EU's AWG projects that potential growth will settle at 1.1% in 2070 (after peaking at close to 1.5% in 2040).

CHART 3. POTENTIAL GROWTH TO MODERATE FROM 2040 ONWARDS

EU - AVERAGE OF ANNUAL GROWTH (%)



Source: The European Commission's *2024 Ageing Report*, The Investment Institute by UniCredit

HIGHER AGE-RELATED SPENDING TO STRAIN PUBLIC FINANCES

Population ageing is expected to put direct pressure on European public finances through additional pension, health-care and long-term-care expenditures, given that the latter is almost entirely publicly financed in Europe.

Public age-related spending is particularly high in Europe by international standards, amounting to 24% of GDP in 2024. The bulk of this expenditure goes to pensions (11.6% of GDP), followed by health care (6.6%), education (4.3%) and long-term care (1.7%). Spending across these categories is expected to increase by 1.3pp through 2070, as upward pressure on health-care and long-term-care expenditures significantly outweighs broad stabilization in pension spending and a decline in education spending (with the latter reflecting the reduction in the number of young people living in the EU).

Other things being equal, higher age-related expenditures worsen governments' primary balances. This is even more likely in an environment in which tax bases are expected to shrink, as labour-tax revenues, on which governments generally rely the most, are likely to decline. Policymakers are thus likely to face increasing pressure to reduce non-ageing spending – infrastructure spending, social spending not related to ageing, defence and public administration spending – or, alternatively, to increase taxation to maintain an unchanged primary balance – options are equally likely to face political resistance.

In addition to the impact higher age-related spending has on budget balances, demographic changes affect public-debt sustainability through their direct effect on GDP growth and (indirectly) on the interest-rate-growth differential. Lower GDP growth over the longer-term increases a country's debt-to-GDP ratio, worsening **debt sustainability**. More uncertain is the impact interest-rate-growth differentials have on debt sustainability, as it will depend on whether interest rates rise or fall and, in the case of the latter, how the size of the fall compares with that of real economic growth.

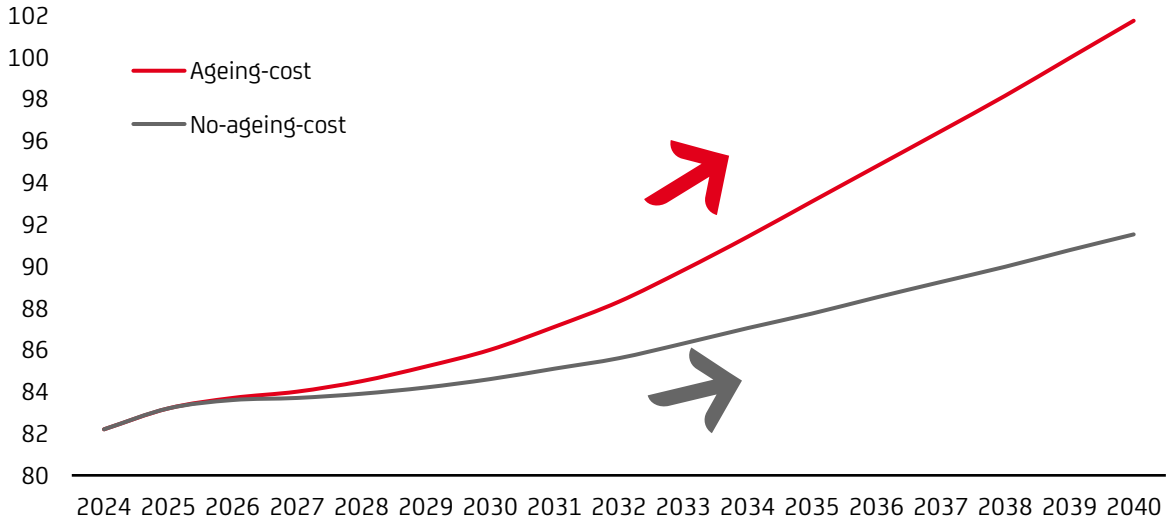
Ageing influences **real interest rates** through several (partly opposing) channels involving capital demand and supply. A lower birth rate and lower labour-input growth imply that there will be an increase in a country's capital-labour ratio, thereby lowering the marginal product of capital and thus putting downward pressure on real interest rates. The impact of an increasing old-age dependency ratio on savings is more uncertain. On the one hand, increasing life expectancy might encourage working-age people to save more for retirement, putting downward pressure on the real interest rate. On the other hand, as the share of a population in retirement age increases, spending savings can be assumed to increase, working in the opposite direction. This is most likely to prevail towards the end of the forecast horizon in those countries (such as most EU countries) characterized by early ageing, with these having thus almost completed the aforementioned demographic transition expected to be well underway in 2070.

Considering the uncertainty surrounding the evolution of these variables individually, we were led to interpret the evolution of the interest-rate-growth differential as in second place in terms of its importance for public-debt sustainability compared to the upward pressures on the primary balance due to age-related spending and possibly lower GDP growth.

Our interpretation is supported by the results of simulation analysis, as depicted in Chart 4, based on the European Commission's debt-sustainability analysis framework and the macroeconomic and cost-of-ageing projections made by the EU's AWG. The chart shows how the significant projected increase in ageing costs is expected to put upward pressure on **public-debt-to-GDP ratios** with respect to a scenario that does not take the costs of ageing into account. If one assumes that fiscal policy – i.e. the (structural) primary balance before costs related to an ageing population are added – remains unchanged, the EU's public-debt-to-GDP ratio is projected to increase over the next 15 years, driven by an increase in both the costs related to an ageing population and interest expenditure. In a baseline scenario ("No ageing costs" scenario), the impact of the interest-rate-growth differential (i.e. the so-called snowball effect) is assumed to become only slightly negative by 2040 (versus by more than -1pp in 2024) mostly due to an increase in interest rates. In the alternative "Ageing costs" scenario, the slightly supportive snowball effect on debt dynamics would not be large enough to moderate increasing pressure from costs related to an ageing population on primary balances. Consequently, the EU's public-debt-to-GDP ratio would rise by more than 10pp compared to a scenario in which no costs related to an ageing population are considered, and this upward trend could further accelerate in the longer term.

CHART 4: THE IMPACT OF AGEING ON EU PUBLIC DEBT

PUBLIC-DEBT-TO-GDP RATIO PROJECTIONS (% GDP)



Source: Eurostat, the European Commission's *2024 Ageing Report*, The Investment Institute by UniCredit

From economics to policy

There is a large amount of literature discussing structural policies aimed at mitigating the adverse effects of demographic changes by raising labour force participation, managing immigration flows, improving prospects for TFP growth, increasing the sustainability of pension systems and lowering the cost of caring for the elderly.

BOOSTING LABOUR FORCE PARTICIPATION

Reforms to boost labour supply and employment, such as reforms aimed at reducing barriers to employment and making labour markets more flexible, have long been agreed at the EU level and translated into country-specific recommendations by the European Commission in the context of the European Semester. Still, the overall implementation of these reforms so far has not been satisfactory, as shown by the European Commission's implementation scores across all EU countries. This calls for reviving a sense of urgency surrounding demographic changes. On a positive note, a reformed EU economic-governance framework envisages a new system of incentives for EU member states (based on a possible extension of the fiscal adjustment period), which could help address medium- and long-term challenges, including those related to demographic changes and their impact on labour supply.

Among these reforms, those aimed at further raising participation rates are likely to deliver the highest gains in the long term. Targeted policies should be focused on **1.** addressing declining participation rates among older persons, also by extending working lives as life expectancy rises, and **2.** further narrowing gender participation gaps. Concretely, this requires direct incentives toward individuals who have not yet reached retirement age to seek employment and to employed people aged 65 or more to postpone effective retirement in line with improvements in longevity. The EU's aim should be to encourage older workers to voluntarily delay retirement, given that the average statutory **retirement age** for men across member states is already set to rise from around 65 years (64.5 for women) currently to around 67 years in 2070. In addition, policies should be aimed at narrowing country-specific gender gaps in terms of labour-force participation, as illustrated in a recent comprehensive paper[2].

The European Commission's *2024 Ageing Report* utilizes scenario analysis to illustrate the benefits of structural reforms. The analysis indicates that an increase in the employment rate among older workers (those aged between 55 and 74) by 10pp in about ten years' time would reduce the number of pensioners by raising the effective retirement age. This would, in turn, both increase GDP growth and create room to rebuild fiscal buffers. In the first two decades following policy implementation, the ageing-costs/GDP ratio is estimated to be reduced by about 0.6pp compared to the baseline. Towards the end of the forecasting horizon, pension costs are projected to resume growing due to pension rights accrued over longer careers. However, this is not expected to jeopardize previous improvement.

PROMOTING HEALTHY AGEING

A policy lever that has recently gained lot of traction involves raising the **employability of older workers** by promoting conditions that may increase the number of years that individuals can expect to live in good health and therefore choose to spend working. This reflects a view of ageing as a malleable process based on evidence that medical advances and healthier lifestyles have generally been associated with improvements in cognitive and mental skills in recent decades, as outlined by the IMF (2025)[3]. Importantly, improved skills have allowed older workers to increase productivity and obtain a higher amount of earnings from labour. These findings are particularly relevant as older individuals tend to work in jobs that involve less-strenuous physical activity than younger ones. Overall, this evidence offers a bright spot amid the increase in the overall age of the EU's population: healthy ageing could contribute to foster labour-input growth by increasing the likelihood that older individuals remain engaged in the labour market for longer, either by actively seeking employment or postponing retirement.

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[2] Jiajia Gu, Lisa Kolovich, Jorge Mondragon, Monique Newiak, and Michael Herrmann, *Promoting Gender Equality and Tackling Demographic Challenges*, IMF Gender Notes (2024)

[3] See IMF (2025), *World Economic Outlook, Chapter 2: The Rise of the Silver Economy: Global Implications of Population Ageing*

Concretely, supporting healthy ageing requires a multifaced approach focused on health and prevention, measures that tackle behavioural risks, policies aimed at improving the human capital of older workers and facilitating their transition into new occupations and jobs. These measures should come alongside reforms that can induce a rise in the effective retirement age by introducing incentives to postpone retirement. In particular, the IMF emphasizes the importance of **upskilling and reskilling** in a context in which AI is reshaping the nature of work. While **AI** threatens to displace workers exposed to repetitive or routine tasks, it offers workers with complementary skills, such as digital literacy, teamwork and resilience, the opportunity to free up cognitive resources for higher-order thinking and more-complex tasks. However, some researchers[4] suggest that diversity among older workers often hinders the effectiveness of age-based policies alone in providing better employment opportunities for all workers (including the most vulnerable). They need to be complemented by more-targeted policies, particularly for workers who are less likely to benefit from longevity, and by policies that also address potential substitution effects between young and older workers (to the detriment of the latter).

These reforms, if successful, would significantly mitigate adverse effects of an ageing population. The EU's AWG estimates that, if all (rather than half, as assumed in the baseline scenario) of future gains in life expectancy are spent in good health, the increase in health care spending would be more muted over the forecast horizon, freeing up significant resources for more-critical spending needs. This highlights the increasing policy relevance of improving the way individuals age to keep public expenditure under control in the future.

Conclusion

Our analysis highlights the importance of ongoing developments in the EU's demography that call into question the sustainability of the EU's economic and social model. Addressing challenges to potential growth and public finances requires accelerating the implementation of well-known structural policies with a new sense of urgency, including by exploiting strategies enabled by improvements in longevity. Comprehensive policy responses are key and will need to increasingly involve private capital markets in providing access to capital for businesses that seek to invest in innovation and productivity and to households that seek to invest and build up wealth for retirement. This, in turn, will help reduce pressure on public pension schemes and free up resources that can then be allocated towards more-critical public spending, such as investment in human capital.

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[4] Andrew Scott, Nicolaj Søndergaard Mühlbach, Daron Acemoglu (2022), *The increasing age-friendliness of US employment,* CEPR

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Glossary

A list of the terminology used in this report is available on our website: https://www.the-investment-institute.unicredit.eu/en/glossary.

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