Demographics and Pensions in Latvia: Projections for 2060

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EXECUTIVE SUMMARY

Latvia is facing a sustained period of population ageing. Under the baseline projection, total population will decline from 1.86 mln in 2025 to 1.34 mln by 2060. At the same time, the number of working-age people is likely to shrink significantly, while the number of retirees will increase. As a result, the ratio of working-age individuals to retirees is expected to fall from 2.88 in 2025 to around 1.52 by 2060. Even under more optimistic scenarios, such as strong positive migration or higher fertility, population ageing will remain pronounced. For example, sustained net migration of +10000 persons every year would still leave the population at 1.70 mln in 2060, well below today's level.

These demographic trends place growing pressure on the pension system. With a fixed contribution rate of 20%, the theoretical replacement rate in the pay-as-you-go (first-pillar) system is projected to decline to around 35% by 2060, compared with some 60% in the early 2020s. While the average pension has broadly kept pace with wages since the mid-2000s and pension spending has remained at around 7–8% of GDP, this stability has been supported by policy adjustments rather than favourable demographics. Expanding the funded second pillar can partially offset the projected decline. Under standard assumptions, a 5% contribution to the second pillar should generate an additional replacement rate of about 20%, while a 10% contribution should yield around 40%, depending on investment returns. However, higher contributions require greater savings during working life and increase exposure to financial market risk. Overall, no single policy measure (e.g., migration, higher fertility, or expansion of the funded pillar) can fully offset demographic pressures. Ensuring sustainable and adequate pensions by 2060 will require a balanced combination of gradual reform, stronger labour force participation, and continued economic growth.

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This report is structured in two main parts. The first part presents demographic projections to 2060, covering mortality, fertility, and migration, also examining their implications for population size and age structure. These projections set the foundation for assessing future economic dependency and labour force dynamics.
The second part builds on these demographic results in order to perform an analysis of pension outcomes, focusing on replacement rates and expenditure under Latvia's multi-pillar system. It evaluates the sensitivity of pension adequacy to population ageing and explores the potential role of the funded second pillar in mitigating long-term pressures on the pay-as-you-go scheme. This matters, because population ageing erodes the contribution base of the pay-as-you-go system, increasing pressure on public finances and pension adequacy.

This report comes at a time when pension systems in neighbouring Baltic countries have already undergone significant reforms, while Latvia's system, originally modelled on the previous Swedish framework, has remained largely unchanged. These reforms have been driven by demographic ageing and shrinking labour forces. Latvia has experienced a sharp population decline, thus increasing pressure on the pay-as-you-go pillar and narrowing the contribution base. Against this background, a forward-looking assessment is timely, offering evidence to guide reforms aimed at sustaining the pension system and protecting future retirement incomes.

1. DEMOGRAPHICS

This part of the report presents demographic projections to 2060, covering mortality, fertility, and migration, examining their implications for population size and age structure. These projections lay the foundation for assessing future economic dependency and labour force dynamics.

1.1 MORTALITY

1.1.1 Methodology

Mortality projections are based on age- and sex-specific survival probabilities estimated from official CSB Latvia statistics for the period 2000–2024. CSB Latvia provides age-specific probabilities of dying (variable qx), which we convert into survival probabilities for each age group ($Sx = 1 - qx$). Separate calculations for men and women preserve observed gender differences in mortality across the life course. Survival rates are projected forward from 2025 to 2060, using age-specific linear trends estimated on a logistic scale, ensuring that survival probabilities remain bounded between zero and one and that improvements naturally slow down as survival approaches higher levels. Projected survival probabilities are converted to single-year age profiles and incorporated into population estimates. Population values are aged forward annually using estimated survival rates.

Life expectancy at birth and at age 65—the current statutory retirement age—is derived by applying projected age-specific survival probabilities within standard life table calculations. For each projection year, synthetic cohorts are constructed and followed across ages using estimated survival rates, in turn allowing calculation of the total number of years lived by each cohort. Life expectancy at birth reflects the average number of years that a newborn is expected to live under the projected mortality conditions of a given year, while life expectancy at age 65 measures the remaining expected lifetime for individuals who reach retirement age. These indicators are calculated separately for men and women and provide a consistent basis for assessing future longevity and retirement duration under projected mortality trends.

1.1.2 Survival rates: projections for 2060

CSB data indicate a steady improvement in survival probabilities across all age groups examined over the period 2000–2024[1], reflecting ongoing gains in longevity. Projections to 2060 suggest that this positive trend is set to continue, although improvements gradually slow down at higher survival levels. Figures 1 and 2 illustrate survival probabilities at ages 30, 40, and 50, respectively for men and women. Survival rates increase over time for all ages shown, with higher probabilities observed at younger ages and progressively lower levels at older ages. As expected, women consistently exhibit stronger survival probabilities than men, with the gender gap becoming more pronounced at age 50. Overall, projected patterns point to continued increases in longevity for both sexes, in turn contributing to an ageing population structure over the coming decades.

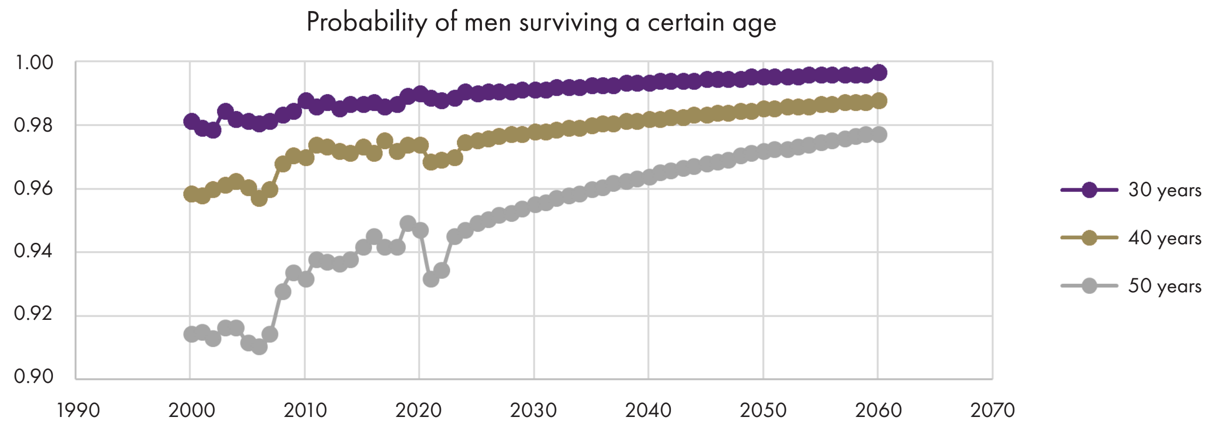

Figure 1. Probability for men of surviving ages 30, 40, 50 over time. CSB data 2000–2024, projections 2025–2060.

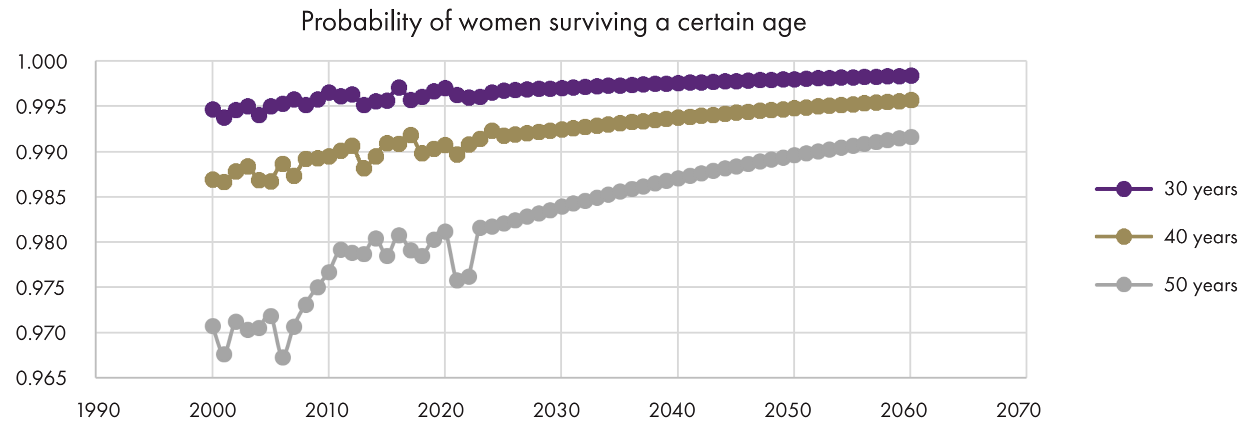

Figure 2. Probability of women surviving ages 30, 40, 50 over time. CSB data 2000–2024, projections 2025–2060

1.1.3 Life expectancy at birth and age 65: projections for 2060

Figure 3 shows that life expectancy at birth and at age 65 have both been increasing steadily for both men and women over the historical period, a trend that continues throughout the projection horizon to 2060. At birth, male life expectancy rose from around 64 years in the early 2000s, then to 78 years by 2060, while female life expectancy shows increases from about 75 years to 85 years over the same period. Although short-term fluctuations are visible in the early 2000s and—due to Covid—around 2020, the overall trend points to sustained improvements in longevity for both genders. Women consistently exhibit stronger life expectancy than men, with a gap of around 7–8 years that narrows only modestly over time.

Figure 4 shows that remaining life expectancy at age 65 also shows a clear upward trend. For men, expected remaining lifetime at retirement age is likely to increase from about 15 years in 2025 to around 18 years by 2060, representing an increase of some 17 per cent. For women, remaining life expectancy over the same period is expected to rise from roughly 19 years to about 22 years, corresponding to a 15 per cent increase. These projections imply that future retirees—particularly women—are expected to spend longer periods in retirement, reinforcing the demographic pressure on pension systems and age-related public spending over the coming decades.

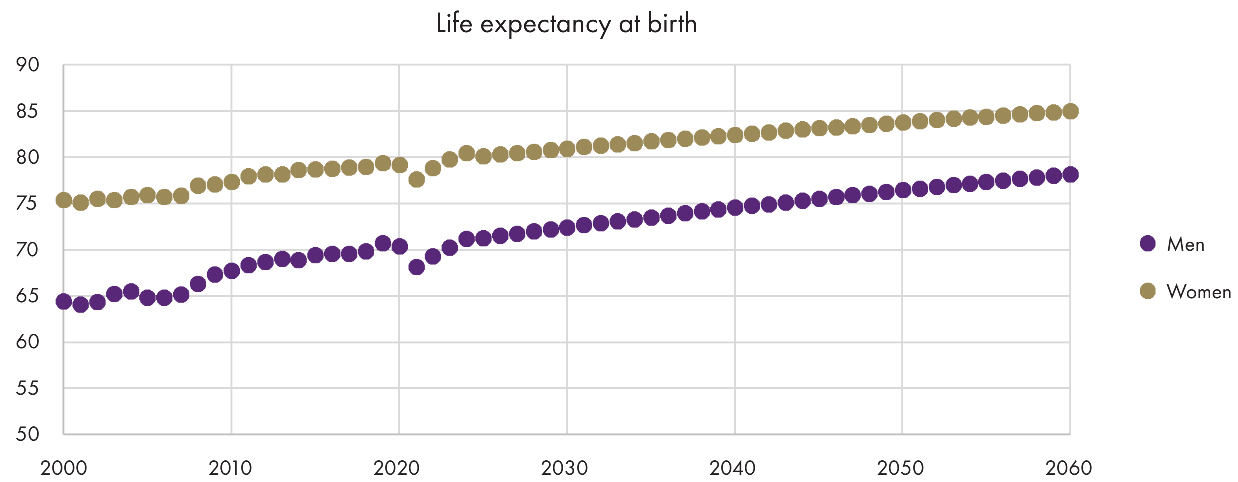

Figure 3. Life expectancy at birth over time for men and women. CSB data 2000–2024, projections 2025–2060

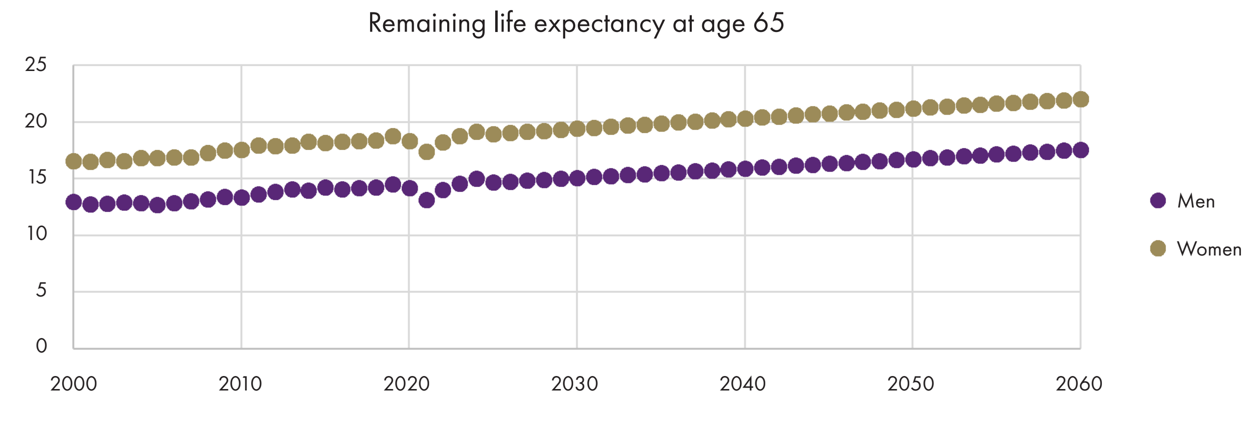

Figure 4. Remaining life expectancy at age 65 over time for men and women. CSB data 2000–2024, projections 2025–2060.

MAIN POINTS ON MORTALITY AND LIFE EXPECTANCY (TO 2060)

- People in Latvia are living longer, a trend that is expected to continue through to 2060. Survival rates improve at all ages for both men and women.
- Life expectancy at birth is projected to rise to about **78 years for men and 85 years for women** by 2060.
- At retirement age (65), remaining life expectancy between 2025 and 2060 increases noticeably: from about **15 to 18 years for men** and from **19 to 22 years for women**.
- Women continue to live longer than men, although the gap narrows only slightly over time.
- As a result, future retirees will likely spend **more years in retirement**, increasing pressure on pensions and age-related public spending.
- Longer lives are a positive development, but they also mean that pensions must be paid for longer periods, reinforcing the need for forward-looking pension planning.

1.2 FERTILITY

1.2.1 Methodology

Projecting fertility is inherently more uncertain than projecting mortality, as childbearing behaviour is influenced by a wide range of economic, social, and institutional factors. Fertility decisions respond to labour market conditions, income expectations, housing affordability, family policies, migration dynamics, cultural norms, and shifts in the timing of parenthood. These influences may change rapidly and can generate short-term fluctuations that do not necessarily reflect long-term structural trends. As a result, straightforward extrapolation of past fertility rates may be misleading, particularly when recent data include temporary shocks or timing effects. This means that fertility projections require carefully balanced assumptions that distinguish between short-term volatility and longer-term behavioural patterns.

For the short-term projection horizon (up to 2030), age-specific fertility rates (ASFR) for women aged 15–19, 20–24, ..., 45–49 are estimated using statistical data for the period 2015–2024[2]. This period captures the most recent fertility regime and ongoing shifts in the timing of childbearing. Exponential trends are estimated separately for each age group and extrapolated to 2030. However, at the time of writing this report, the CSB reported 11,637 newborns in 2025, some 14 per cent below the level implied by these trends. This deviation is interpreted as a short-term shock rather than an immediate structural break. Accordingly, the short-term projection incorporates this temporary decline while allowing fertility to gradually return towards its underlying trend over the remainder of the decade.

Beyond 2030, continued extrapolation of age-specific trends would likely produce unrealistic outcomes. Instead, a pragmatic stabilization approach is adopted. A structural age profile of fertility is constructed based on recent median ASFR levels and smoothed across adjacent age groups to remove short-term irregularities. From 2030 onwards, this age structure is assumed to remain broadly stable, with total fertility converging towards a predefined long-term level. ASFR are proportionally adjusted to ensure consistency with the assumed total fertility rate. Sensitivity analysis employs alternative long-term fertility levels to assess the demographic implications of different fertility regimes.

Projected births are split by gender using fixed male and female shares based on Latvia's observed gender ratio at birth, with an average of about 5.5 per cent more boys than girls born since 2000.

1.2.2 Fertility projections for 2060

Total fertility in Latvia has exhibited substantial volatility since the mid-2000s, reflecting both structural changes in childbearing behaviour and shorter-term shocks. Following a sharp decline in the 1990s, fertility gradually recovered during the 2000s and peaked in the mid-2010s, before entering a renewed downward phase in recent years. The most recent data indicate a pronounced drop in births in 2025, which is reflected in the short-term projection as a temporary deviation from earlier trends. As shown in Figure 5, total fertility is projected to remain subdued in the second half of the 2020s, before gradually stabilizing towards the end of the decade.

Beyond 2030, fertility is assumed to converge towards a stable long-term level, with age-specific fertility rates maintaining a consistent age profile. Beyond 2030, fertility is assumed to converge towards a stable long-term level, with age-specific fertility rates maintaining a consistent age profile. Specifically, a stable long-term level is set to be a median of ASFR for the period 2015–2024, smoothed across adjacent age groups[3]. The baseline scenario assumption is a long-term fertility rate of 1.2. Alternative scenarios set fertility rates to 1.6 and 2.1. Under the baseline scenario, total fertility remains below replacement level throughout the projection horizon, reflecting persistent demographic headwinds such as population ageing, continued postponement of parenthood, and migration dynamics. Alternative scenarios in the pension section explore higher fertility paths, illustrating the sensitivity of future population outcomes to changes in childbearing behaviour over time.

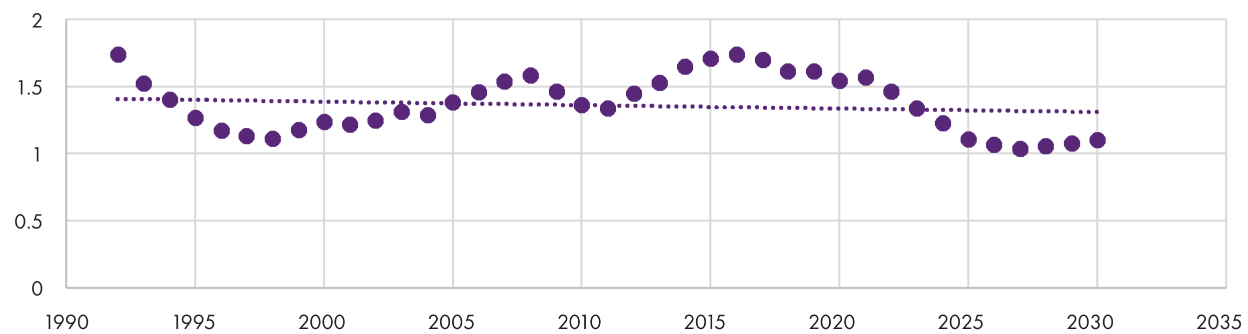

Figure 5. Total fertility rate in Latvia over time. CSB data 2000–2024, projections 2025–2030.

MAIN POINTS ON FERTILITY

- Fertility in Latvia has been volatile over recent decades and has declined again in recent years, with a particularly sharp drop in births recorded in 2025.
- In the short term, fertility is projected to remain low through the late 2020s, before stabilizing towards the end of the decade.
- From 2030 onward, fertility is assumed to settle at a stable long-term level, with the baseline scenario set at **1.2 children for each woman** — well below the replacement level.
- Persistently low fertility implies fewer young people entering the labour force in future, reinforcing population ageing and increasing pressure on pensions and public services.
- While higher fertility would improve long-term demographic balance, it is not a short-term solution to ageing, as today's births affect the labour market only decades later.

1.3 MIGRATION

1.3.1 Methodology

Future international migration is highly uncertain and depends on economic convergence, labour market conditions, geopolitical developments, and migration policy. Rather than extrapolating volatile historical flows, this analysis adopts a scenario-based approach. Three alternative assumptions are considered for net migration over the projection horizon to 2060:

- zero net migration,
- moderate positive net migration of +2000 persons yearly, and
- moderate negative net migration of -2000 persons yearly.

These stylized scenarios are not intended as precise forecasts but as illustrative pathways that bracket a plausible range of outcomes. They allow assessment of the sensitivity of Latvia's future population size and age structure in relation to sustained migration inflows or outflows, while avoiding overreliance on short-term fluctuations in recent data.

Latvia's migration outlook is also considered in the context of regional convergence. The neighbouring Baltic countries, Estonia and Lithuania, have already transitioned from sustained net emigration to periods of net immigration as income levels have risen and labour markets tightened. Given broadly similar economic development paths and integration within the European labour market, it is reasonable to assume that Latvia may follow a comparable trajectory over the medium to long term. While the timing and magnitude of any such shift remain uncertain and depend on economic performance and policy choices, this regional experience supports the inclusion of scenarios in which Latvia's net migration gradually converges towards balance and potentially modest positive inflows.

1.3.2 Migration projections for 2060

Figure 6 shows annual immigration and emigration flows in Latvia from 2000 to 2024. Emigration exceeded immigration throughout most of the period, particularly during the late 2000s, when outflows peaked at over 20000 persons yearly, reflecting the impact of the global financial crisis. Immigration remained relatively low until the early 2010s, after which it gradually increased, narrowing the migration gap. A sharp temporary spike in immigration is observed in 2022, driven largely by refugee inflows following Russia's full-scale invasion of Ukraine. By 2023–2024, immigration and emigration levels converge towards similar magnitudes (around 8000–10000 annually), suggesting a move towards a more balanced migration pattern in recent years.

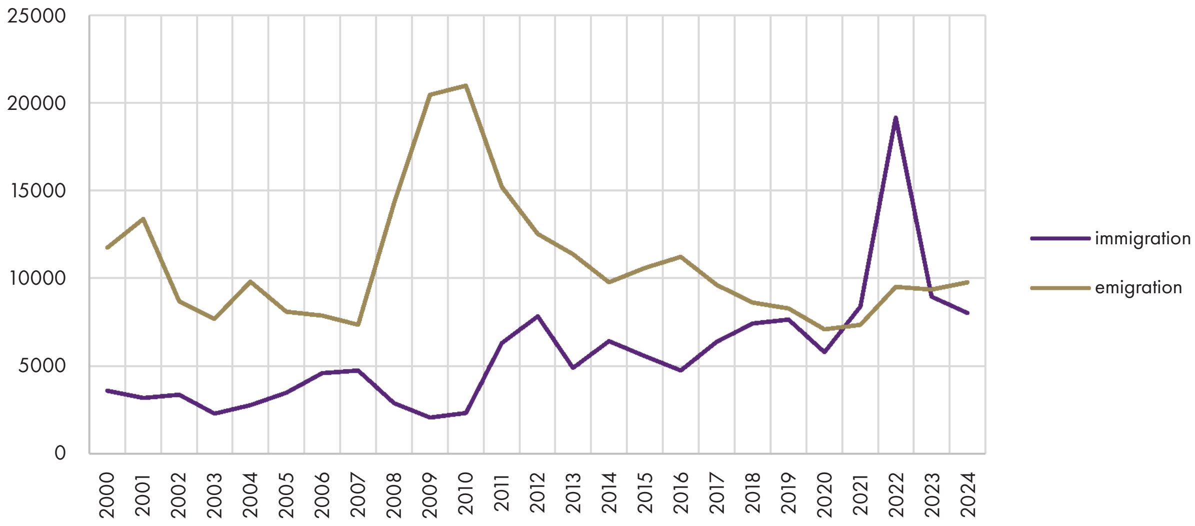

Figure 6. Immigration and emigration in Latvia, 2000–2024. CSB data.

Figure 7 presents the average age distribution of emigrants from and immigrants to Latvia in 2015–2024 based on CSB data[4]. Migration is predominantly concentrated in working ages. More than half of emigrants (52.5%) are aged 20–40, with the highest shares in the 25–34 age groups, while departures among those aged 60 and above are relatively limited. Immigration also peaks in prime working ages: nearly half of all immigrants (47%) are aged 25–45, with the largest inflows recorded in the 25–34 age cohorts. Compared with emigration, immigration shows relatively higher shares among young children (0–4) and lower shares among older age groups.

Figure 7 highlights that Latvia's migration dynamics are dominated by economically active population groups, implying that net migration primarily affects labour market participation and demographic ageing rather than retirement-age populations.

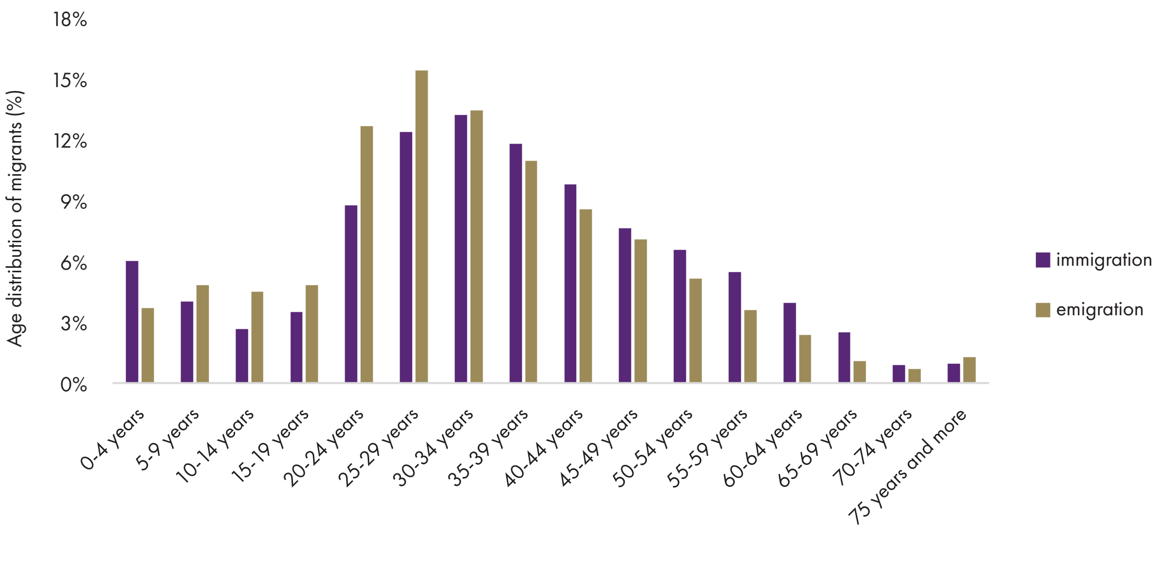

Figure 7. Age structure of emigration and immigration in Latvia (average 2015–2024). CSB data.

To distribute assumed positive net migration across age groups, the age profile of immigrants was applied. This reflects the fact that a positive net migration balance is driven primarily by inflows rather than reductions in outflows, so that the demographic characteristics of incoming migrants deliver the most relevant approximation of population gained. Using the immigration age structure (a) ensures consistency with observed patterns, which show that recent inflows are concentrated in working ages, and (b) aligns the assumption with a pull-driven migration scenario associated with improving economic conditions. Conversely, in a negative net migration scenario, the age profile of emigrants is used to reflect the characteristics of population losses.

Figure 8 shows a clear positive relationship between GDP per capita (in PPP, constant 2021 USD) and net migration in Latvia, Estonia, and Lithuania. The GDP per capita dataset is from the World Bank database[5]. At lower income levels, all three countries experience net outflow. As GDP per capita rises, migration balances improve and eventually turn positive, most clearly in Estonia and, more recently, in Lithuania. Latvia is following a similar upward trend, though with more modest gains. The Russia's full-scale invasion of Ukraine led to a temporary surge in inflows, primarily driven by refugee movements, resulting in migration levels above the underlying economic trend. In the short term, migration flows are assumed to gradually return towards pre-war patterns. Overall, the figure suggests that income convergence reduces emigration pressures and supports net inflows, while cross-country differences indicate that economic growth alone does not fully explain migration outcomes.

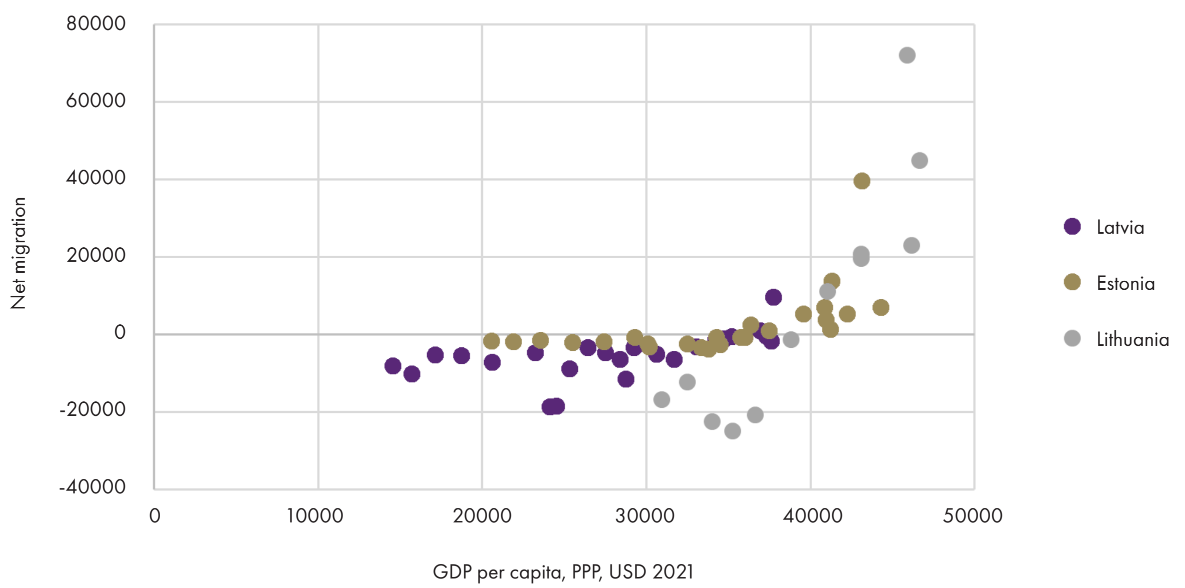

Figure 8. GDP per capita (PPP, in constant USD 2021) and net migration in Latvia, Estonia, and Lithuania. Data from the Statistical offices of Latvia, Estonia, Lithuania, and The World Bank

For the purposes of this report, three migration scenarios are considered. In the baseline scenario, both immigration and emigration are assumed at 8000 persons, broadly corresponding to the average annual inflow observed over 2015–2024. In the second scenario, immigration increases to 10000 while emigration remains at 8000, implying moderate positive net migration. The third scenario reverses these figures, with 8000 immigrants and 10000 emigrants, resulting in negative net migration. In each case, the corresponding age profiles are applied to reflect the demographic composition of migration flows.

MAIN POINTS ON MIGRATION

- Future migration is uncertain, so the report uses three illustrative scenarios: **balanced migration**, **moderate net inflow (+2000 every year)**, and **moderate net outflow (-2000 every year)** rather than relying on short-term trends.
- Migration in Latvia is concentrated mainly among **working-age people**, especially those aged 25–40. This means migration affects the labour force much more than the number of retirees.
- Recent immigrants are mostly of prime working age, while emigration is also dominated by younger adults, directly influencing labour supply and economic activity.
- Experience in neighbouring Baltic countries suggests that as incomes rise, net migration can improve: Estonia and Lithuania have already shifted from net emigration to periods of net immigration, and Latvia may follow a similar path over time.
- Higher incomes tend to reduce emigration pressures and support inflows, although economic growth alone does not fully determine migration outcomes.
- Overall, migration can help stabilize the working-age population in the medium term, but even sustained positive inflows are on their own unlikely to fully offset population ageing.

1.3.3 Population projection to 2060

Here we present the baseline projection under the assumption of zero net migration, with immigration equal to emigration. Figure 8 presents projected population by single year of age for 2025, 2030, 2040, 2050, and 2060. The age distribution progressively shifts towards older ages, illustrating continued population ageing. Total population declines steadily from 1.86 million in 2025 to 1.78 mln in 2030, 1.64 mln in 2040, 1.49 mln in 2050, and 1.34 mln in 2060. These projections are broadly consistent with Eurostat's 2023 population projections, which estimate a population of 1.76 mln in 2030, 1.59 mln in 2040, 1.47 mln in 2050, and 1.36 mln in 2060, indicating close alignment in both the scale and trajectory of long-term demographic decline[6].

Figure 9 shows that large cohorts currently concentrated in prime working ages in 2025 progressively move into retirement ages in subsequent decades. By 2040–2060, the population aged 65 and over expands noticeably, while younger cohorts remain comparatively smaller, reflecting sustained low fertility and limited demographic replacement. The narrowing base of the age structure contrasts with the relative expansion of older age groups, producing a top-heavier distribution by 2060.

This structural shift implies a declining share of the working-age population and a rising old-age dependency burden. As larger cohorts transition into retirement and smaller cohorts enter the labour market, pressure on pension financing is expected to increase—that is, absent offsetting effects from higher labour force participation, productivity growth, or sustained net immigration.

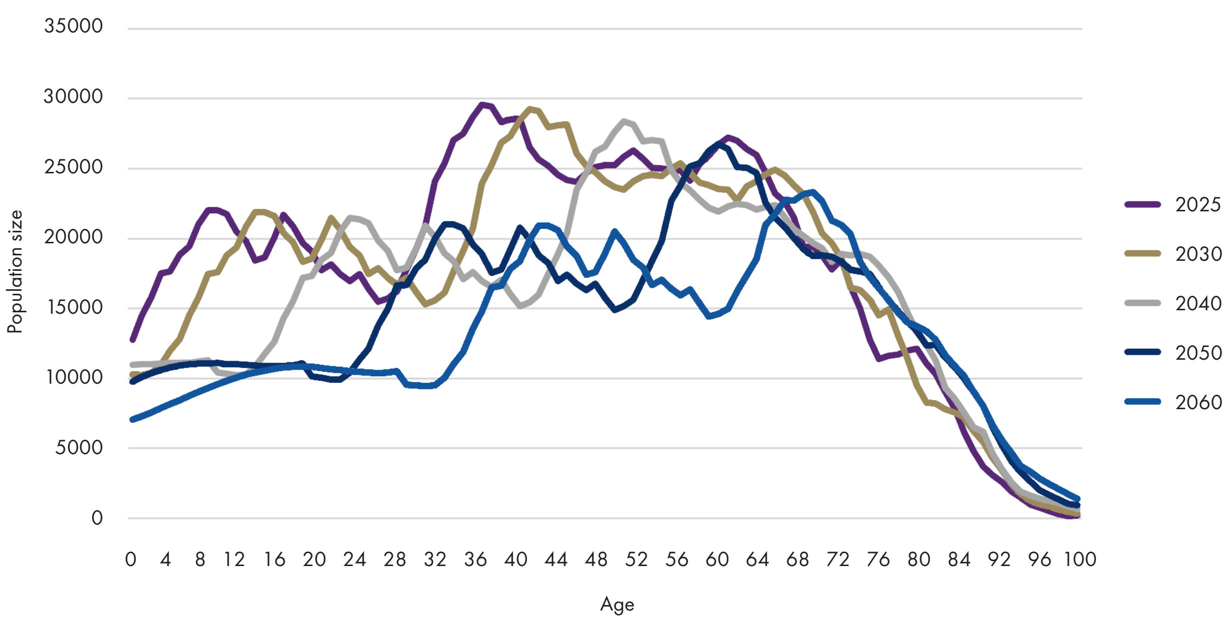

Figure 9. Projected age distribution of the population, selected years (2025–2060). Note: Neutral net migration scenario, i.e., annual immigration equals emigration (8000 persons each), with different age profiles assumed for immigrants and emigrants. The long-term fertility rate after 2030 is 1.2.

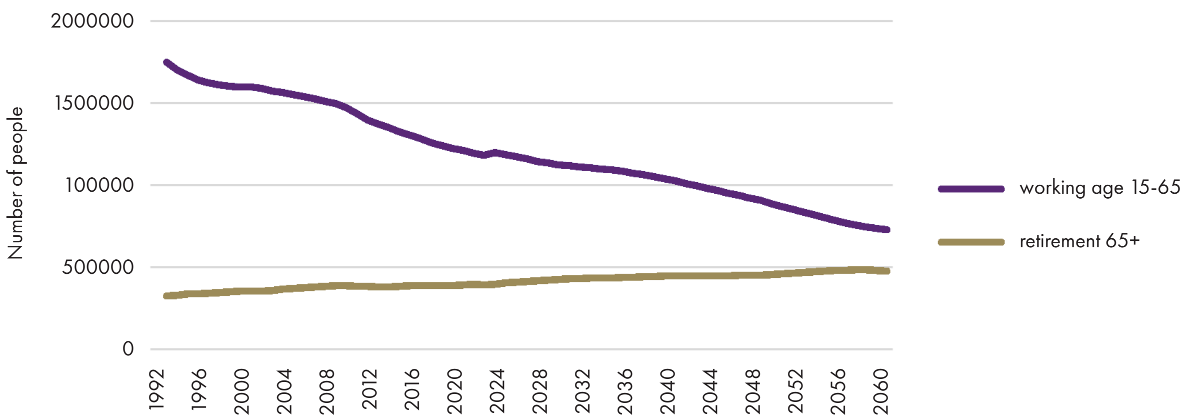

Figure 10. Projected working-age (15–65) and retirement-age (65+) population, 1992–2060. Note: Neutral net migration scenario, i.e., annual immigration equals emigration (8000 persons each), with different age profiles assumed for immigrants and emigrants. The long-term fertility rate after 2030 is 1.2.

Figure 10 illustrates the long-term evolution of the working-age population (15–65), the retirement-age population (65+), and their ratio from 1992 to 2060. The working-age population shows a persistent downward trend, declining from some 1.75 mln in the early 1990s to below 1 mln by the early 2040s and further to around 750000 by 2060. This reflects sustained low fertility, emigration, and cohort ageing. In contrast, the retirement-age population gradually increases from roughly 320000 in the early 1990s to nearly 500000 by the late 2050s, before stabilizing towards the end of the projection period. As a result, the dependency ratio of working-age to retirement-age population deteriorates significantly over time. The combined effect is a marked rise in the old-age dependency burden. A shrinking labour force base will be required to support a growing number of retirees, implying increasing pressure on the pension system and public finances unless offset by higher labour force participation, productivity gains, later retirement, or sustained positive net migration.

Yearly net migration	2030		2040		2050		2060	
	Pop, mln	Ratio	Pop, mln	Ratio	Pop, mln	Ratio	Pop, mln	Ratio
Zero net migration	1.78	2.61	1.64	2.30	1.49	1.90	1.34	1.52
Positive net migration, +2000	1.79	2.62	1.66	2.34	1.54	1.96	1.41	1.59
Positive net migration, +5000	1.80	2.64	1.71	2.40	1.62	2.04	1.51	1.68
Positive net migration, +10000	1.82	2.67	1.78	2.49	1.75	2.17	1.70	1.83
Negative net migration, -2000	1.77	2.59	1.61	2.26	1.44	1.83	1.26	1.43
Negative net migration, -5000	1.76	2.57	1.56	2.19	1.36	1.72	1.15	1.29

Table 1. Projected population and dependency ratios under alternative net migration scenarios, 2030–2060. Note: Under the zero net migration scenario, annual immigration equals emigration (8000 persons each), with different age profiles assumed for immigrants and emigrants. The long-term fertility rate after 2030 is 1.2.

Table 1 shows that, across all net migration scenarios, the population declines over time, although higher net migration substantially mitigates both depopulation and demographic ageing. For reference, in 2025 the total population was 1.86 mln and the dependency ratio stood at 2.88. Under the zero net migration scenario, the population falls from 1.78 mln in 2030 to 1.34 mln by 2060, accompanied by a steady deterioration in the dependency ratio (from 2.61 to 1.52). Positive net migration moderates these trends, with annual net inflows of 10000 resulting in a 2060 population of 1.70 mln and a dependency ratio of 1.83. Conversely, negative net migration accelerates decline, reducing the population to 1.15 mln and the dependency ratio to 1.29 under the -5000 scenario by 2060.

Long-term fertility rate after 2030	2040		2050		2060	
	Pop, mln	Ratio	Pop, mln	Ratio	Pop, mln	Ratio
Baseline fertility rate, 1.2	1.64	2.30	1.49	1.90	1.34	1.52
Improved fertility rate, 1.6	1.67	2.30	1.56	1.93	1.44	1.63
Boost fertility rate, 2.1	1.71	2.30	1.65	1.97	1.57	1.76

Table 2. Population projections and dependency ratios under alternative long-term fertility assumptions (2040–2060). Note: Under the zero net migration scenario, annual immigration equals emigration (8000 persons each), with different age profiles assumed for immigrants and emigrants.

Table 2 illustrates the sensitivity of long-term population outcomes to alternative fertility assumptions after 2030. Higher fertility rates partially offset population decline and improve demographic balance over time. Under the baseline fertility rate (1.2), the population decreases from 1.64 mln in 2040 to 1.34 mln by 2060, with the dependency ratio deteriorating from 2.30 to 1.52. A recovery scenario (fertility rate 1.6) moderates these trends, resulting in a 2060 population of 1.44 mln and a dependency ratio of 1.63. The boost scenario (fertility rate 2.1) yields the most favourable outcomes, with the population reaching 1.57 mln and the dependency ratio improving to 1.76 by 2060.

Comparing the fertility and migration scenarios indicates that migration has a larger impact on population levels over the projection horizon, while fertility changes affect demographic structure more gradually. Even under the boost fertility scenario (2.1), the 2060 population reaches 1.57 million, below the

1.70 mln achieved under sustained net migration of +10000 annually. Conversely, improvements in fertility contribute more modestly to the dependency ratio, with the boost scenario yielding a ratio of 1.76 in 2060, compared to 1.83 under high positive net migration. Overall, migration emerges as the more powerful short- to medium-term lever for stabilizing population size, whereas fertility increases primarily shape longer-term ageing dynamics.

MAIN POINTS ON POPULATION PROJECTIONS TO 2060

- Under the baseline scenario (balanced migration), Latvia's population is projected to fall from **1.86 mln in 2025 to about 1.34 mln by 2060**.
- The age structure shifts strongly towards older ages: large working-age cohorts move into retirement, while younger cohorts remain much smaller due to low fertility.
- The working-age population declines sharply, from around **1.17 mln in 2025 to roughly 750000 by 2060**, while the number of people aged 65+ rises to nearly **500000**.
- As a result, the ratio of working-age people to retirees deteriorates markedly, increasing the burden on each worker to support pensions and public services.
- Migration can slow population decline in the medium term: sustained net inflows of **+10000 yearly** would raise the 2060 population to about **1.70 mln**, compared with 1.34 mln under zero net migration—but ageing still continues.
- Higher fertility improves long-term demographic balance, but even a strong fertility of 2.1 would leave the 2060 population at only 1.57 mln, and effects on the labour force materialize only gradually.
- Overall, migration has a stronger short- to medium-term impact on population size, while fertility mainly affects ageing in the longer term. Neither is sufficient on its own to stop population ageing.
- Without offsetting measures, such as higher labour force participation, productivity growth, later retirement, or sustained immigration, these trends imply growing pressure on pensions and public finances.

2. PENSIONS

2.1 LATVIA'S PENSION SYSTEM

Building on the demographic projections presented above, this section assesses the implications of population ageing for future pension outcomes in Latvia until 2060. Latvia's pension system is a three-pillar model: that is:

- a mandatory state scheme (Pillar 1, pay-as-you-go/ notional defined contribution) plus
- mandatory funded contributions invested in financial markets (Pillar 2), with
- an additional voluntary private pension savings option (Pillar 3).

An individual's pension mainly depends on their social insurance contributions over working life (and, for Pillar 2/3, investment returns), with the state pension paid out by the State Social Insurance Agency. Analysis focuses on the interaction between demographic change and pension system structure, in particular the balance between the pay-as-you-go first pillar and the funded second pillar. Figure 11 shows historical contribution splits between pillars over time. Using projected population, life expectancy at retirement, and alternative migration scenarios, we evaluate how different contribution splits between pillars affect replacement rates and the fiscal resources required to sustain them. Rather than producing point forecasts, the analysis adopts a scenario-based approach to illustrate the range of possible pension outcomes under alternative policy configurations.

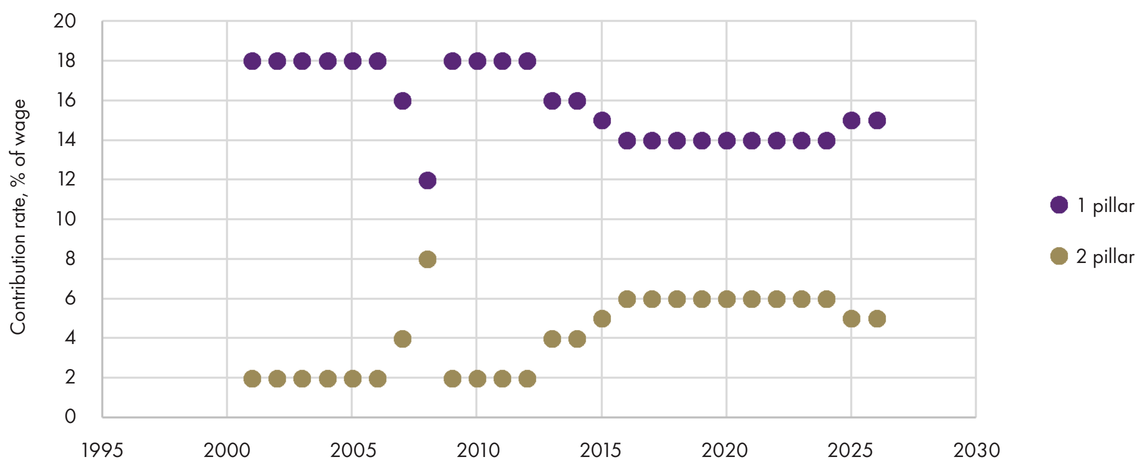

Figure 11. Pension contribution rates by pillar (% of wages) over time.

Assessment focuses on two main indicators: the pension replacement rate and pension expenditure as a share of GDP. The replacement rate measures the ratio of average pension income to average earnings at the time of retirement and serves as an indicator of adequacy. Pension expenditure as a share of GDP captures the macroeconomic burden of maintaining a given level of benefits and reflects the combined effect of demographic ageing, wage dynamics, and policy parameters.

2.2 FIRST PILLAR

In the pay-as-you-go first pillar, pensions are financed directly from current contributions by the working population. As a result, the level of pensions is closely linked to the balance between contributors and beneficiaries. For a given contribution rate, population ageing reduces the number of workers relative to pensioners, placing downward pressure on replacement rates unless offset by higher contributions, later retirement, or additional budget support. Conversely, maintaining a fixed replacement rate under demographic ageing requires increasing payroll contributions or transfers from general government revenues. This direct link between demographic structure and pension outcomes makes the first pillar particularly sensitive to fertility, migration, and longevity trends.

Assuming a constant total contribution rate of 20%, the sustained decline in the worker-to-retiree ratio over 1992–2060 translates into a substantial reduction in the replacement rate. Figure 12 shows that the replacement rate falls from 0.9 in the early 2000s to around 0.6 by the early 2020s, reflecting rapid population ageing and workforce contraction. Thereafter, the decline continues more gradually, reaching some 0.35 by 2060. Overall, the figure illustrates a pronounced long-term deterioration in pension adequacy, implying growing pressure on both the pension system and public finances.

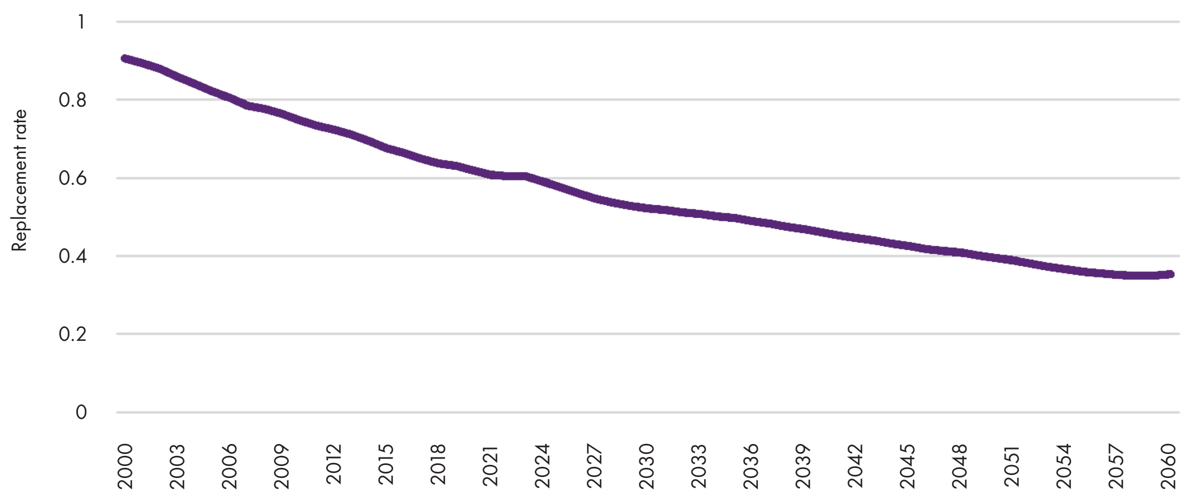

Figure 12. Projected theoretical pension replacement rate with fixed contribution rate (20%), 2000–2060. Projected 2026–2060

While Figure 12 demonstrates a strong projected decline in replacement rates driven by population ageing under a constant contribution rate, recent historical developments paint a somewhat different short- to medium-term picture. Figures 13–15 show that, over the past two decades, pensions in Latvia have broadly followed wage growth, resulting in a relatively stable pension-to-wage ratio.

Figure 13 indicates that both average gross wages and pensions have increased since the mid-2000s, particularly after 2017, reflecting rapid income growth. Despite strong wage dynamics, Figure 14 shows that the ratio of average pension to average wage has remained within a relatively narrow range, mostly between 30% and 35%, with a temporary peak around 2010 and moderate fluctuations thereafter. This suggests that pension adequacy, measured relative to wages, has been largely preserved over time, despite what Figure 12 might have suggested.

At the same time, Figure 15 shows that pension expenditure as a share of GDP has remained broadly stable since the mid-2010s, hovering around 7–8%, following a temporary increase around the global financial crisis. Together, these patterns indicate that stability of the pension–wage ratio has been achieved through active policy adjustments rather than favourable demographics.

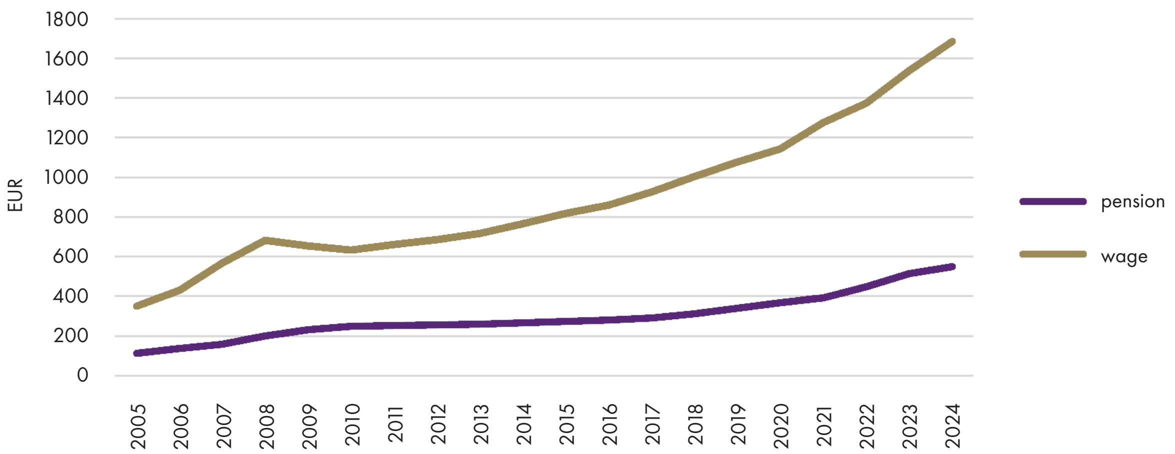

Figure 13. Average monthly gross wage and pension, 2005–2025. CSB data.

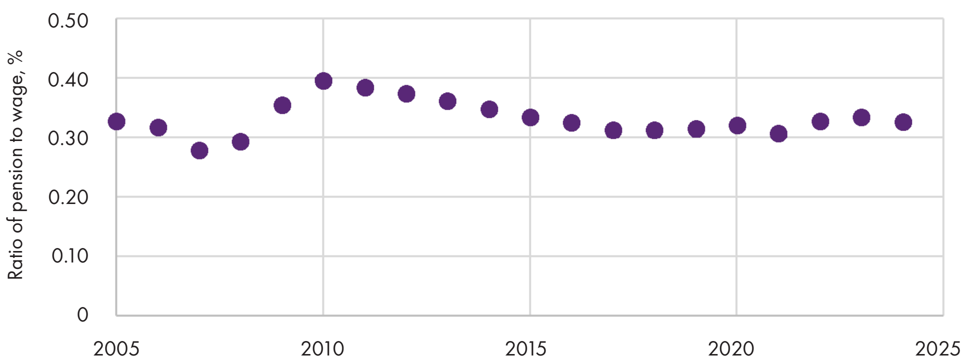

Figure 14. Ratio of pension to wages, 2005–2025. CSB data.

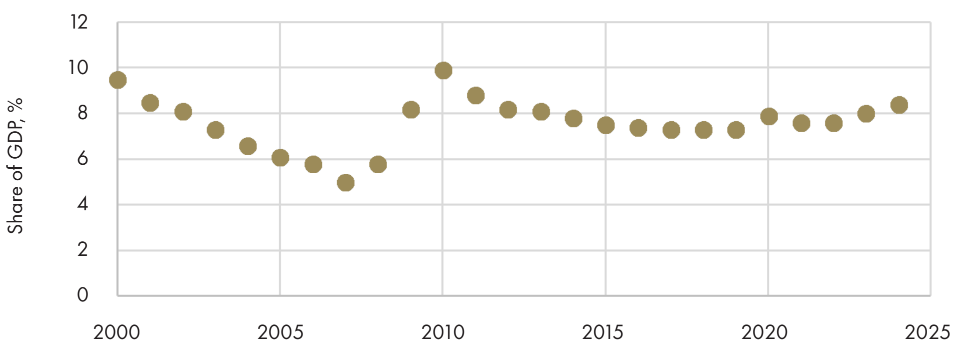

Figure 15. Share of GDP spent on pensions over time, 2000–2024. CSB data

This contrast between projected and observed outcomes is important. The demographic projections highlight a growing structural imbalance, with declining worker-to-retiree ratios mechanically reducing first-pillar replacement rates. In practice, though, Latvia has so far offset these pressures through a combination of benefit indexation, budget transfers, and parametric reforms, thereby stabilizing relative pension levels without a sustained increase in pension spending relative to GDP.

However, the projections suggest that maintaining this balance will become increasingly difficult in the coming decades. As ageing accelerates, preserving current pension adequacy would require either higher contribution rates, increased budget support, later retirement, or a stronger role for the funded second pillar. In that sense, historical stability should not be interpreted as evidence of long-term sustainability, but rather as the outcome of policy choices that may become progressively more costly under future demographic conditions.

MAIN POINTS ON THE FIRST PILLAR

- **Population ageing poses a structural challenge to Latvia's pension system**, particularly to the pay-as-you-go first pillar.
- **If contribution rates remain unchanged, replacement rates will decline substantially over time**, potentially reaching very low levels by 2060.
- Observed stability in the pension-to-wage ratio (≈30–35%) and pension expenditure (≈7–8% of GDP) has resulted from discretionary policy measures rather than favourable demographic dynamics.
- **Maintaining current replacement rates under future ageing will become increasingly costly**, putting pressure on either contributions or the state budget.
- **A stronger funded (second) pillar and/or parametric reform will likely be necessary** to balance adequacy and fiscal sustainability in the long term.

2.3 SECOND PILLAR

This section assesses the extent to which expanding the funded second pension pillar could offset the projected decline in first-pillar replacement rates. Stylised scenarios are constructed to quantify the contribution of the second pillar to total retirement income under alternative contribution assumptions.

The funded second pillar operates on an accumulation basis, with individual contributions invested in financial markets over working life and converted into retirement income at pension age. Unlike the first pillar, outcomes in the second pillar depend primarily on contribution rates, investment returns, and the length of the contribution period, as well as projected life expectancy at retirement, which in combination determine the annuity value of accumulated assets. While the funded pillar is less directly exposed to population ageing, it shifts part of the longevity and market risk to individuals and makes pension outcomes more sensitive to financial performance. This means that increasing the share of contributions allocated to the second pillar reduces immediate pressure on the first pillar but introduces greater exposure to investment risk and may widen differences in pension outcomes across individuals.

To assess the potential contribution of the funded second pension pillar to overall retirement income, a stylized accumulation-annuitization framework is applied. Under this approach, second-pillar contributions are assumed to be paid as a constant share of wages over working life, to earn a constant real rate of return, and to be converted into retirement income over a fixed pay-out period.

Specifically, annual contributions equal a fraction c of wages and are accumulated over T years at a real return r. The resulting capital at retirement is given by the standard future value of an annuity:

$$K = c * w * \frac{(1+r)^T - 1}{r}$$

where w denotes the annual wage. At retirement, accumulated assets are assumed to be converted into an annuity paid evenly over L years, yielding an annual pension of $P = \frac{K}{L}$. Dividing by wages gives the replacement rate from the second pillar:

$$RR = \frac{c}{L} * \frac{(1+r)^T - 1}{r}$$

Wages cancel out in this expression, implying that the second-pillar replacement rate depends only on the contribution rate, the real return, the length of the contribution period, and the assumed retirement duration.

For the baseline scenario, a real return of 3% is assumed, along with a 40-year contribution period and a 20-year pay-out horizon. Under these assumptions, the second-pillar replacement rate is roughly equal to 3.95 times the contribution rate. This implies that a contribution rate of 5% generates a replacement rate of around 20%, while rates of 6% and 10% correspond to some 24% and 40%, respectively.

These estimates are illustrative and represent stylized lifetime averages. They abstract from administrative costs, investment risk, incomplete careers, and heterogeneity across individuals. Nevertheless, this framework provides a transparent and policy-relevant benchmark for evaluating the extent to which expansion of the funded pillar could mitigate projected declines in first-pillar replacement rates.

Rate of return, %	Pillar 2 contribution rate, %	Wage replacement rate
3	5	19.8
3	6	23.7
3	10	39.5
4	5	23.8
4	6	28.5
4	10	47.5

Table 3. Second-pillar replacement rates under alternative contribution and return assumptions.

MAIN POINTS ON THE SECOND PILLAR

- **The second pension pillar can partially offset projected decline in first-pillar replacement rates under demographic ageing**.
- Unlike the pay-as-you-go first pillar, the second pillar is based on individual accumulation, with outcomes set by contribution rates, investment returns, career length, and retirement duration.
- Expanding the second pillar **reduces direct demographic exposure**, but shifts risk towards financial market performance and longevity, increasing individual-level outcome variability.
- Under a stylized baseline scenario (3% real return, 40-year contribution period, 20-year payout horizon), the second-pillar replacement rate equals roughly **3.95 × the contribution rate.**
- Illustrative outcomes:
    - 5% contribution → roughly 20% replacement rate
    - 6% contribution → roughly 24% replacement rate
    - 10% contribution → roughly 40% replacement rate
- Results are stylized and abstract from administrative costs, incomplete careers, and investment risk, but provide a transparent benchmark for policy evaluation.
- **Meaningful mitigation of first-pillar decline demands high-enough contribution rates and sustained real returns** to assure the second pillar fully compensates for demographic pressures.

Endnotes

1 See dataset IRP0201 from the Central Statistical Bureau of Latvia (CSB), available at https://data.stat.gov.lv/pxweb/en/OSP_PUB/START__POP__IR__IRP/IRP020.

2 See dataset IDK010 from the CSB, available at https://data.stat.gov.lv/pxweb/en/OSP_PUB/START__POP__ID__IDK/IDK010/.

3 The baseline scenario assumes the following age-cohort distribution: 15–19 (4%), 20–24 (18%), 25–29 (27%), 30–34 (27%), 35–39 (17%), 40–44 (7%), and 45–49 (<1%).

4 See dataset IBE030 from the CSB, available at https://data.stat.gov.lv/pxweb/en/OSP_PUB/START__POP__IB__IBE/IBE030/.

5 See dataset from the World Bank, available at https://data.worldbank.org/?locations=LT-LV-EE

6 See Eurostat population projections (2023 release) for EU countries, available via Eurostat Data Browser (table proj_23np).

CONCLUSIONS

Latvia's demographic outlook points to continued population ageing and a shrinking working-age population through to 2060. Even under more favourable migration or fertility assumptions, the worker-to-retiree ratio declines markedly, placing structural pressure on the pay-as-you-go first pillar. While pension-to-wage ratios have remained broadly stable since the mid-2000s, this has been achieved through policy adjustments rather than supportive demographics. Looking ahead, maintaining current levels of adequacy will require either higher contributions, later retirement, increased fiscal transfers, or a rebalancing of the pension system.

Expansion of the funded second pillar can help offset part of the projected decline in replacement rates, particularly under higher contribution rates and favourable investment returns. However, the funded pillar complements rather than substitutes for the first pillar and introduces greater exposure to market and longevity risks. Overall, ensuring long-term pension sustainability and adequacy will require a balanced policy mix combining parametric reforms, prudent development of the funded pillar, and measures that strengthen labour supply and economic growth.

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