Healthcare investment and outcomes in Central and Eastern Europe

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Riga, Latvia

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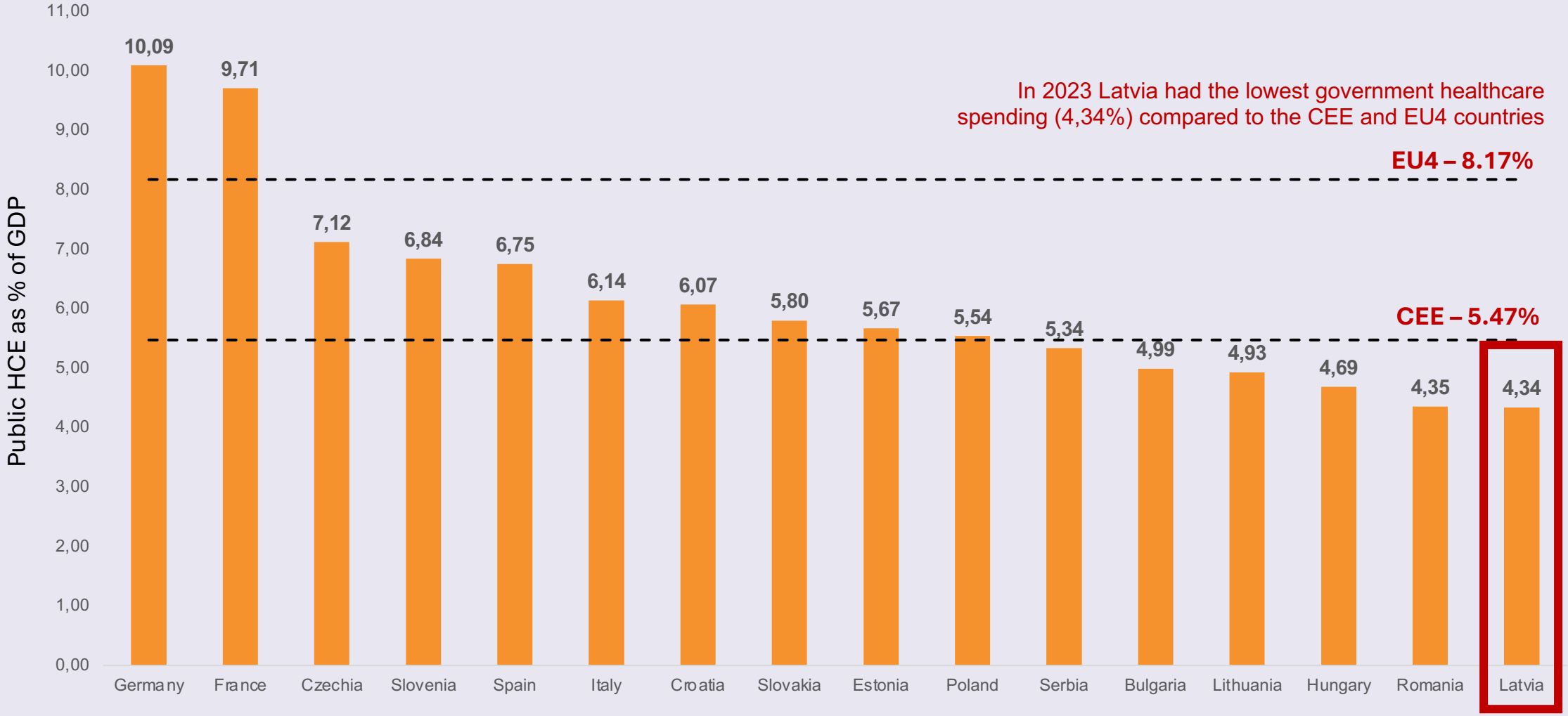
HTA Ltd.

CEE countries are slowly catching up with EU4 on public HC investment as % of GDP. In 2017 the difference was 3 percentage points and in 2023 it reached 2.78 percentage points.

The gap with the EU4 remains wide and shows no signs of closing rapidly



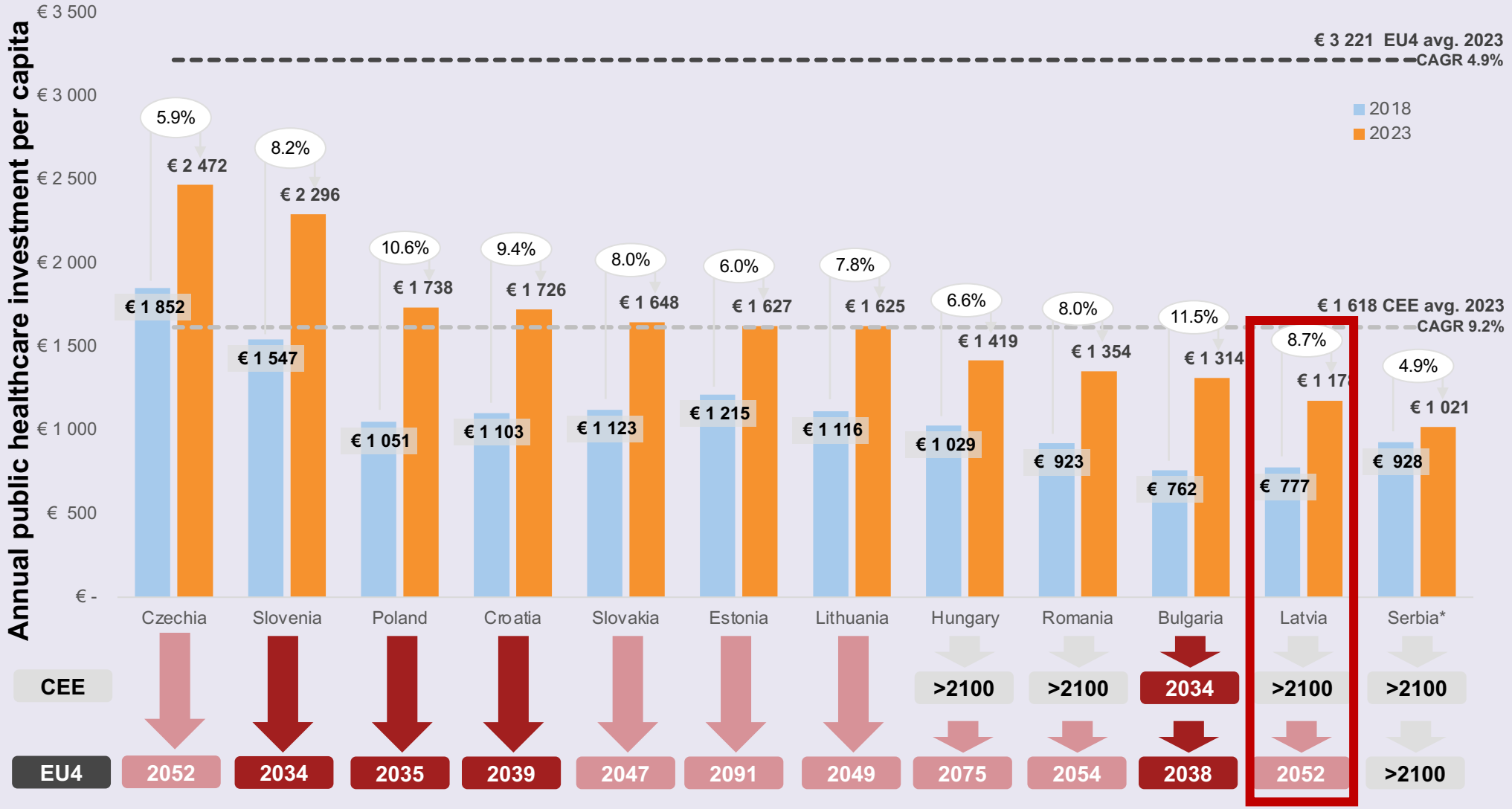
Source: EUROSTAT, Health care investment by financing scheme, Total and Government schemes and compulsory contributory health care financing schemes

The CEE average health care investments are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia and Bulgaria.

The EU4 average health care investments are calculated based on data from Germany, Italy, Spain and France

Public healthcare investment per capita in the CEE is rising faster than in the EU4

Public healthcare investment in Slovenia, Poland, Croatia and Bulgaria is projected to reach the EU4 average by 2040



Methodology

The 2018-2023 data is extrapolated based on the CAGR

$$= \left(\frac{value\ in\ 2023}{value\ in\ 2018}\right)^{1/6}$$

CAGR (Compound Annual Growth Rate): shows the average yearly increase in public healthcare expenditure per capita, assuming steady, compounded growth

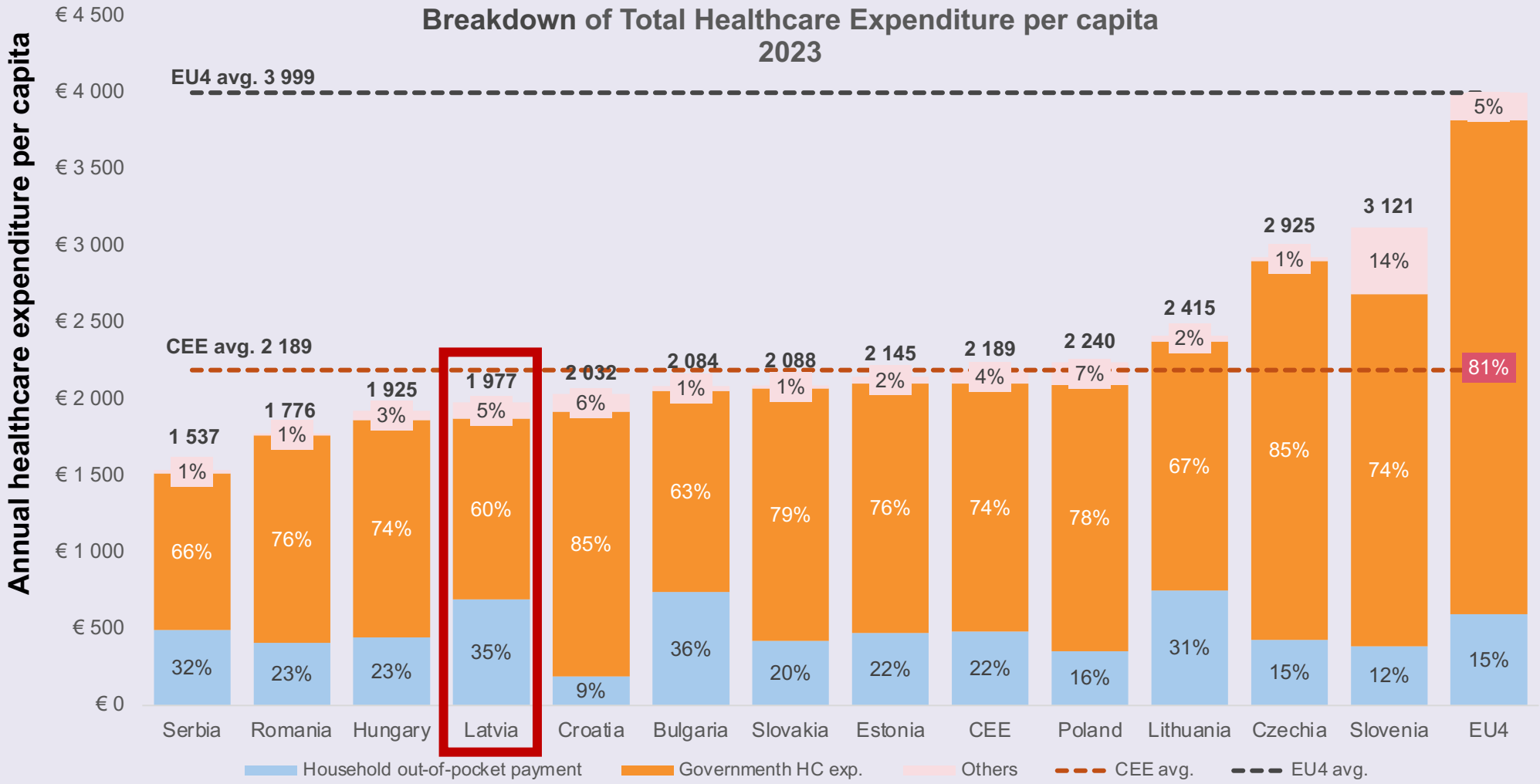
Source: EUROSTAT, Health care investment by financing scheme, Government schemes and compulsory contributory health care financing schemes, PPS per inhabitant

The CEE average health care investments are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia* and Bulgaria.
The EU4 average health care investments are calculated based on data from Germany, Italy, Spain and France
*Data for Serbia are available starting from 2021

Households fill the gap

OOP expenditure makes up a significant proportion of total healthcare expenditure in the CEE countries, leaving patients vulnerable

High co-payments worsen health outcomes by financial hardship and unmet need[1]



- Out-of-pocket (OOP) healthcare expenditure is higher in the CEE compared to the EU4 (22% vs. 15%).
- Public healthcare expenditure is only 74% in the CEE compared to 81% in the EU4.

Public healthcare expenditure in Serbia, **Latvia**, Bulgaria and Lithuania is below the average in the CEE and the EU4.

Source: EUROSTAT, Health care expenditure by financing scheme, Total and Government schemes and compulsory contributory health care financing schemes, Household out-of-pocket payment, PPS per inhabitant

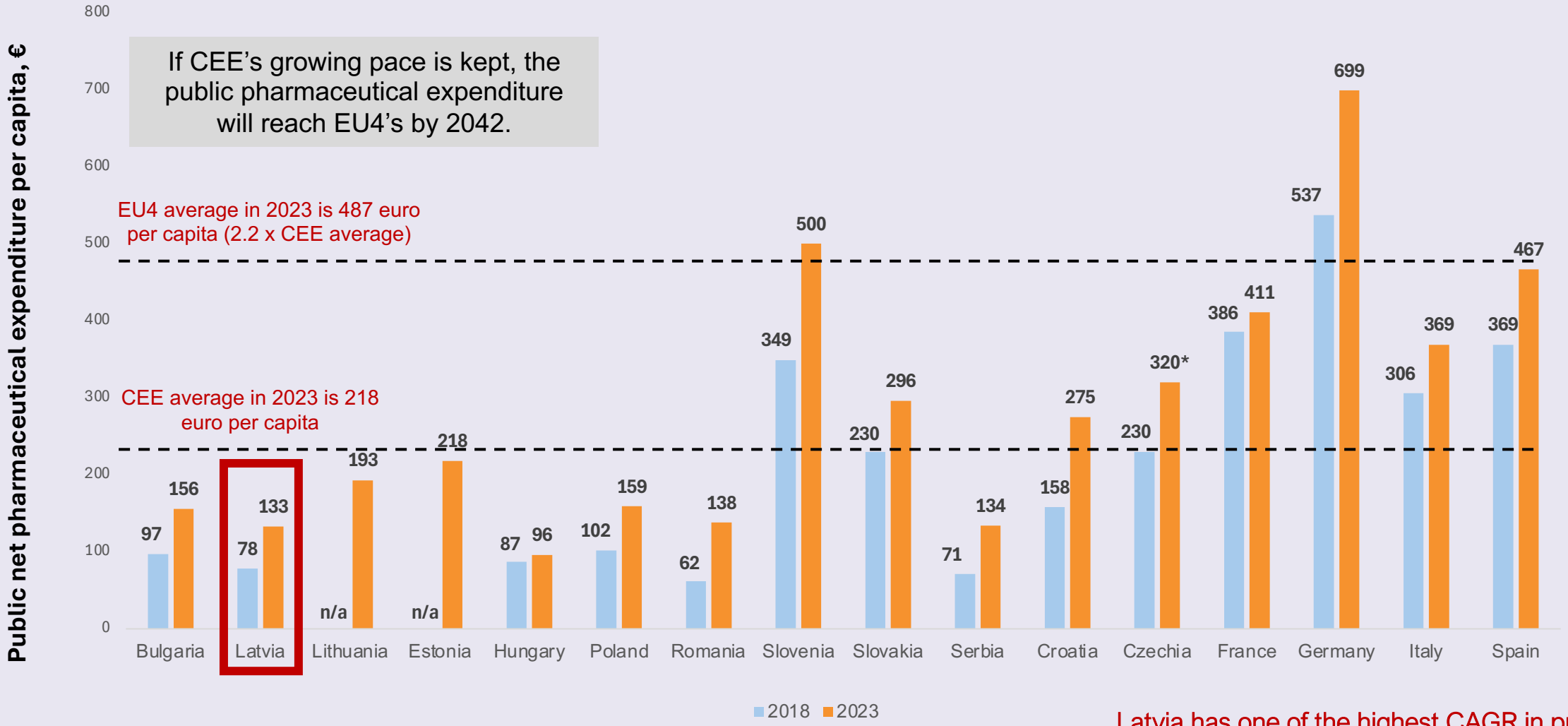
[1] Can people afford to pay for health care? Evidence on financial protection in 40 countries in Europe. WHO Regional Office for Europe; 2023; https://www.who.int/europe/publications/i/item/9789289060660

The CEE average health care expenditures are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania, Serbia and Bulgaria.

The EU4 average health care expenditures are calculated based on data from Germany, Italy, Spain and France

In 2023 the public net pharmaceutical spending in most CEE countries is still lower than the 2018 EU4 average (400 € per capita).

On the other hand, the average CEE CAGR for this period is 4.48% higher than the EU4 average.



Source: IQVIA, Public pharmaceutical expenditure per capita in euro.

* Data for 2022.

The EU4 average health care expenditures are calculated based on data from Germany, Italy, Spain and France

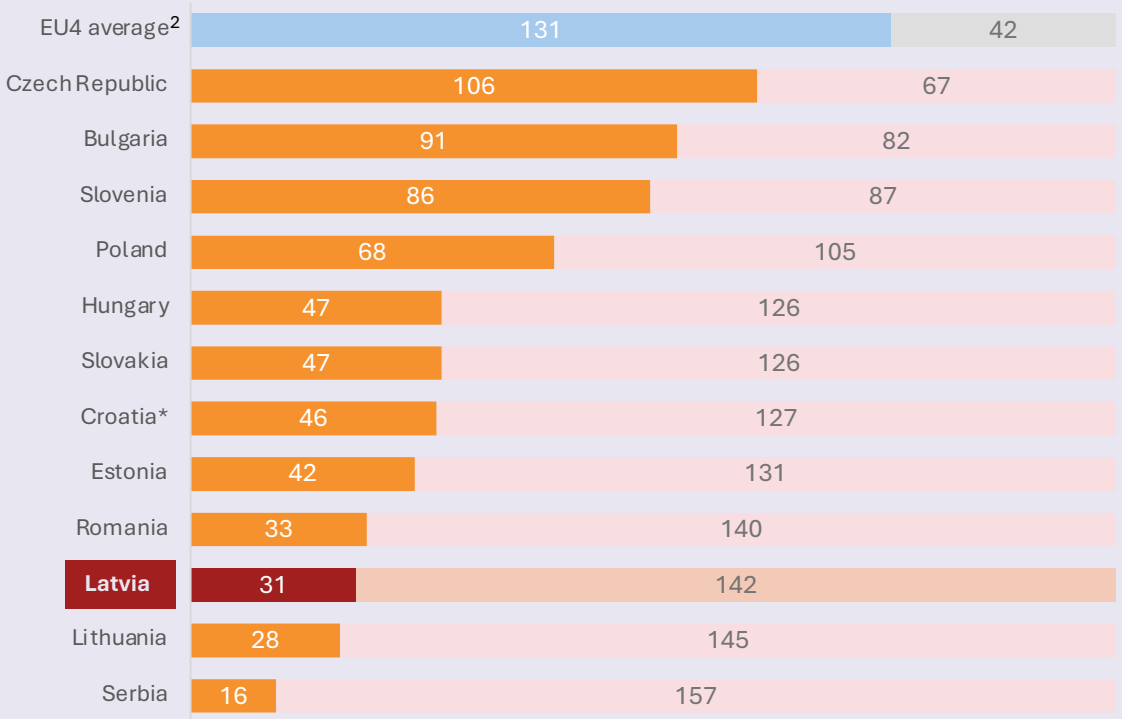
Latvia has one of the highest CAGR in public pharmaceutical spending compared to the CEE and EU4 countries, still among the lowest in CEE

Patients in Latvia had more limited access to new drugs authorised by the European Medicines Agency (EMA) compared to the EU4 and CEE averages (2020-2023)

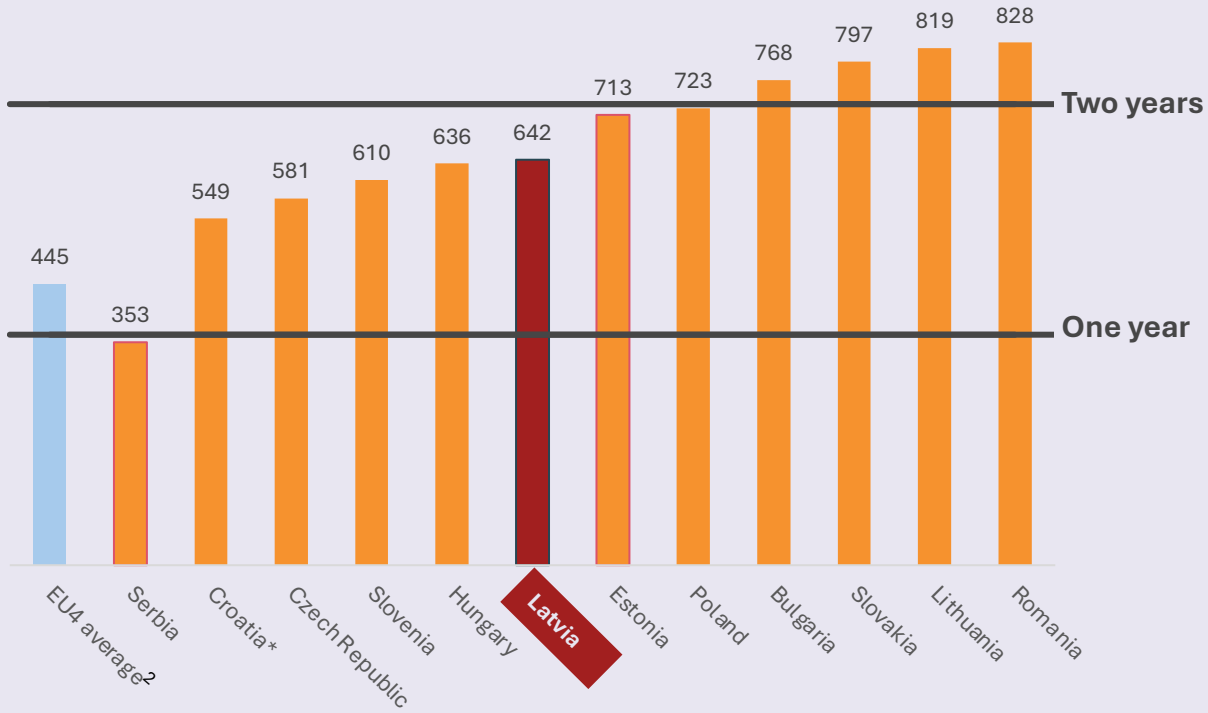
In Latvia, patients gained access to only 18% of new EMA-authorised drugs, compared to 31% on average across CEE countries and 76% across EU4. The average time to availability in Latvia was 642 days, which is 26 days shorter than the CEE average[3] (668 days) and 197 days longer than the EU4 average[2] (445 days).

EMA approved drugs (total 173)

W.A.I.T. Indicator: Availability of new drugs[1]
2020-2023



Time to availability for EMA approved drugs
Days, 2020-2023



- The W.A.I.T. Indicator measures differences in time to reimbursement across Europe. A medicine is available on the market if patients can receive the medicine under a reimbursement scheme. The chart shows the number of new EMA-authorised medicines available to patients across Europe. Some medicines have limited availability (21% of those available in Bulgaria)

- Availability date –The first date when doctors can prescribe/hospitals can administer the medicine to patients in the country, who will be able to benefit from reimbursement conditions applicable in the country.

- Time to availability – The number of days between EMA market authorisation of a medicine and the date it becomes available to patients which, for most countries, is the point at which it gains access to the reimbursement list.

Source: EFPIA Patients W.A.I.T. Survey
1. By new medicines, we refer to medicines, including a substance that has not been previously available in Europe
2. The EU4 average is calculated based on data for Italy, Spain, France, and Germany. In Spain, the WAIT analysis does not identify those medicinal products being accessible earlier in conformity with Spain's Royal Decree 1015/2009 relating to Medicines in Special Situations.; For France, the time to availability (597 days, n=80 dates submitted) includes products under the Accès précoce system (n=4 dates submitted) for which the price negotiation process is usually longer.
3. The CEE average is calculated based on data for the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Estonia, Latvia, Lithuania, Bulgaria, Romania, Croatia, and Serbia.
*Croatia did not complete a full dataset and therefore availability may be unrepresentative.

The relationship between the age of individuals and their use of health care:

An aging population increases pressure on healthcare spending

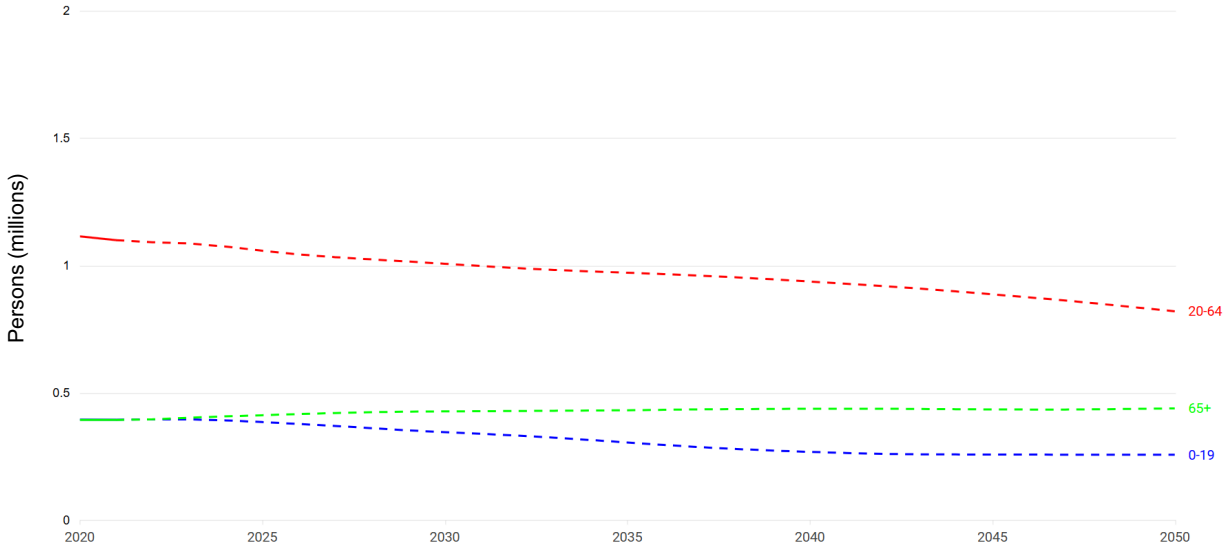
Demographic erosion threatens fiscal sustainability

Latvia, age: 0-19, 20-64, 65+

Population by age and sex - broad age groups

2020-2050

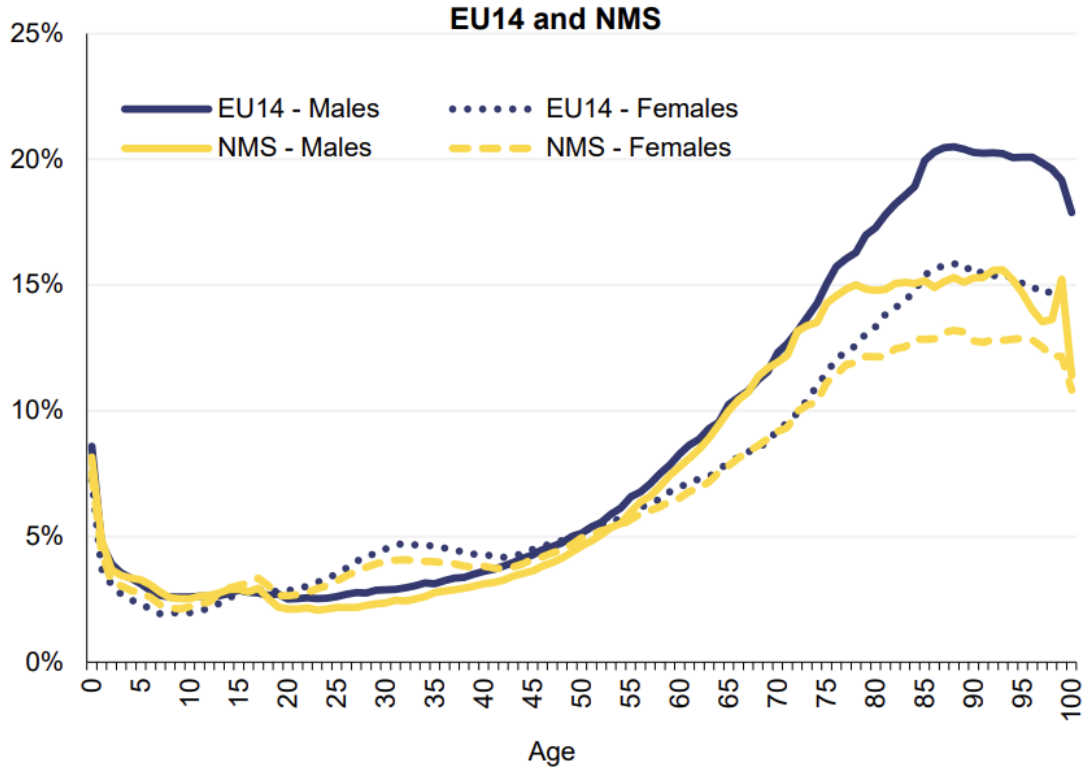
Sex: **Both sexes**



Latvia's population is aging: the working-age group (20–64) will decline steadily by 2050, while the number of older adults (65+) will slightly increase. The youth population (0–19) will continue to shrink. These trends point to a contracting labor force and rising pressure on social and healthcare systems.

According to the European Commission, per capita public expenditure in CEE countries increases significantly with age, especially beyond 55. This is largely due to the higher prevalence of multimorbidity and the associated need for resource-intensive healthcare.

Age-related healthcare spending per capita as proportion of GDP per capita %, 2022



Source: United Nations, Department of Economic and Social Affairs, Population Division (2024). World Population Prospects: The 2024 Revision; European Commission (2024), The 2024 Ageing Report. Economic & Budgetary Projections for the EU Member States (2022-2070)

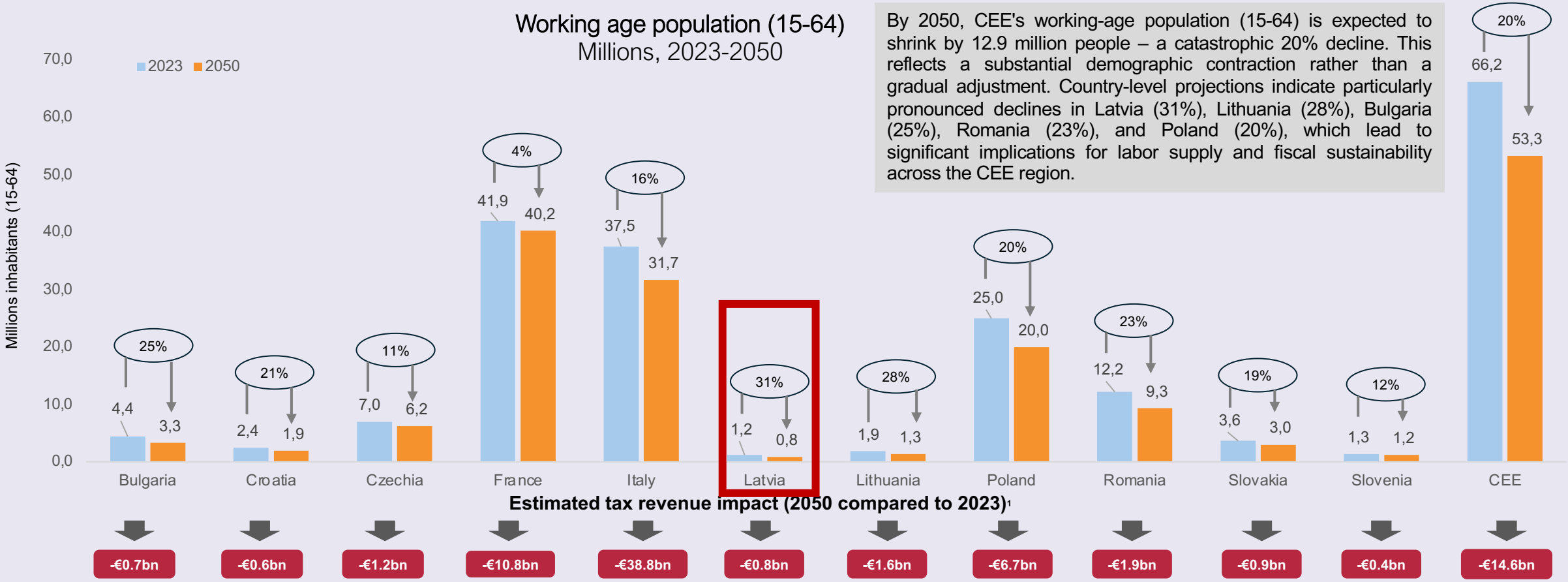
The EU14 aggregate includes the profiles of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Sweden. The NMS aggregate includes Bulgaria, Croatia, Czechia, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovakia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

Image: European Commission –The 2024 Ageing Report

The working age population is projected to fall by 12.9m in CEE so reducing labor supply and tax revenue

Fiscal squeeze: This would reduce annual income tax revenue by an estimated €14.6bn by 2050 across CEE

Working age population (15-64)
Millions, 2023-2050



By 2050, CEE's working-age population (15-64) is expected to shrink by 12.9 million people – a catastrophic 20% decline. This reflects a substantial demographic contraction rather than a gradual adjustment. Country-level projections indicate particularly pronounced declines in Latvia (31%), Lithuania (28%), Bulgaria (25%), Romania (23%), and Poland (20%), which lead to significant implications for labor supply and fiscal sustainability across the CEE region.

Estimated tax revenue impact (2050 compared to 2023)[1]

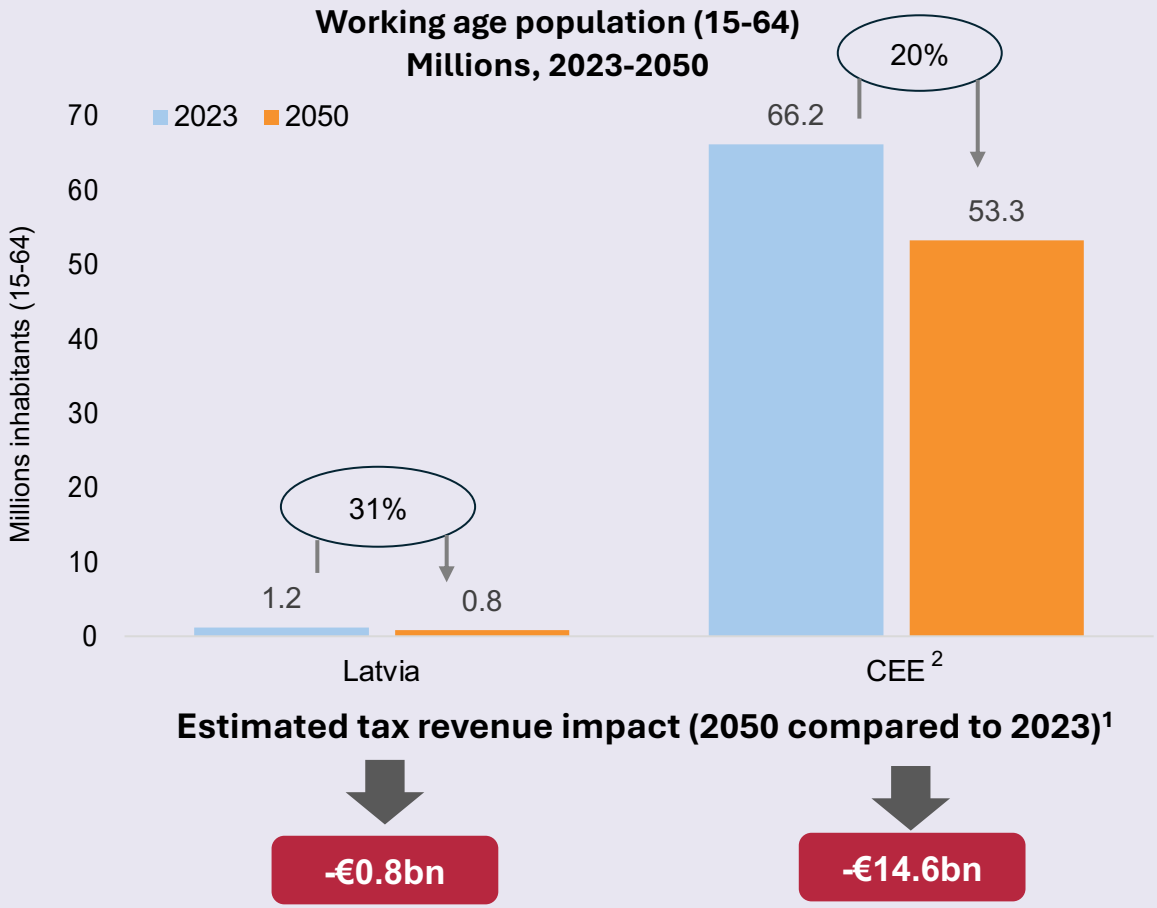
Bulgaria	Croatia	Czechia	France	Italy	Latvia	Lithuania	Poland	Romania	Slovakia	Slovenia	CEE
-€0.7bn	-€0.6bn	-€1.2bn	-€10.8bn	-€38.8bn	-€0.8bn	-€1.6bn	-€6.7bn	-€1.9bn	-€0.9bn	-€0.4bn	-€14.6bn

The fiscal impact demonstrates CEE's unique vulnerability. CEE countries will lose €14.6 billion in annual income tax revenues by 2050, with the largest losses in Poland (-€6.7bn), Romania (-€1.9bn), and Lithuania (-€1.6bn). By comparison, France (€-10.8bn) and Italy (€-38.8bn) face larger fiscal losses with smaller workforce reductions (4% and 16%), compared with an average decline in working age population of around 20% in the CEE region. While France and Italy manage gradual adjustment, CEE faces fiscal catastrophe.

Source: Analysis of Eurostat data for income tax and population projections
1. This is the difference between annual tax revenue in 2023 and annual tax revenue in 2050. We assume tax paid per working age person remains constant between 2023 and 2050. Income tax is from salaries/wages 'individual or household income.
2. There is missing tax revenue data for Hungary, Estonia, Germany, Spain and EU4 + UK.

The working age population is projected to fall by 12.9m in CEE so reducing labor supply and tax revenue

Fiscal squeeze: This would reduce annual income tax revenue by an estimated €14.6bn by 2050 across CEE

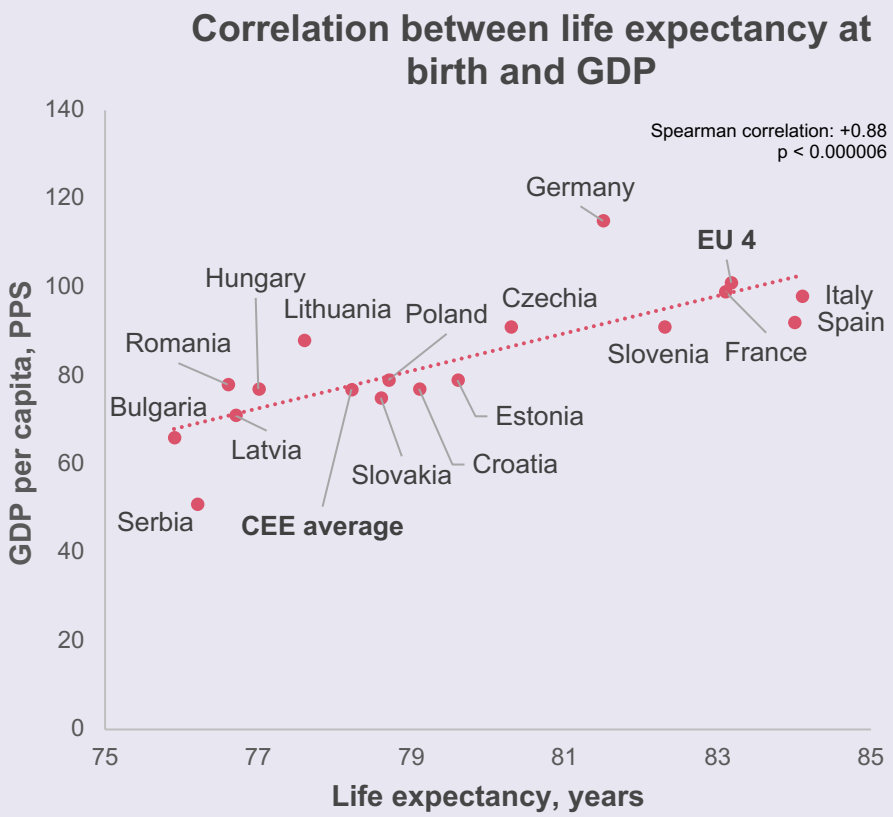


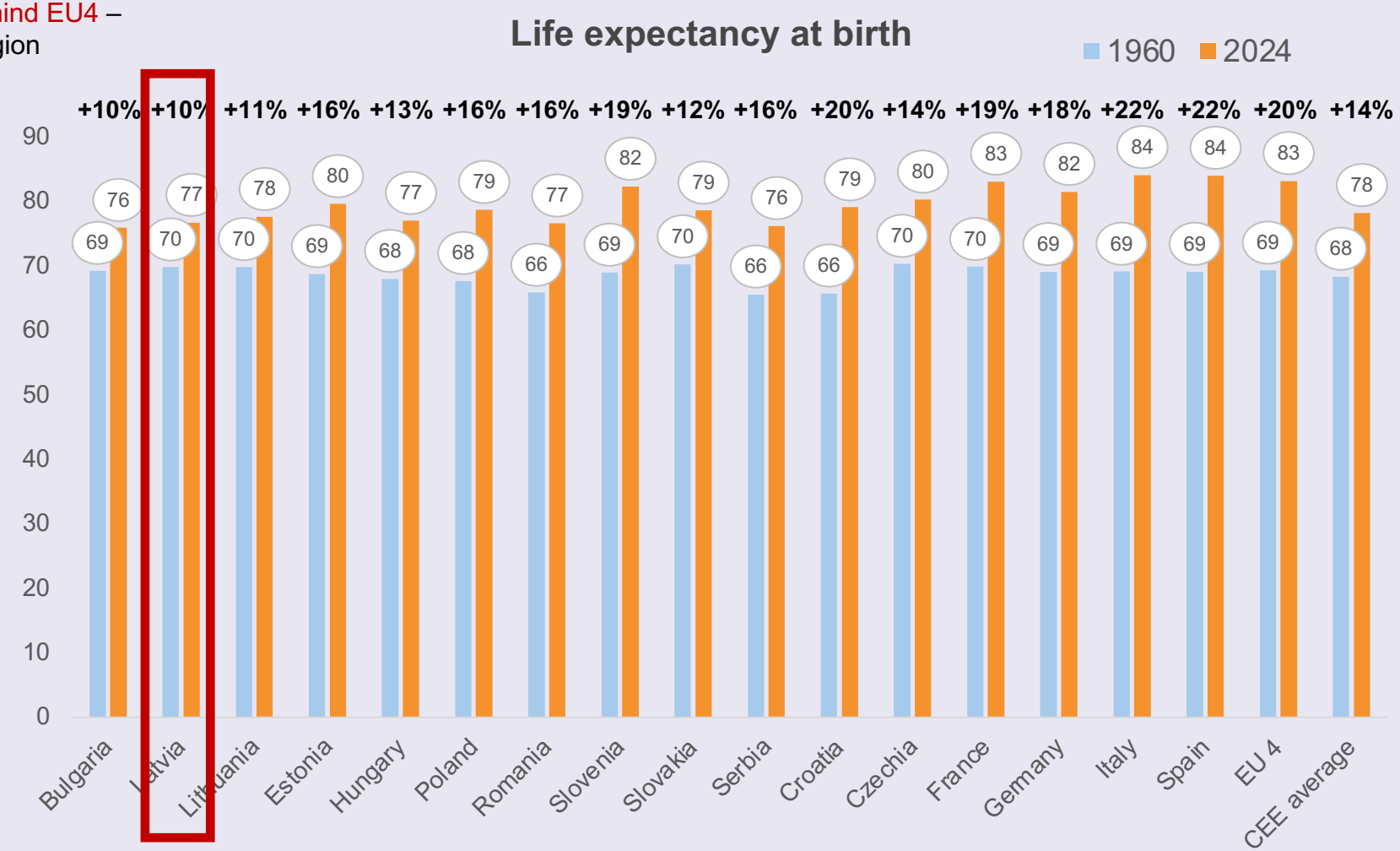
By 2050, the working-age population (15–64) in CEE is projected to shrink by 12.9 million (20%), with Latvia facing a sharper 31% drop from 1.2m to 0.8m. This decline could cut annual income tax revenues by €14.6bn across CEE and €0.8bn in Latvia, reducing labor supply and threatening fiscal sustainability.

Source: Analysis of Eurostat data for income tax and population projections
1. This is the difference between annual tax revenue in 2023 and annual tax revenue in 2050. We assume tax paid per working age person remains constant between 2023 and 2050. Income tax is from salaries/wages 'individual or household income.
2. There is missing tax revenue data for Hungary and Estonia.

Countries with lower GDP face shorter life expectancy

CEE life expectancy continues to improve, but still ranks behind EU4 – with significant and persistent variations within the region



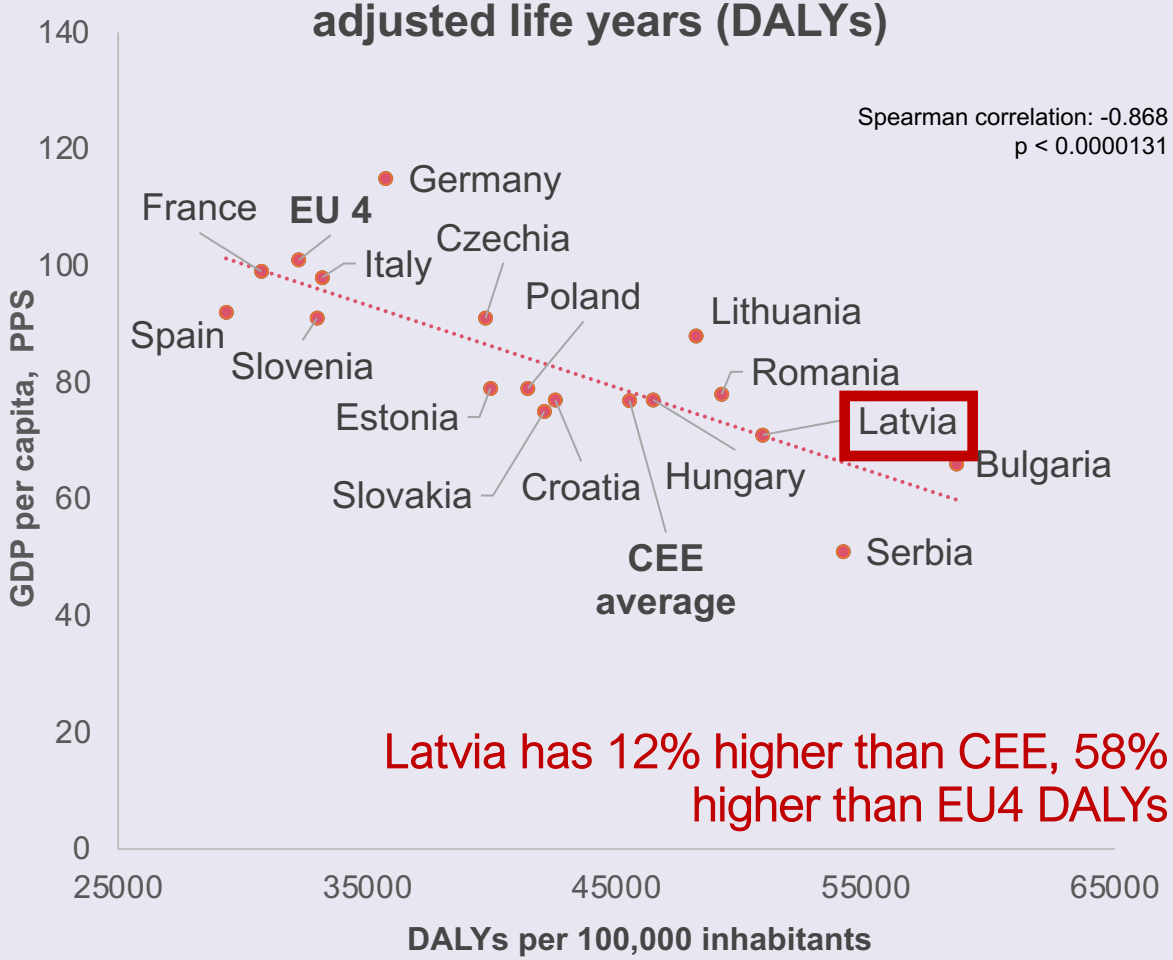


→ **Clear positive correlation: the higher the GDP, the higher the life expectancy and *vice versa***
→ **CEE countries have made progress in life expectancy, but at a slower pace than the EU4 average (14% vs. 20% increase)**
→ **Top performers in CEE: Slovenia and Czechia**
→ Latvia has made progress in life expectancy, but at half the pace vs. EU4 average (10% vs. 20% increase)

*Average values used for EU4 (France, Italy, Sprain, Germany) and CEE (Bulgaria, Serbia, Latvia, Lithuania, Romania, Hungary, Croatia, Slovakia, Slovenia, Poland, Estonia, Czechia)
Source: Eurostat data for life expectancy at birth (2024) and OECD data for life expectancy at birth (1960); Eurostat data for GDP per capita (2024). Note that the Life expectancy at birth data are shown rounded in the figure on the right.

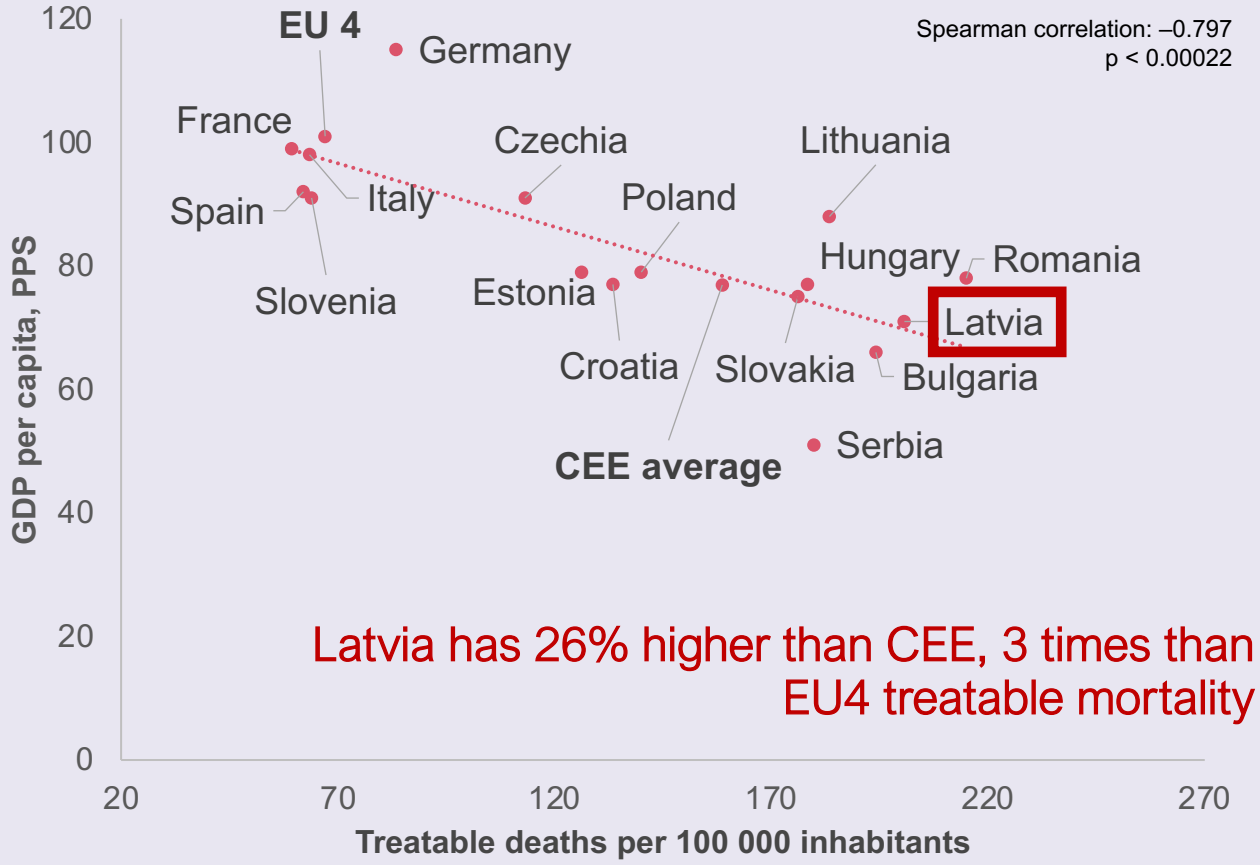
CEE countries have higher rates of disability and treatable deaths as well as lower productivity (GDP per capita) compared to the EU4 average

Correlation between GDP and Disability adjusted life years (DALYs)



Latvia has 12% higher than CEE, 58% higher than EU4 DALYs

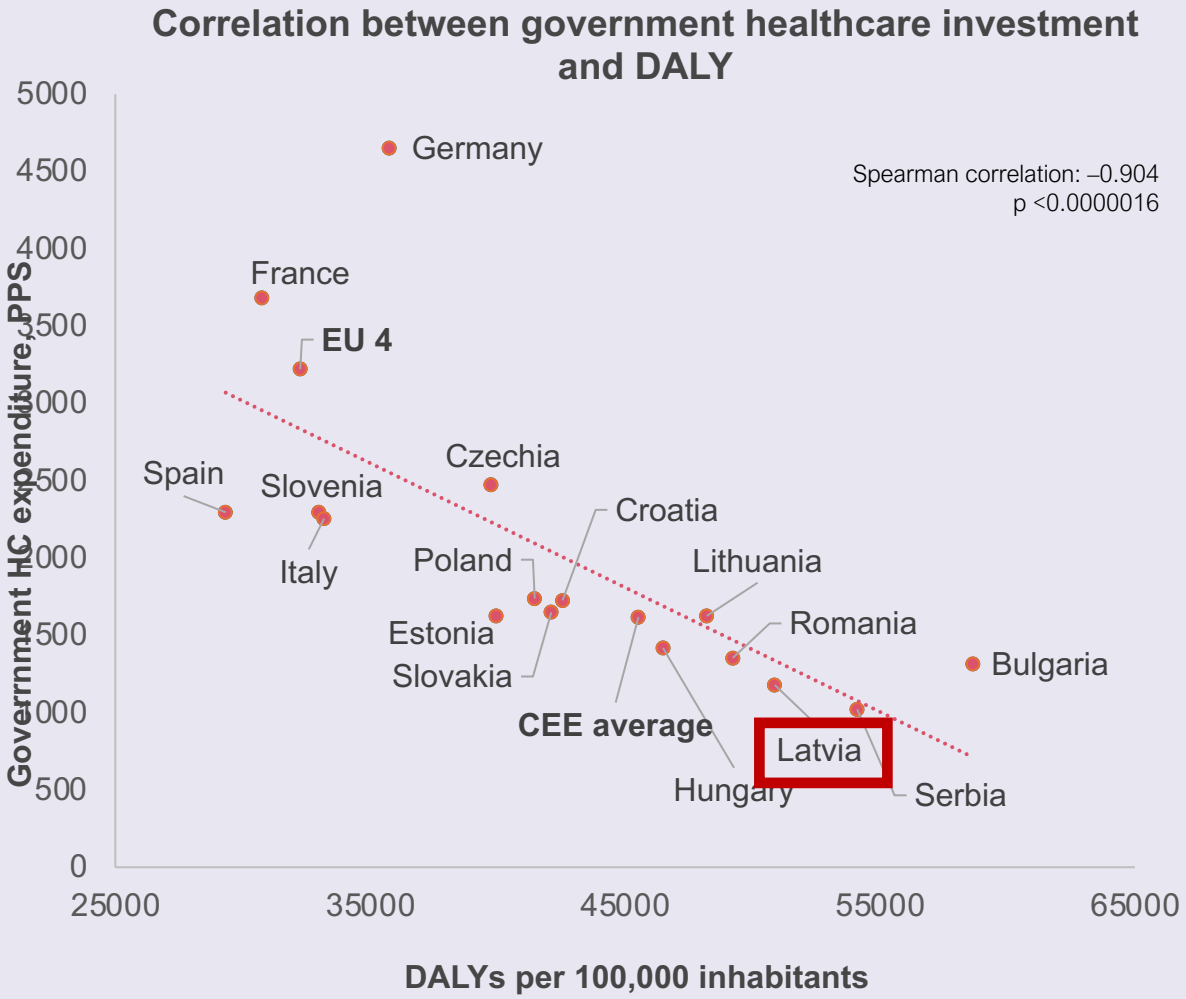
Correlation between GDP and treatable mortality

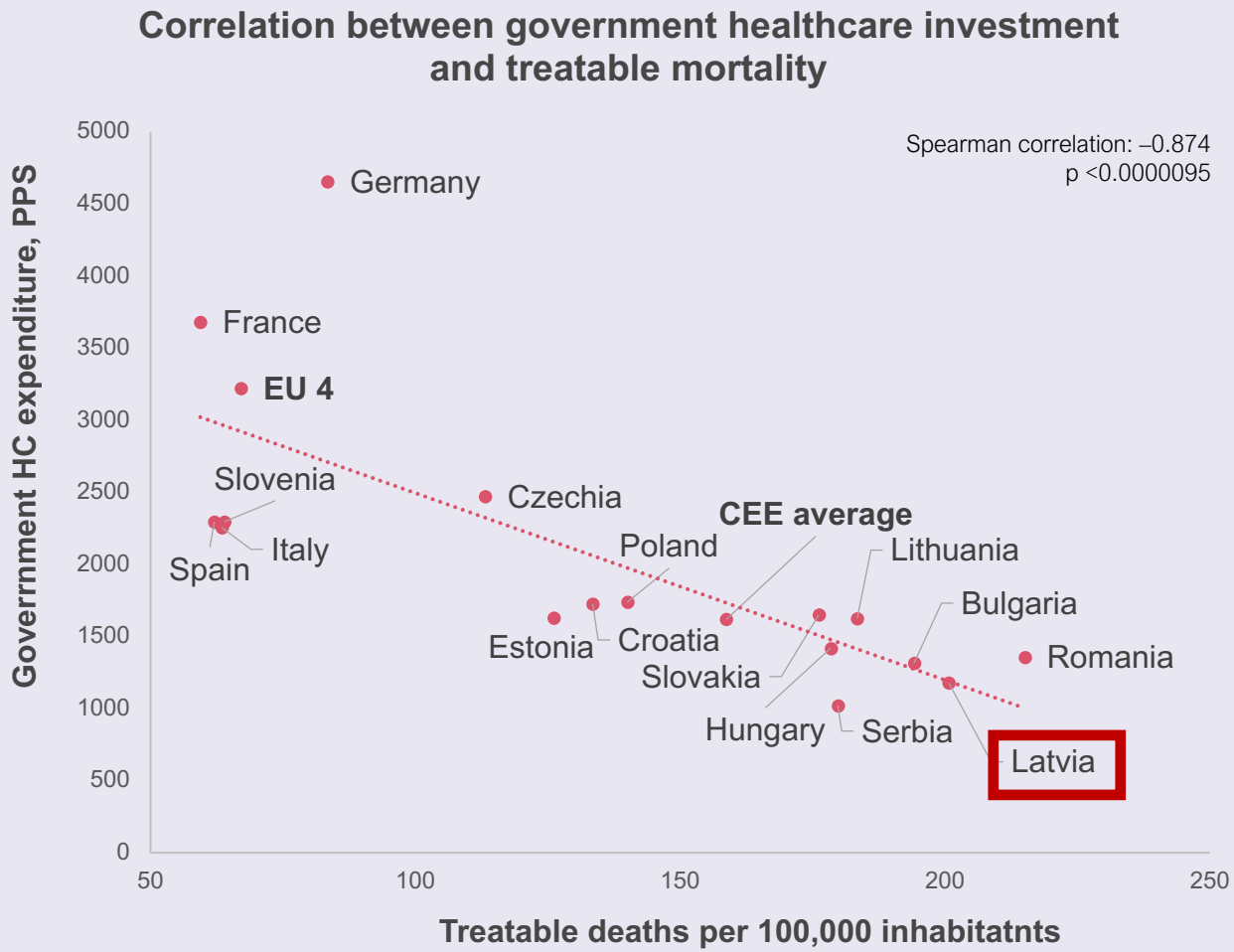


Latvia has 26% higher than CEE, 3 times than EU4 treatable mortality

*Average values used for EU4 (France, Italy, Sprain, Germany) and CEE (Bulgaria, Serbia, Latvia, Lithuania, Romania, Hungary, Croatia, Slovakia, Slovenia, Poland, Estonia, Czechia)
DALY – disability adjusted life years; GDP – gross domestic product
PPS (purchasing power standard) is an artificial currency unit used by Eurostat in which national accounts aggregates are expressed when adjusted for price level differences using Purchasing Power Parities (PPPs). Thus, PPPs can be interpreted as the exchange rate of the PPS against the euro.
Treatable mortality refers to premature deaths that could have been avoided with timely and effective healthcare interventions, including secondary prevention, after a disease has developed
Source: WHO data for DALY (2021); Eurostat data for treatable deaths (2022) and Eurostat data for GDP per capita (2024)

CEE countries have higher rates of disability and treatable deaths as well as lower healthcare investment per capita compared to the EU4 average





*Average values used for EU4 (France, Italy, Sprain, Germany) and CEE (Bulgaria, Serbia, Latvia, Lithuania, Romania, Hungary, Croatia, Slovakia, Slovenia, Poland, Estonia, Czechia)
DALY – disability adjusted life years; GHCE – government healthcare expenditure
PPS (purchasing power standard) is an artificial currency unit used by Eurostat in which national accounts aggregates are expressed when adjusted for price level differences using Purchasing Power Parities (PPPs). Thus, PPPs can be interpreted as the exchange rate of the PPS against the euro.
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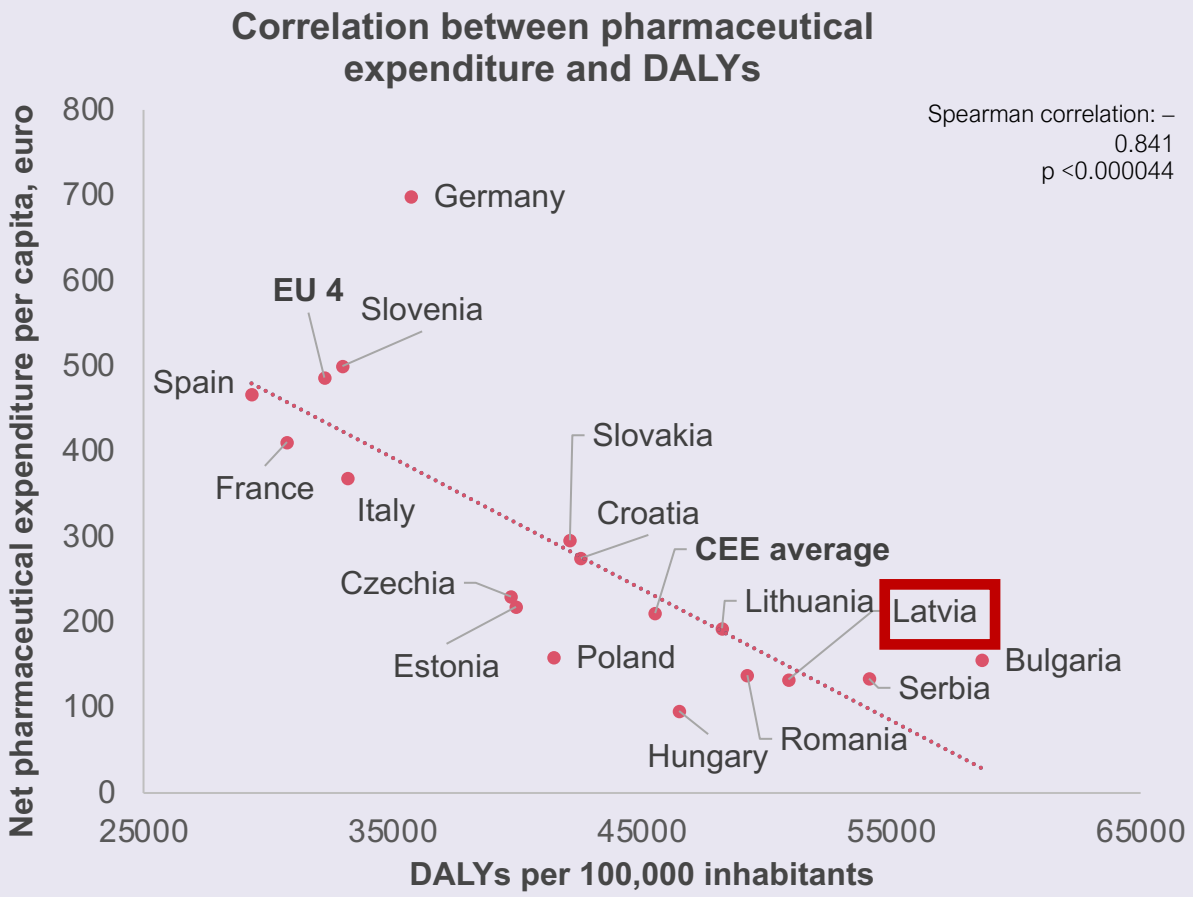
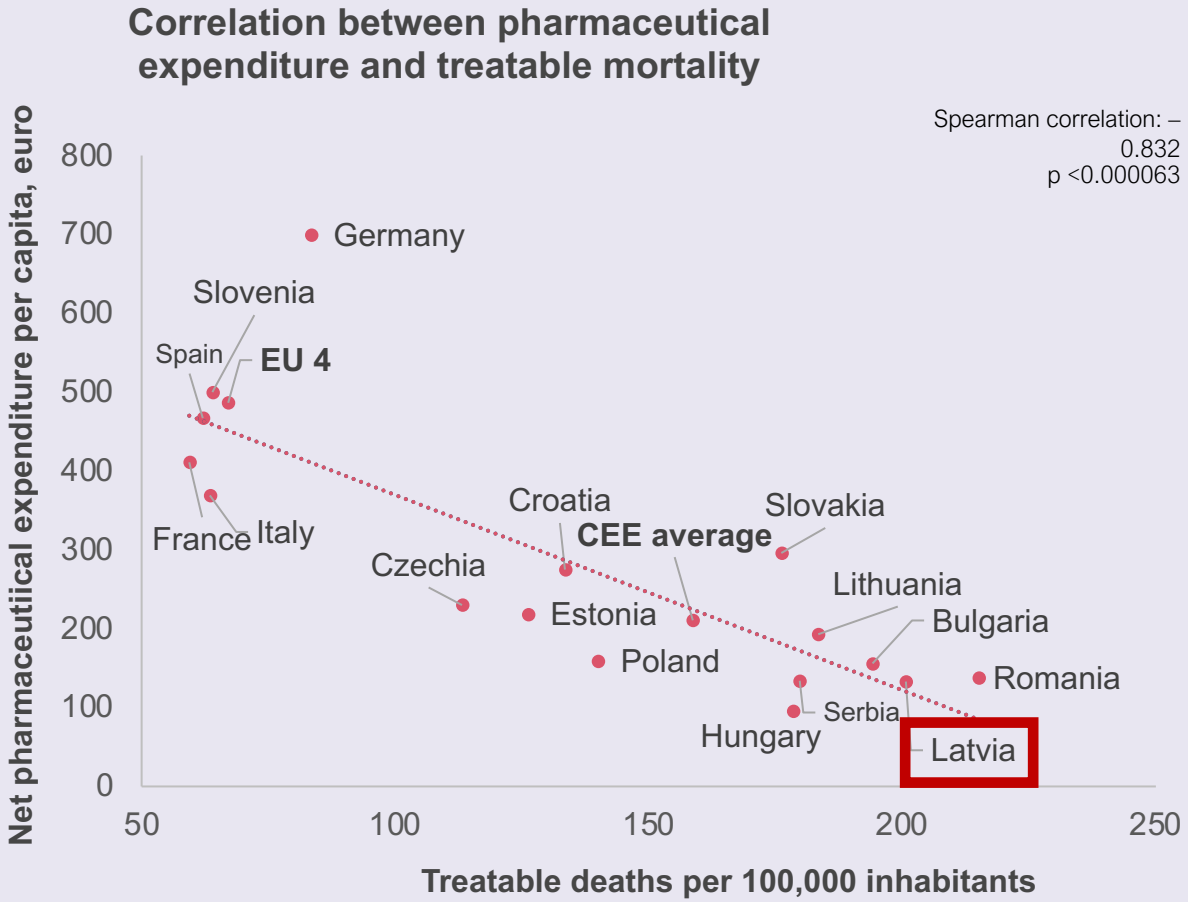
Source: WHO data for DALY (2021); Eurostat data for treatable deaths (2022) and Eurostat data for GHCE (2023)

CEE countries have higher rates of disability and treatable deaths as well as lower net pharmaceutical spending per capita compared to the EU4 average

Poor investment in pharmaceuticals in the CEE is directly correlated with more DALYs and worse quality of life





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Treatable mortality refers to premature deaths that could have been avoided with timely and effective healthcare interventions, including secondary prevention, after a disease has developed
Source: WHO data for DALY (2021); Eurostat data for treatable deaths (2022) and IQVIA data for net pharmaceutical expenditure in euro per capita (2023). Data on net pharmaceutical expenditure for Czechia for 2023 are yet available; therefore, data from 2018 have been used.

Healthcare readiness index 2024

Healthcare expenditure as long-term investment, rather than a short-term cost

CEE countries lag behind EU4 in overall healthcare readiness, scoring notably lower

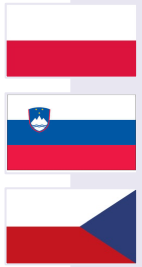
1. Healthcare expenditure is seen as an **investment** not a cost
2. Focus on **early diagnostic** and public health interventions
3. „**Innovations** are a friend, not a foe“

Source: GLOBSEC, Healthcare Readiness Index 2024

The CEE average are calculated based on data from Croatia, Czech Republic, Estonia, Hungary, Poland, Romania, Slovakia, Slovenia, Latvia, Lithuania and Bulgaria.
The EU4 average are calculated based on data from Germany, Italy, Spain and France

Good practices in CEE: drivers of healthcare innovation

Institutional governance and collaboration

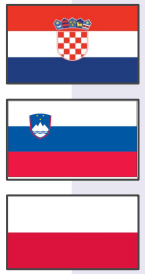


HTA empowerment:
Integration into decision-making

Trust-based partnerships:
Transparent industry-agency dialogue

Stakeholder alliances:
Collaborative orphan drug pathways

Sustainable funding and innovative pricing

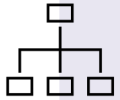


Outcomes-based models:
Individualized, non-linear contracts

Budget safeguards:
"Expensive Drugs List" and no-payback growth

Risk-sharing:
Use of price confidentiality and negotiations

Specialized health and advocacy programs



Rare disease infrastructure:
National registries and expanded screening

Dedicated vaccine HTA:
New evaluation process for voluntary vaccines

Value advocacy:
Impactful public awareness campaign

Operational efficiency and access

Timeline optimization:
P&R process reduced from 600 to 180 days

Care decentralization:
Moving oncology care to regional centers

Primary care expansion:
Relaxed GP prescribing criteria


Poland


Slovenia


Croatia

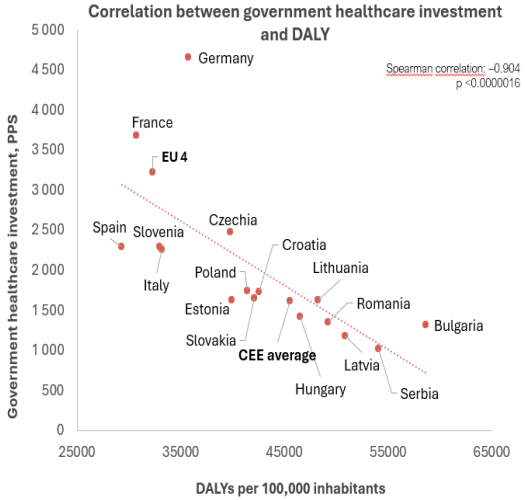

Czech Republic

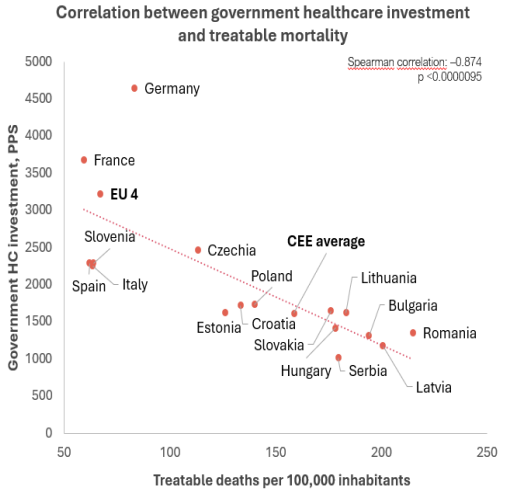
Underinvestment in CEE healthcare is actively costing lives. Governments must close the EU4 funding gap now or accept a future defined by higher mortality, poorer outcomes, and systemic decline.

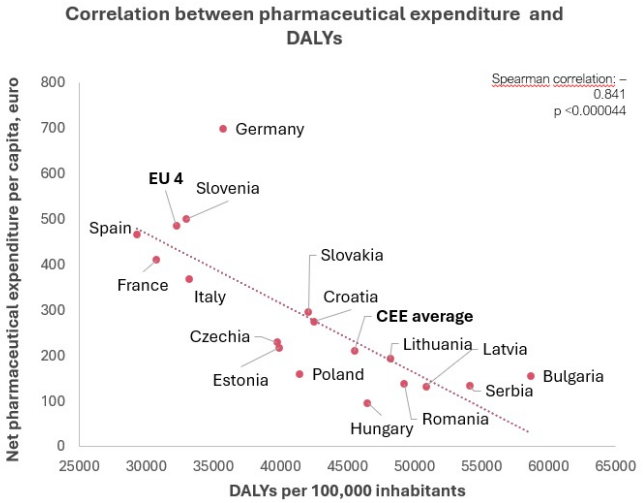
The cost of „*doing nothing*“

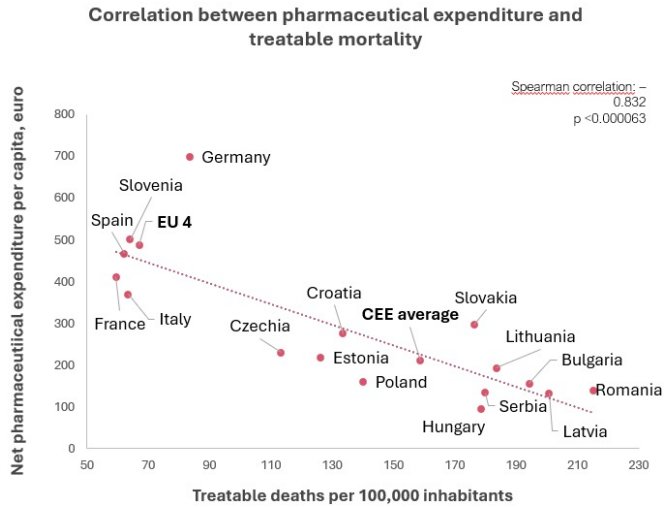
If CEE countries fail to increase healthcare investment, the region will accumulate **>49M DALYs** and experience **>176K preventable deaths** per annum.

By contrast, catching up to EU4 investment levels as early as **tomorrow** could avert **>13M DALYs** and save **>101K lives** from treatable causes. With an average GDP per capita of 21 800 euro in the CEE, the potential economic impact in terms of savings reached **300 billion euro.**









The data indicate that CEE healthcare systems - built predominantly on public funding - are no longer able to sustain the economic burden of „doing nothing“.

Projections regarding averted Disability-Adjusted Life Years (DALYs) and reductions in preventable mortality are provided to illustrate the potential costs of maintaining the status quo. However, these projections are preliminary rather than methodologically robust; they are extrapolated from ecological correlations between health investments and outcomes in Western European countries and thus remain limited by potential multi-variable confounding.

Key Policy Recommendations

1. Strengthen the sustainability and efficiency of health financing to improve population outcomes.

CEE governments should prioritise health spending reforms that improve allocative efficiency, system performance, and long-term fiscal sustainability.

a) Increase efficiency and effectiveness of health spending through modernizing governance and system integration.
b) Enhance predictability of pharmaceutical financing

2. Reduce structural barriers to timely access and availability to innovative medicines.

Delayed access to effective therapies remains a major contributor to health inequality across Europe.

a) Align financing with long-term value (outcomes-based payment models, and multi-year funding approaches)
b) Strengthen HTA frameworks through broader value and real-world evidence (real-world data, patient-reported outcomes, and wider societal and productivity impacts.

3. Embed prevention and risk-factor reduction as a core complement to health investment.

The long-term health and economic returns of healthcare spending and pharmaceutical innovation are maximised when combined with stronger prevention policies, incl. vaccines, targeting major modifiable risk factors.

Intelligence is not what you know. It is what you do when you don't know.

HTA
EVIDENCE MATTERS

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