World Health Organization
European Region

UHC watch

WHO Barcelona Office
for Health Systems Financing

Population ageing and health system financial sustainability:
What happens if we can't afford to pay for health care?

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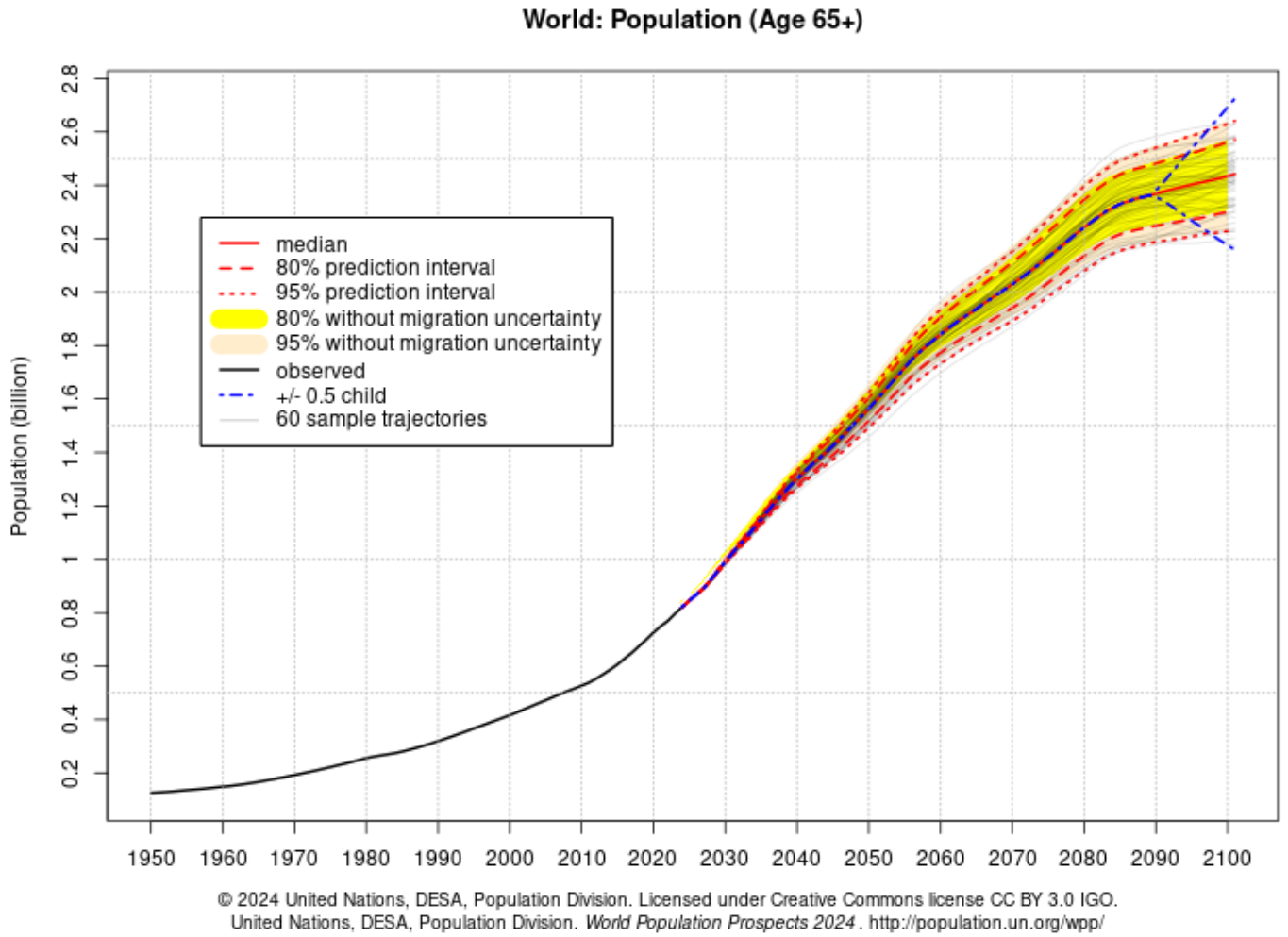
Objectives

- Understand the implications of revenue raising mechanisms in the context of population ageing
    - Takeaway: Social contributions are susceptible to declines in the size of the working age population!
- Make the link between financial sustainability and financial protection
    - If there are financing gaps in the future, someone will have to pay more or people will skip services!

Older people will make up an increasingly large share of the population globally



United Nations, DESA, Population Division. *World Population Prospects 2024*. http://population.un.org/wpp/

Select a Country

Spain

Health Financing

Population by Year and Age Group

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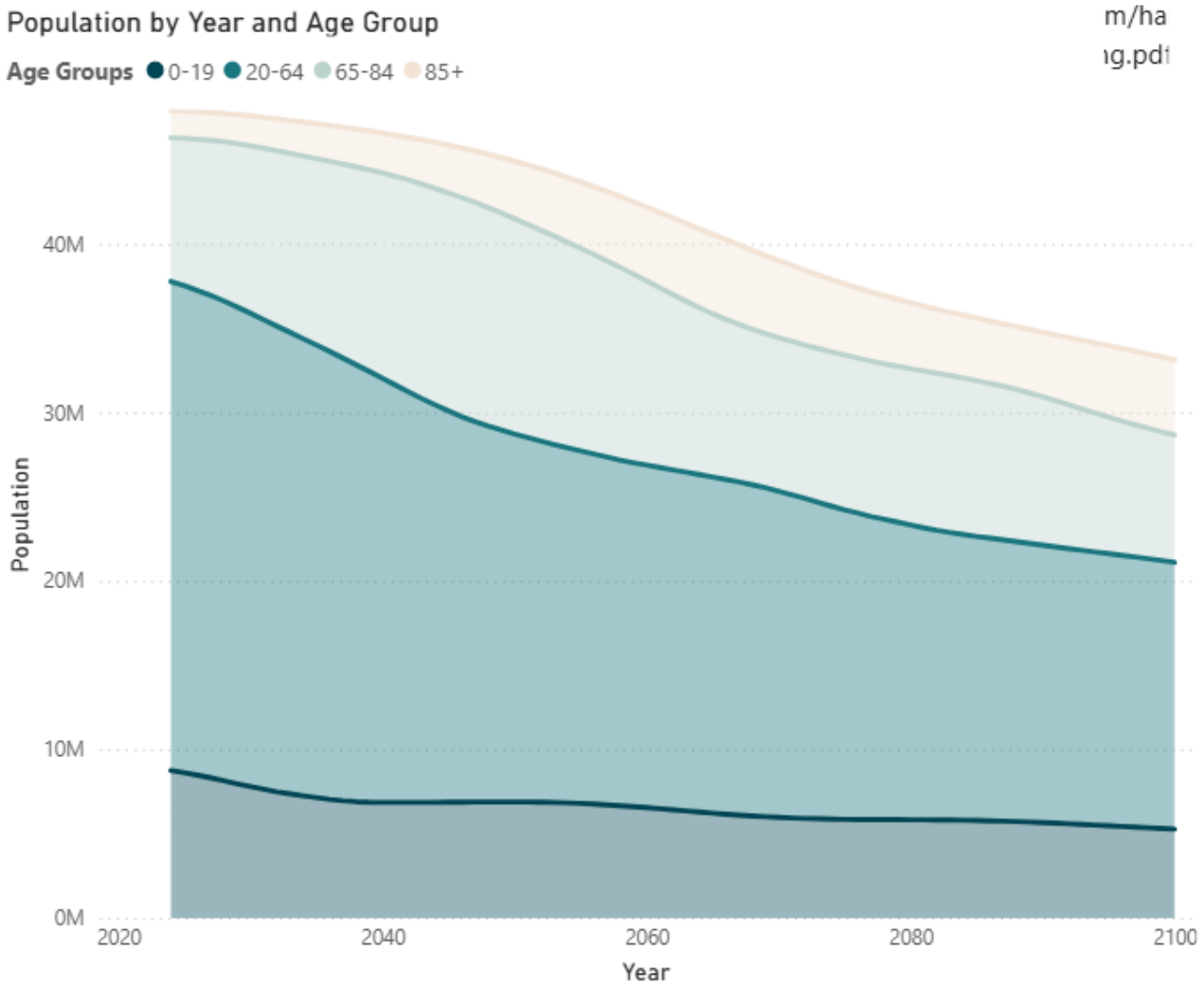


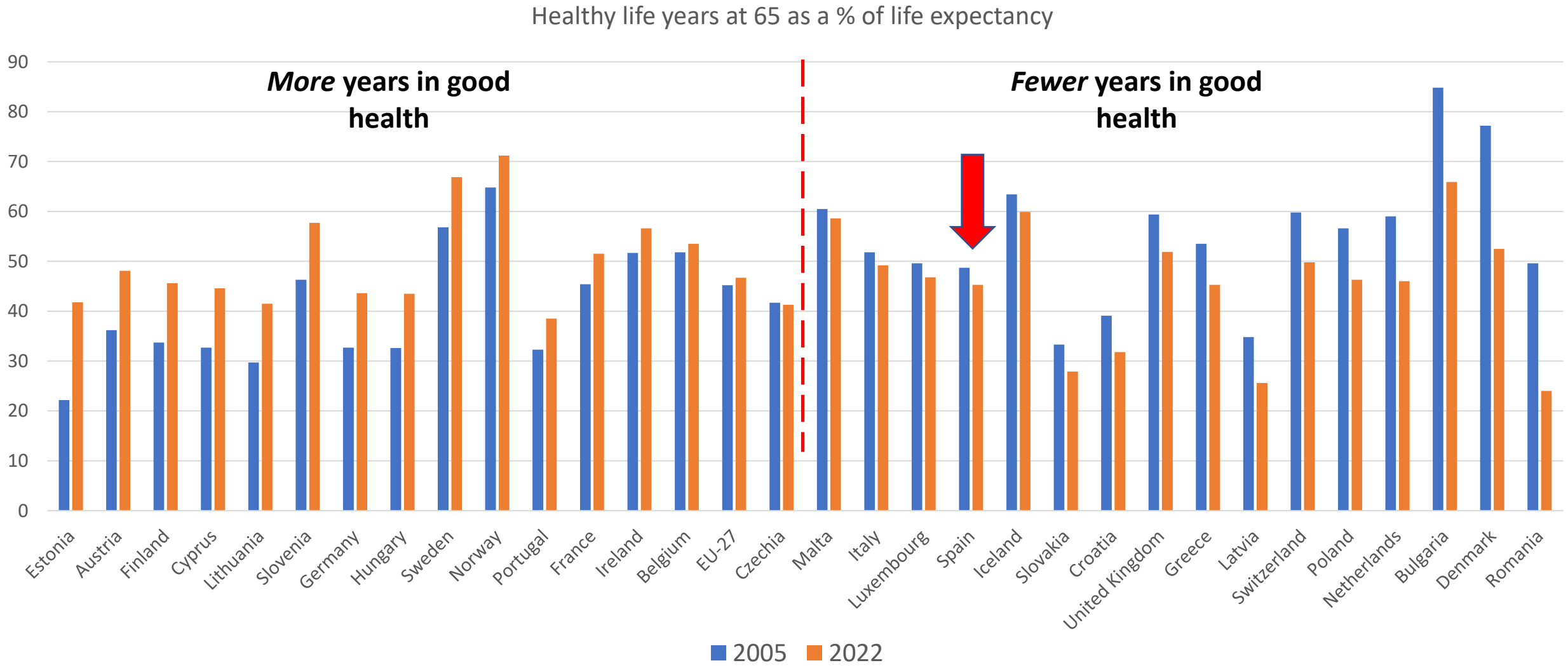
In 2024, **21%** of the population was aged 65 and over. By 2060, that share is projected to **increase** to **36%**. At the end of the projection period in 2100, **36%** of the population is projected to be aged 65 and over.

Population distribution by age group

Year	0-19	20-64	65-84	85+
2024	18%	61%	18%	3%
2040	15%	54%	26%	5%
2060	16%	48%	26%	10%
2080	16%	48%	25%	11%
2100	16%	48%	23%	13%

Source: https://population.un.org/wpp/

Will more older people require more care in the future?



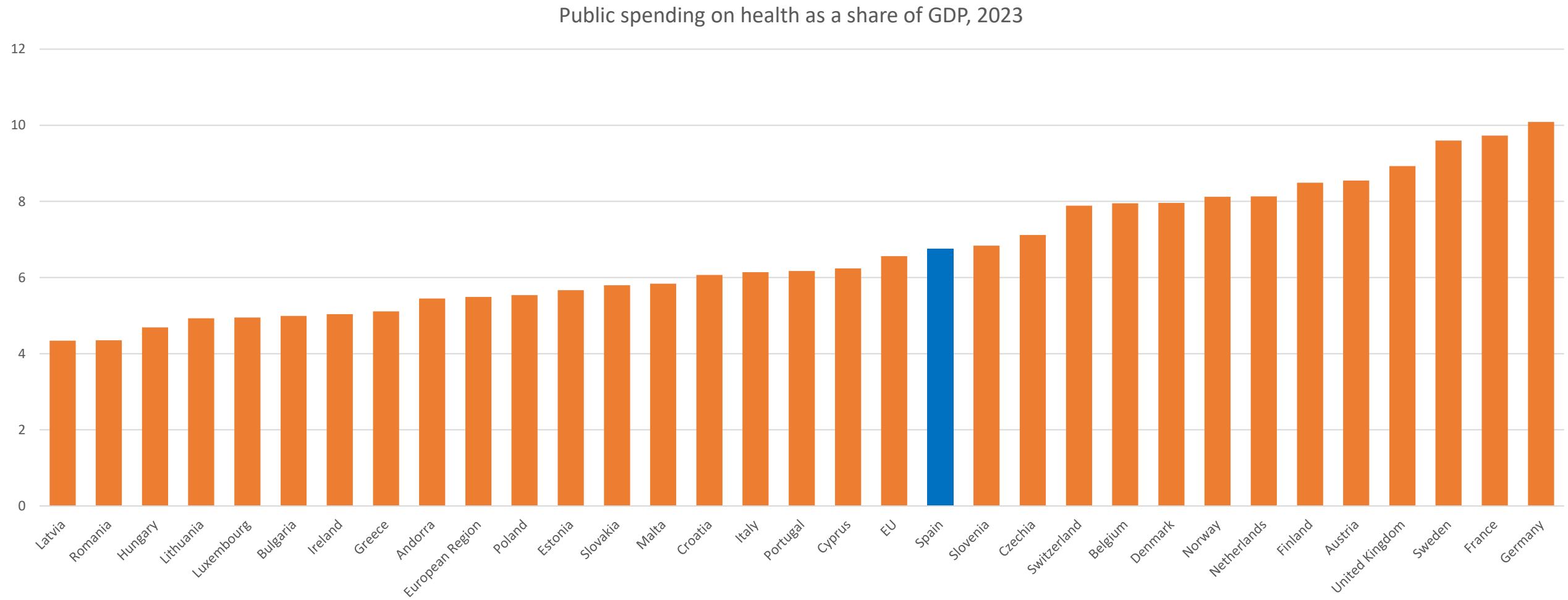
Will population ageing make health financing "unsustainable"?

Questions to set the scene:

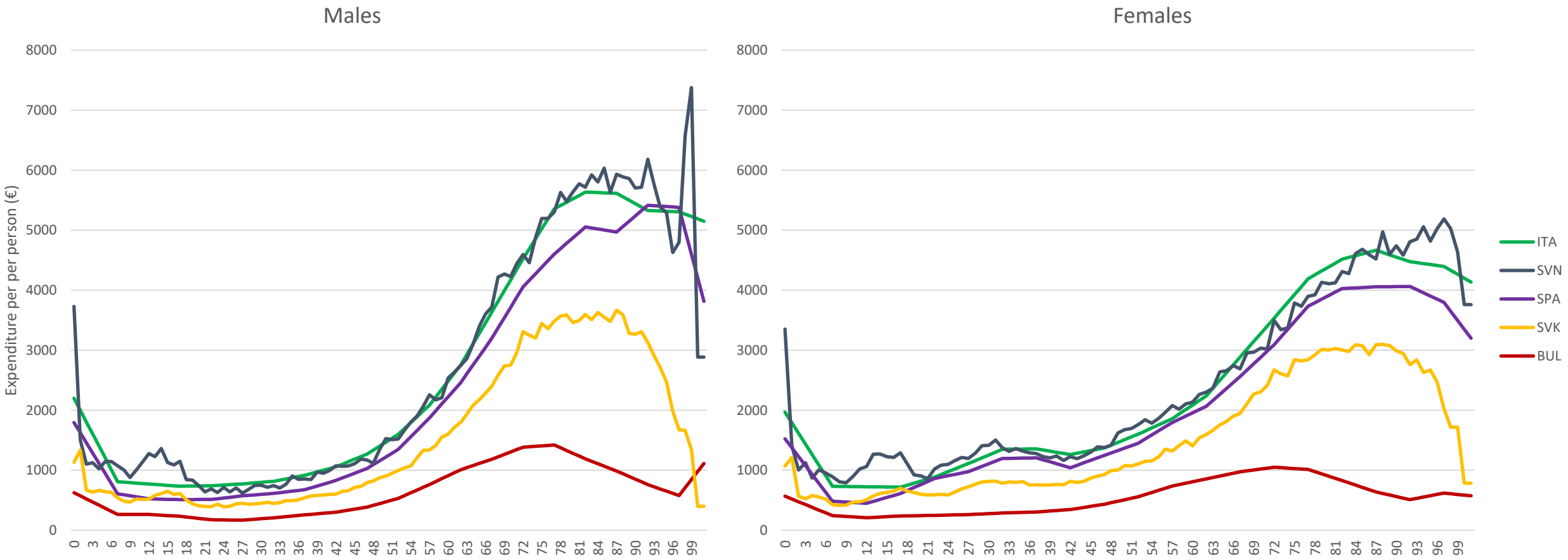
- How much do countries spend on health now?
- How much does health spending increase as people age?
- How do countries raise revenues for health?

(related question) What will happen if there are financing gaps?

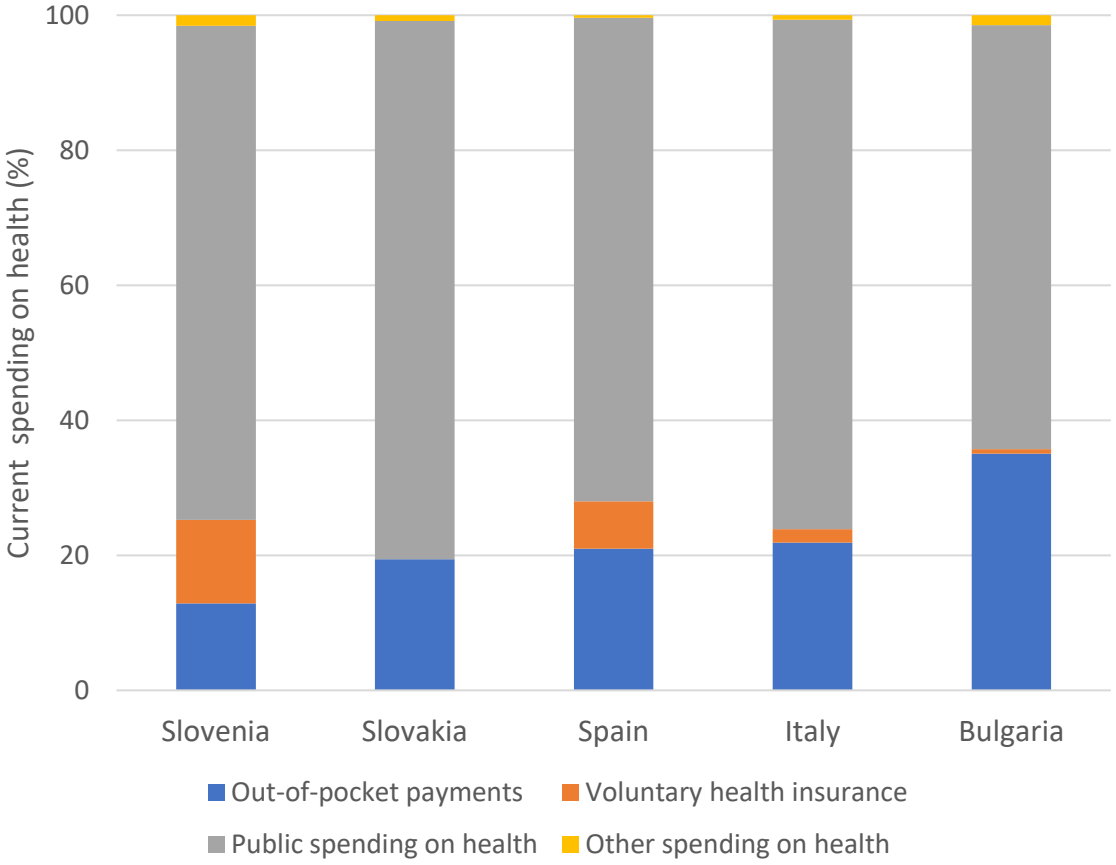
Will population ageing make health financing “unsustainable”?

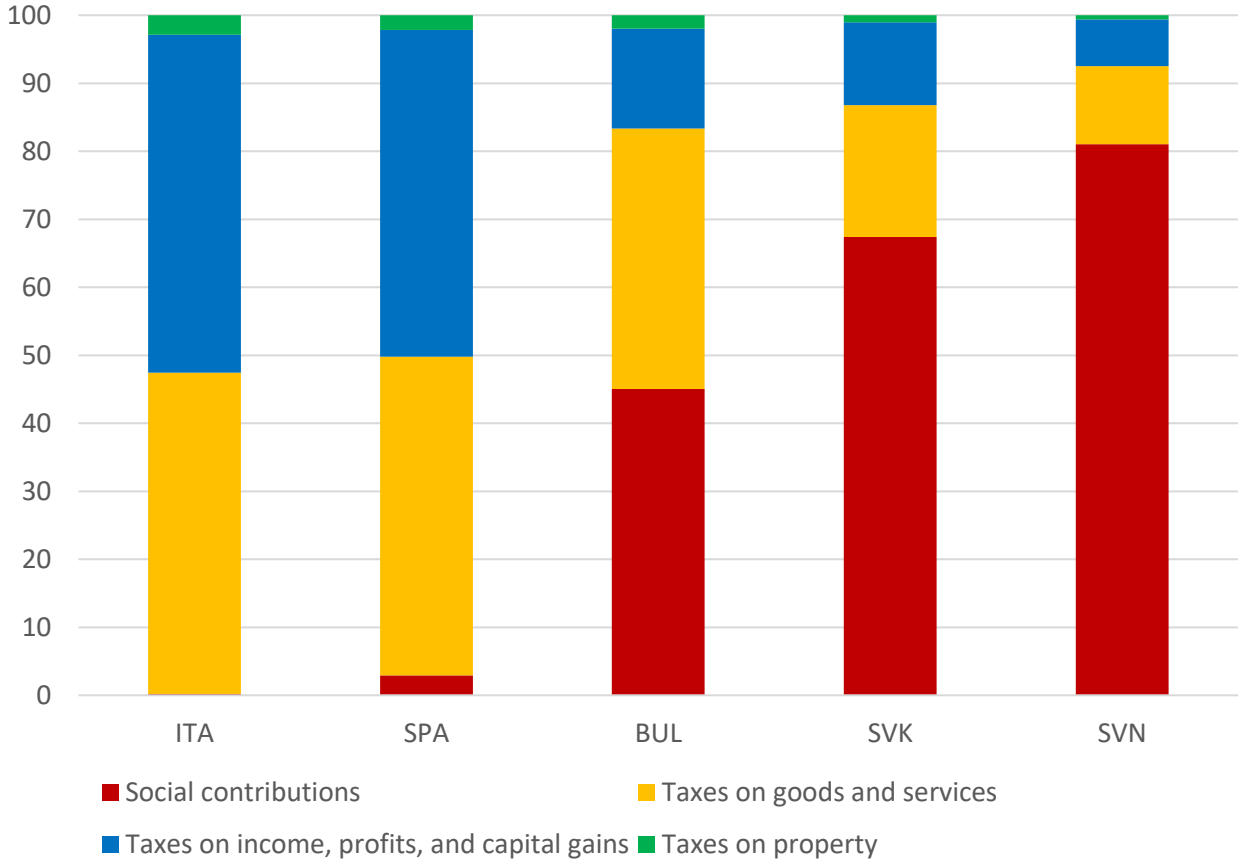


Per person health spending tends to increase with age in EU countries…



Countries differ considerably in where the money comes from…





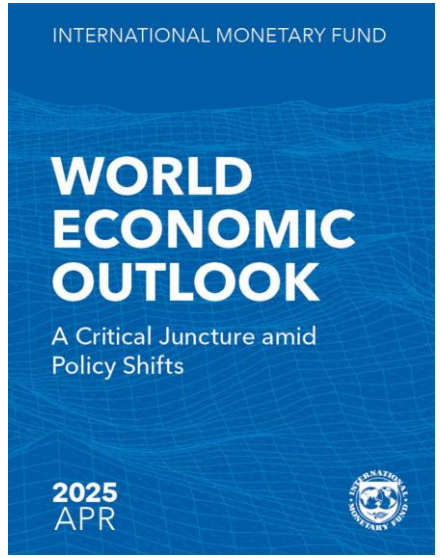
What is the Population Ageing financial Sustainability gap for Health Systems (PASH) simulator

- A macro-level simulation tool (not a forecasting tool!) to understand (primarily) how population ageing affects health system revenues and expenditures

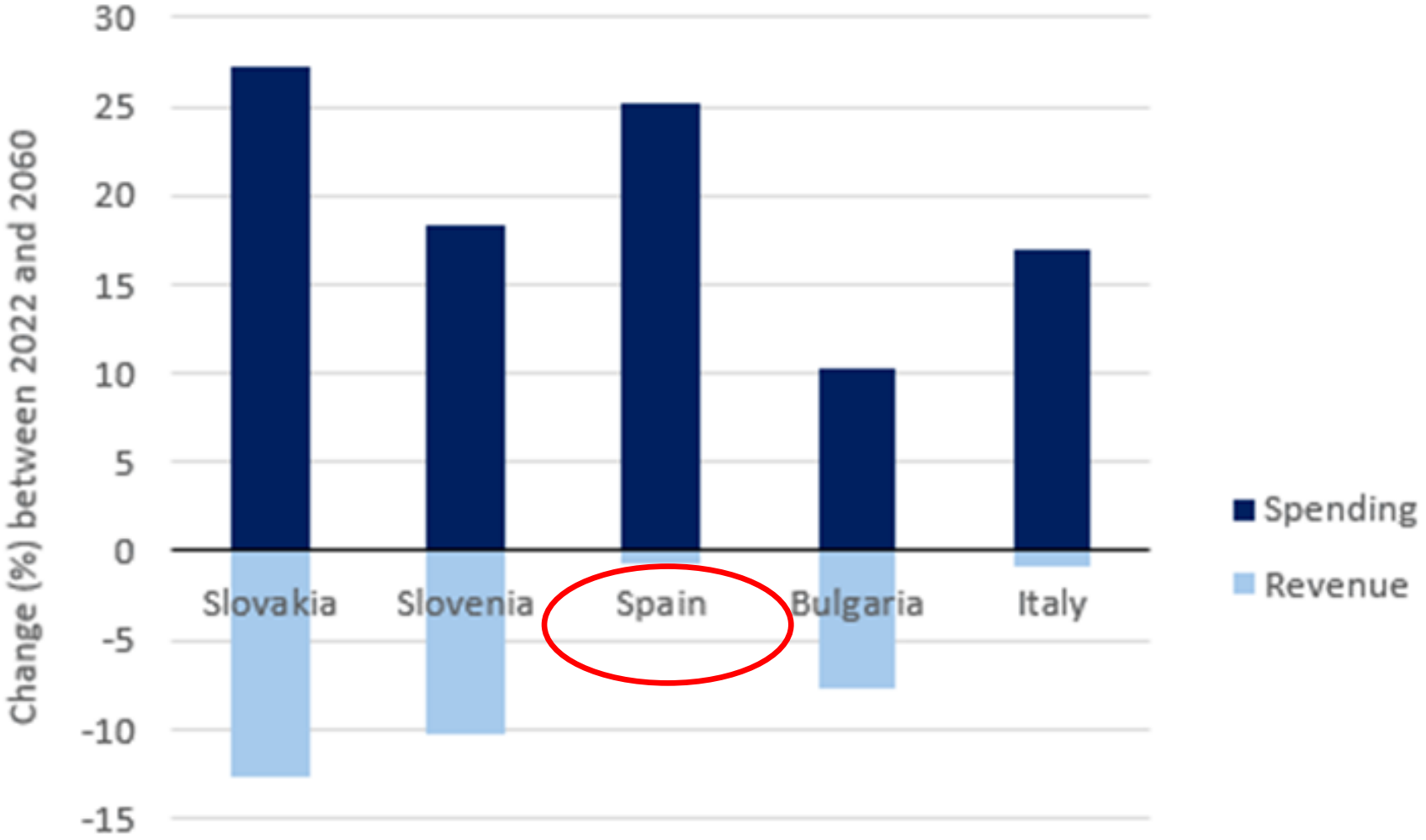
- A tool for transparently considering what happens if the way health systems raise revenue and spend stays the same forever (ie not a black box approach to guessing the future)

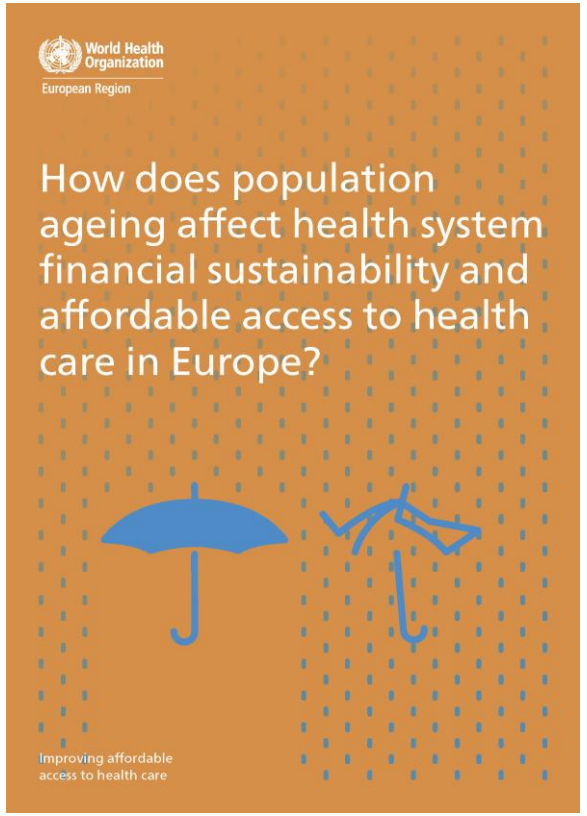
Why did we create this?

1. To challenge the idea that ageing populations will bankrupt health systems
2. To show that financial sustainability is not only achieved through expenditure cuts (there is a revenue side to the equation)
3. To explore the implications of different policy choices related to expenditures and revenues

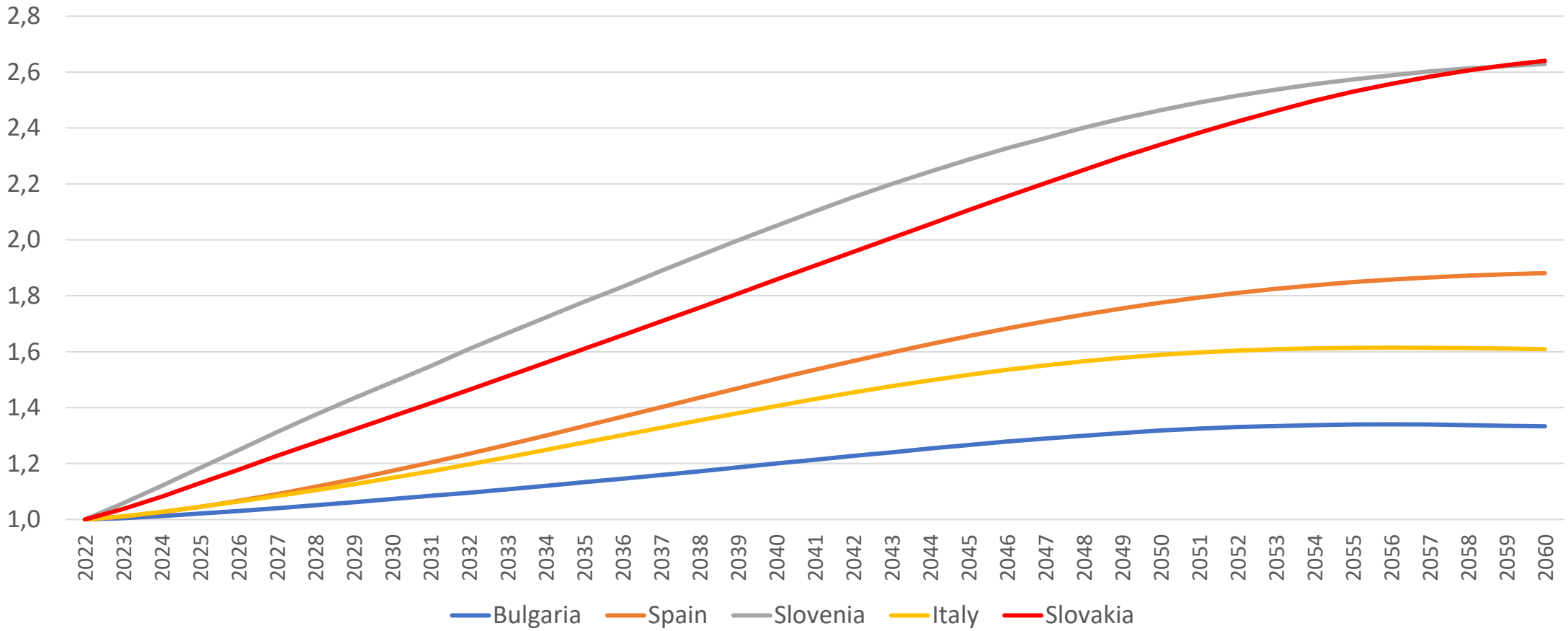


PASH for 5 countries:
why do the results look the way they do?

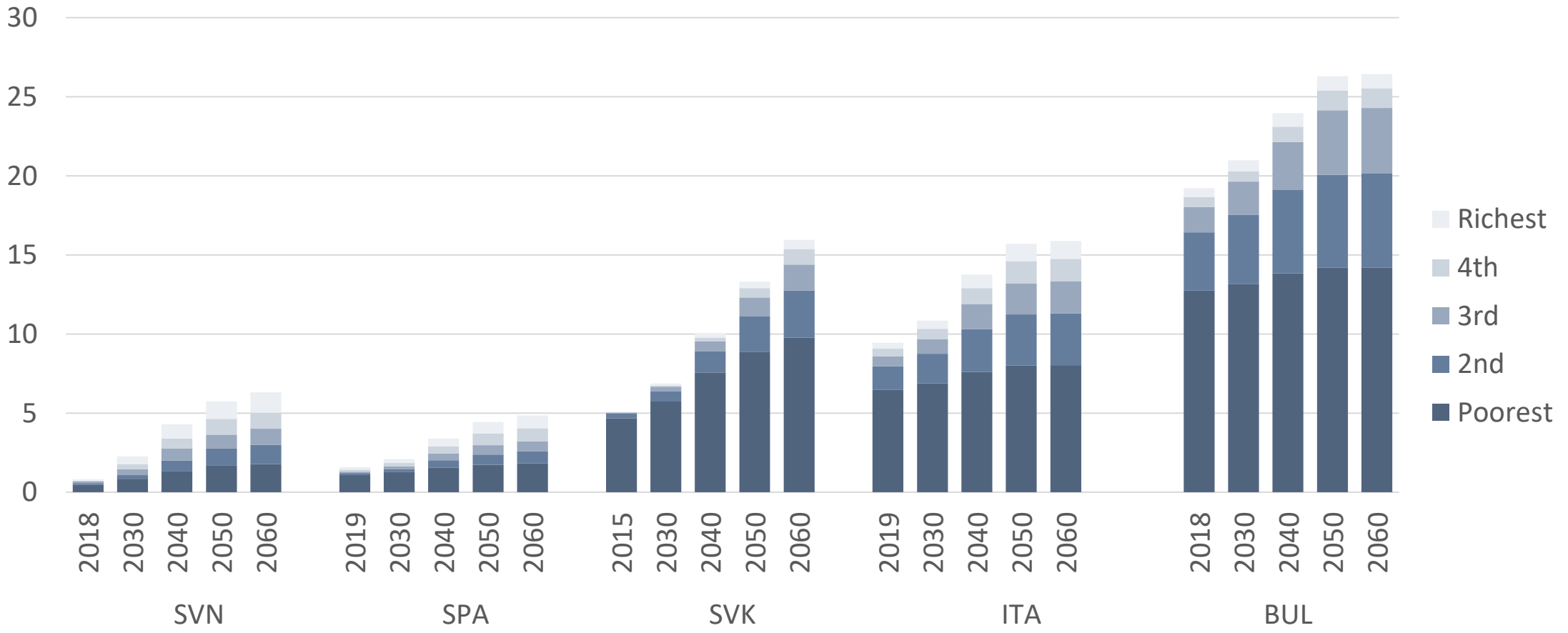




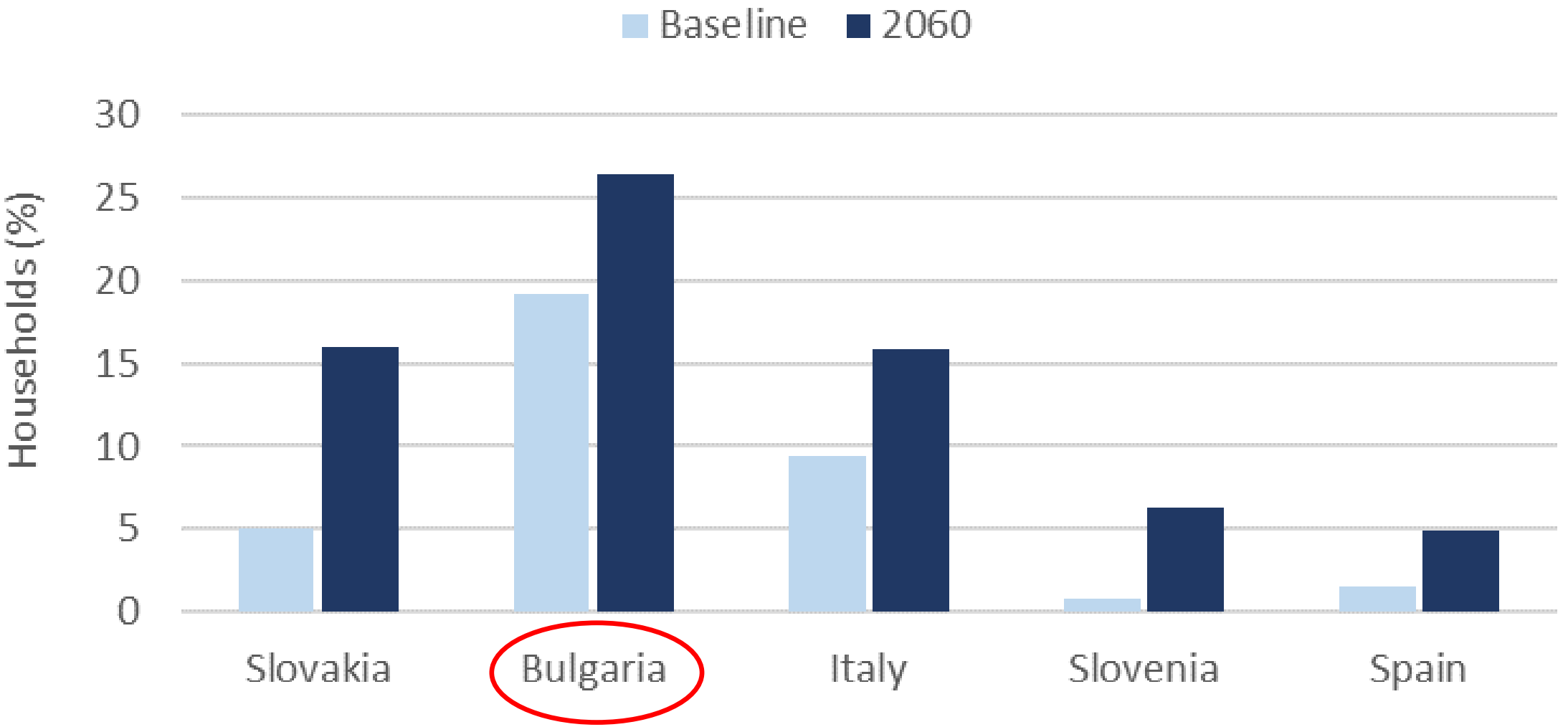
By how much would OOPs have to increase to fill the financing gap due to ageing?



Catastrophic spending through 2060 as populations age



Change in catastrophic spending by 2060

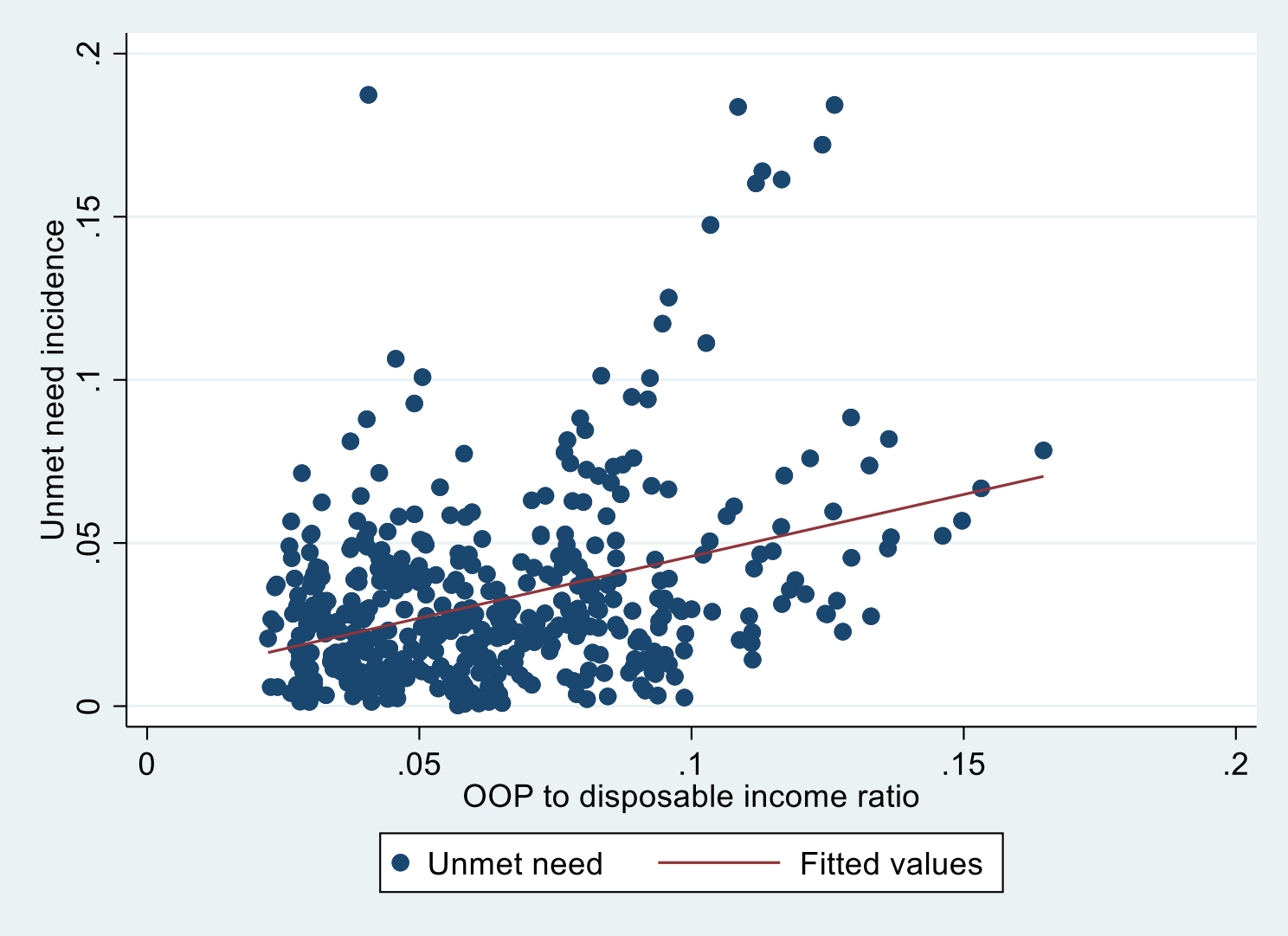


What if people *don't* use health services because health care is too expensive OOP?

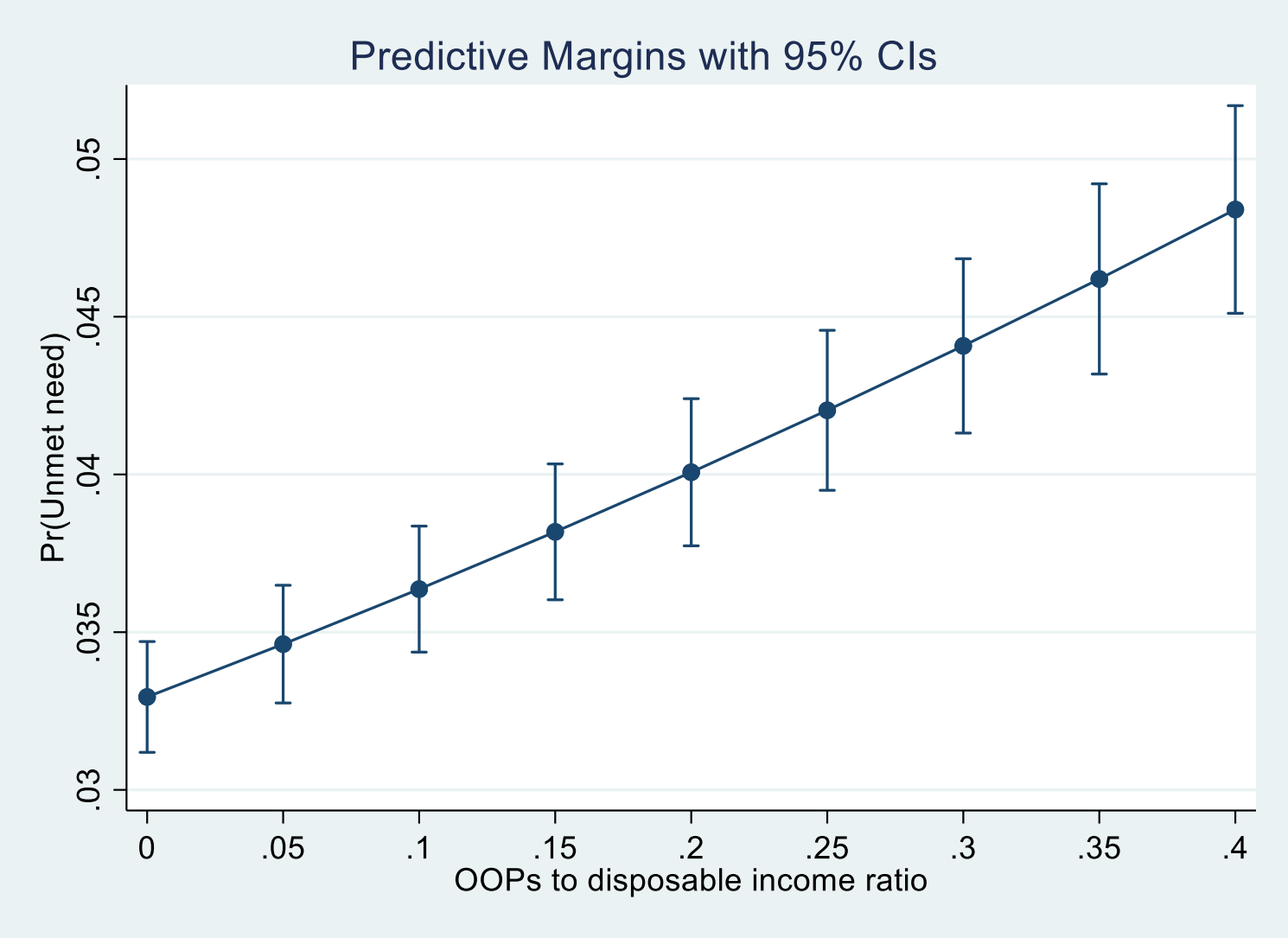
- Some people will decide not to use health services if OOP requirements change… can we quantify how many?
- EU-SILC for 32 countries from 2004–2024 (over 5 million usable observations)
- Estimate relationship between OOP spending at national level relative to disposable income

$$P(UnmetNeed_{i,c,t}=1)=\Phi(\beta 0+\mathbf{\beta 1OOPtoInc_{i,c,t}}+\beta 2GoodHealth_{i,c,t}+\beta 3AnyChronic_{i,c,t}+\beta 4ActivityLimit_{i,c,t}+\beta 5HHSize_{i,c,t}t+\beta 6ActivityStatus_{i,c,t}+\beta 7UrbanRural_{i,c,t}+\beta 8Marital_{i,c,t}+\beta 9Age_{i,c,t}+\beta 10Age^2_{i,c,t}+\beta 11Sex_{i,c,t}+\gamma_c+\delta_t)$$

OOP per person to individual level disposable income per person against country-year incidence of unmet need



How does unmet need change as OOP requirements increase (from probit model)?



What would be the effect of the ageing-related financing gap in Spain?

Reminder: 1.88x more OOP spending by 2060 to fill the gap

Baseline average unmet need in Spain: 1.8% [95% CI 0.0179- 0.0182]

Predicted unmet need with more OOP spending: 2.3% [95% CI 0.0228-0.0231]

Relative increase: ~127.5%

An illustration of the importance of coverage policies:

What if Bulgaria had an Austrian-styled cap on co-payments?

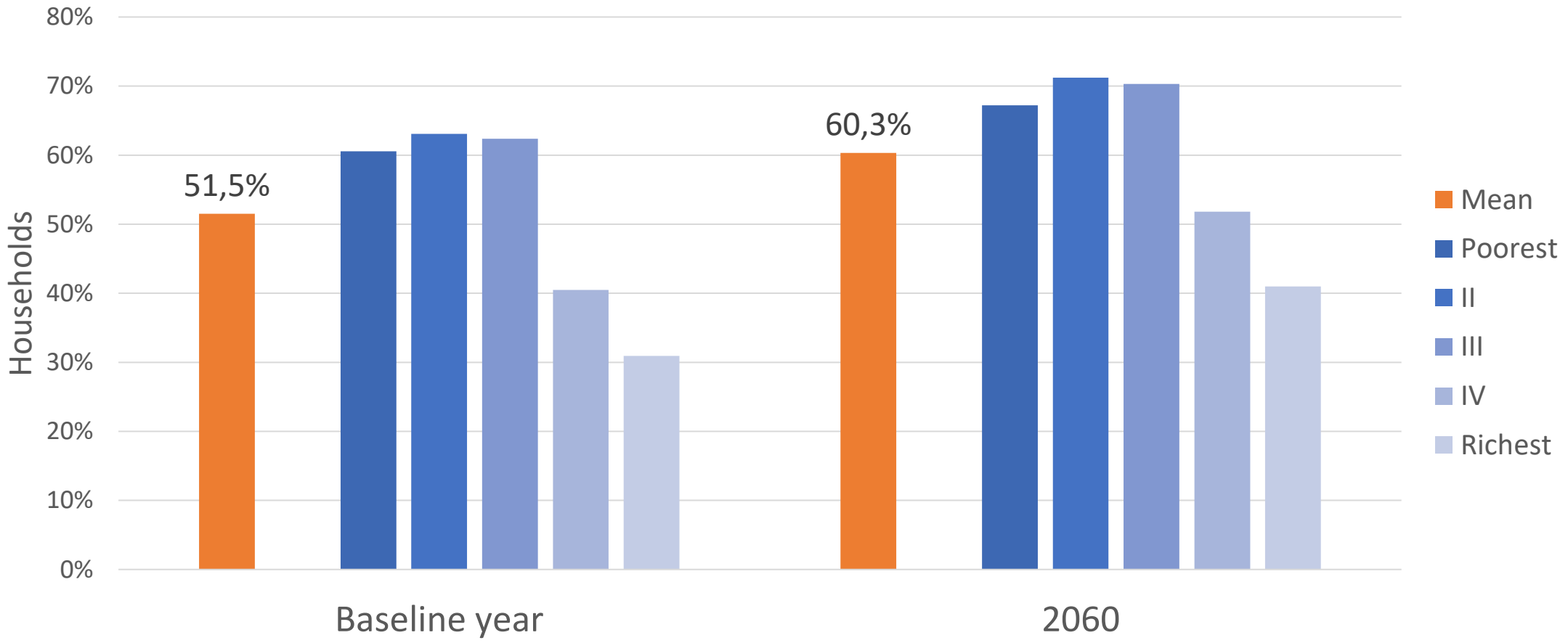
How does the cap work in Austria?

- Co-payments for outpatient prescribed medicines are automatically capped at 2% of net annual income

- There are also caps on other co-payments that vary by SHI fund (but we do not explore these here!)

- We assume that 50% of each household's medicines spending are for prescriptions (and the other 50% is OTC and not subject to a cap)

How many households *would have* exceeded an Austrian-styled cap?



What would catastrophic spending incidence have been like if Bulgaria had an Austrian-styled cap in 2060?