

# Sustainable old-age security core indicators



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# Sustainability of pension systems

## Monitoring perspectives

- Related to demography and related to the pension systems
- Microeconomic vs. macroeconomic level
- Current vs. future outlook



# Demographic indicators

- Relatively easy to compare internationally
- Problems
  - Definition of working age and post-working age - constant or increasing in time?
  - Differences in the health status of the population can reduce the comparability



## Demographic indicators

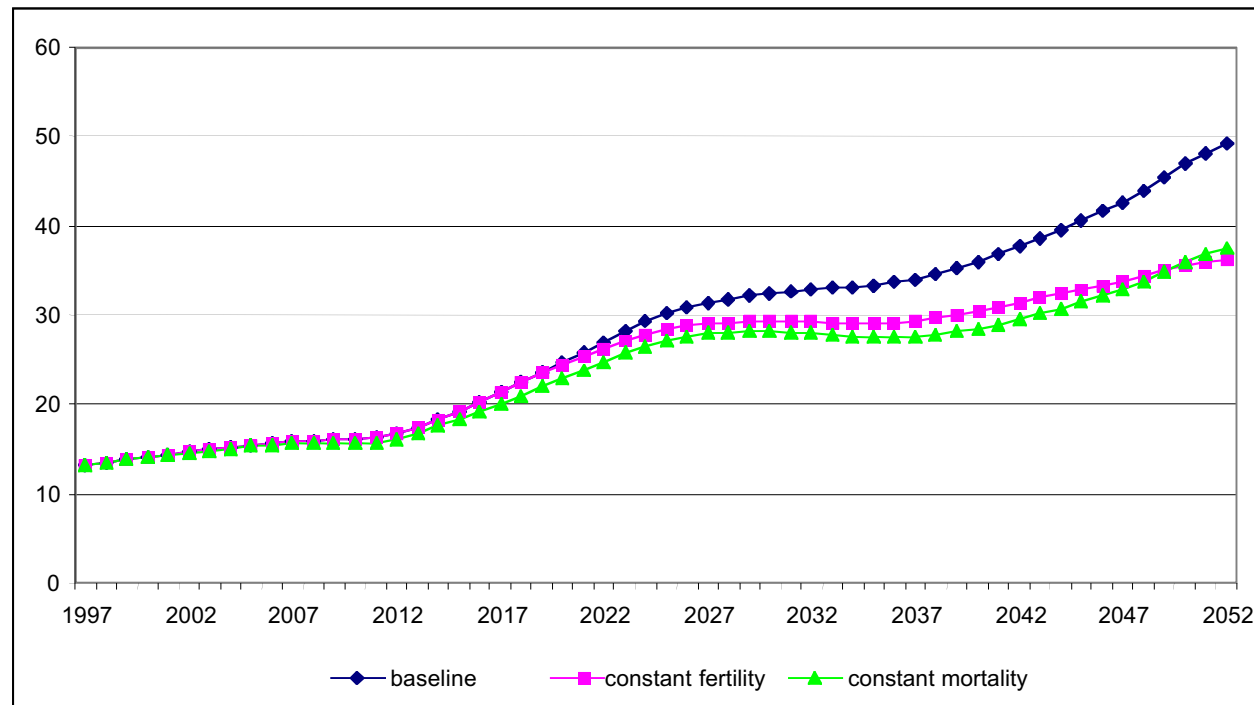
# Old-age dependency ratio

- Both current and future outlook
- How affected by:
  - changes in fertility
  - changes in mortality

# Demographic indicators

## Old-age dependency ratio

- Below: example of Polish population





## Demographic indicators

# Life expectancy

- Measured at retirement age
- Both current and future looking



# Pension system indicators

- More difficult to compare
  - all pension systems are unique
- Comparison simpler when discussing the number of beneficiaries or insured
- The most difficult: comparison of various financial indicators



# Pension system indicators

## System dependency ratio

### ■ Macro level

- Ratio between the number of pensioners and the number of covered workers
- As a rule, higher than demographic dependency ratio
- Difference between the two - measure of the system's 'efficiency'

### ■ Micro level

- Ratio between period of work and period of receiving benefit
- Does not take into account the change in the relative size of generations



## Pension system indicators

# Pension expenditure as % of GDP

- Can be both current and future-looking
- Focuses on necessary annual spending
- Problems:
  - defining projection horizon
  - too much focus is put on the last year of projection horizon



## Pension system indicators

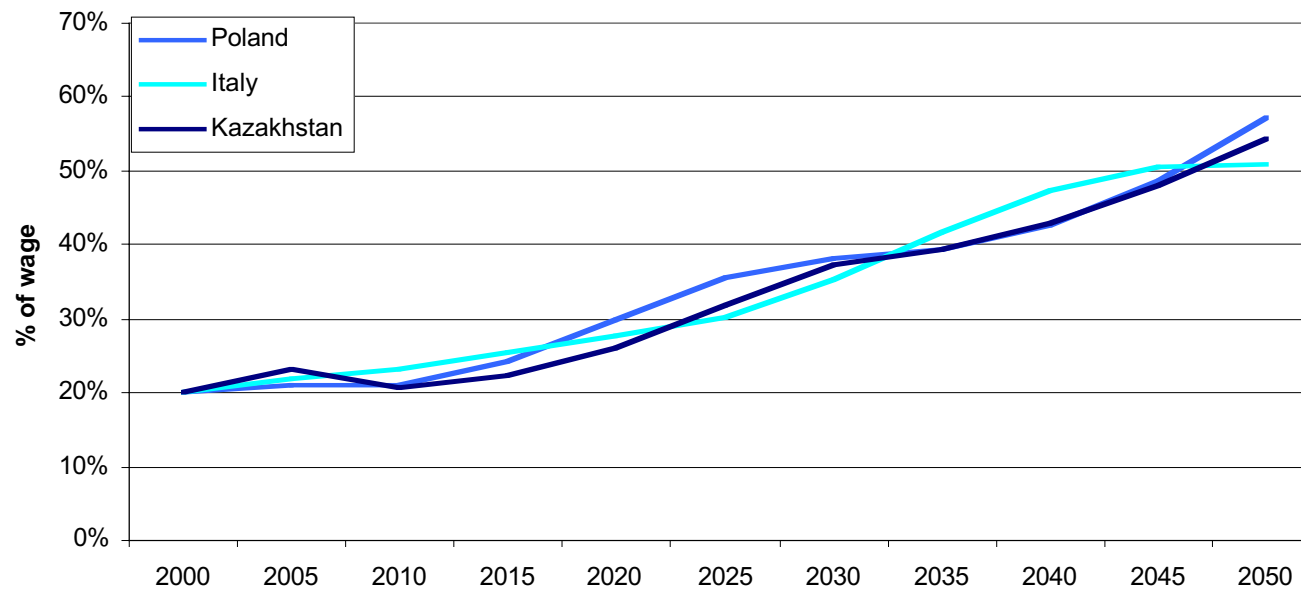
# Pension debt

- Sum of explicit and implicit pension debt
- Problems:
  - definition of IPD
  - methods of assessment
  - again: comparability issue is quite important

# Pension system indicators

## Necessary contribution level

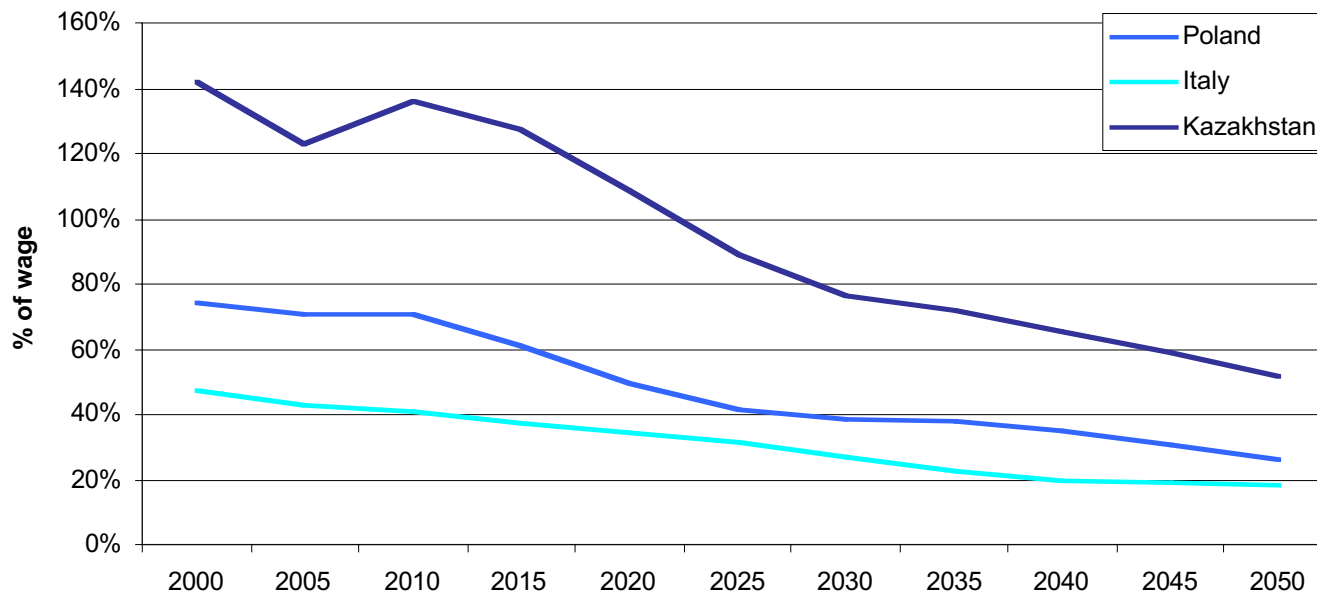
- Required to reach the fiscal balance
- Both current and future looking
- Changes depend on the dynamics of the ageing process, not the level of ageing



# Pension system indicators

## Possible replacement rates

- Required to reach the fiscal balance
- Both current and future looking
- Projected convergence in the future





## Pension system indicators

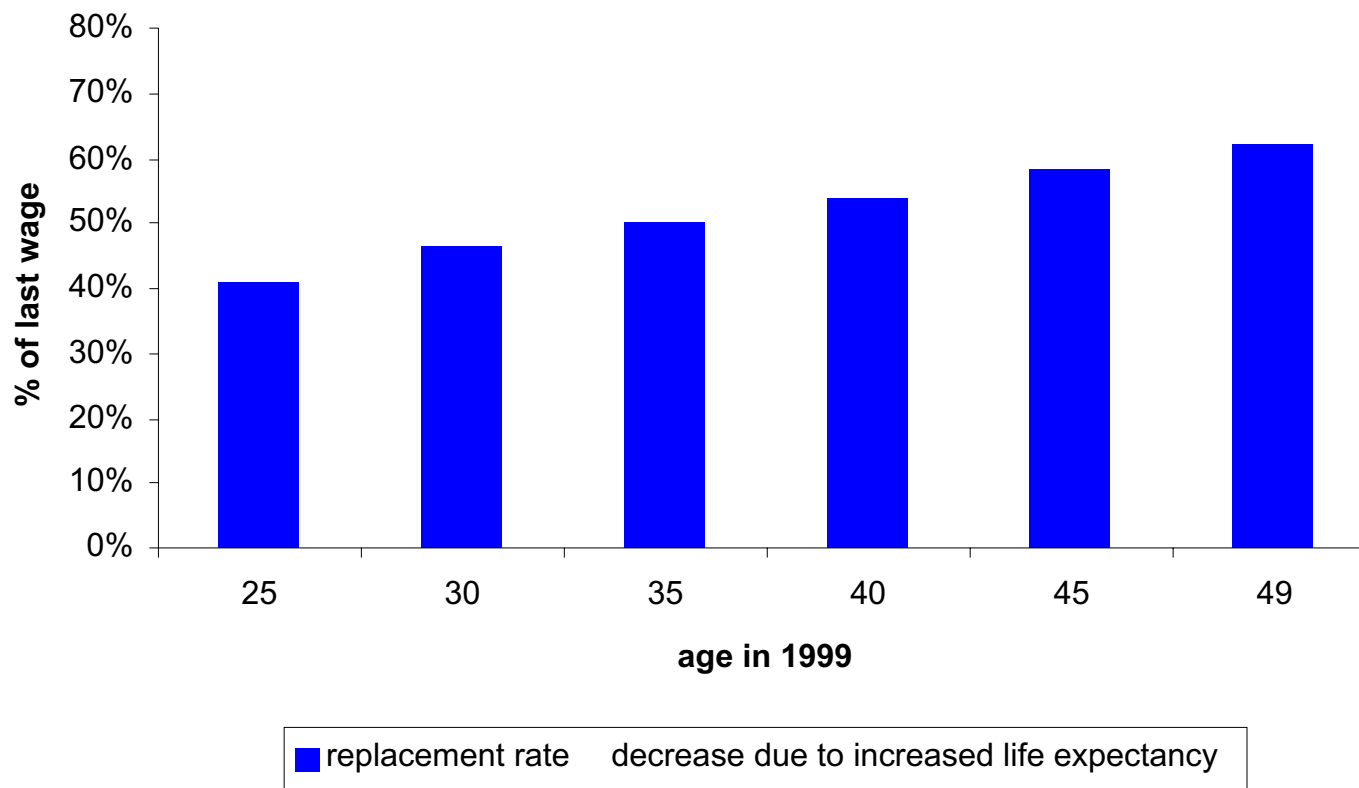
# Replacement rates - micro level

- Current and future-looking
- Interesting issues:
  - how can be affected by changes in longevity
  - build-in incentives to postpone/speed up retirement decision

# Pension system indicators

## Replacement rates - impact of longevity changes

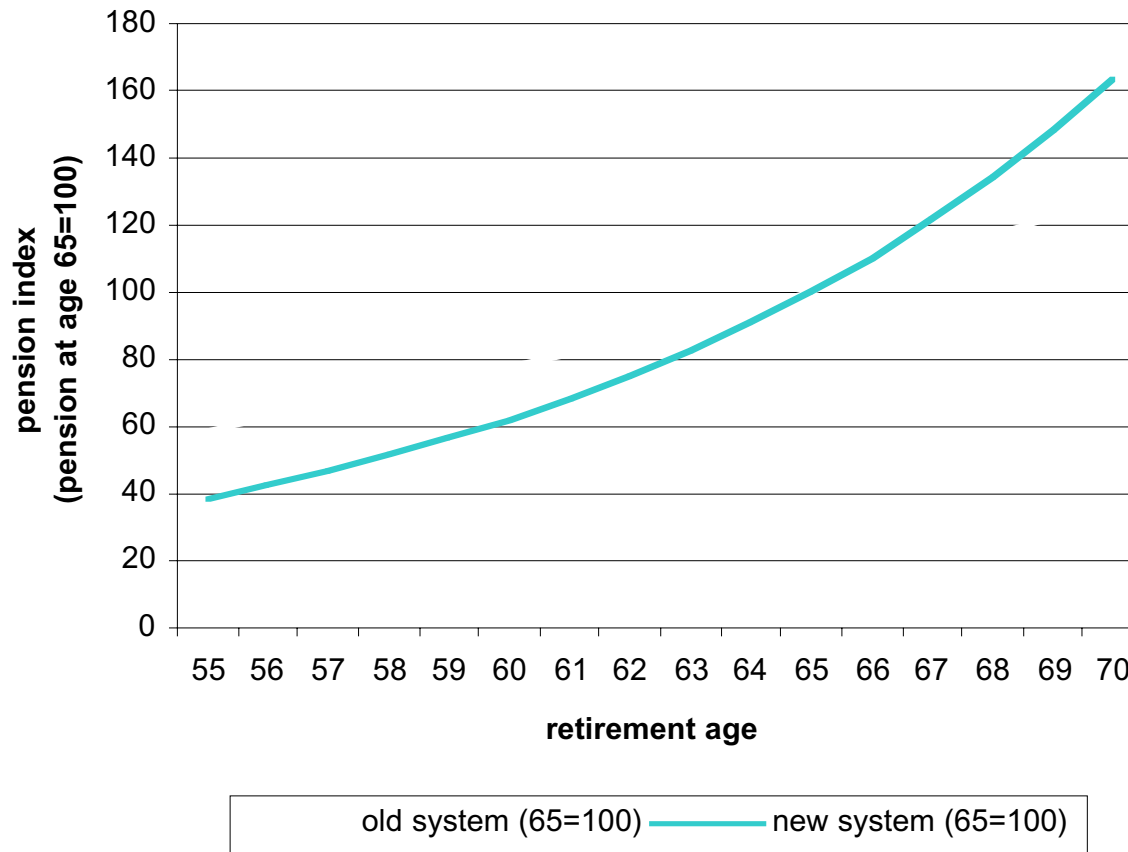
Example of the Polish pension system



# Pension system indicators

## Replacement rates - incentives to postpone retirement decisions

Example of the Polish old and new pension systems





## Conclusions

- Indicators need to be diversified
- Assessing the balance between generations
- To measure sustainability:
  - future looking
  - allowing to assess the dynamics of the process
  - measuring not only outcomes, but also incentives