Social security pension schemes in ESA 2010 – Methodological considerations

Pension Expert Group Meeting

Eurostat

Luxembourg, 5 April, 2019

Structure of presentation

- Actuarial Association of Europe
- EU reporting frameworks of pension obligations
  - ✓ Ageing Working Group of the Economic Policy Committee (EPC-AWG)
  - ✓ Eurostat ESA 2010
- Methodological approach: closed versus open-group
- AAE survey on social security pension system typology and methodological aspects of Table 29 pension exercise
- Eurostat 2017 results for 1st pillar of pension system
- Key methodological considerations and impact on Eurostat results
- The contribution of social security actuaries

Actuarial Association of Europe (AAE)

- The AAE was established in 1978, originally as the Groupe Consultatif Actuariel Européen
- The AAE currently has 36 member associations in 35 European countries, representing over 23,000 actuaries
- Its purpose is to provide advice and opinions to the various organisations of the European Union on actuarial issues in European legislation
- Advice and comments provided by the AAE on behalf of the European actuarial profession are totally independent of industry interests

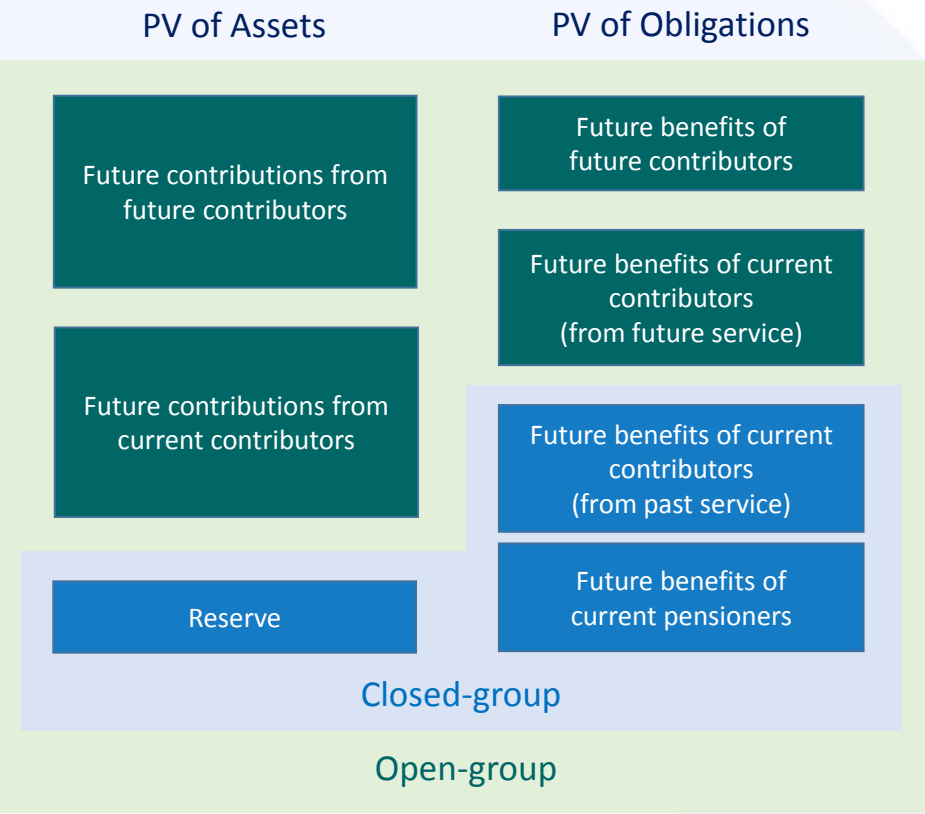
EU reporting frameworks – EPC-AWG

- A well-established EU framework: since 2001
- Long-term public pension expenditure projections
  - ✓ Based on EU commonly agreed methodologies and assumptions
  - ✓ Calculations on an open-group basis
- Analysis of the sustainability of public finances with respect to age-related expenditure, including pensions
- Contributory and non-contributory Social Security Pension Schemes (SSPS) are included
- Reporting is undertaken every 3 years
- Results are presented in the Ageing Report and Fiscal Sustainability Report

EU reporting frameworks – Eurostat ESA 2010

- A newly-established EU framework: first transmission of pension data by MS in December 2017
- Pension obligations of SSPS are reported in the supplementary Table 29
  - ✓ Calculations on the Accrued-to-Date Liability (ADL) method
  - ✓ Broadly, based on the EPC-AWG assumptions
- ADL method does not allow the assessment of the financial sustainability of SSPS
- Table 29 provides a tool for economic analysis of households' pension wealth across MS
- Non-contributory SSPS are in principle excluded
- Reporting is undertaken every three years

Methodological approach:
Closed versus open-group



Closed-group

- It only includes current pensioners and contributors
- No future entrants are taken into account
- It ignores future contributions (largest asset)
- No future accrual of new benefits
- It provides incomplete financial picture of a SSPS
- It only reflects the performance of a SSPS in the past

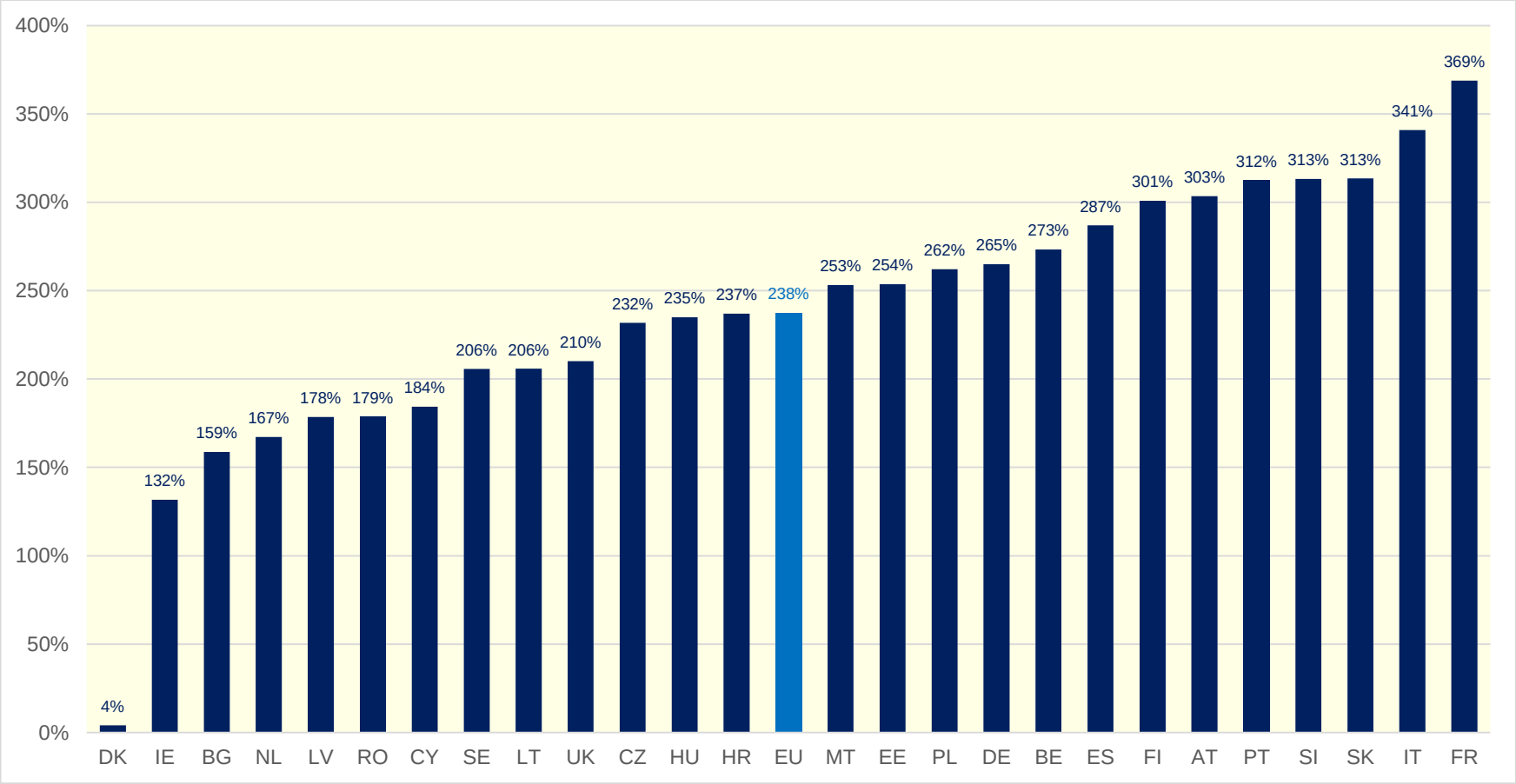
Open-group

- It includes current pensioners and contributors as well as future contributors
- All future contributions are considered
- All future benefits of current pensioners and contributors (past and future service) and future contributors are considered
- It provides a complete and forward-looking financial picture of a SSPS

AAE survey on social security pension schemes covered under ESA 2010

- Data collected from 24 MS (plus NO and CH) on:
  - ✓ Different types of social security pension systems in the EU
  - ✓ Main methodological aspects applied in Table 29 pension exercise
- Key aim
  - ✓ Analyse the implications of different types of social security pension systems and using different methodological approaches
  - ✓ Address the potential issues associated with the communication and interpretation of the results
- Conducted by AAE
  - ✓ Task force on Methodology and Projections of the Social Security Sub-committee, part of the Pensions Committee
  - ✓ Assuring the confidentiality of survey responses

Eurostat 2017 results: ADL as % of GDP in 2015 (1st pillar[1] of pension system)



Source: Eurostat

[1] The 1st pillar of the national pension system refers to the contributory social security pension schemes (SSPS) which are recorded under column H of Table 29 ("Social Security Pension Schemes"), as well as under column G of Table 29 ("Classified in general government") in Member States where a separate SSPS exists for government employees

Key methodological considerations and impact on Eurostat results

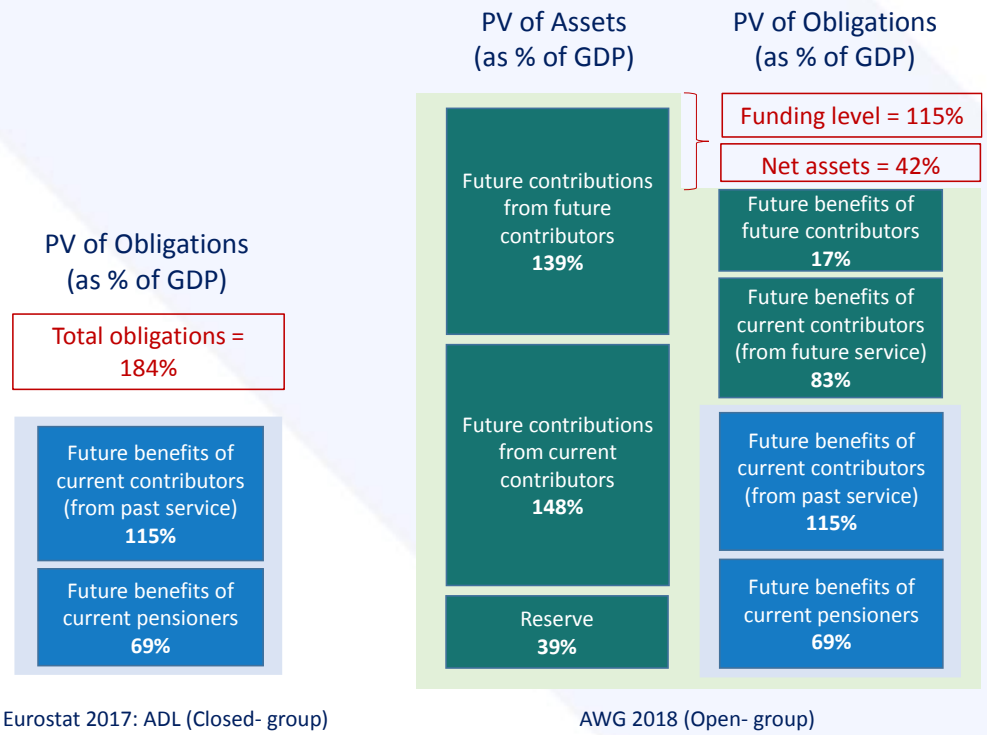
1. Closed versus open-group approach
2. Treatment of minimum income provision
3. Type of national pension model
4. Assumptions
5. Calculations approach: Pro-rata basis factor
6. Treatment of non-employment credits

Key methodological considerations and impact on Eurostat results –
1. Closed versus open-group approach

- SSPS typically operate on a PAYG basis
  - ✓ Implicit social contracts: current pensioners' benefits are covered by contributions of current contributors
- Open-group approach
  - ✓ Explicitly accounts for the intergenerational societal commitments

Illustration: Cyprus Social Insurance Scheme (SIS) –

Eurostat 2017: ADL versus EPC-AWG 2018 (open-group)

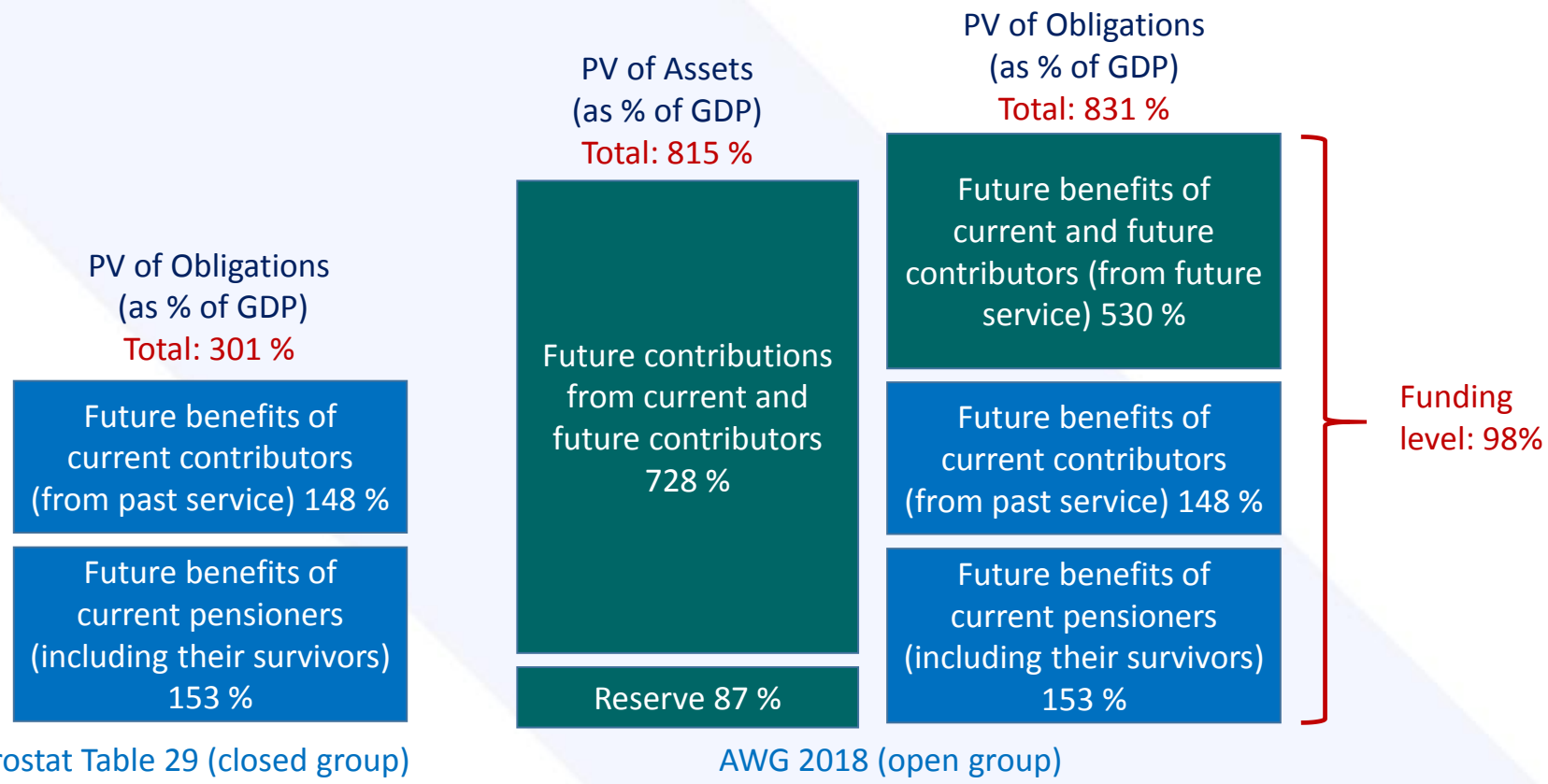


Source: Actuarial Unit, Ministry of Labour, Welfare and Social Insurance

- ADL figure does not allow for assessing long-term financial sustainability of Cyprus SIS
- Cyprus SIS is financially sustainable with a funding level of 115% under open-group approach

Illustration: Earnings-related pension scheme in Finland -

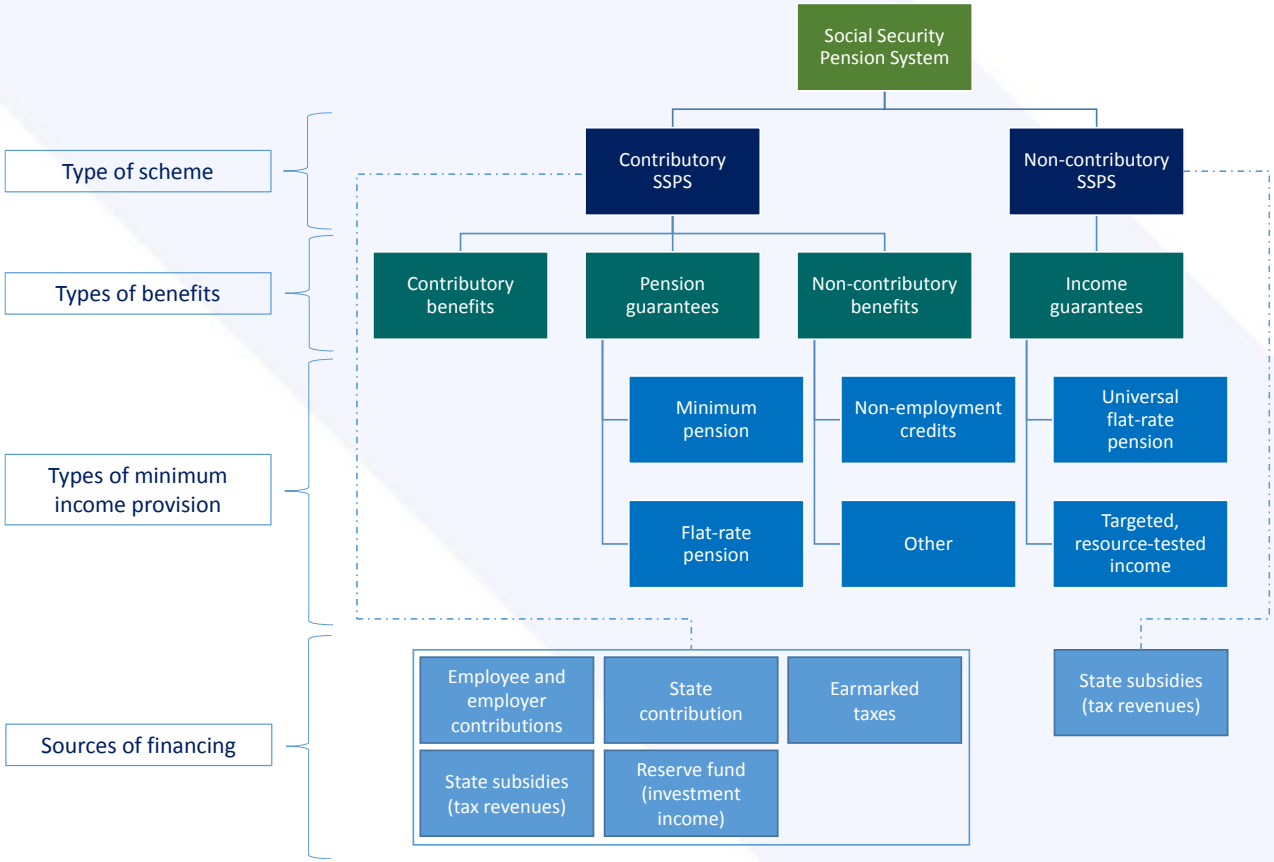
Eurostat 2017: ADL versus EPC-AWG 2018 (open-group)



Source: Finish Centre for Pensions

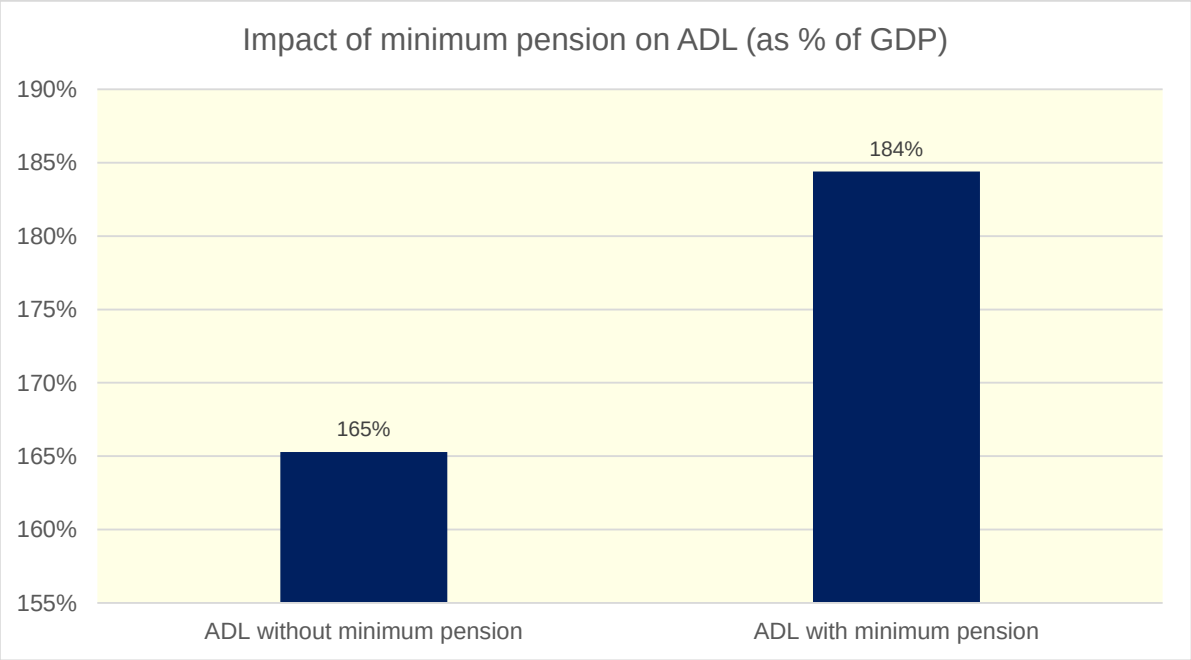
Key methodological considerations and impact on Eurostat results –

2. Treatment of minimum income provision



- Contributory SSPS are in principle covered, while non-contributory SSPS are not
- AAE survey (24 MS)
  - ✓ 55 contributory SSPS covered
  - ✓ 14 non-contributory SSPS are not (only under EPC-AWG)
- Pension guarantees (contributory SSPS) and universal flat-rate pension (non-contributory SSPS) have the same objective but are treated differently
- MS which provide significant levels of minimum income provision through non-contributory SSPS are treated more favourably

Treatment of pension guarantees –
An illustration: Cyprus SIS

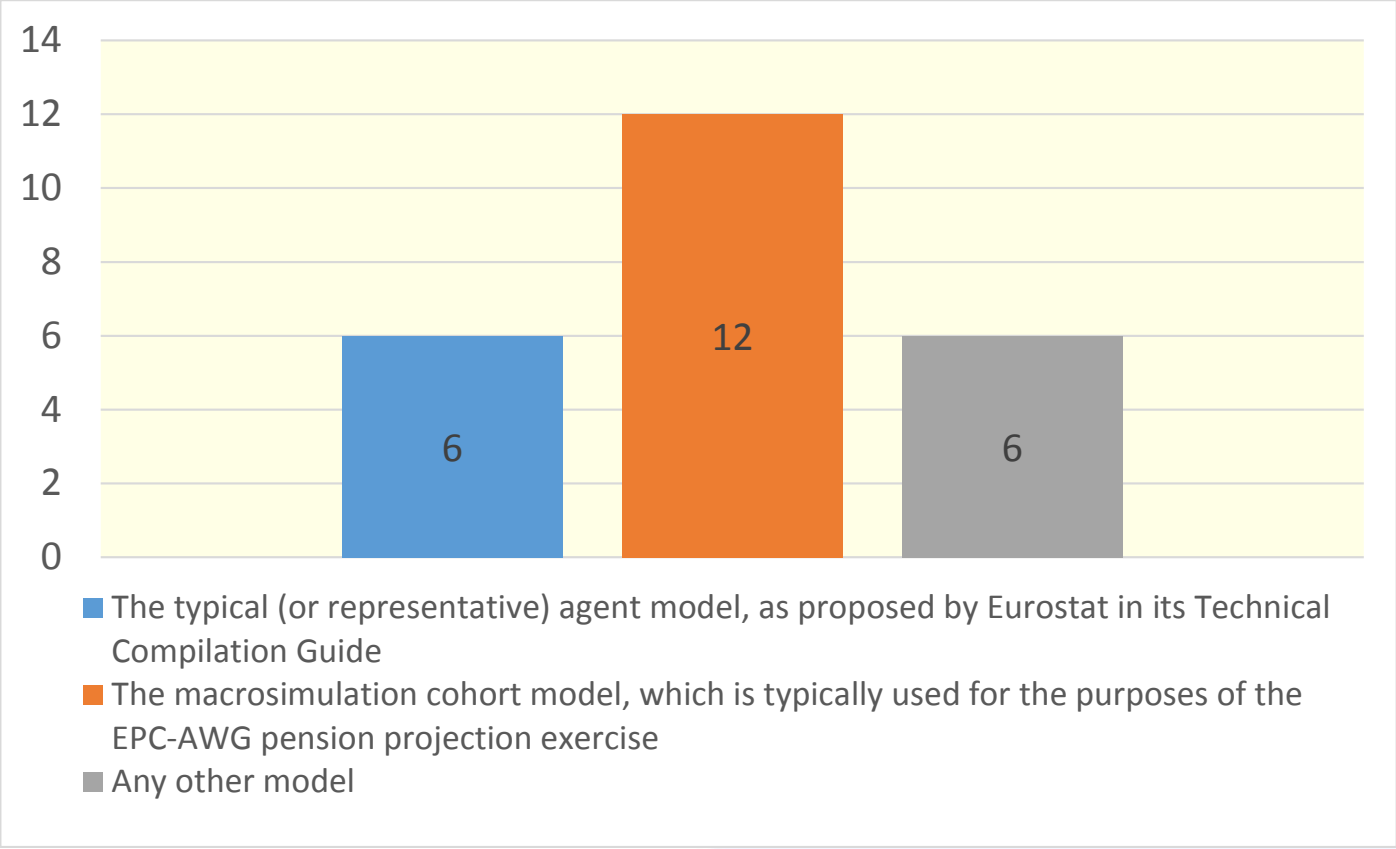


Source: Actuarial Unit, Ministry of Labour, Welfare and Social Insurance

- If Cyprus SIS minimum pension was not included in Table 29 calculations, the ADL figure would have been 10 per cent lower
  - ✓ Reduced 19 percentage points from 184 per cent to 165 per cent of GDP

Key methodological considerations and impact on Eurostat results –

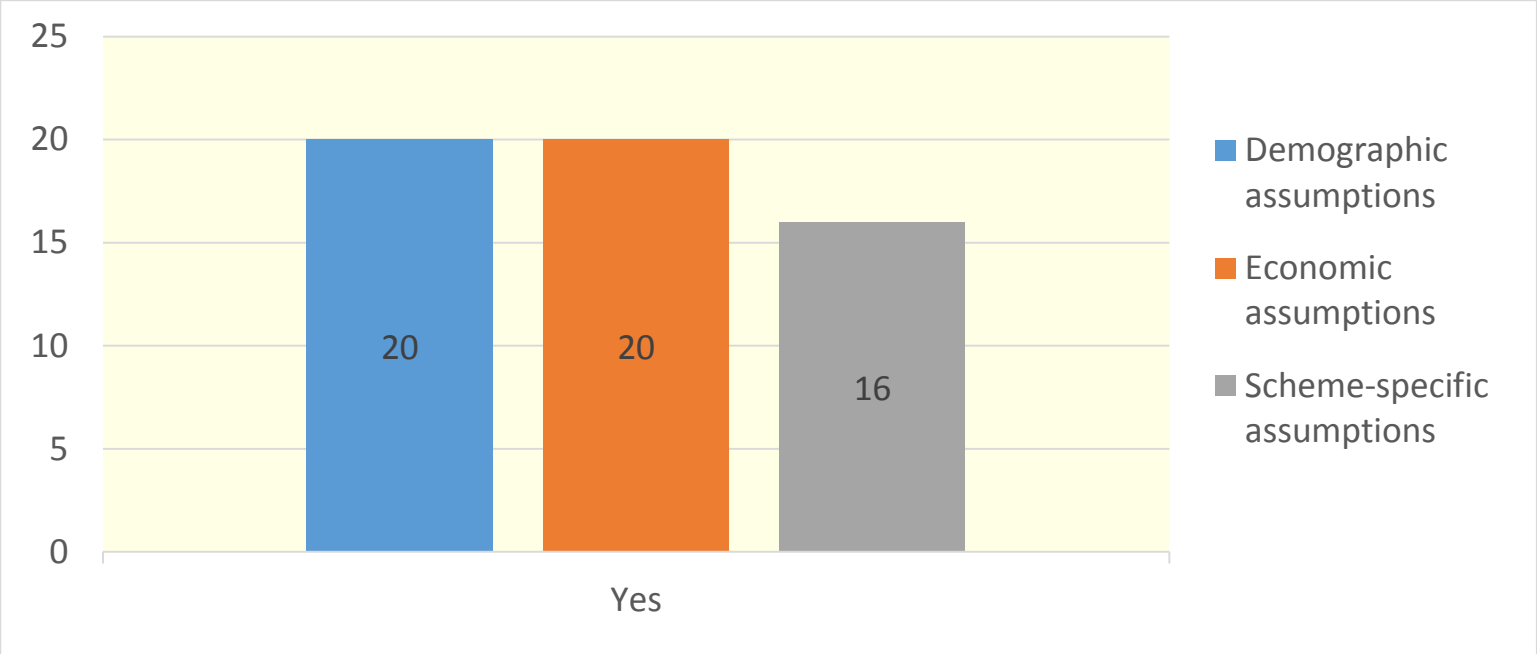
3. Type of national pension model used



Source: AAE survey – 24 responses

Key methodological considerations and impact on Eurostat results –

4. Are the Table 29 assumptions the same with those of EPC-AWG?

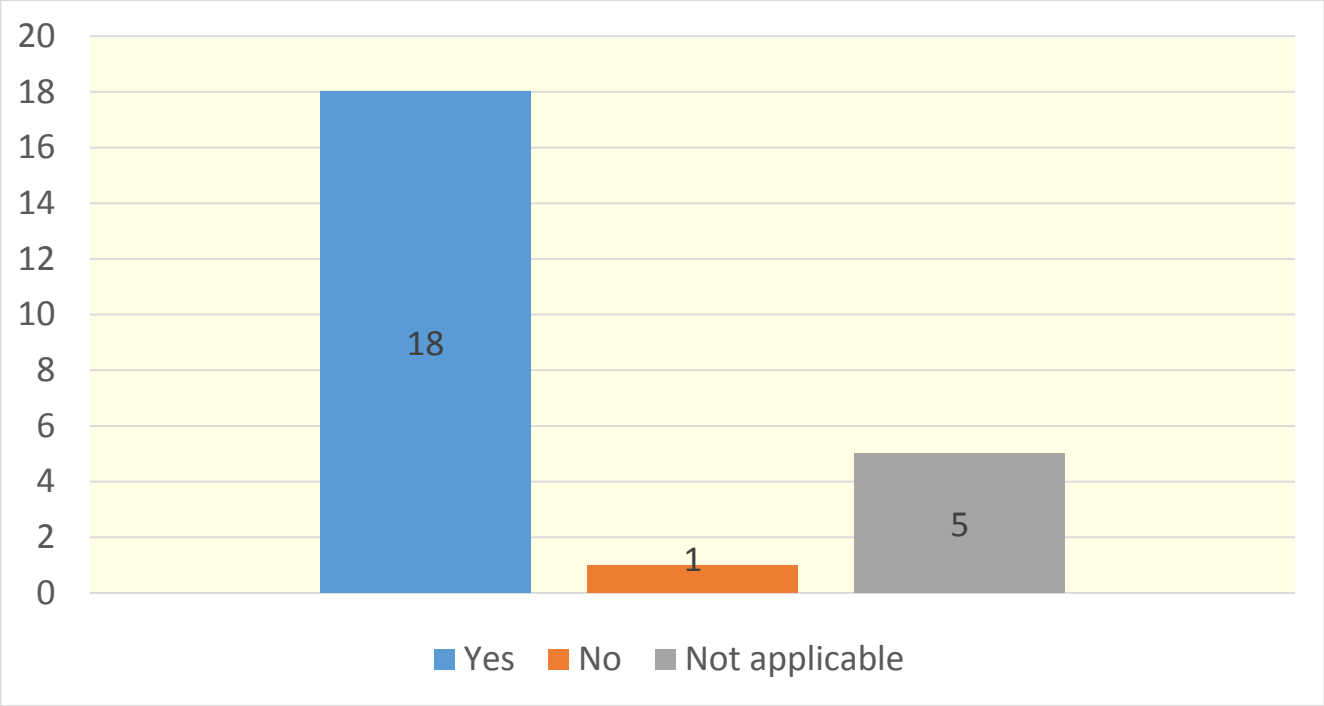


Source: AAE survey – 23 responses

- Broadly the same for economic and demographic assumptions
  - ✓ Some differentiation for scheme-specific assumptions
- Deviation from EPC-AWG assumptions on the key economic assumption of wage increase
  - ✓ Choosing between Projected Benefit Obligations (PBO) and Accumulated Benefit Obligations (ABO)
  - ✓ ADL figure for current contributors under ABO could be 20%-30% lower than that of PBO

Key methodological considerations and impact on Eurostat results –

5. Calculations approach: was the pro-rata basis factor applied to calculate the ADL figures?

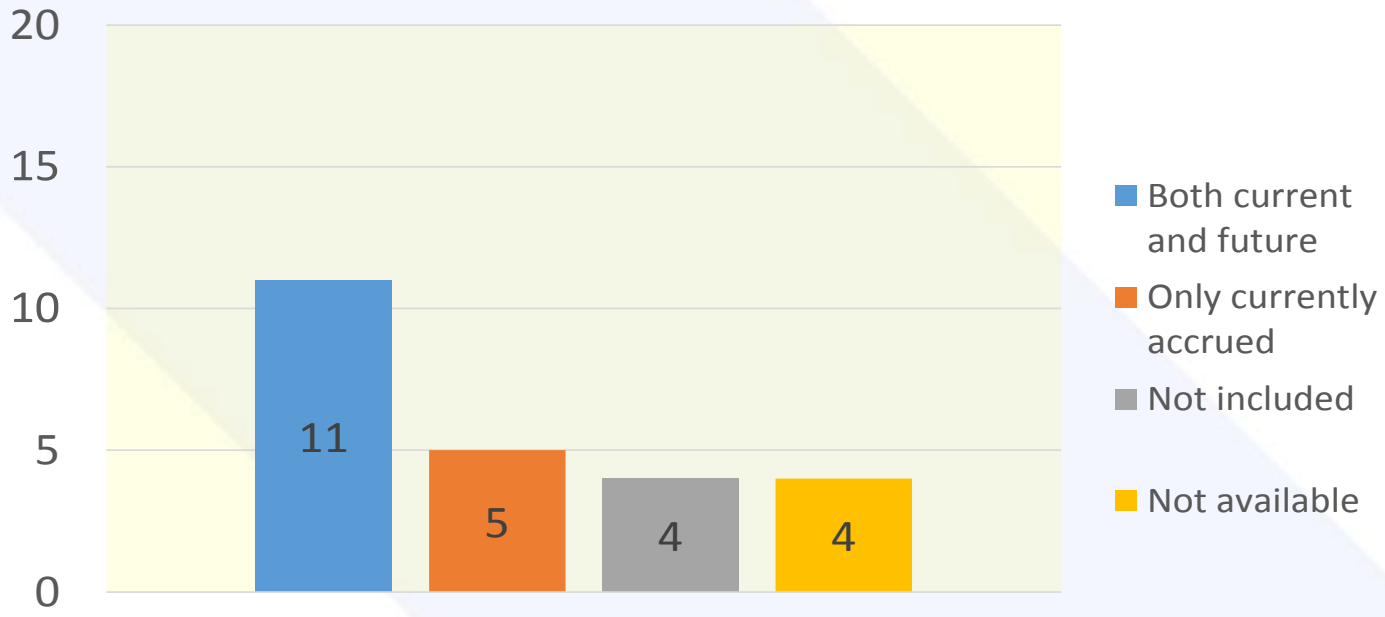


Source: AAE survey – 24 responses

- 18 MS – yes: followed the pro-rata basis factor
- 5 MS - not applicable: in principle, due to the type of SSPS

Key methodological considerations and impact on Eurostat results –

6. Were the non-employment credits, such as childcare and invalidity, included in ADL calculation?



Source: AAE survey – 24 responses

- Different approaches for accounting credited years were adopted by MS
  - ✓ 11 MS – both current and future: computed and recorded at the year of retirement
  - ✓ 5 MS - only current: recorded as they occur
- Non-employment credits are not considered by a number of MS

The contribution of social security actuaries

1. Improvement of existing methodologies of calculating EU pension obligations
   - ✓ Key methodological issues associated with Table 29 ADL figures need to be addressed, such as treatment of redistributive features of SSPS
   - ✓ Use of appropriate measures based on sound actuarial standards and principles to properly assess the financial sustainability of contributory SSPS, taking into account financing method and types of benefits offered
2. Creation of a robust framework for effective communication and interpretation of EU pension obligation figures
   - ✓ Enabling informed decisions to be made by stakeholders
   - ✓ Minimising the risk of misinterpretation or misuse
   - ✓ Use of multiple disclosure approach in the form of balance sheets
   - ✓ Ensuring that no certain types of SSPS are promoted

References

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   AAE Discussion Paper, Brussels, March 2019

2. Stavrakis (2018) Reporting the pension obligations of social security schemes: An EU perspective. International Social Security Review 71, 3/2018, 105-123

3. The 2018 Ageing Report: Economic and Budgetary Projections for the EU Member States (2016-2070)
   Ageing Working Group of the Economic Policy Committee, Brussels, May 2018

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