Society of Actuaries in Ireland

Measuring the cost of the State's pension promises

May 2018

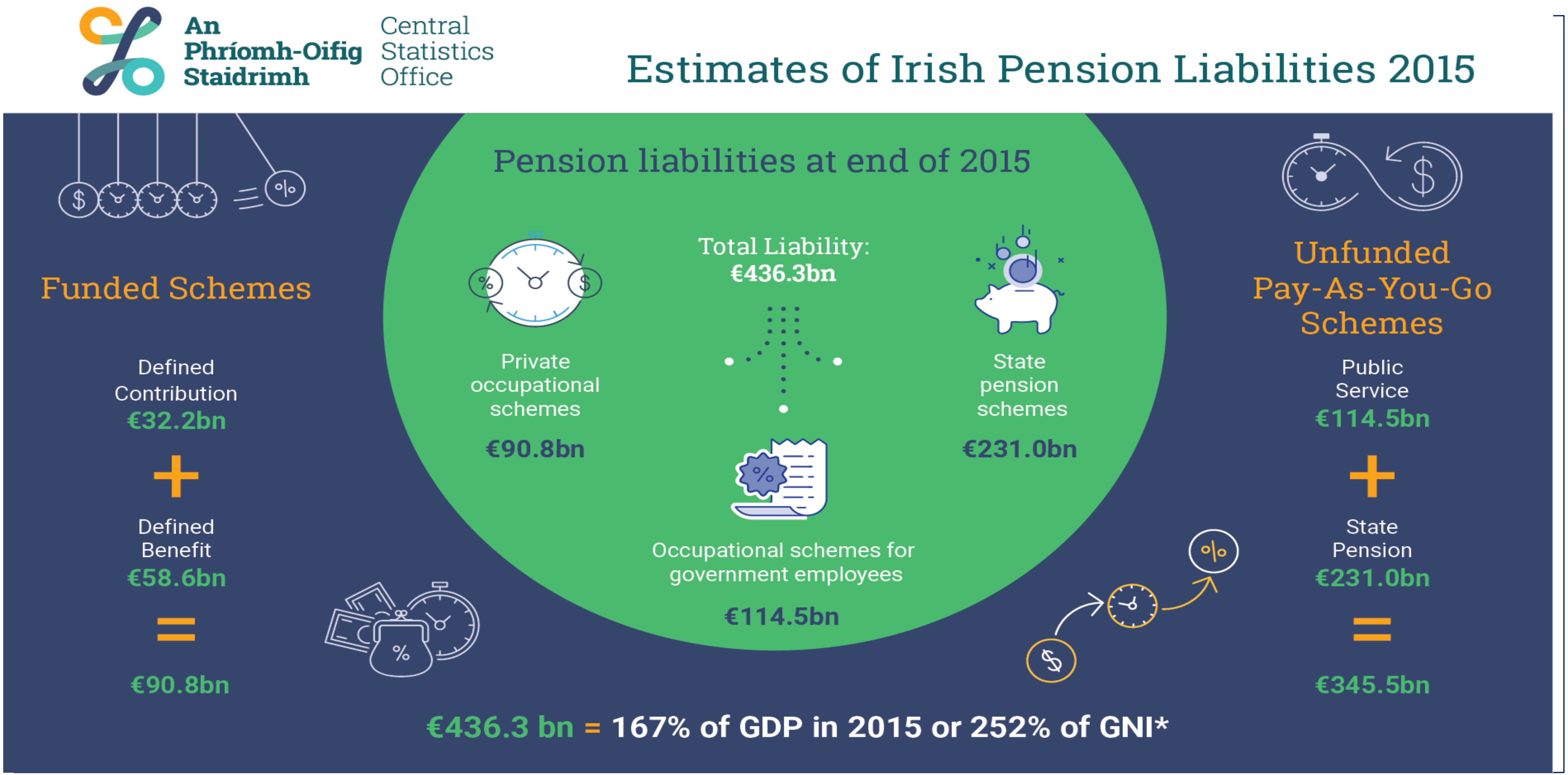
Disclaimer

The views expressed in this presentation are those of the presenter(s) and not necessarily of the Society of Actuaries in Ireland

Agenda

1. Setting the scene
2. Actuarial Review - Social Insurance Fund (SIF) 2015
3. Pensions Roadmap 2018 - aspects relating to the SIF
4. Results of the Public service pension review 2015
5. IAA Paper on measuring and reporting SS 2018

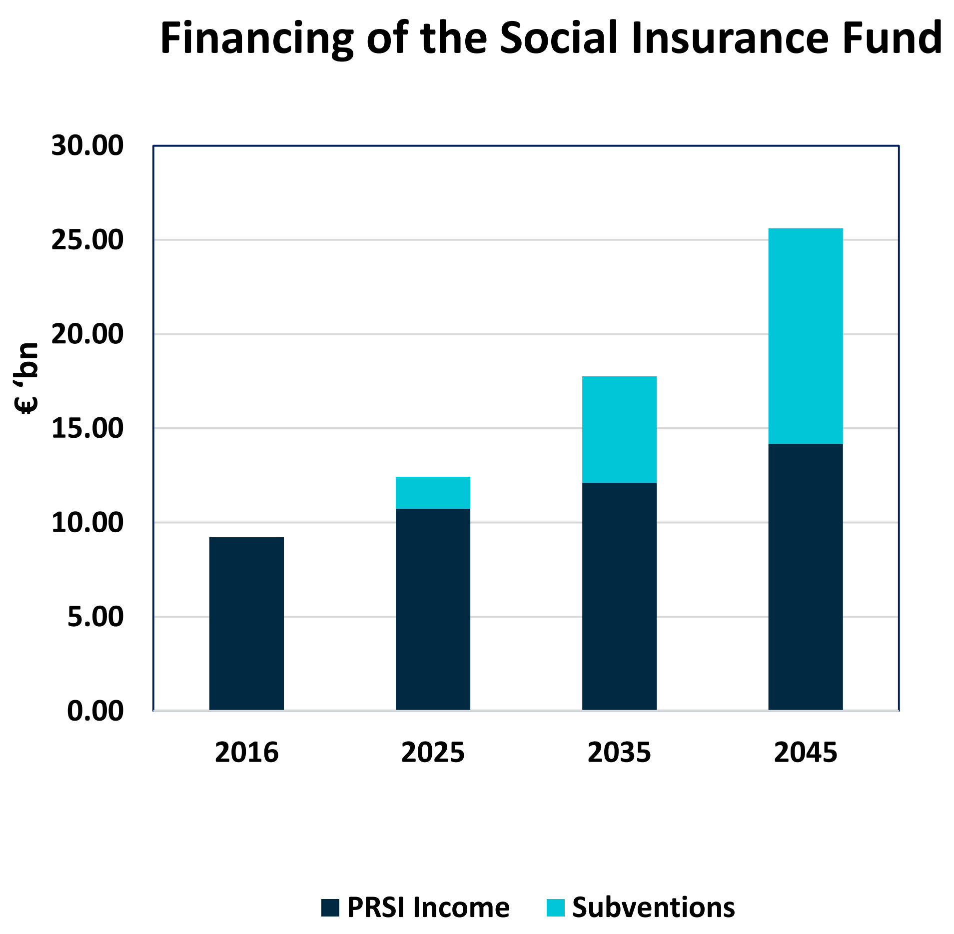
Setting the scene….



Results Actuarial Review 2015

Performed in 2017

Overview of key results



- The Fund currently has **a modest surplus of** income over expenditure (2016 surplus of €0.4 billion on expenditure of €8.8 billion and receipts of €9.2 billion)
- The surplus is projected to increase in 2017 before reducing in the period 2018 to 2019 and returning to a small shortfall in 2020
- The annual shortfalls are projected to increase from 2021 onwards as the ageing of the population starts to impact
- In the absence of further action to tackle the shortfall, the excess of expenditure over income of the Fund will increase significantly over the medium to long term. The modest 2020 projected shortfall of €0.2 billion is expected to increase to €3.3 billion by 2030 and to €22.2 billion by 2071
- As a percentage of GDP, the shortfall is projected to increase from 0.1% of GDP in 2020 to 0.9% in 2030 and 3.1% in 2055 before gradually reducing to 2.9% of GDP by 2071
- One of the key results from this Review is the net present value of future projected shortfalls which is €335 billion based on a real discount rate of 1.5% per annum

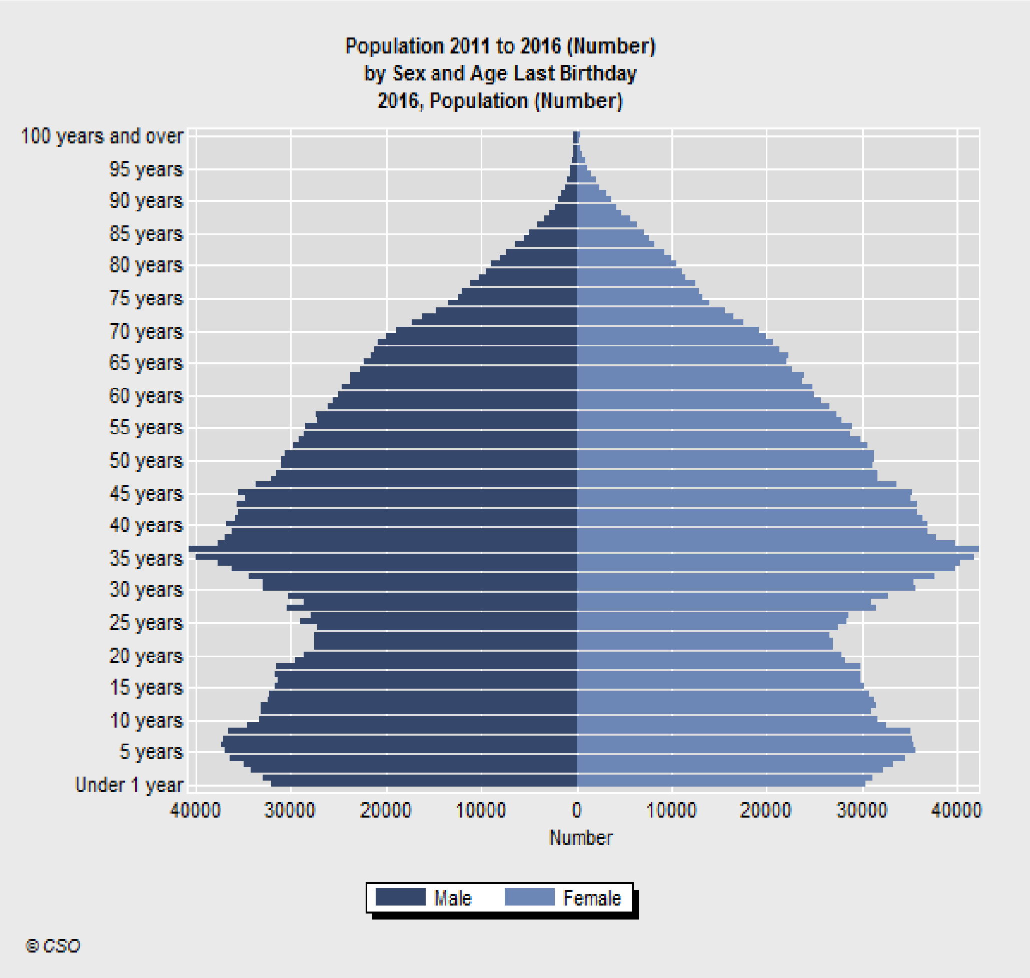
Assumptions of the core review

Base case:

- the macroeconomic assumptions for the short term (up to 2021) projections are those set out in the Stability Programme Update of April 2017.
- Thereafter, the demographic assumptions and macroeconomic assumptions from 2022 onwards are those produced by the European Commission to be used in the 2018 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2016 - 2070). Later published in November 2017.
- The base case assumptions are generally consistent with the assumptions used by the Department of Finance for current projection purposes.
- An adjustment to the mortality assumptions made for consistency with the CSO's most recent view of mortality improvements into the long term future.

Population projection and pensioner support

- The population over State Pension Age (SPA) is projected to increase from 12% of the total population in 2015 to 17% in 2035 to 23% in 2055
- The pensioner support ratio (measured as those over 65) is projected to decline from **4.9 workers for every individual over age 66 to 2.9 workers in 2035 and to 2.0 workers by 2055**
- It is the *effective* retirement age which is important - 64.9 years for males and 64.8 years for females



Income and expenditure and Deficit as % of GDP

	Income and Expenditure Projections (€'bn)			
Year	**Receipts**	**Expenditure**	**Surplus / (Shortfall)**	**Shortfall as a % of GDP**
2015	8.5	8.6	(0.1)	0.0%
2016	9.2	8.8	0.4	0.2%
2017	9.6	9.1	0.5	0.2%
2018	9.8	9.5	0.2	0.1%
2019	9.9	9.9	0.0	0.0%
2020	10.0	10.3	(0.2)	0.1%
2021	10.2	10.8	(0.6)	(0.2%)
2022	10.4	11.4	(1.0)	(0.3%)
2023	10.8	11.6	(0.8)	(0.2%)
2024	10.6	11.9	(1.3)	(0.4%)
2025	10.7	12.4	(1.7)	(0.5%)
2026	10.8	12.9	(2.1)	(0.6%)
2027	11.0	13.6	(2.7)	(0.8%)
2028	11.1	13.9	(2.8)	(0.8%)
2029	11.2	14.1	(2.9)	(0.8%)
2030	11.3	14.6	(3.3)	(0.9%)
2035	12.1	17.8	(5.6)	(1.4%)
2045	14.2	25.6	(11.4)	(2.4%)
2055	16.9	34.2	(17.3)	(3.1%)
2071	22.5	44.7	(22.2)	(2.9%)

Pension related expenditure in 2016 is €6.1 billion rising to €12.9 billion by 2035 and €35.7 billion in 2071 i.e. 69% of overall expenditure rising to 80% over the period

Figures are in 2015 real price terms

Equalised contribution rates

Starting	No Subvention	Subvention of 25%	Subvention of 33%
	Equalised Contributions for 5 year period		
2018	102%	77%	69%
	Equalised Contributions for 10-year period		
2018	110%	82%	73%
2028	139%	104%	93%
2038	173%	130%	116%
2048	197%	148%	132%
2058	202%	151%	135%
	Equalised Contributions for 20-year period		
2018	125%	94%	84%
2038	186%	140%	125%
2058*	201%	151%	134%
	Equalised Contributions for whole projection period		
2018	174%	131%	117%

Over the entire control period where no further change to benefits were to occur a 74% increase in PRSI income as compared with what is currently being paid would be required

Value for money and policy aspects

- Excellent VFM achieved for:
    - those on the lower part of the income distribution
    - shorter contribution histories,
    - the self-employed.

- For those at the higher end of the income distribution, the Fund is redistributive

- The value for money impact on gender is less clear cut:
    - Women have longer life expectancies and therefore get better value for the same level of SPC
    - Men have a higher propensity to claim other benefits from the SIF including Invalidity, Jobseeker's and Illness Benefit. Where these benefits are taken into account in addition to SPC, men tend to fare better overall than their female counterparts.

- A wide variety of policy options were examined including:
    - indexation options
    - a variety of "TCA" designs for post 2020

Pension Roadmap

March 2018

Pension Roadmap: State pension reform

State pension reform (Strand 1)

- Indexation policy
- TCA calculation approach post 2020
- State pension age changes
- Sustainability

Reforms outlined in Strand 6 – Fuller working Lives will also have wider implications for the SIF and for age-related expenditure

Pension Roadmap 2018-2023: Indexation

Indexation

- Set a formal benchmark for 34% of earnings
- Future changes in pension rates of payment are linked to changes in the consumer prices index and average wages by 2018

Implications?

- Contradictory objectives? Or…..
- An individual approach intended whereby the pension would continue to increase broadly with earnings such that 34% of average earnings at point of retirement but…..
  - post retirement the pension increases at a lower rate (at some composite of earnings and prices)?
  - This would mean that the pension at retirement would vary depending on year of retirement (reflecting prevailing average earnings in that year) but increases to that pension in retirement would be based on some declared percentage?
- In other countries indexation is invariably linked to earnings
- Risk of “locking in” rates at times when fiscal space constrained.

Pension Roadmap 2018 – 2023: SPA

State pension age

- No further increase in the State pension age prior to 2035 other than those already provided for in 2021 and 2028.
- Any change to the State pension age after 2035 will be directly linked to increases in life expectancy. This will begin with an actuarial assessment of life expectancy in 2022.
- Undertake an actuarial assessment of life expectancy every five years thereafter to inform State pension age decisions

Implications?

- No change to SPA other than an increase to 67 in 2021 and to 68 in 2028
- Implications for numbers going onto Jobseekers and other benefit types during any additional “gap” years
- Thereafter, an actuarial assessment every 5 years
- Recent studies are indicating that the rate of mortality improvements previously anticipated are slowing down particularly at older ages.

Pension Roadmap 2018 – 2023: Sustainability

Funding on a sustainable basis

- Proposal to actuarially review social insurance contribution rates and contribution classes on an annual basis to determine what changes would be required to fund benchmarked increases in payment rates or expansion of benefits cover.
- Progress work to consider and present options for the amalgamation of USC and PRSI
- A consultation paper to be published on an appropriate rate-setting / funding approach for the SIF.

Implications?

- What is "sustainable"? A highly subjective concept
- Roadmap: "Affordable benefits that do not undermine competitiveness and do not undermine competitiveness of flexibility in the labour market"
- Attempts to perform relevant calculations e.g. Canada, USA
- If measuring / questioning what is "sustainable", should we take account of other "age related" or wider expenditure pressures outside state pension?
- Citizen's Assembly: A compulsory social insurance payment received the most first preferences for funding for care of older people
- Implies more benefits should potentially be payable from the SIF or a reformed version of the SIF requiring amalgamation of PRSI and USC?

State pension – wider context

A holistic assessment

- A holistic assessment of all age-related expenditure on a consistent basis needed to inform the debate?
- Costing of term care, health, and non contributory state pensions, other means tested payments?
- These other age related items are financed from general taxation rather than the SIF.
- The IAA recommends that actuarial projections of these (means tested) cash-flows should also be prepared on a regular basis.

Mandatory retirement ages in the workplace

Existing mandatory retirement ages will become increasingly difficult to justify:

Per the Citizens Assembly report "How we best respond to challenges and opportunities of an ageing population"

- 96% of the members recommended the removal of the anomaly, which arises when a person who must retire at 65 is not entitled to the State pension until 66
- 86% of the members recommended abolishing mandatory retirement based on age

Public service pensions

ADL Results 31 December 2015

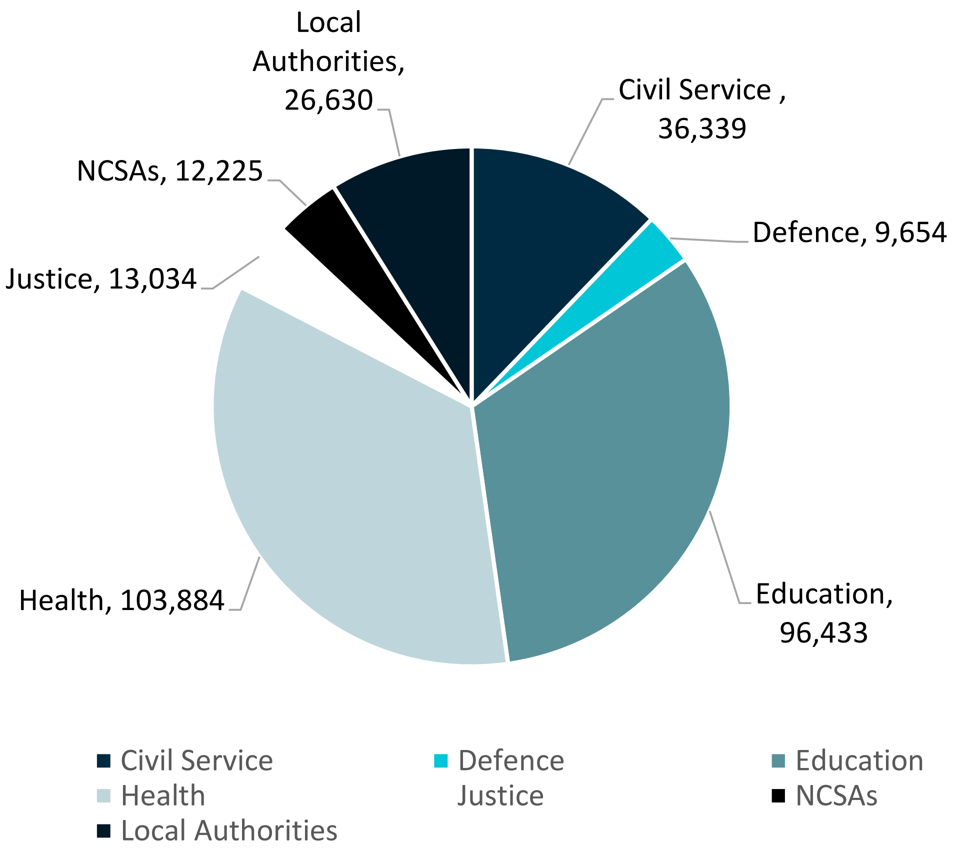
Overview of Valuation

- The review was conducted by DPER and peer reviewed by KPMG and published in 2017
- A large quantity of individual member data on active employees, deferred members and current pensioners in each sector was collated, cleansed and thoroughly analysed by the actuarial unit in the Department
- The valuations for both the ADL and the cash-flow projection purposes reflect a line by line modelling of all benefits in scope on the per member data received
- Data records in respect of **228,563** active employees and **153,486** pensions in payment.
- A summary of all assumptions adopted for determining the ADL calculation for EU reporting purposes is below.

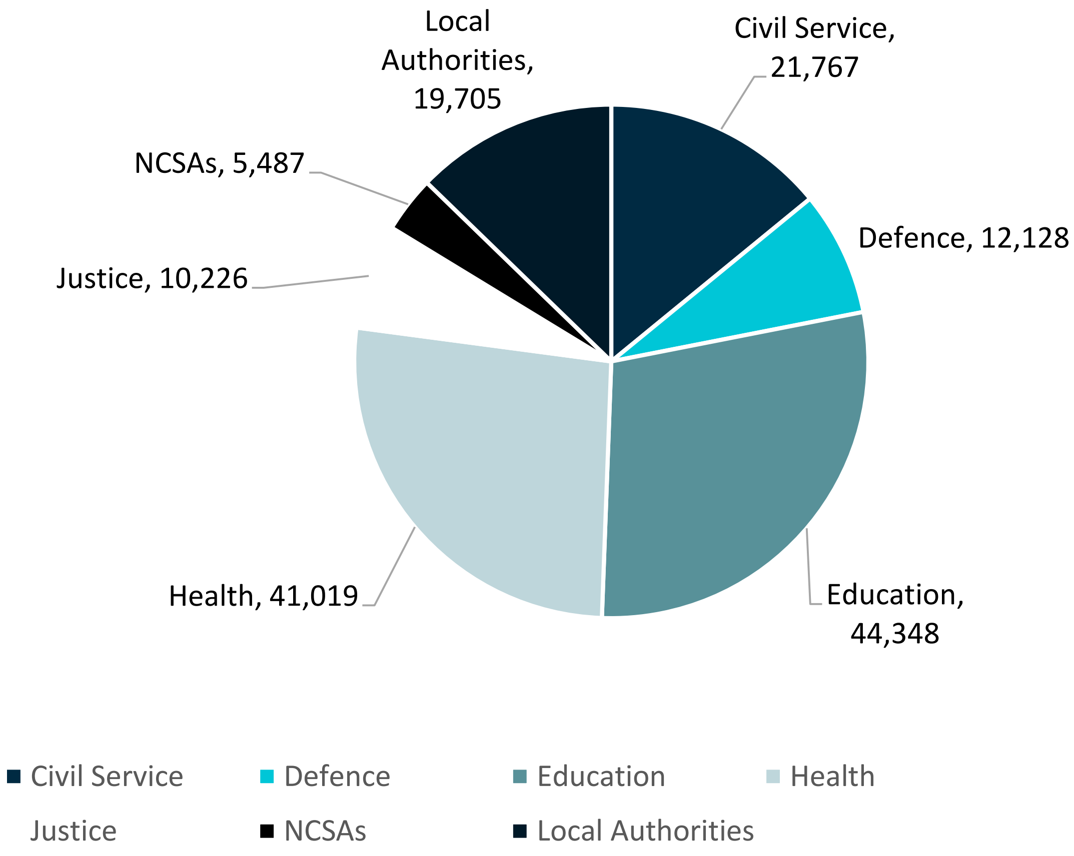
Assumptions for ADL purposes at 31st December 2015	
Discount Rate	**5.00% p.a.**
Inflation	2.00% p.a.
Real Salary Increases	Labour productivity per hour growth rate for Ireland which broadly translates to an overall rate of 1.45% p.a. in the long term
Mortality Post Retirement	58% ILT 15 (for males) 62% ILT 15 (for females)
Mortality Post Retirement Improvement Factors	Yes

Summary of data received – 31 Dec 2015

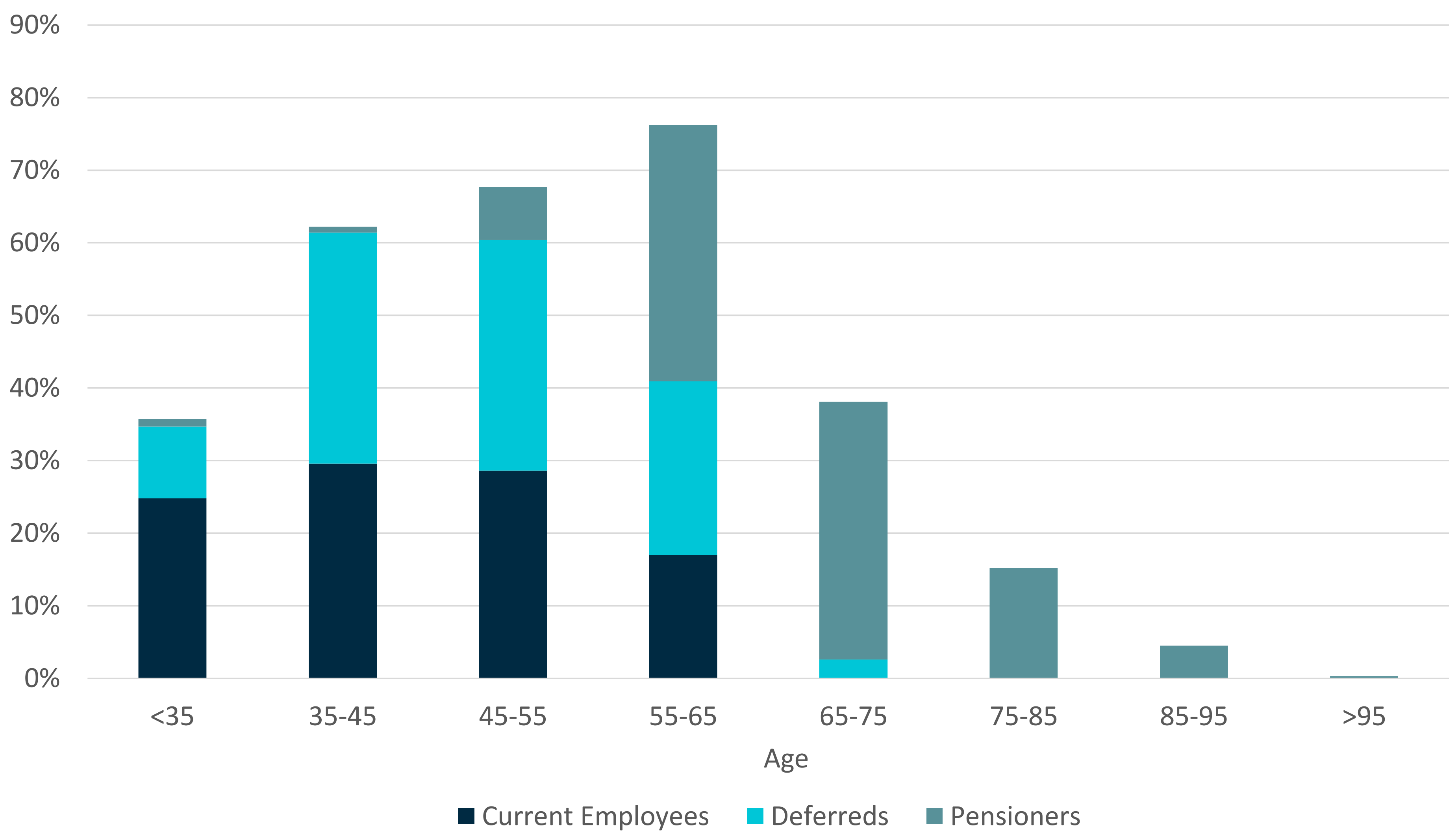
Public service employees by sector



Pensioner data by sector



Summary of data received – by age



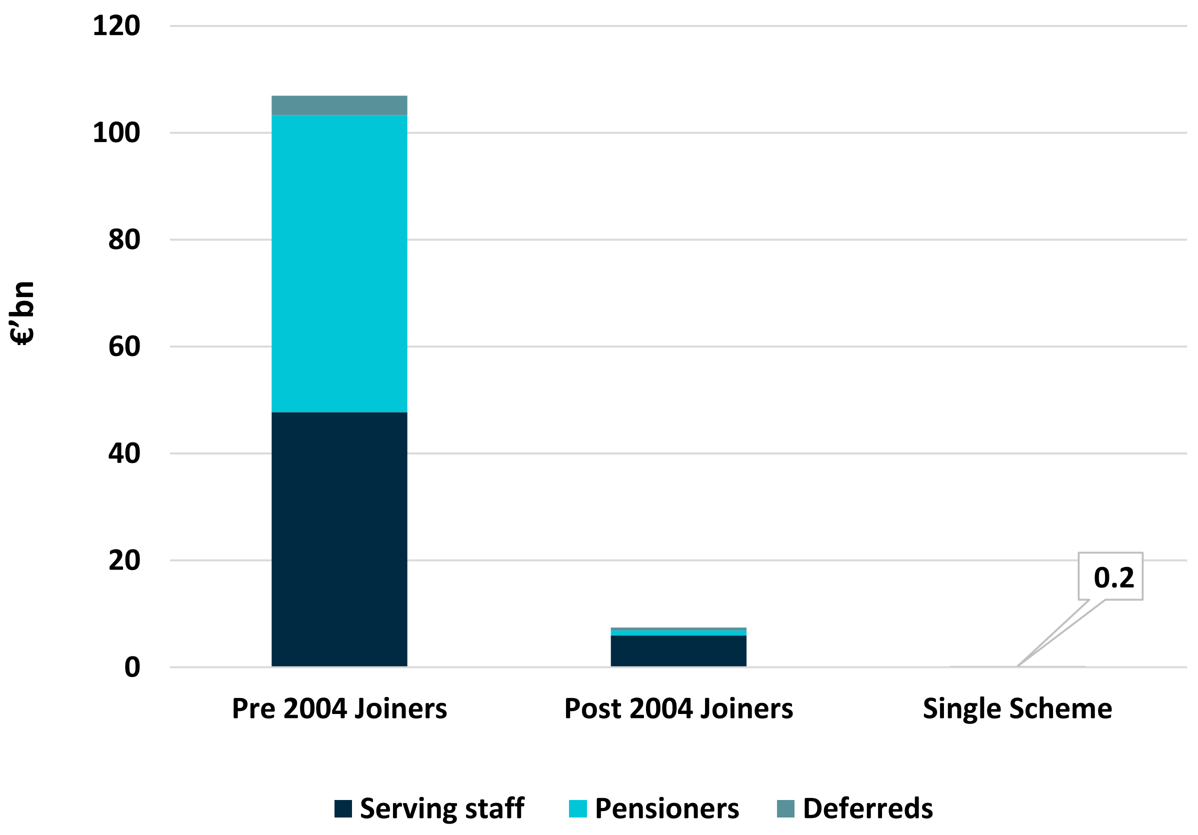
ADL Results – by sector

€'bn	Serving Staff	Pensioners	Deferreds	Total Liability
Civil Service	8.8	7.3	0.7	16.8
Health	12.2	11.9	0.9	25.0
Education	17.3	20.3	1.9	39.5
Defence Forces	3.4	4.5	0.0	7.9
Gardaí	4.1	5.6	0.0	9.7
State-Sponsored Bodies	3.4	2.7	0.2	6.3
Local Authorities	4.7	4.2	0.4	9.3
Total Public Service	**53.9**	**56.5**	**4.1**	**114.5**

- ADL makes no allowance for the cost of paying the State Pension (Contributory) to public service employees (where eligible).
- Commercial Semi-State Companies pension obligations have not been included in the review.
- ADL assumes that pensions are indexed in line with pay-parity. This approach is consistent with previous reviews.
- Much of the ADL is in respect of pensioners and almost all is in respect of pre-Single Scheme membership.

ADL results – by scheme

Breakdown by Scheme as at 31 December 2015



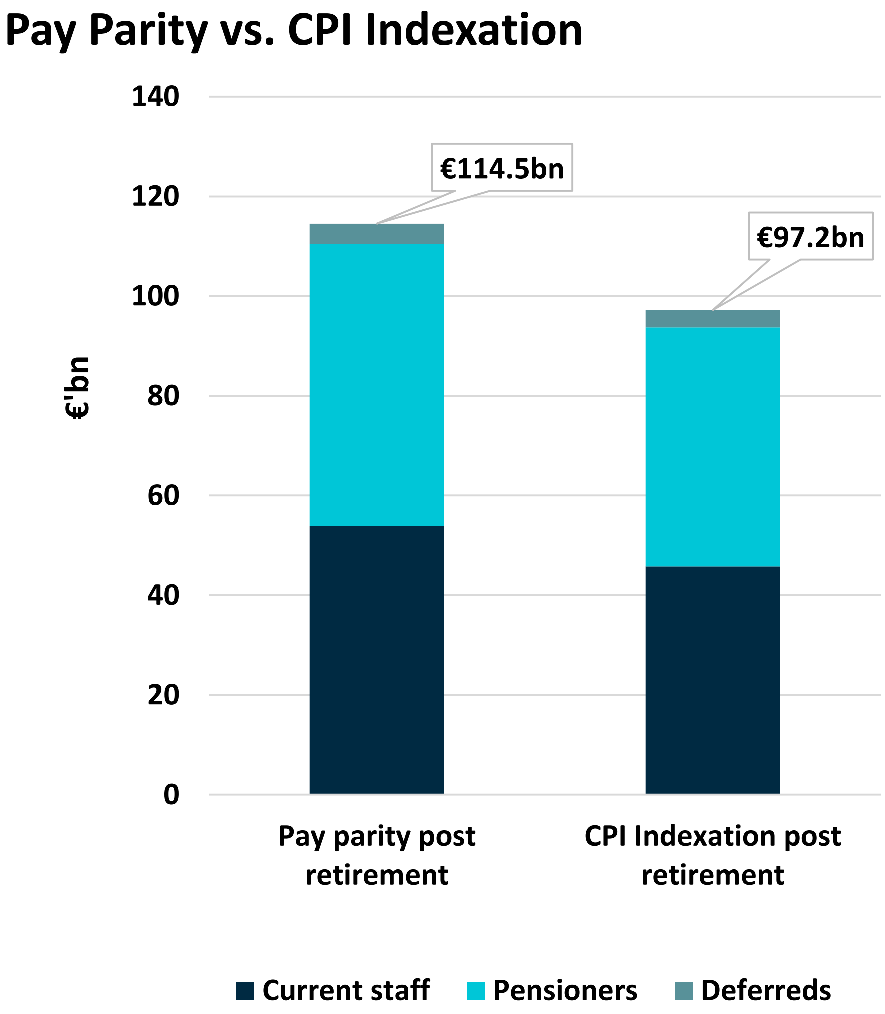
- In the long term, the introduction of the Single Public Service Pension Scheme (the "Single Scheme") on 1st January 2013 is also of relevance when considering future pension costs.
- While the Single Scheme does not have any material effect on the ADL figure (c €0.2bn), it is expected to reduce spending on retirement benefits by in excess of 35% over the long term.
- This expected cost saving can be attributed to the later retirement age, career average benefit accrual and post-retirement indexation to CPI.

ADL results – CPI indexation

CPI Indexation versus Pay Parity indexation reduces ADL by **€17bn**.

- Under Public Service Pensions (Single Scheme and Other Provisions) Act 2012 ,CPI linking ‘may’ be applied by Minister to existing pensions from pre-Single Scheme arrangements, instead of pay parity.

- *“The Government, in acknowledgement of the increase in pension contributions required of public servants in respect of the Additional Superannuation Contribution (ASC), have committed not to extend the application of Section 40 of the Public Service Pensions (Single Scheme and Other Provisions) Act 2012 for pre-existing public service pensions for the duration of this Agreement.”*

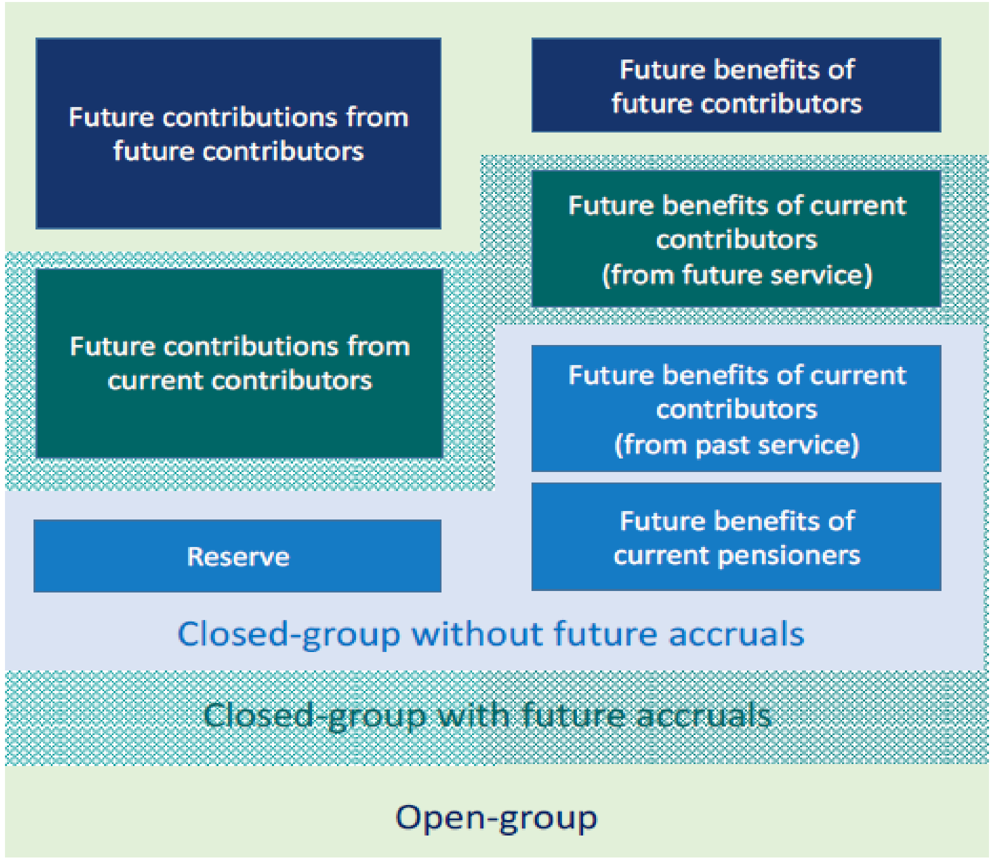


"Measuring and Reporting Actuarial Obligations of Social Security Systems”

IAA Paper – March 2018

Findings / recommendations

- Social security systems are secured by intergenerational societal commitments
- Not directly comparable to an occupational pension schemes
- The current required disclosures primarily focus on the accrued-to-date (closed group) obligations and may be misleading
- Recommend aligning reporting approaches with the financing approach, especially for Social security schemes financed using pay-as-you-go
- The **open group approach** which includes the effect of new entrants is recommended
- Whilst the closed group approach is currently mandated, additional comprehensive disclosures of open group measures are essential
- Measurements should be performed by qualified actuaries applying sound actuarial principles



Source: Measuring and Reporting Actuarial Obligations of Social Security Systems – IAA Recommendations

With you today

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