

ST. JOHN'S COLLOQUIUM

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The Ageing of the EU – implications for pensions

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The 2015 Ageing Report

- three-yearly report from the European Commission
- based on Eurostat projections of the population
- focus is on long-term sustainability of public expenditure
- pensions, health care, long-term care, education
- leads to policy recommendations to improve sustainability
- European Semester process for individual countries
- separate Pension Adequacy Report 2015
- AAE discussion paper – March 2016

Main sources:

- 2015 Ageing Report
 - 424 pages Economic Projections
 - 436 pages Assumptions/Methods
- 2015 Pension Adequacy Report
 - 396 pages Volume I
 - 373 pages Volume II
- That is **1,629 pages** in total

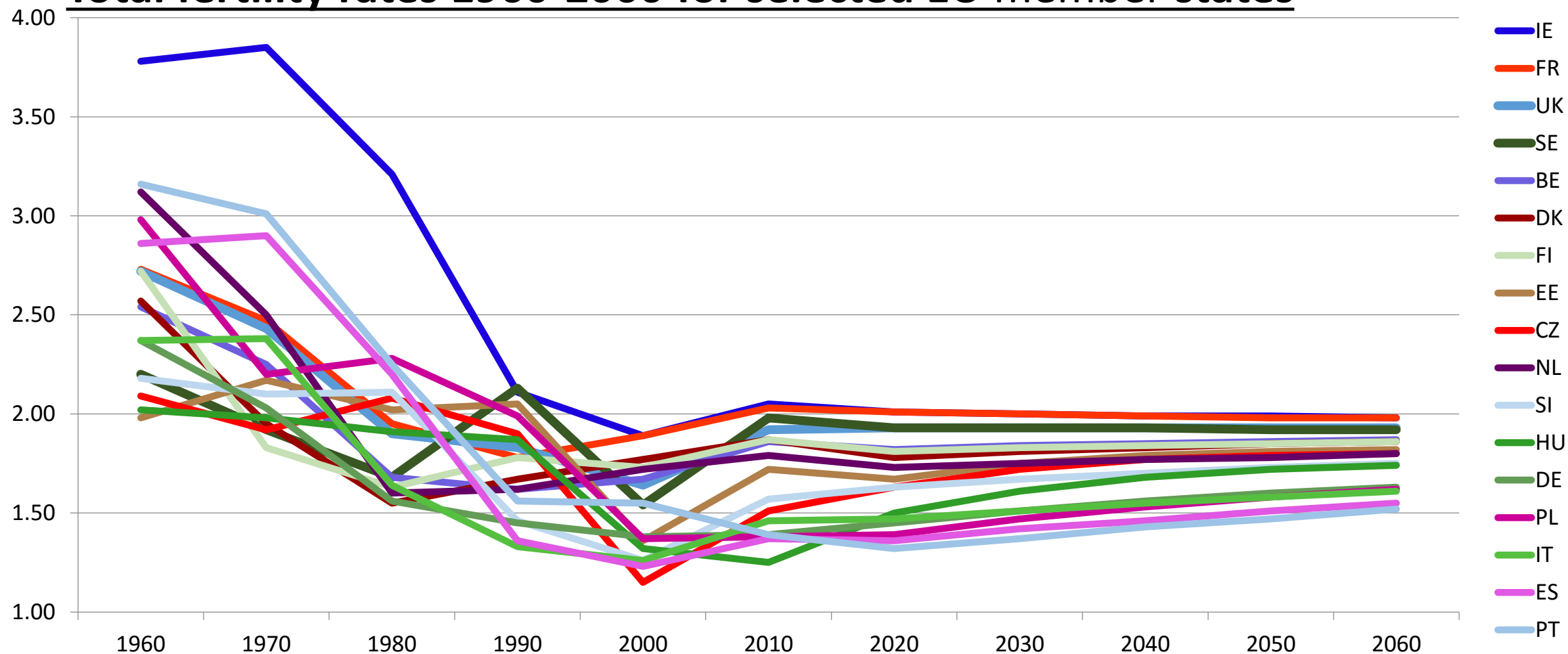
AAE discussion paper provides a summary and additional actuarial considerations in only **48 pages**

Overall projection of public costs to 2060 for EU

	% of GDP in 2013	% of GDP in 2060
Pensions	11.3	11.2
Health care	6.9	7.8
Long-term care	1.6	2.7
Education	4.7	4.7
Unemployment	1.1	0.7
Total	25.6	27.1

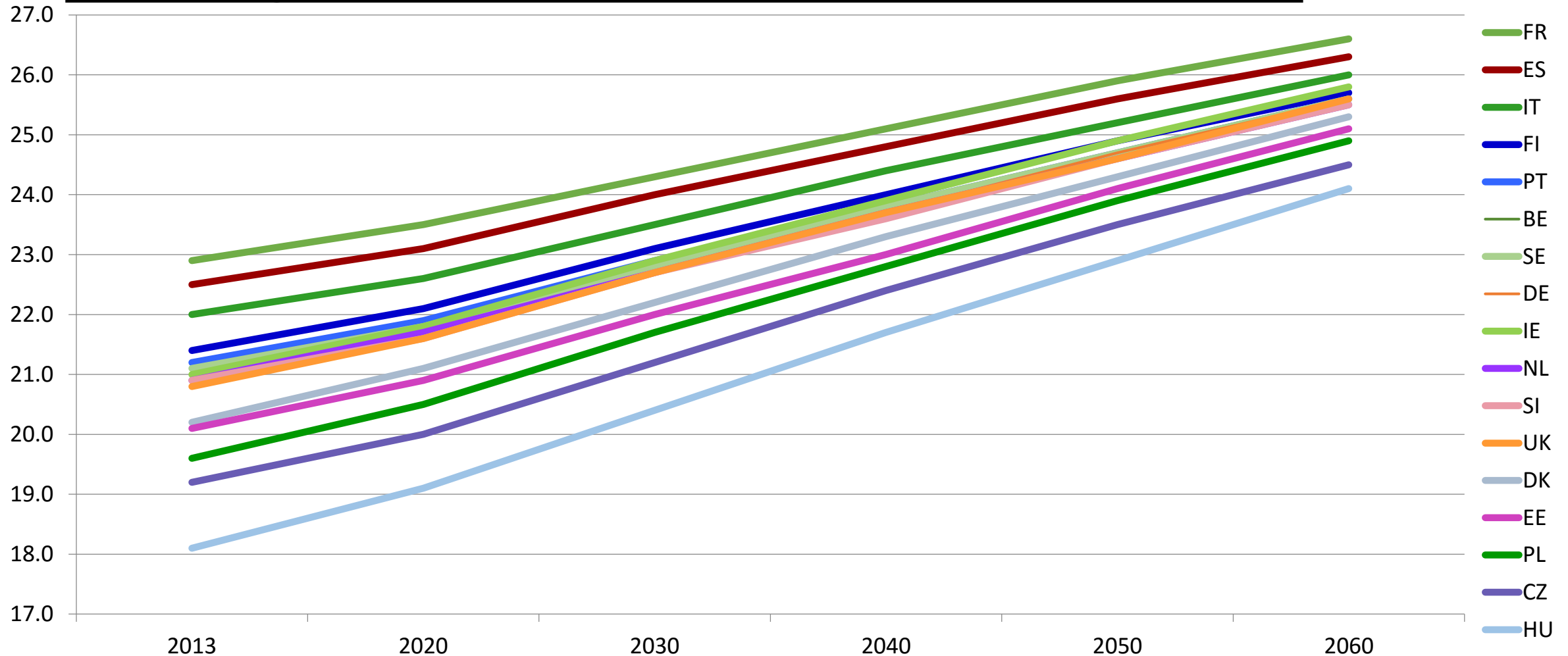
Demographic background for EU

Total fertility rates 1960-2060 for selected EU member states



Demographic background for EU

Female expectation of life at 65 to 2060 in selected countries



Period and cohort expectations of life, UK, 2015

	Males 2015		Females 2015	
	Period	Cohort	Period	Cohort
60	22.7	25.9	25.3	28.3
65	18.7	21.3	21.0	23.6
70	14.9	16.9	16.9	19.0
75	11.4	12.9	13.1	14.7
80	8.4	9.4	9.7	10.7

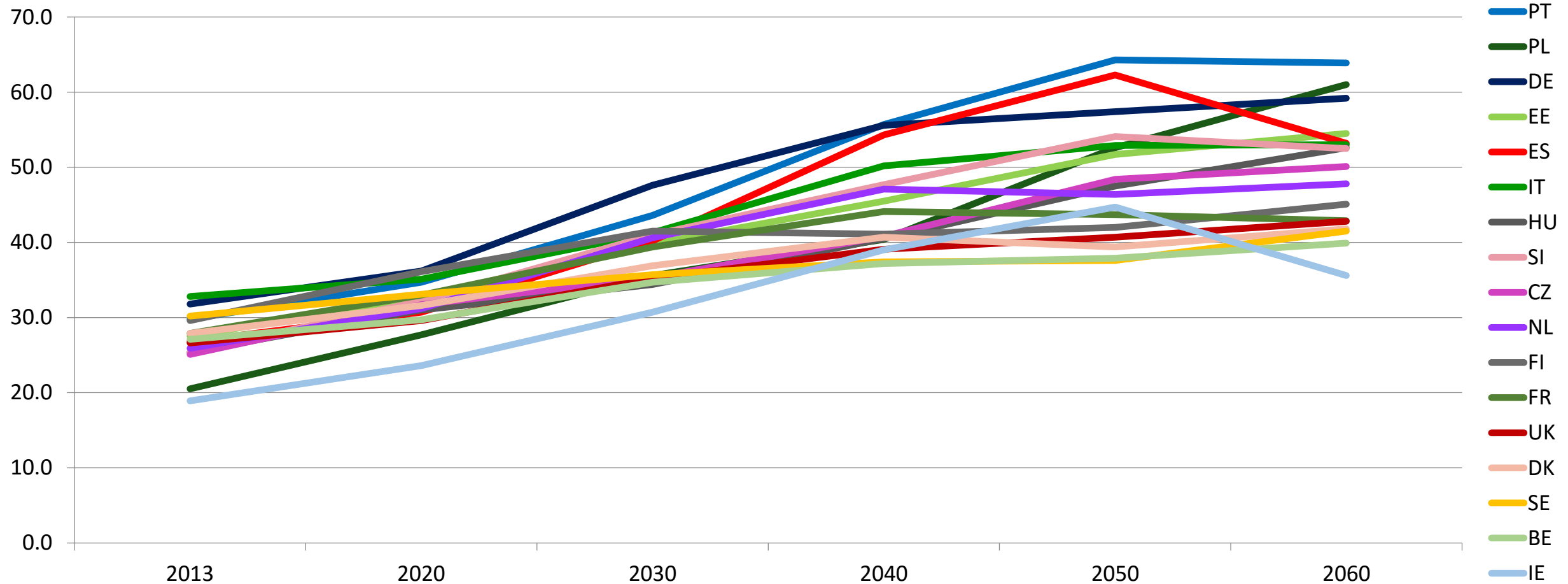
Important to draw the distinction between period and cohort expectations of life. Difference of about 2.6 years at age 65. However, cohort expectations often not published.

Projection of net migration flows, 2013-2060

	Net migration flow in 2020 (000s)	Cumulative net migration 2013-2060	Cumulative as % of 2013 population
LU	11.7	429.0	85.8
BE	80.2	3192.0	28.5
IT	348.1	15511.0	25.8
SE	55.3	2273.0	23.7
AT	51.3	1994.0	23.5
FI	22.0	812.0	15.0
UK	172.1	9162.0	14.3
ES	-79.0	6511.0	14.0
DE	228.7	7041.0	8.7
FR	90.2	3960.0	6.0
IE	-30.3	-208.0	-4.5
LV	-14.3	-237.0	-11.9
LT	-37.4	-605.0	-20.2

Demographic background in EU

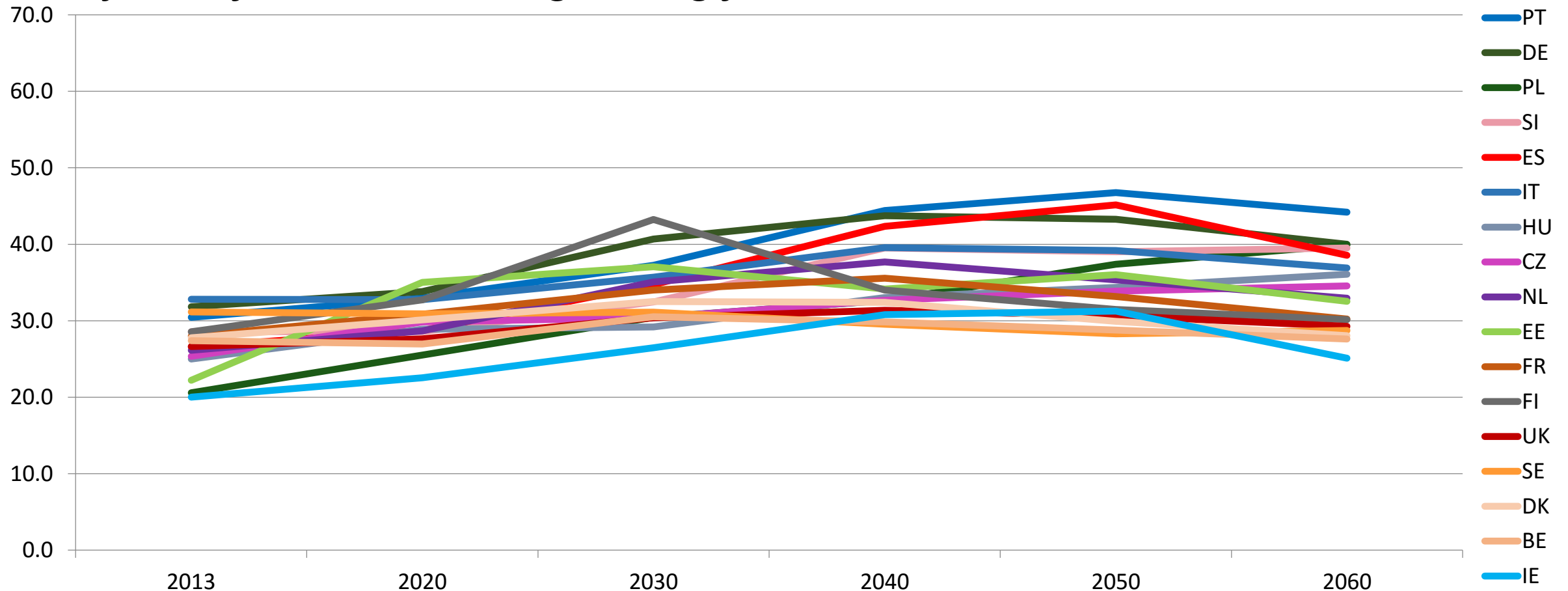
Old-age dependency ratios in some countries, 2013 to 2060



Demographic background in EU

Old-age dependency ratios in some countries, 2013 to 2060

Adjusted for retirement age rising from 65 to 70



Demographic background in EU

Pension age to maintain cohort expectation of life (UK)

Year	Expectation of 21.6 for males	Expectation of 24.3 for females
2020	65.7	65.5
2030	67.0	66.7
2040	68.2	67.8
2050	69.3	69.0
2060	70.5	70.1
Over 50 yrs	1.2 per decade	1.1 per decade

Pension Sustainability Index (Allianz Investors)

Figure 3: 2014 Pension Sustainability Index for western Europe and North America



* Scale from 1 – 10: 10 minor need for reforms, 1 high need for reforms

Source: Allianz Asset Management, International Pensions

Melbourne Mercer Global Pension Index

Country	Overall index	Adequacy	Sustainability	Integrity
Denmark	81.7	77.2	84.7	84.5
Netherlands	80.5	80.5	74.3	89.3
Australia	79.6	81.2	72.1	87.6
Sweden	74.2	71.1	72.6	81.5
Switzerland	74.2	73.9	68.4	82.9
Finland	73.0	70.7	61.8	92.4
Canada	70.0	79.4	56.2	74.3
Chile	69.1	62.8	65.0	84.8
UK	65.0	64.2	51.3	85.5
Ireland	63.1	77.0	36.2	78.5
Germany	62.0	76.0	36.8	75.0
France	57.4	77.2	36.6	54.9
Poland	56.2	61.8	40.6	69.0

Reform measures undertaken or in progress

Major reform measures include

- raising eligibility age for public pensions
- reductions in pension accrual rates
- career average instead of final salary
- less generous indexation of pensions in payment
- notional defined contribution structures
- contribution increases

Methods to take life expectancy into account

1. Legislated increases in eligibility age

2. Formula-based reviews

- maintain expectation of life at pension age
- maintain ratio of expected period on pension to period of working life

3. Sustainability factors or life expectancy coefficients

- adjust pension at award for changing life expectancy

4. Change to notional defined contribution structure

- use annuity value at pension age to convert to pension

5. Incentivise later retirement, eg by increasing no. of years to qualify for a pension

Raising eligibility age

Examples of formula-based reviews

Denmark – maintain life expectancy at 60 (calculate every 5 years and give 15 years notice of change)

UK – maintain ratio of pension period to working period (five-yearly review, taking broader factors into account)

Portugal – increase each year by $\frac{2}{3}$ of increase in life expectancy at 65 measured two years earlier

Netherlands – retirement age increased by 3 months each year if increase in cohort life expectancy at 65 \geq 3 months

Cyprus – automatic increase every 5 years to maintain life expectancy at statutory retirement age

NDC reforms

Notional defined contributions introduced in

- Sweden
- Italy
- Poland
- Latvia
- Norway

Increased life expectancy taken into account in conversion of notional account balances to pension

Sustainability factors

Based on evolving life expectancy

- Finland – life expectancy coefficient
- Spain – sustainability factor

Based on changes to old-age dependency ratio

- Germany

Finland

Approach to dealing with demographic ageing

➤ by introducing *life expectancy coefficient*:

Life expectancy coefficient for year N (>2009) =
$$\frac{\text{cohort life expectancy for those reaching 62 in 2009}}{\text{cohort life expectancy for those reaching 62 in N}}$$

Multiply pensions of those reaching 62 in N
by life expectancy coefficient for year N

Thus adjusting a DB pension benefit for improving life expectancy

Analysis of pension cost changes

The Ageing Report analyses changes into components

- changes in dependency ratio
- changes in coverage ratio
- labour market effects
- changes in benefit ratio

Change in Benefit Ratios 2013-2060

	%			%
Cyprus	−32.5		Finland	−6.7
Spain	−25.3		Italy	−6.4
Sweden	−16.9		Germany	−5.2
Latvia	−16.2		Slovenia	−5.0
Portugal	−15.8		Ireland	−3.1
Slovakia	−15.6		Netherlands	−1.1
Romania	−14.5		United Kingdom	−0.7
Greece	−14.1		Luxembourg	+0.5
Total EU (weighted)	−8.1		Denmark	+7.5

Benefit ratio is ratio of average pension to average wage. Report acknowledges political challenges may result from steep reduction in generosity of pensions.

Pension Adequacy Report 2015

DG Employment's riposte to The Ageing Report 2015

- important to consider adequacy alongside sustainability
- adequacy and also fairness
- importance of wider considerations
- ...e.g. access to health care, housing
- limitations of theoretical measures such as replacement ratios
- need to look at many different facets

Adequacy of pensions

- reform measures often focus on benefit reductions
- ... or raising age of eligibility
- but if benefits are inadequate they may not be sustainable
- adequacy also raises question of fairness
 - gender fairness
 - intergenerational fairness
 - actuarial fairness
 - social fairness
- some objective measures but picture is often complex
 - depends on career, unemployment, age of retirement, etc.

Adequacy of pensions – the wider context

- many issues beyond public pensions
 - tax
 - housing
 - health care
 - long-term care
 - supplementary pensions
 - family
- ‘actuarial fairness’ usually focuses on value for money
 - important for member options, e.g. early or late retirement
- ‘social fairness’ will usually imply cross-subsidies
 - social security addresses need rather than value for money

Roles for actuaries in ageing population

AAE report finishes with section on role of actuaries

- importance of actuarial reporting in social security
- AAE seeking to influence debate in EU
- ISAP2: Financial Analysis of Social Security Programs
- ISSA-ILO Guidelines on Actuarial Work for Soc. Sec
- IORP2 Directive expected to require actuarial function in IORPs but scope is still under discussion
- need for continued promotion of actuarial roles
- actuaries' objective is
- “to contribute to the well-being of society as a whole”

The Ageing of the EU – implications for pensions

http://actuary.eu/documents/AAE-The-ageing-of-the-EU_DEF.pdf

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