



Government
Actuary's
Department



The UK State Pension age review and demographic uncertainty

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Objective and agenda

- > Context
- > Projected costs
- > Projecting mortality
- > State Pension age review

Objective: to illustrate the significance of demographic uncertainty in the context of UK state pensions



Context

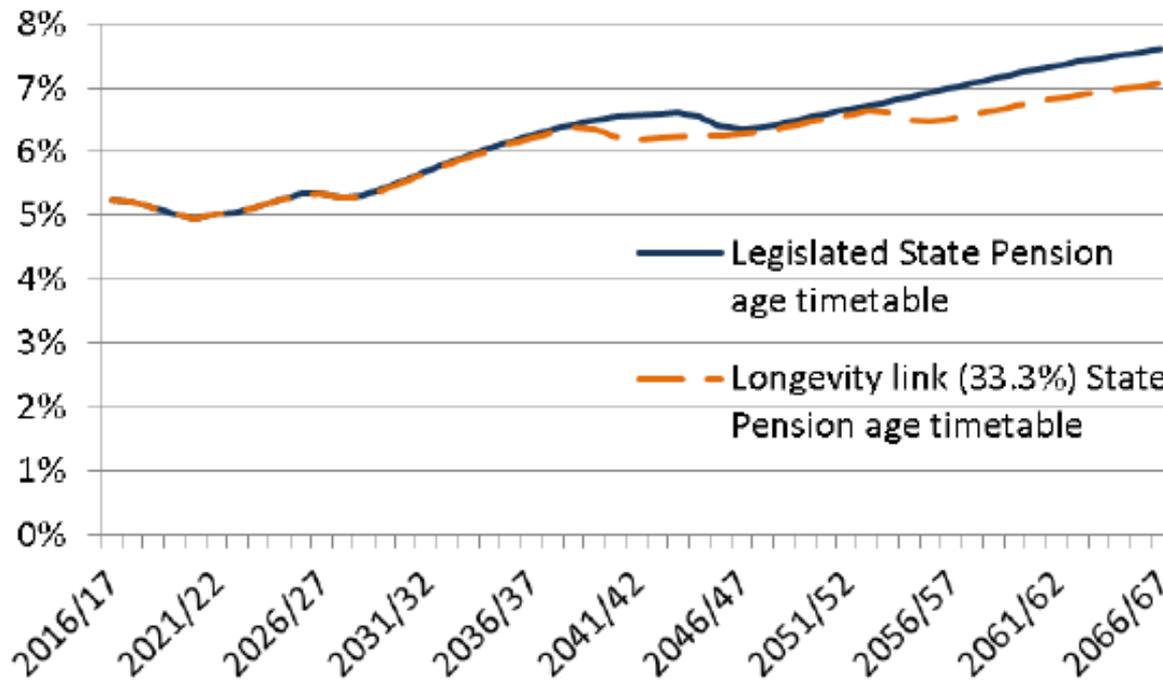
- > UK state pensions
- > National Insurance fund
- > State Pension age

State pensions aim to provide dignity and security in retirement whilst delivering fairness across the generations



State Pension costs are projected to increase as % of GDP

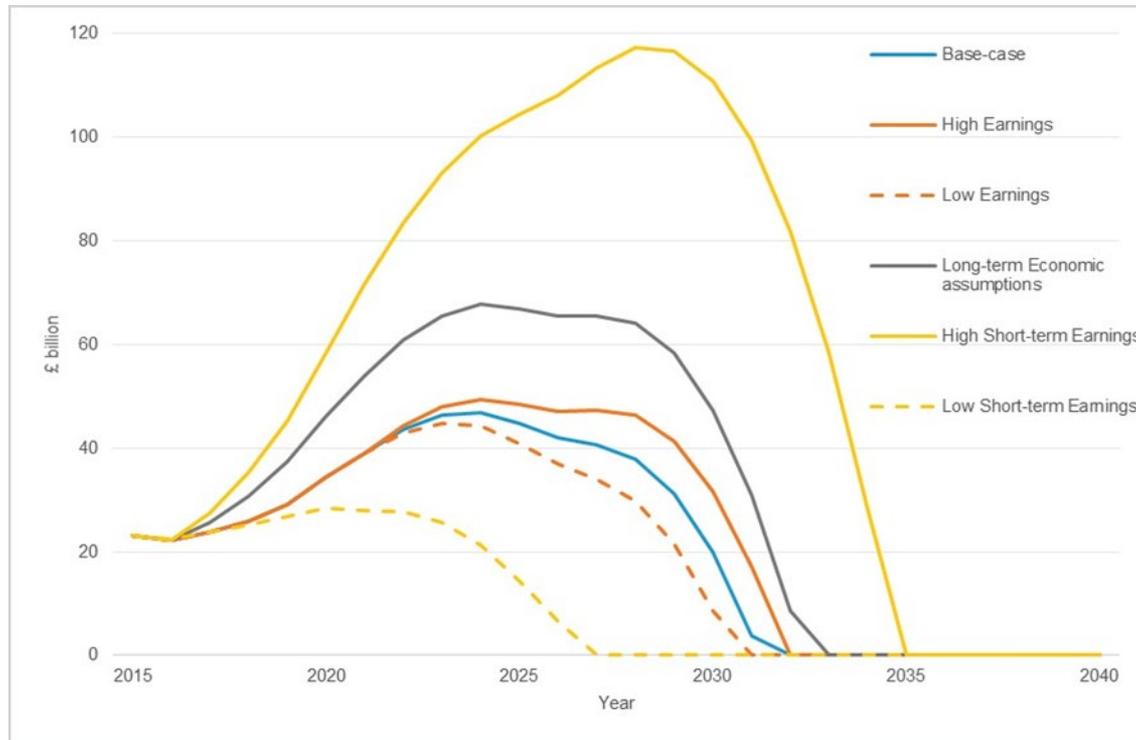
Figure 1.4: State Pension expenditure as % GDP, UK, 2016/17–2066/67³²



Source: OBR



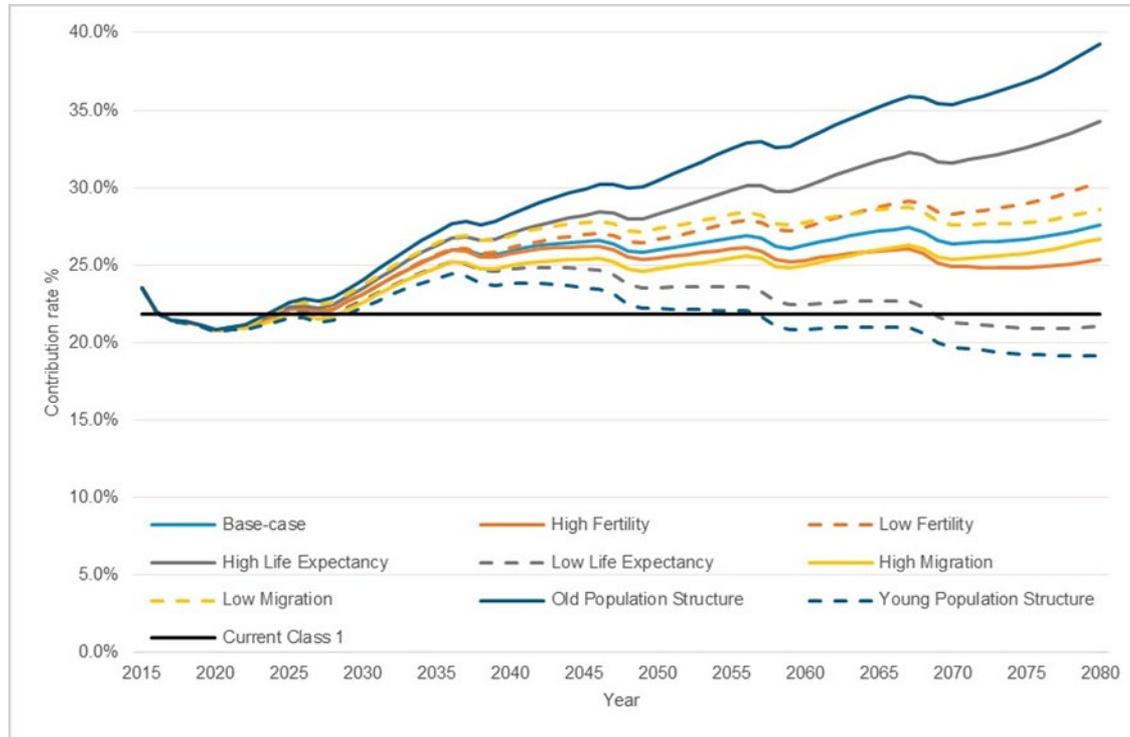
NI fund is sensitive to economic growth (specifically earnings growth)



Projected NI fund balance – variant economic assumptions (source: GAD)



Break-even contribution rate is sensitive to demographic assumptions



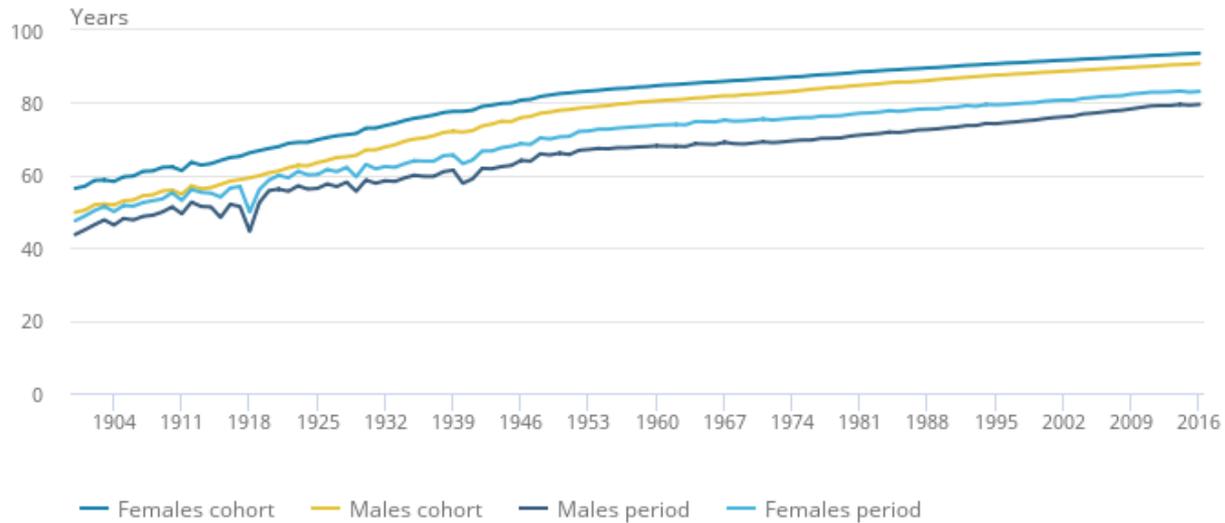
Break-even contribution rate – variant demographic assumptions (source: GAD)



Life expectancy has been increasing

Figure 2: Period and cohort life expectancy at birth

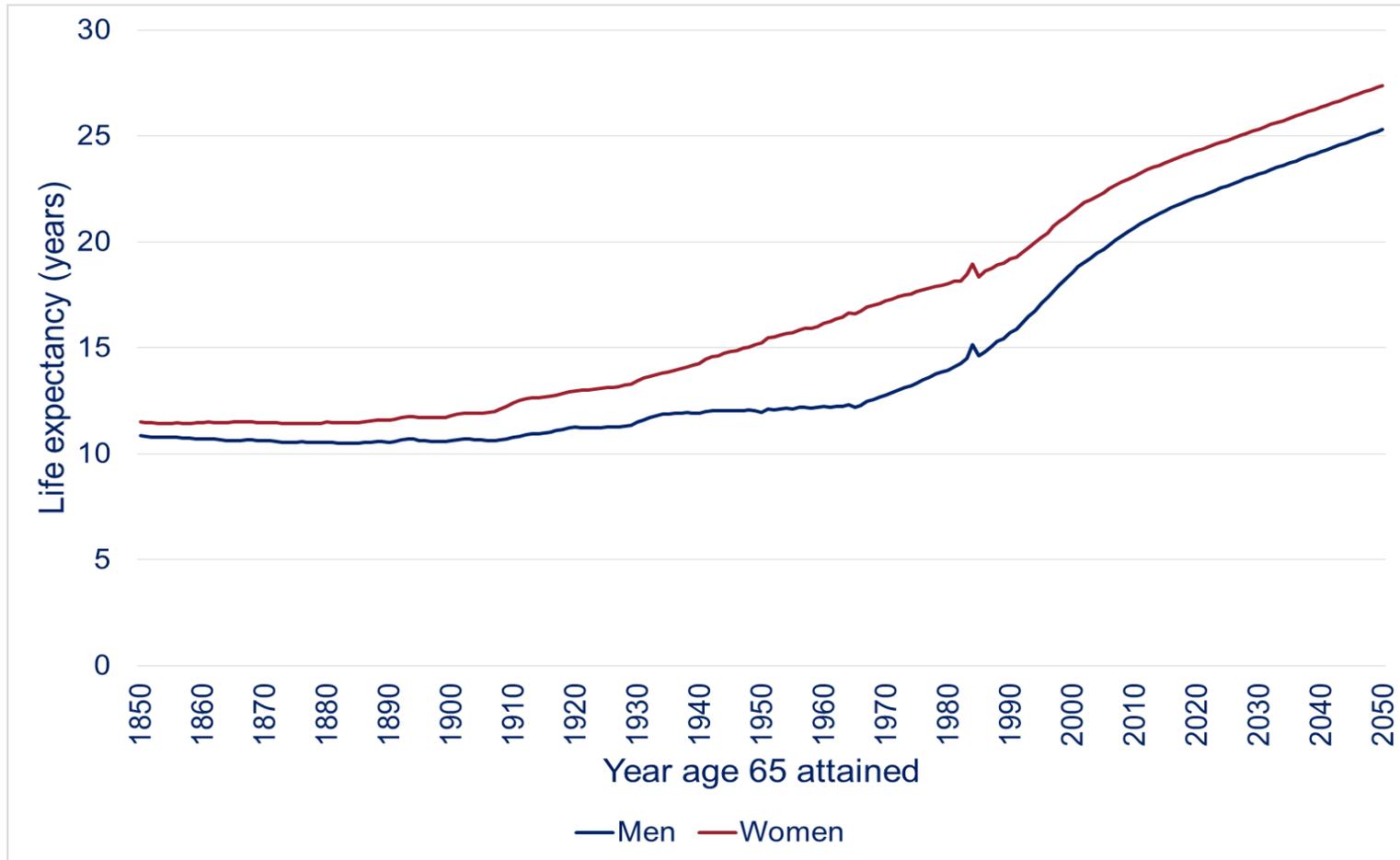
England and Wales, 1900 to 2016



Source: Office for National Statistics



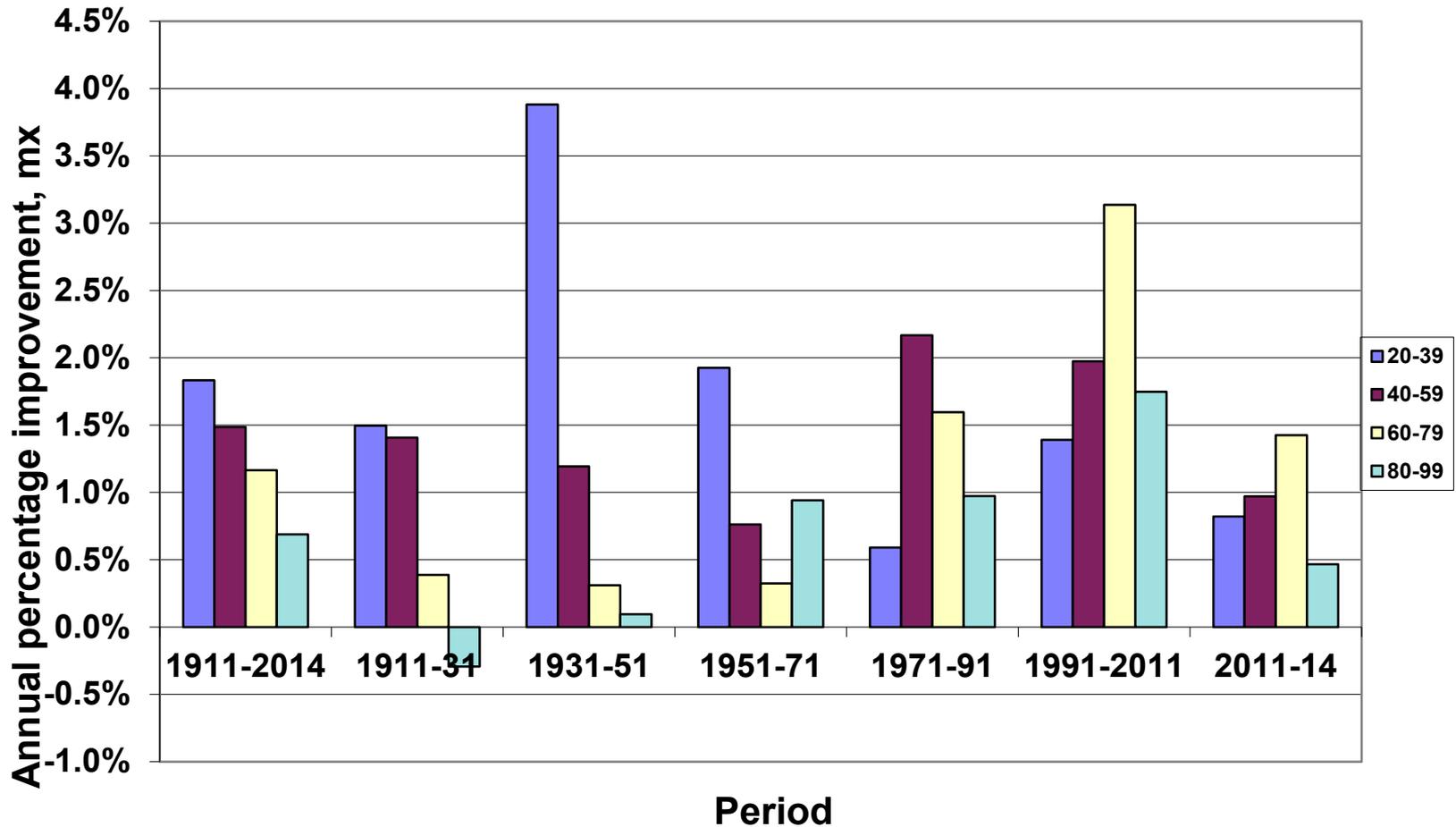
Increases in life expectancy at age 65 have been even more significant



Projected cohort life expectancy at age 65 (source: ONS)



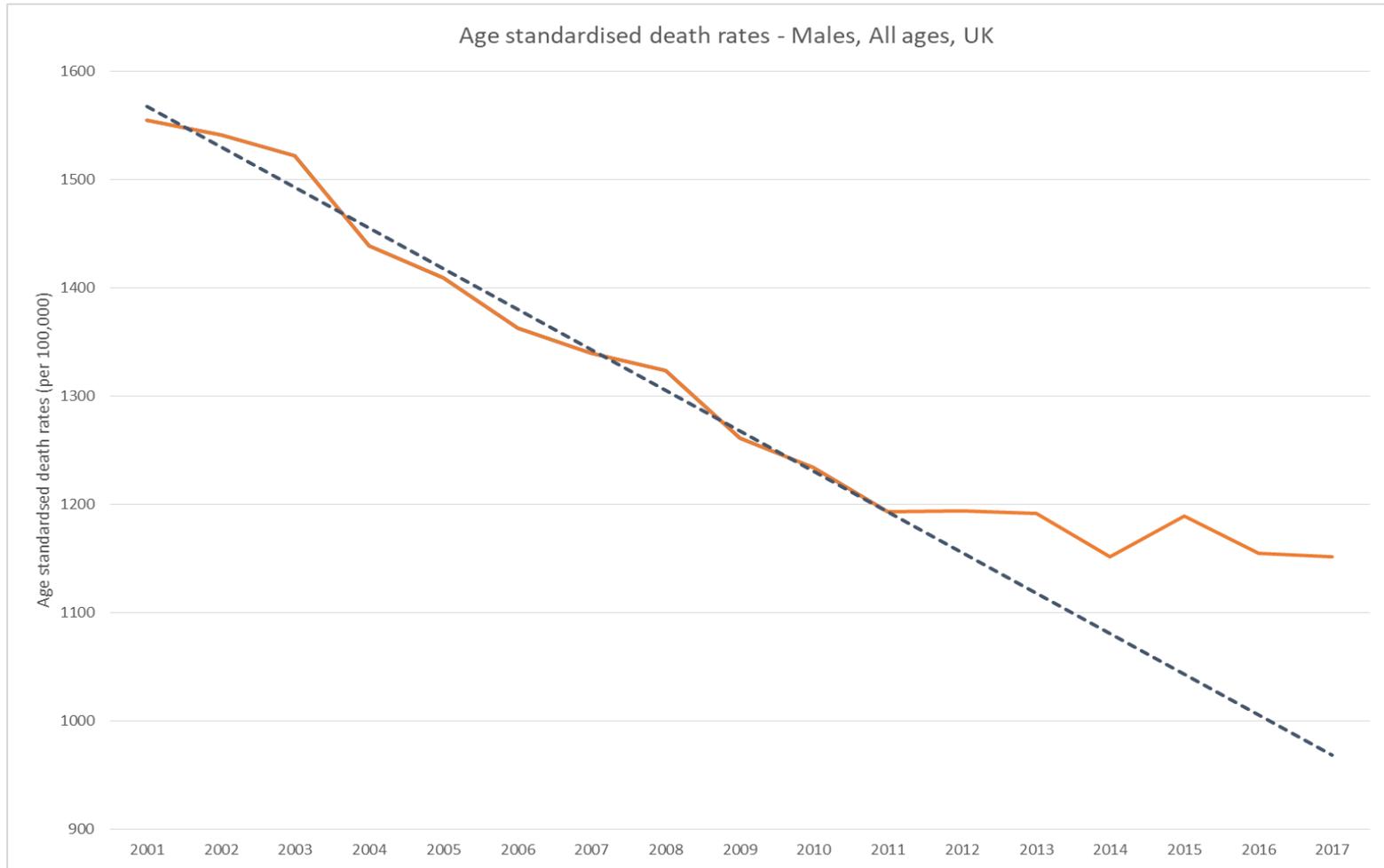
Mortality improvements have varied by age and time period



Annualised mortality improvements (males, E&W)



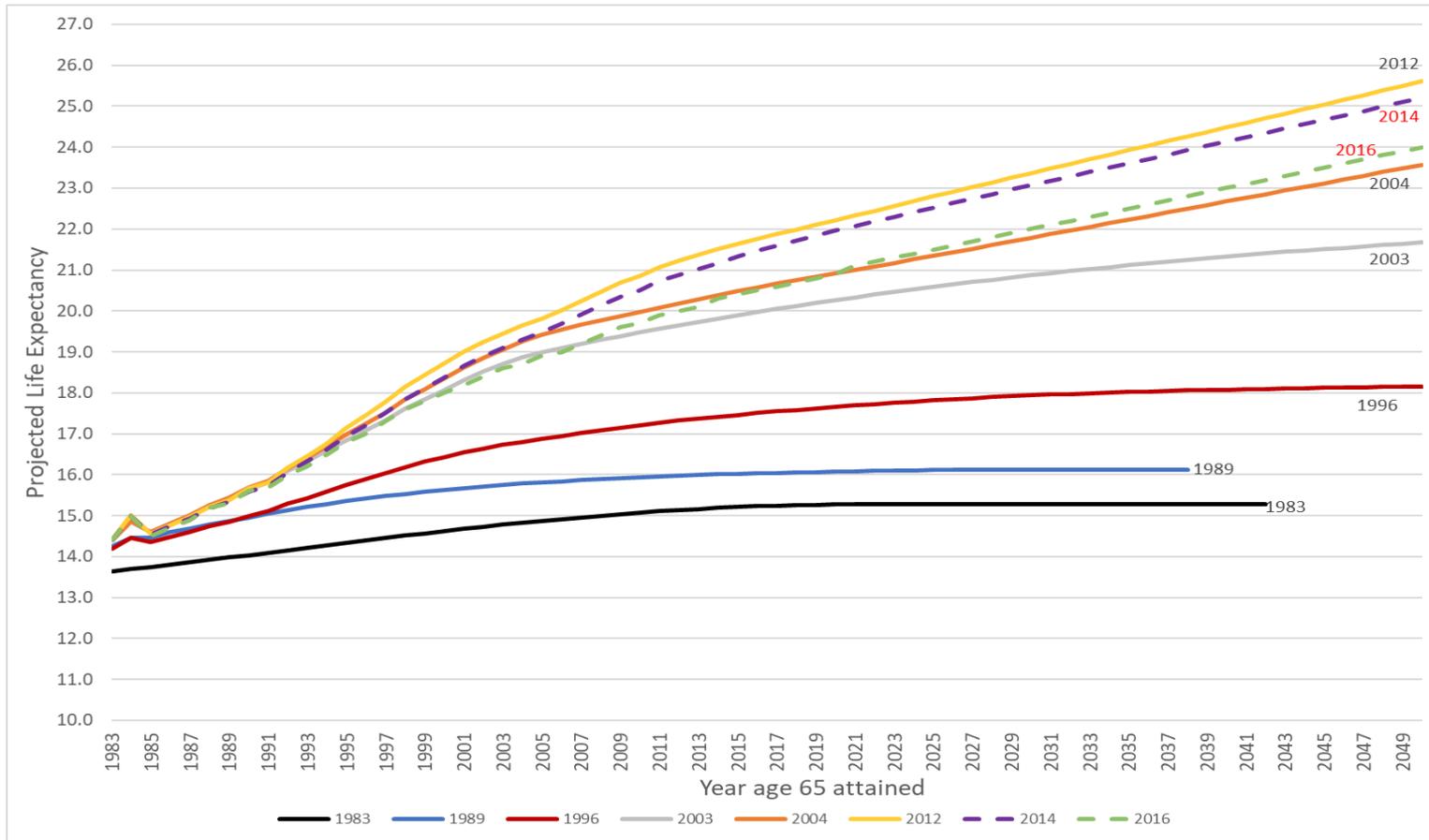
Mortality improvements have recently tailed off



Source: ONS



Mortality projections vary significantly through time



Cohort life expectancy at age 65 from projections made between 1983 and 2016 – Males, UK



There are a variety of potential drivers for future mortality changes

- Changes in bio-medical technology
- Effectiveness of health care systems
- Behavioural changes related to health:
- Smoking prevalence
- Lifestyles
- Obesity
- Emergence of new diseases (eg HIV, SARS)
- Antibiotic resistance
- Re-emergence of old diseases (eg TB)
- Environmental change, disasters, wars
- Changes in population composition; cohort effects, migrants

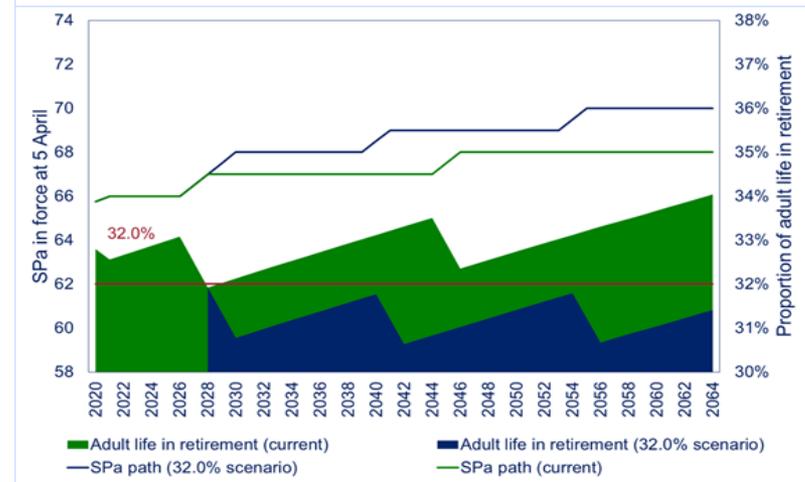
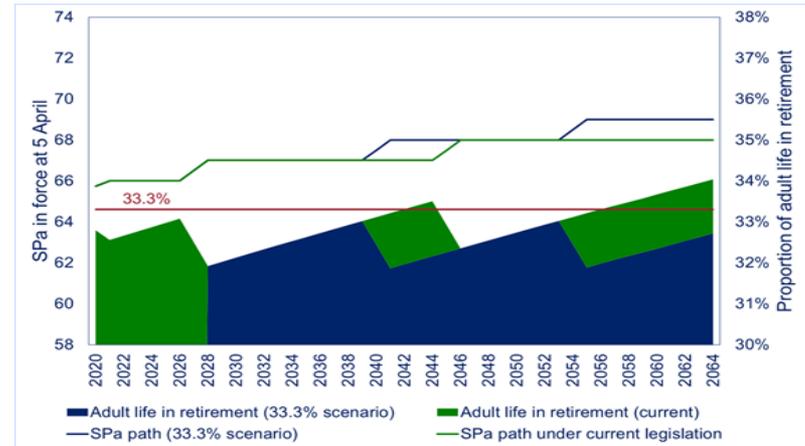
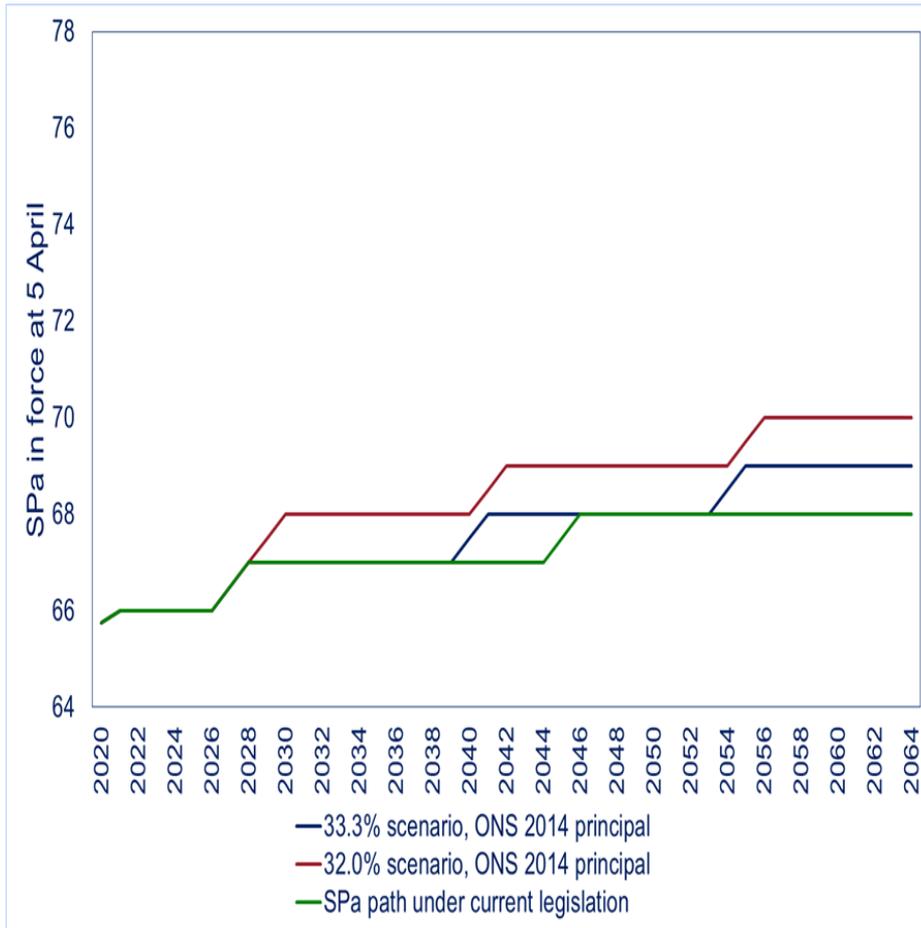


State Pension age (SPa) review: parameters & assumptions

- Broad question: what does SPa need to be in the future to fix the proportion of adult life spent in receipt of state pension?
- Parameters specified by Secretary of State:
 - Period of reaching State Pension age to be covered – 2028 to 2064
 - Proportion of adult life spent in retirement – 2 options: 33.3% and 32%
 - Age at which adult life starts – 20 (OECD convention)
- Further assumptions:
 - Mortality based on ONS UK principal population projections (2014 latest available)
 - Central assumption of 1.2% annual mortality improvements in long term
 - Use unisex (weighted by numbers) cohort life expectancy

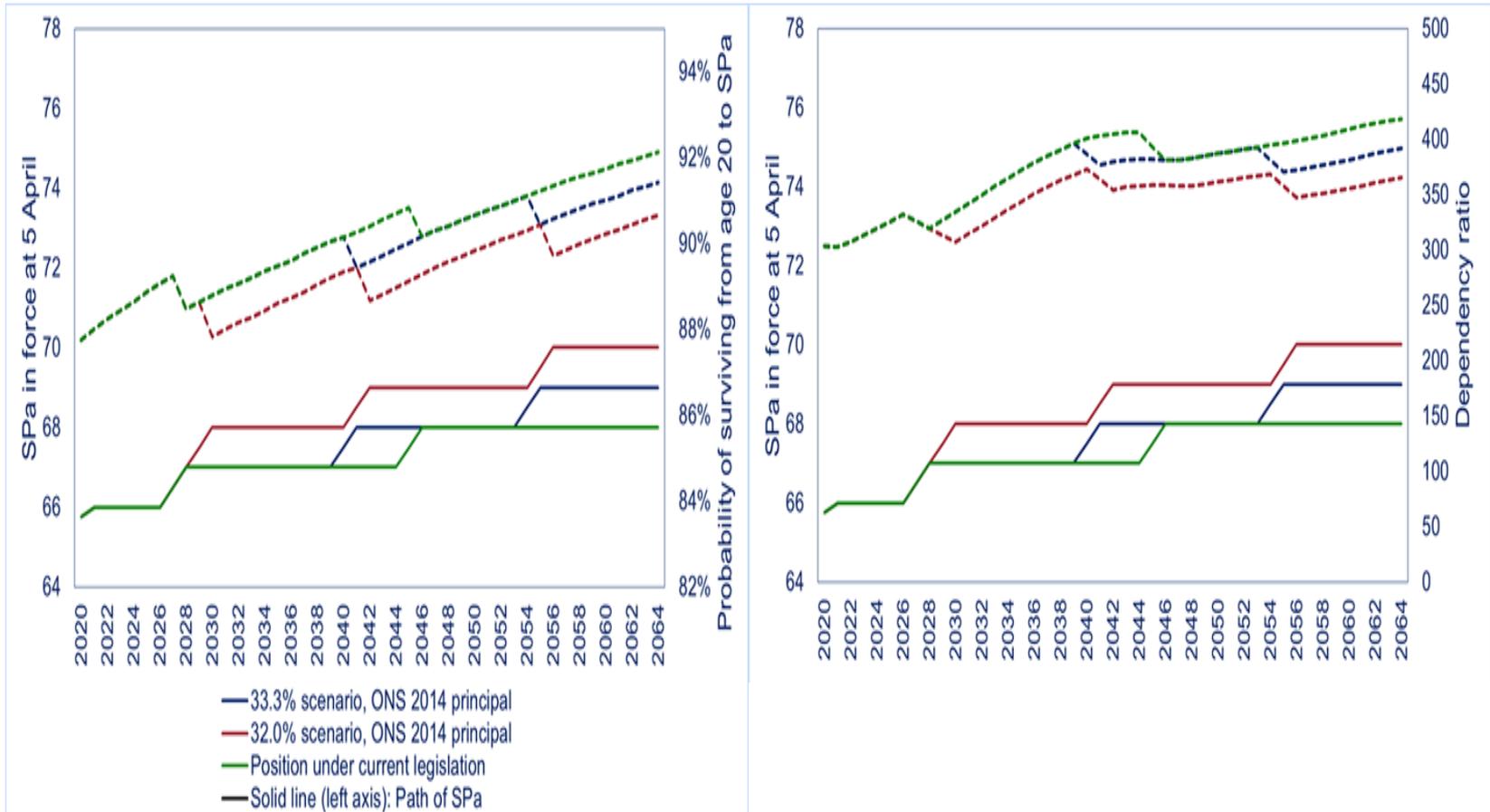


GA report main results: SPa needs to increase more rapidly to achieve fixed proportion





Still an increasing chance of surviving to SPa and an increasing old age dependency ratio



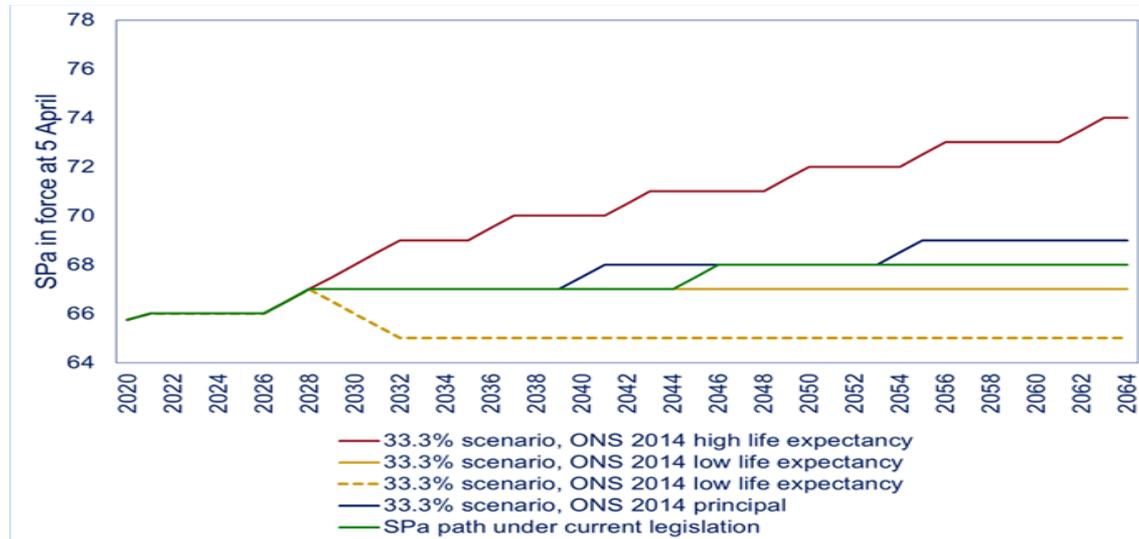


Results sensitive to alternative assumptions on mortality improvements

Table 8: Cohort life expectancies at age 65 (in 2014 and 2064) and calculated proportion of adult life in retirement (in 2028-29), under ONS 2014-based principal population projections and adjusted long-term improvement rates

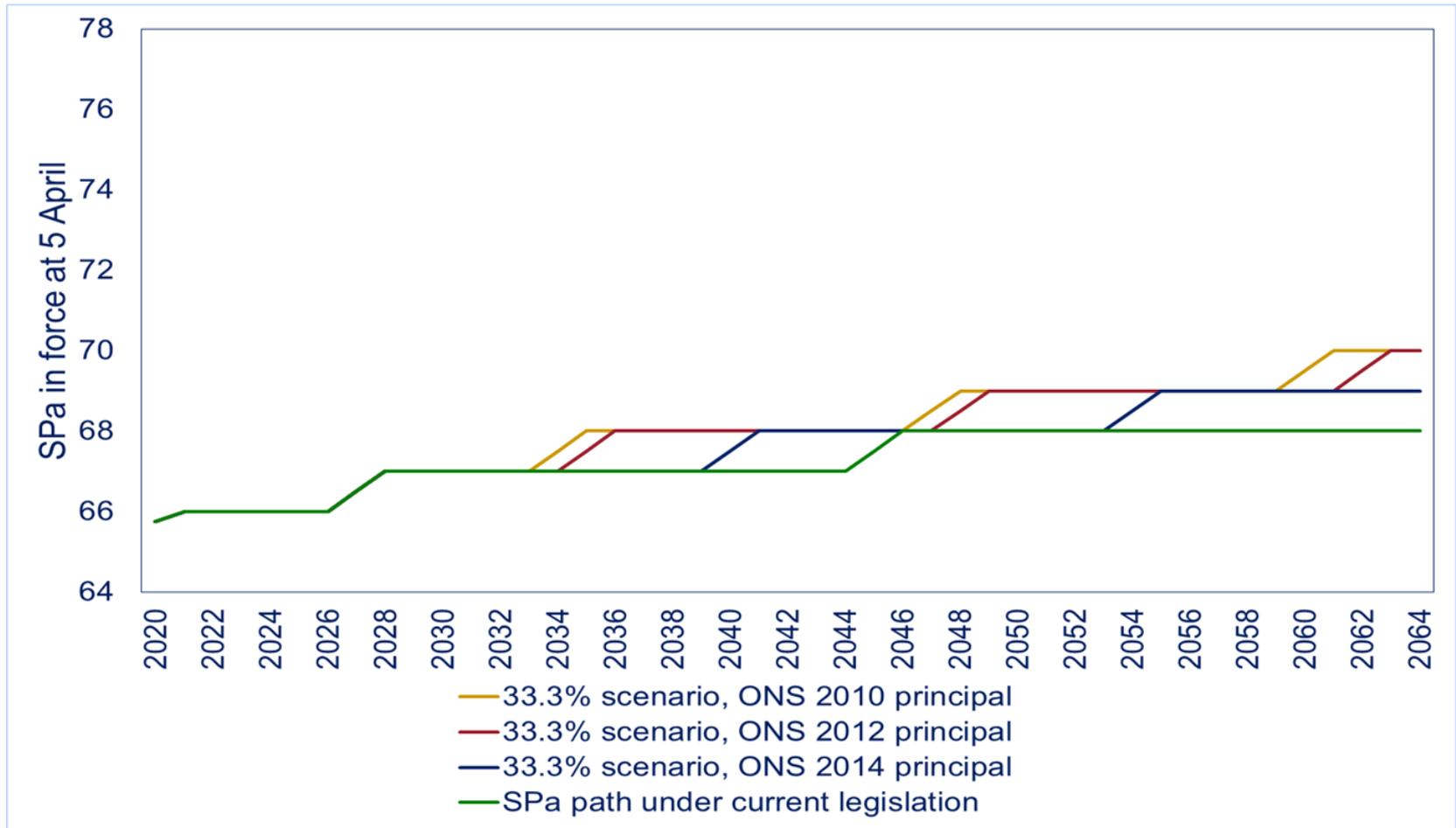
Central long-term improvement rate % pa	Cohort life expectancy at age 65				Proportion of adult life in retirement* (2028-29)
	Men		Women		
	2014	2064	2014	2064	
0% (low)	20.3	20.9	22.5	22.8	30.0%
1.0%	21.0	25.3	23.3	27.3	31.6%
1.2% (principal)	21.2	26.7	23.5	28.7	32.0%
1.4%	21.3	27.6	23.6	29.6	32.3%
2.4% (high)	22.2	34.8	24.6	36.9	34.4%

* based on the currently legislated SPa timetable





Recent mortality projection changes would have *deferred* SPa increases





Government response

- Follow independent review recommendation to increase SPa from 67 to 68 between 2037 and 2039
- But given uncertainty, wait for another review (due by 2023) before legislation
- Policy for post 2039 not set yet
- Minded to commit to “up to 32%”



Key points

- > Future life expectancy is unknown (and unknowable)
- > But governments and individuals need to be able to plan for the future
- > Intergenerational fairness requires a balance between flexibility to manage evolving uncertainty and fixed rules to provide certainty / forecastability



References

- “Government Actuary’s Quinquennial Review of the National Insurance Fund as at April 2015” (GAD, October 2017)
- “Periodic review of rules about State Pension age: Report by the Government Actuary” (GAD, March 2017)
- “State Pension age review” (DWP, July 2017)
- “National Population Projections: 2014-based projections” (ONS, October 2015)
- “Fiscal sustainability report” (OBR, January 2017)