Society of Actuaries in Ireland

The Future of the State Pension

11th May 2016

Society of Actuaries in Ireland

Opening Remarks

Olivia O'Leary

Society of Actuaries in Ireland

Welcome from the SAI

Maurice Whyms

Milliman

IT TAKES VISION

Research report on the financial sustainability of the State Pension

Michael Culligan & Aisling Barrett

11 May 2016

Background

“ Ireland faces challenges on the financial sustainability of its pension system as the population ages…”

“…however, Ireland’s pension spending will be comparatively low in international comparison, despite large projected increases over the next 50 years”

OECD (2014), *OECD Reviews of Pensions Systems: Ireland*, OECD Publishing.
http://dx.doi.org/10.1787/9789264208834-en

OECD Report (2014)

Main recommendation (in relation to sustainability of State Pension)

Change the parameters to improve financial sustainability

- **Retirement Age**
- **Flexibility**
- **Indexation options**

Our report

Background and context

- Commissioned by SAI and publicpolicy.ie following OECD Report
- To look at projected future cost of State Pension system
  - Firstly on ‘as is’ basis
  - Analysis of key drivers / levers / parameters influencing projected costs
  - Examine impacts of changes to parameters
- To identify levers that could put the system on a more sustainable footing
- Purely an analytical exercise
- Aim of SAI and publicpolicy.ie was to provide an input into the public policy debate

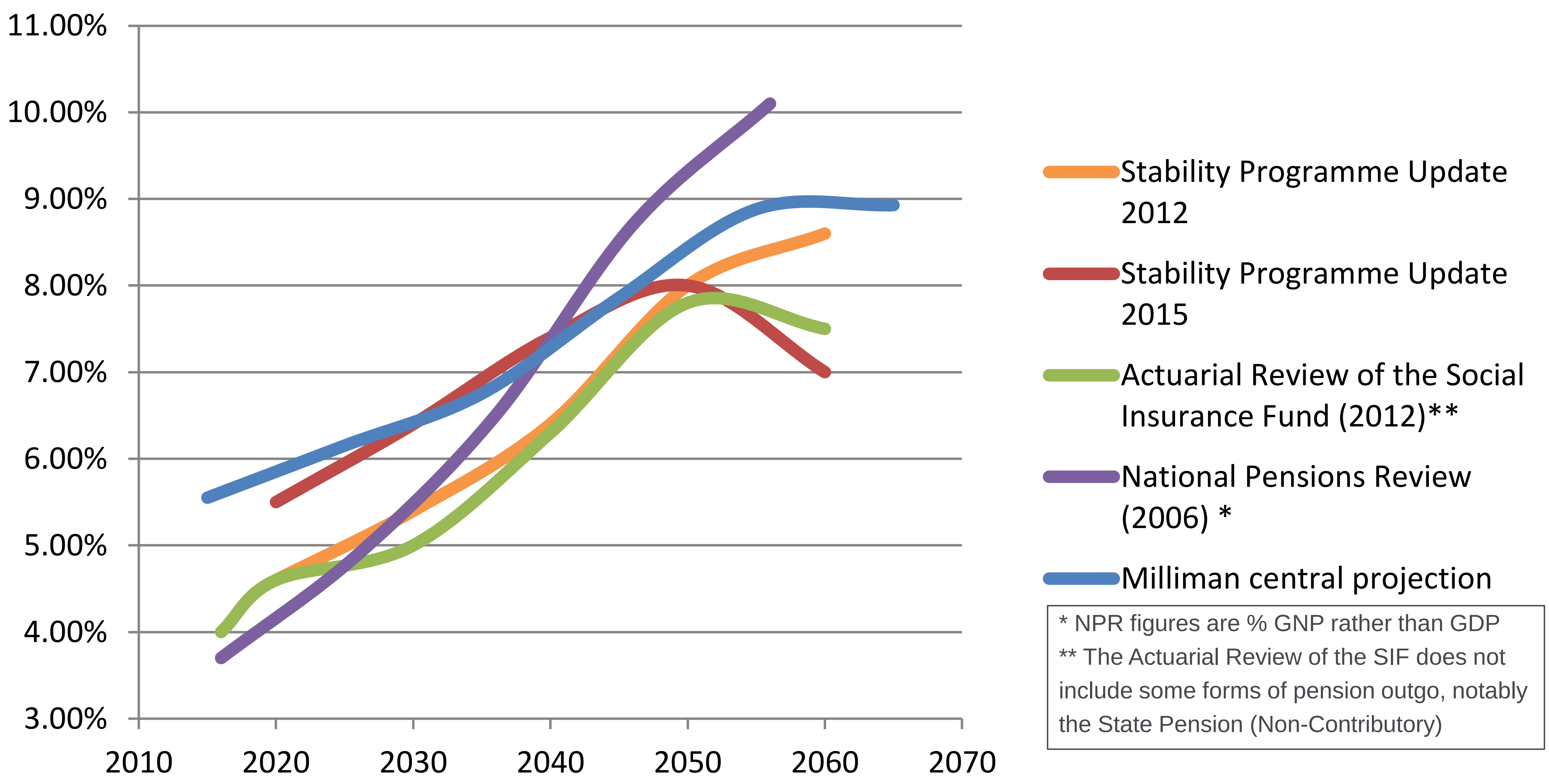
Concept of sustainability

How to define it?

- OECD report discusses concept of sustainability
  - Concludes that it is “even more controversial … than [defining] adequacy”
- OECD: “Most logical approach … involves some form of long-term actuarial equilibrium”
  - System in balance over time
  - Income broadly matches outgo over suitably long period (e.g. 50 years or more)
- We follow this approach
  - We compare projected future pension outgo versus projected income
  - And examine how the two move over time

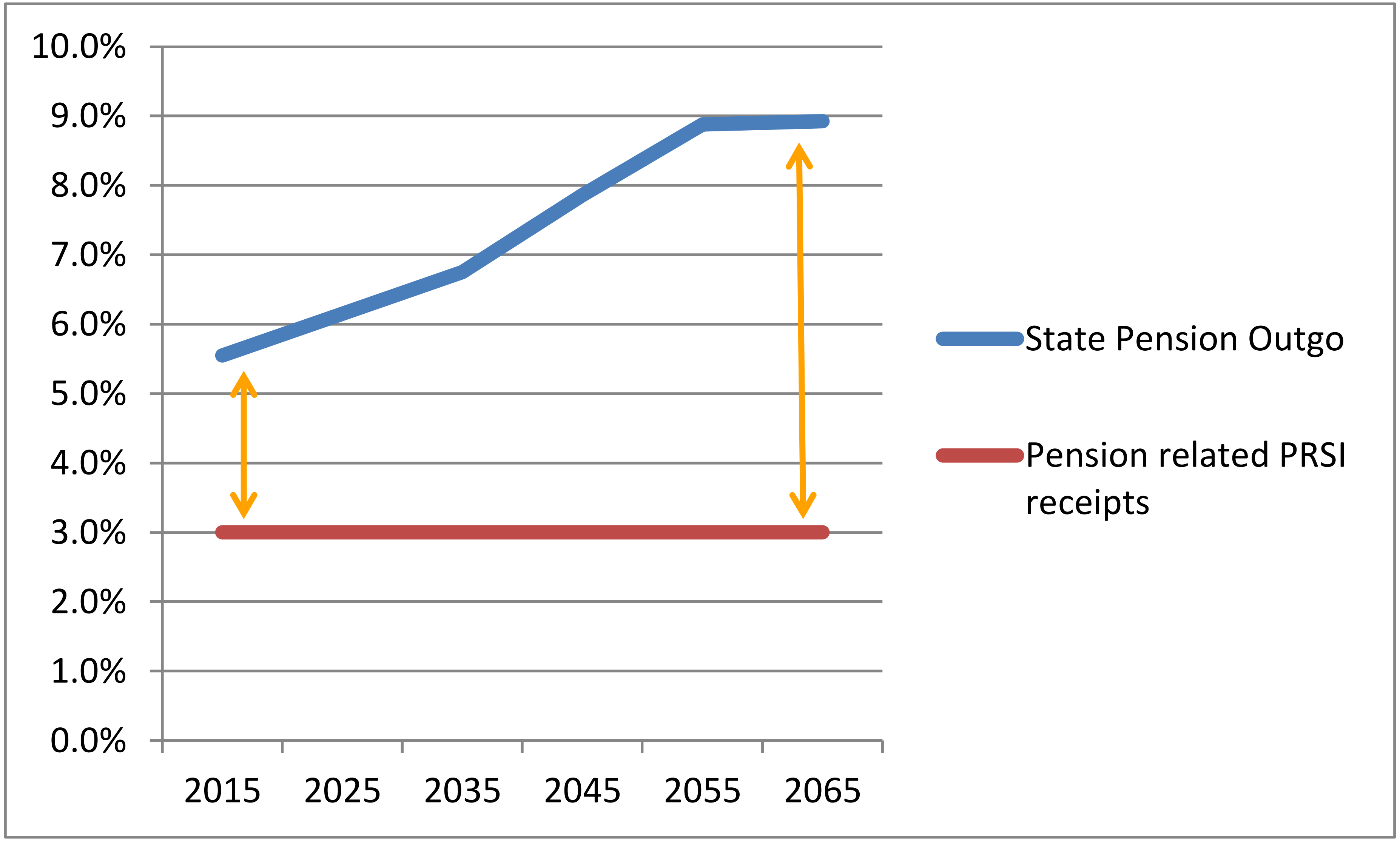
Our projections

Projections of State Pension outgo (% GDP)



* NPR figures are % GNP rather than GDP
** The Actuarial Review of the SIF does not include some forms of pension outgo, notably the State Pension (Non-Contributory)

Our projection of income vs. outgo

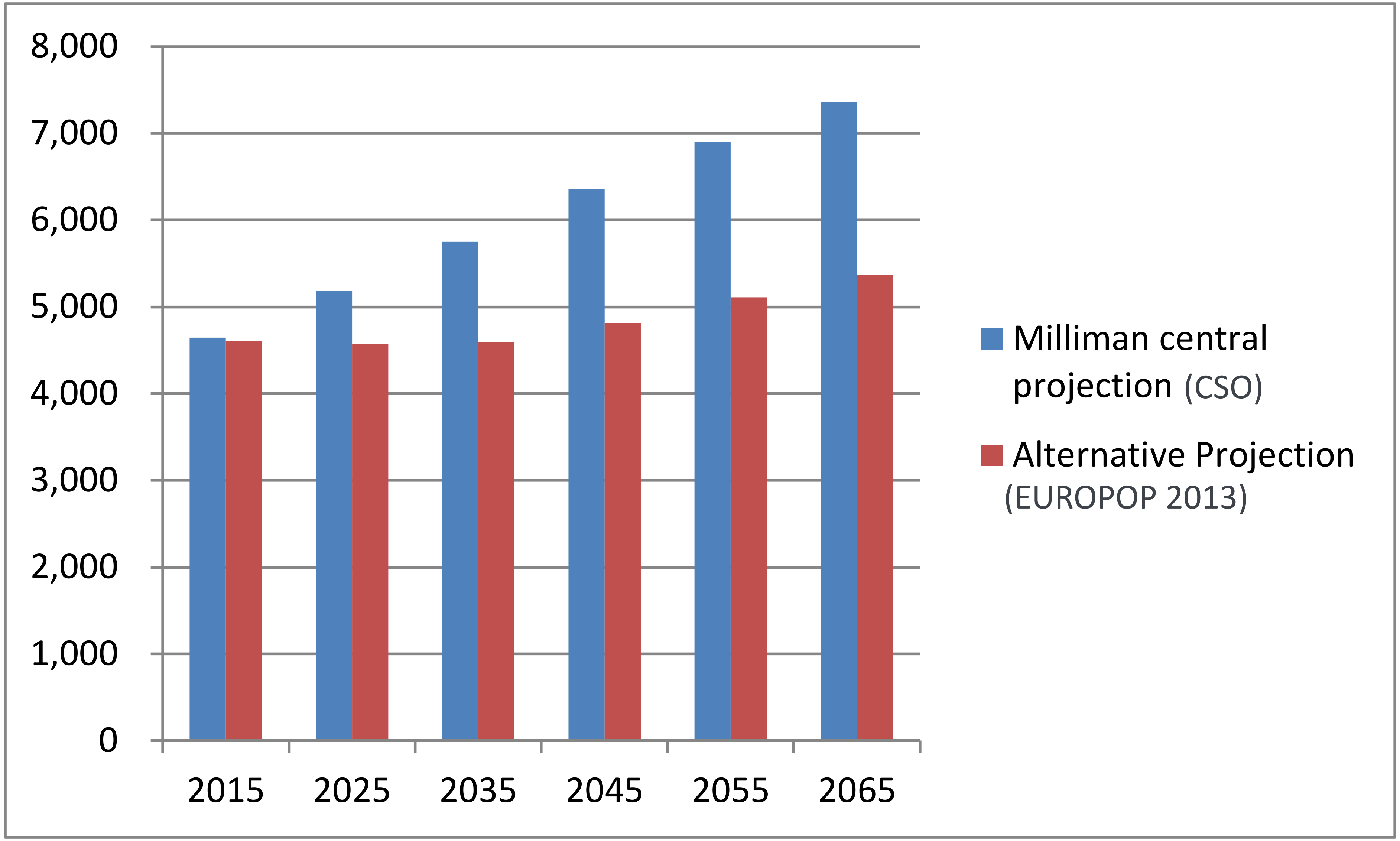


Our projection of income vs. outgo

	2015	2025	2035	2045	2055	2065
State Pension outgo	**5.6%**	**6.2%**	**6.8%**	**7.9%**	**8.9%**	**8.9%**
Pension-related PRSI receipts	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Excess of outgo over receipts	2.6%	3.2%	3.8%	4.9%	5.9%	5.9%
Increase in excess	–	0.6%	1.2%	2.3%	3.3%	3.3%

Our assumptions

Population projections (000's)

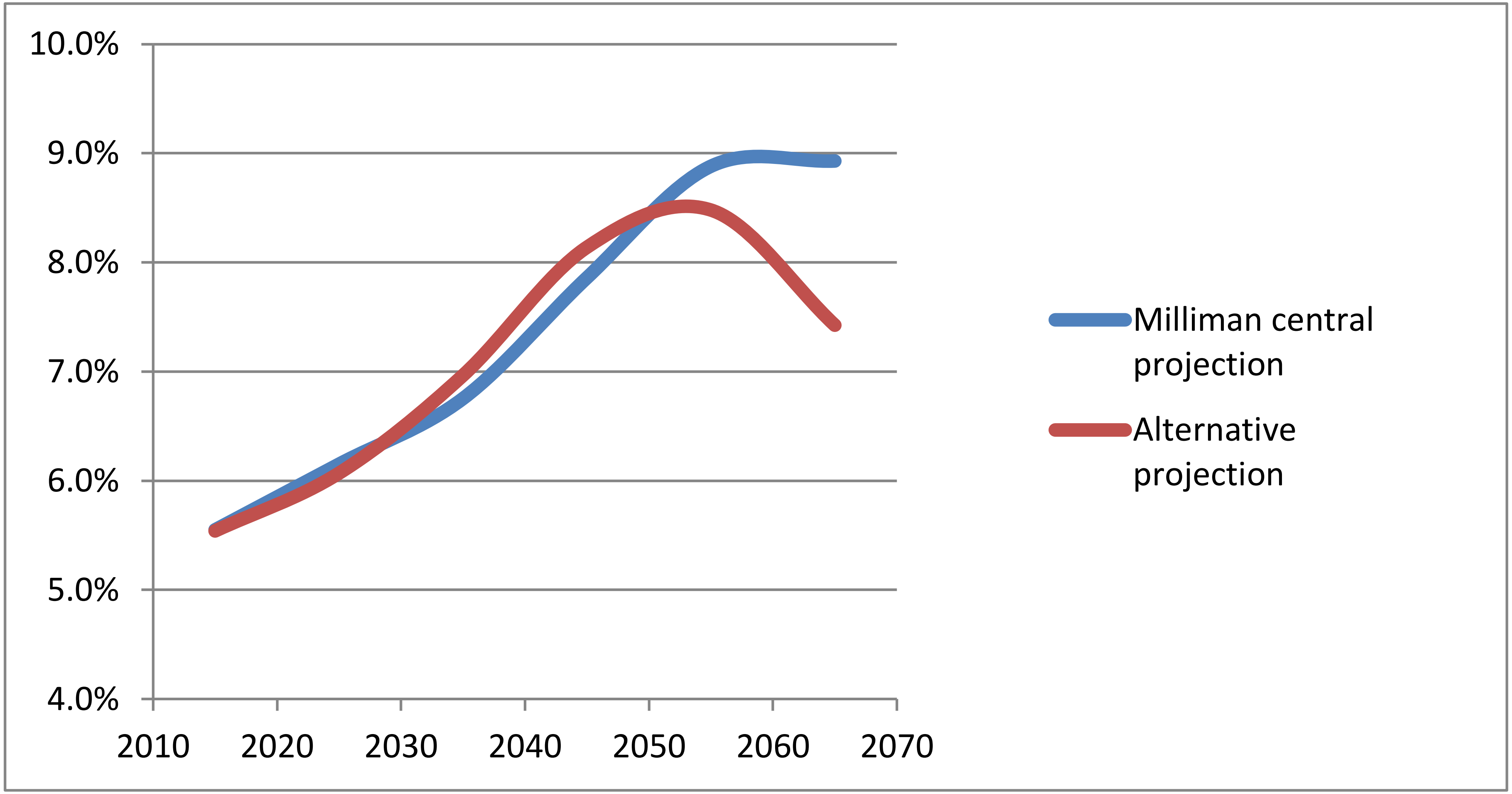


“Ireland has significant reservations around the population projections … where a significant net negative outward migration out to 2037 is estimated by the Eurostat model for migration flows.

Based on assumptions about future cyclicality of net migration, Ireland expects that net migration will close (and change sign) significantly more rapidly than is envisaged under the EUROPOP 2013 projections.”

April 2015 Update to Ireland’s Stability Programme (Department of Finance)

Impact of alternative population projections



Other assumptions

- Population coverage
- Average pension amount
- Earnings growth
- GDP

Options & levers

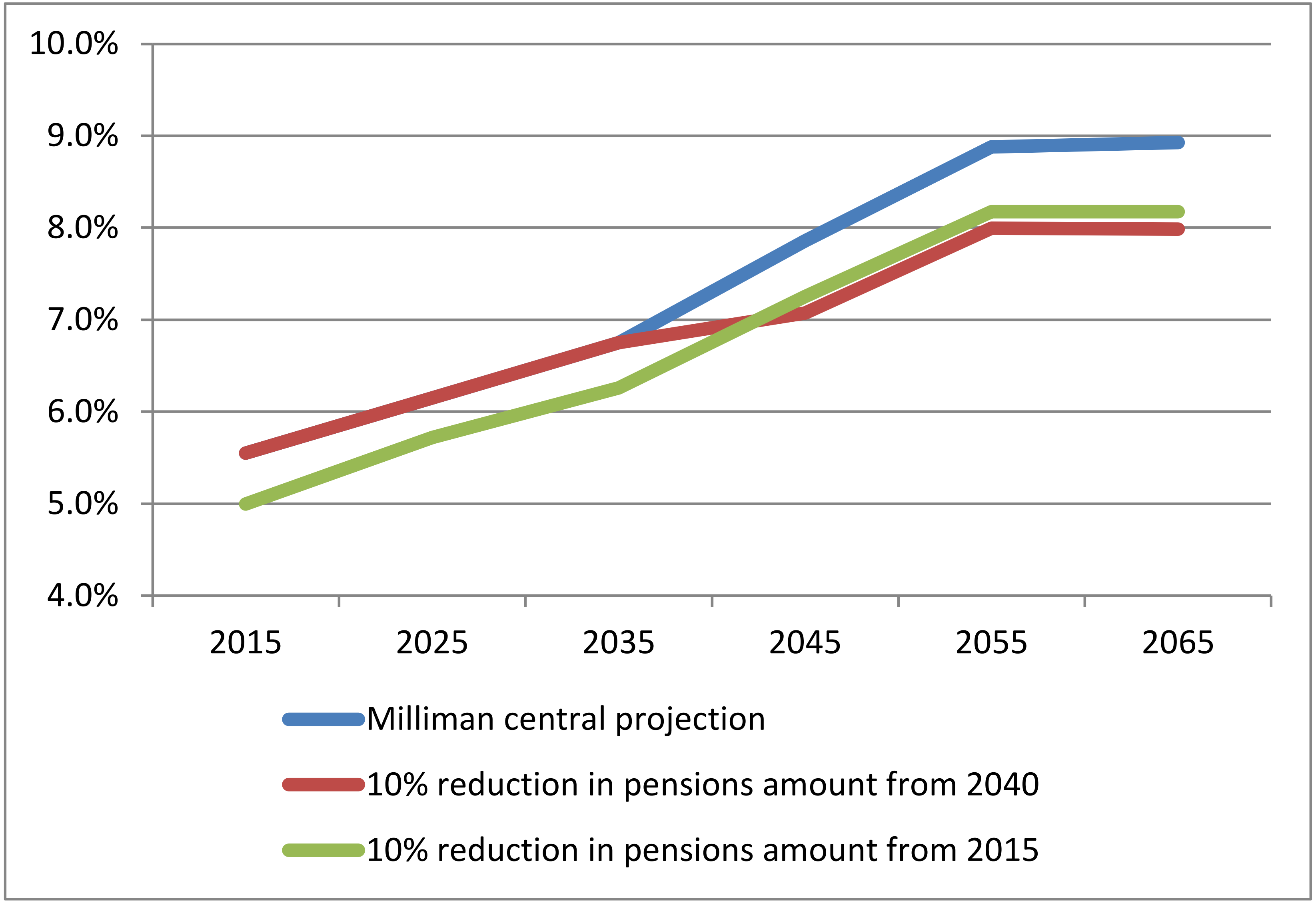
Options

1	Accept increased cost
2	Increase PRSI contributions
3	Change pension parameters / levers
4	Structural reform

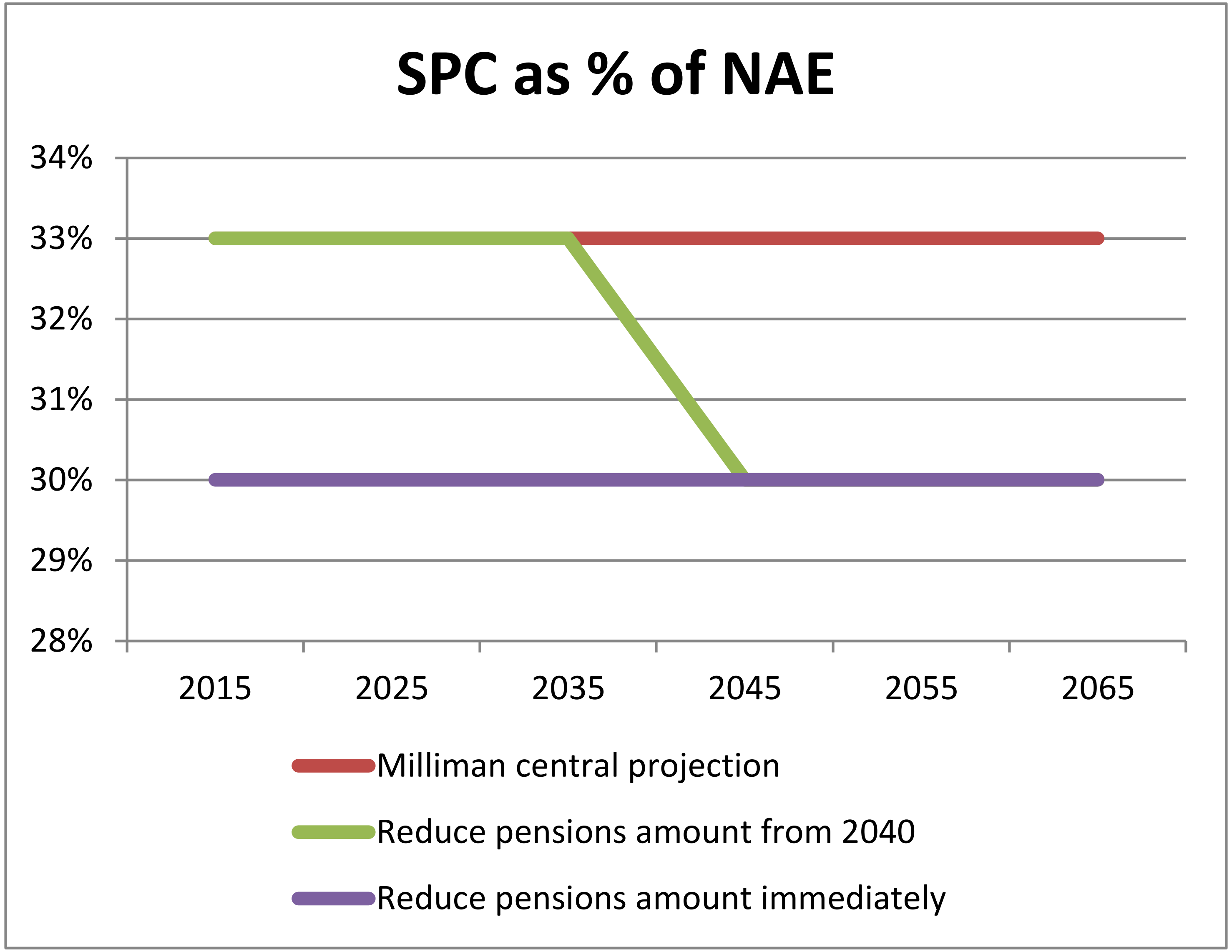
Parameters / Levers

1	Pensions amount
2	Pensions indexation
3	Retirement age
4	Eligibility rules

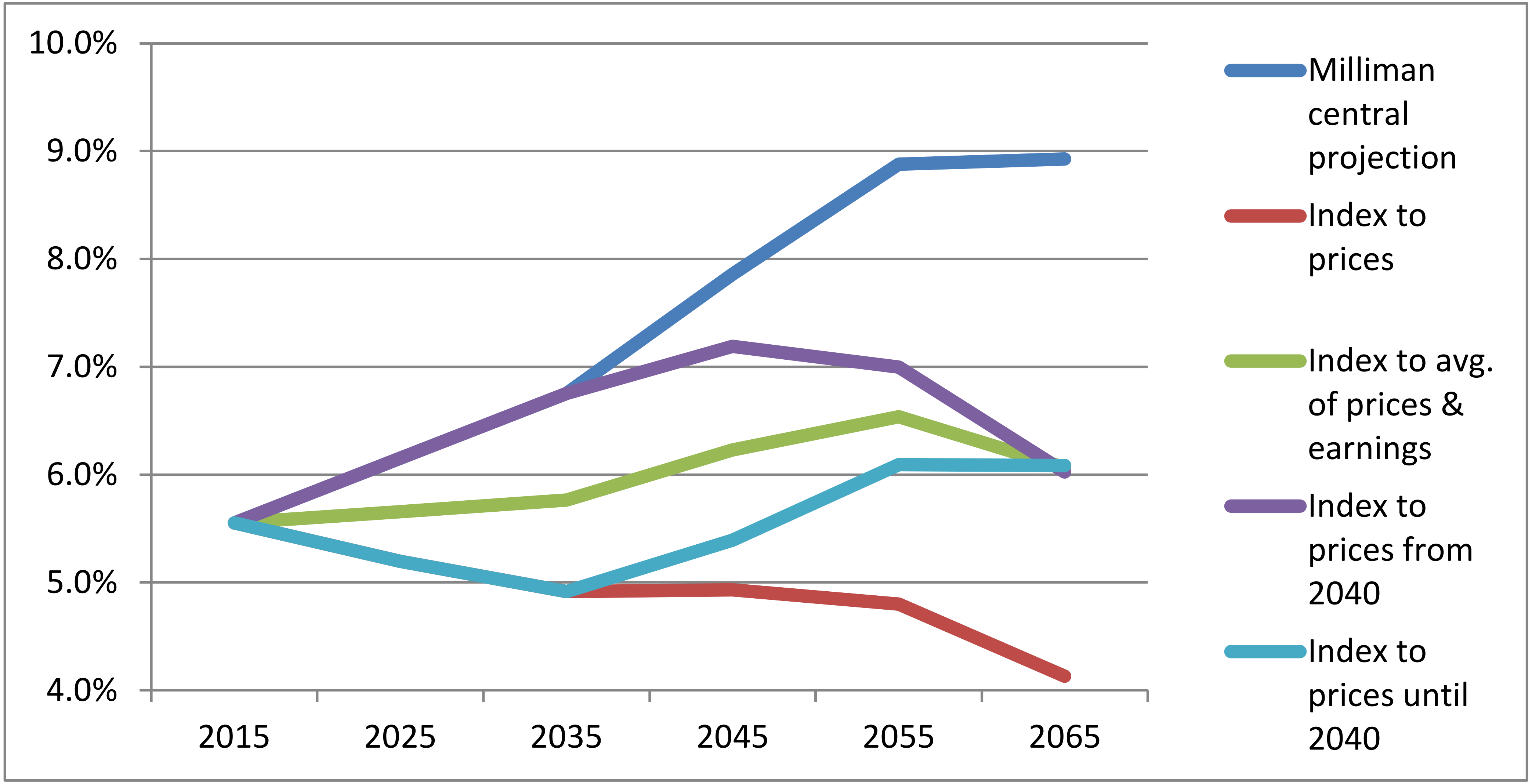
Lever 1 – Pensions Amount – Impact on projected outgo



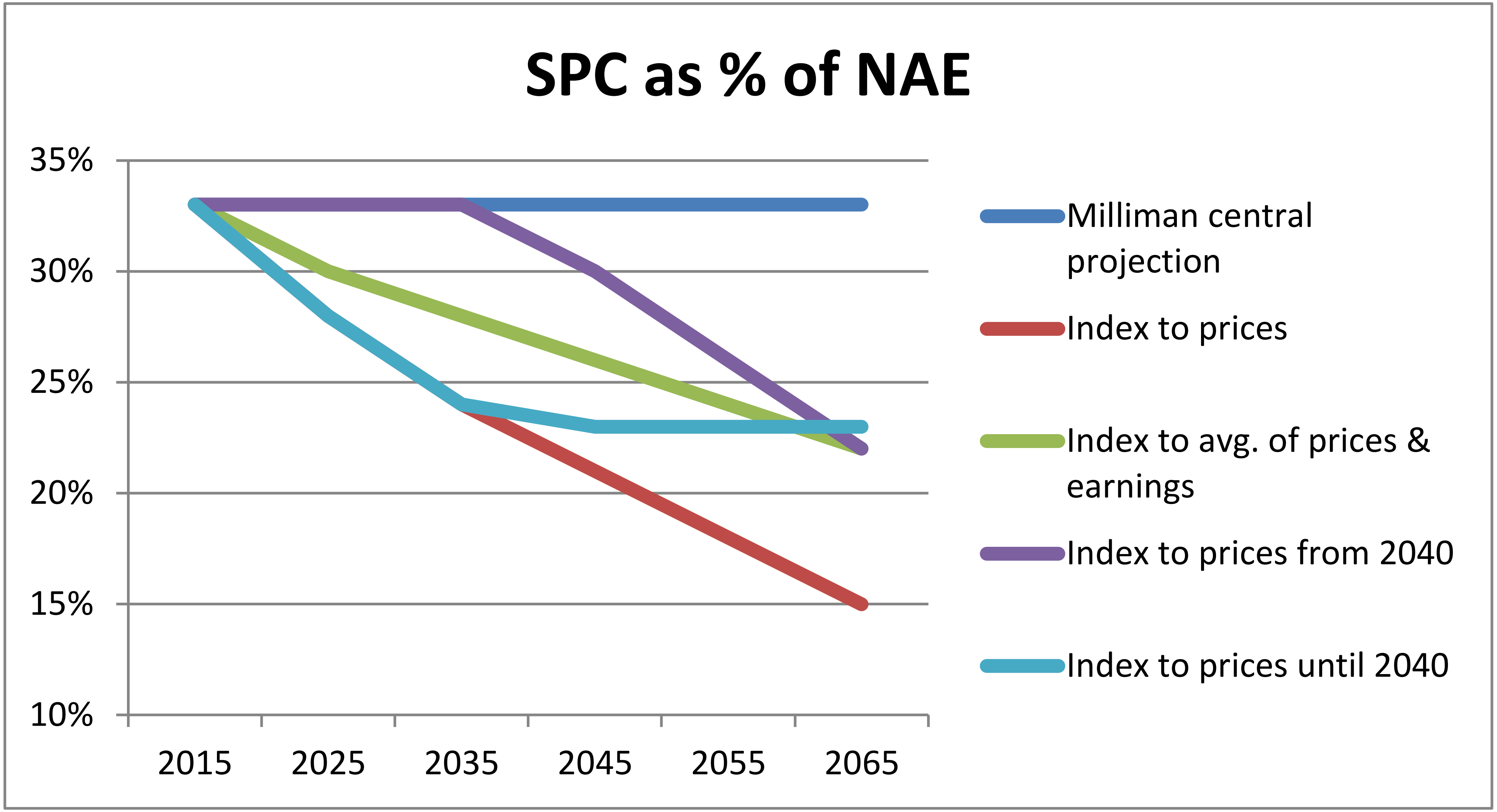
Lever 1 – Pensions Amount – Impact on adequacy



Lever 2 – Pensions Indexation – Impact on projected outgo



Lever 2 – Pensions Indexation – Impact on adequacy

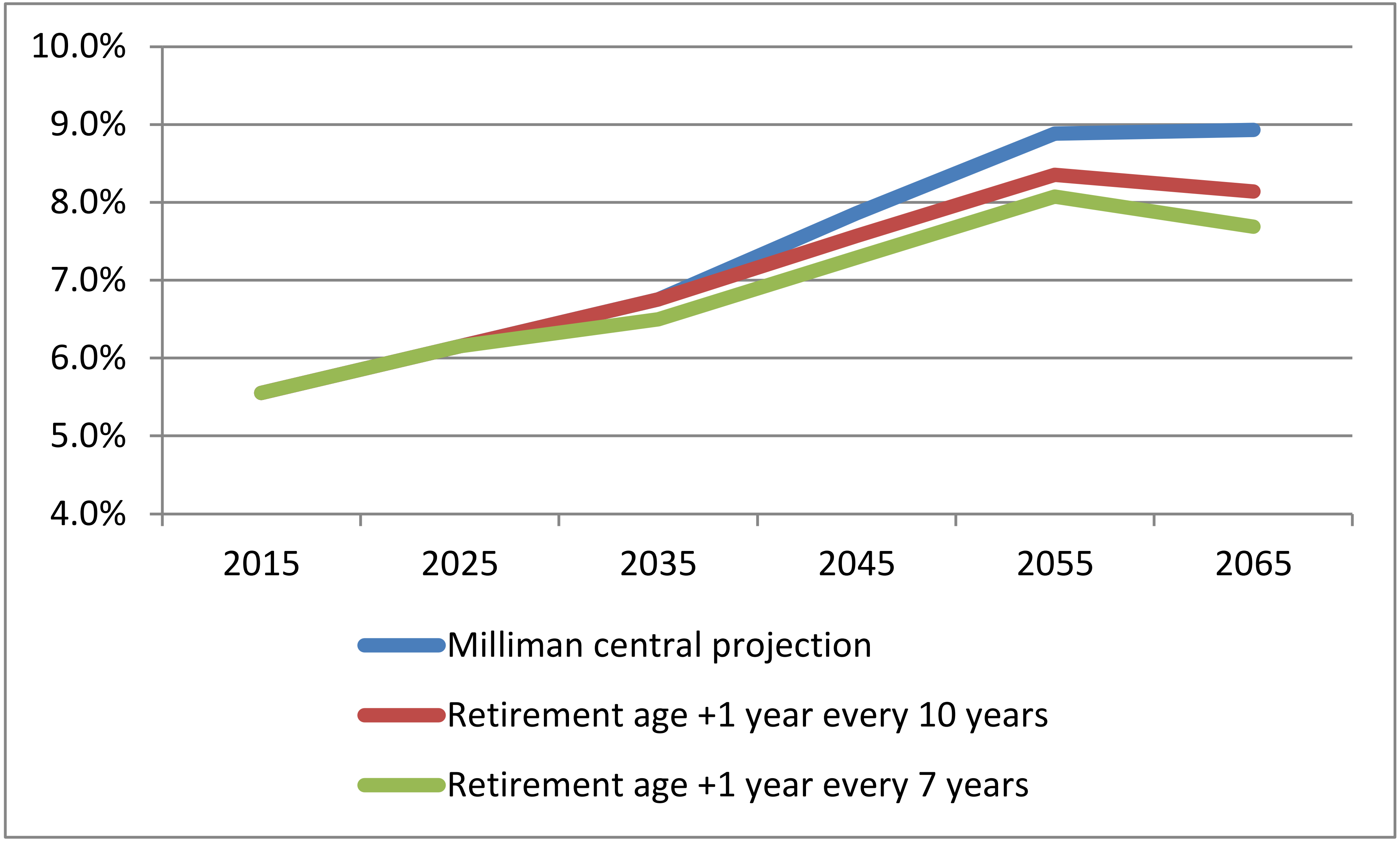


“There is an obvious trade-off between adequacy and sustainability: higher public pensions deliver larger incomes in old age but cost more.…”

“…If governments delay reforms, then the scale of adjustment to benefits needed in the medium or long term will be more sudden and likely more painful.

OECD (2014), *OECD Reviews of Pensions Systems: Ireland*, OECD Publishing. *http://dx.doi.org/10.1787/9789264208834-en*

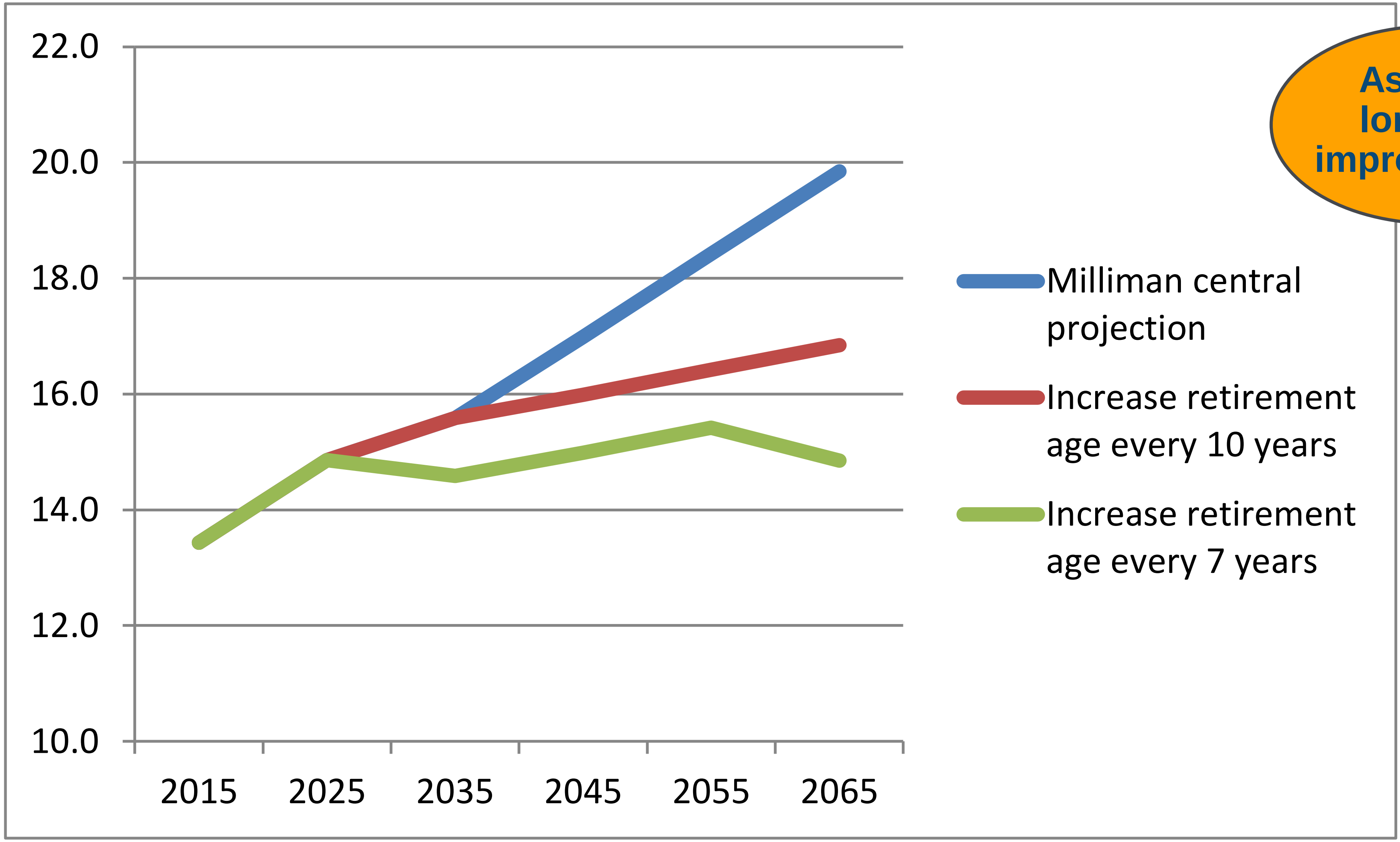
Lever 3 – Retirement Age – Impact on projected outgo



Lever 3 – Retirement Age – Impact on working lives

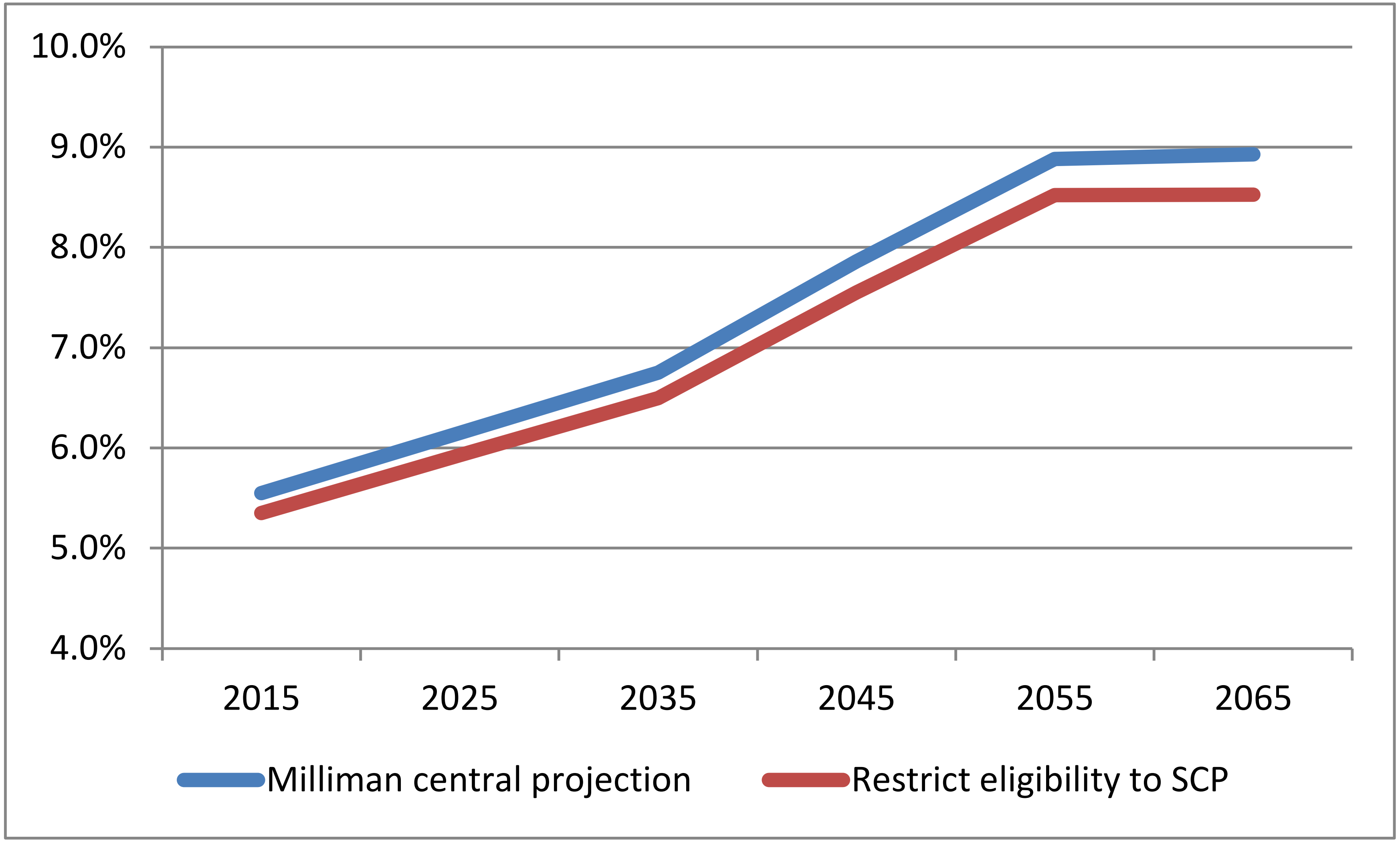
	2015	2025	2035	2045	2055	2065
Central projection	66	67	68	68	68	68
+1 year every 10 years	66	67	68	69	70	71
+1 year every 7 years	66	67	69	70	71	73

Lever 3 – Retirement Age – Impact on payment periods

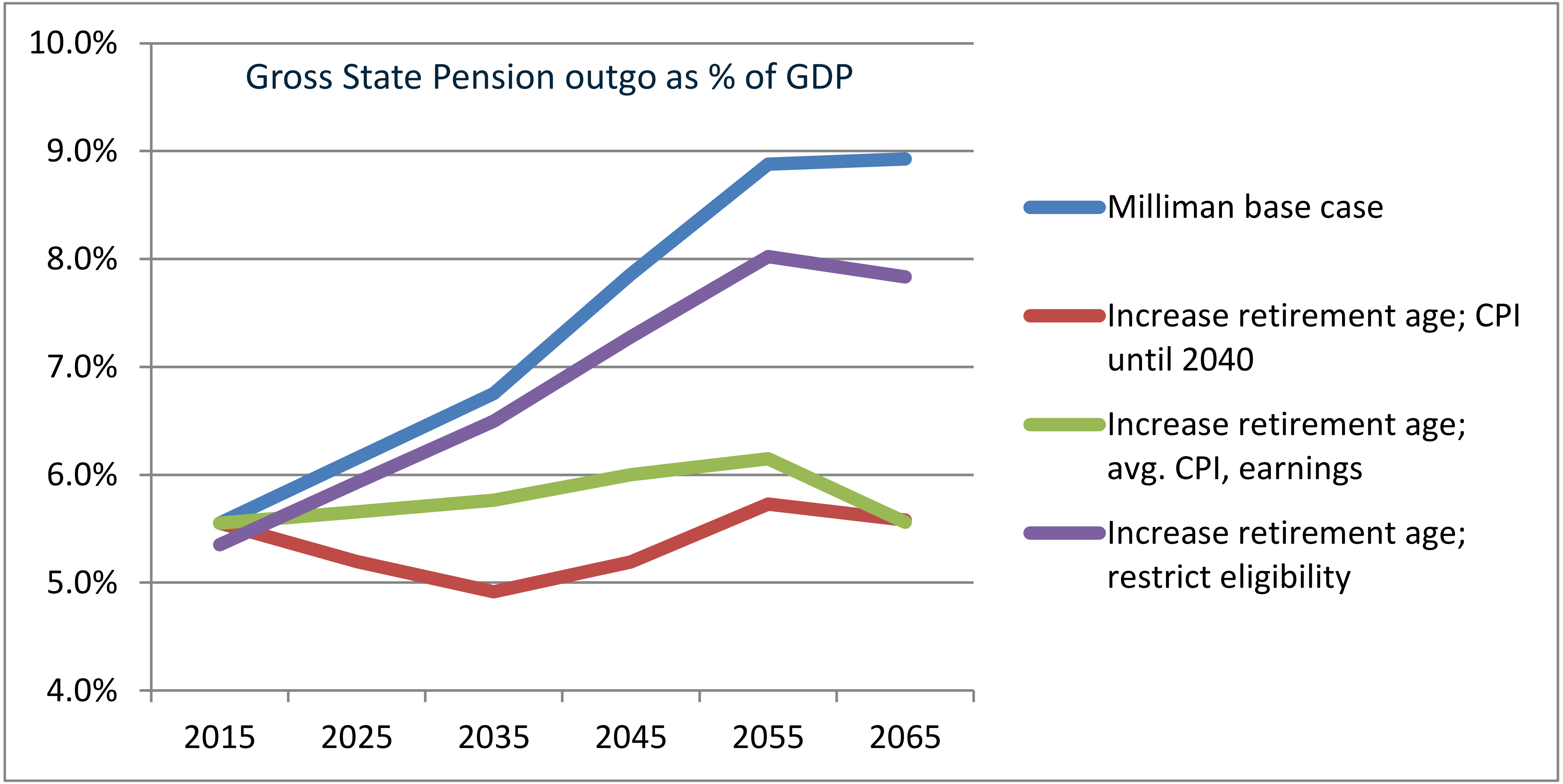


Assumes longevity improvements

Lever 4 – Eligibility – Impact on projected outgo

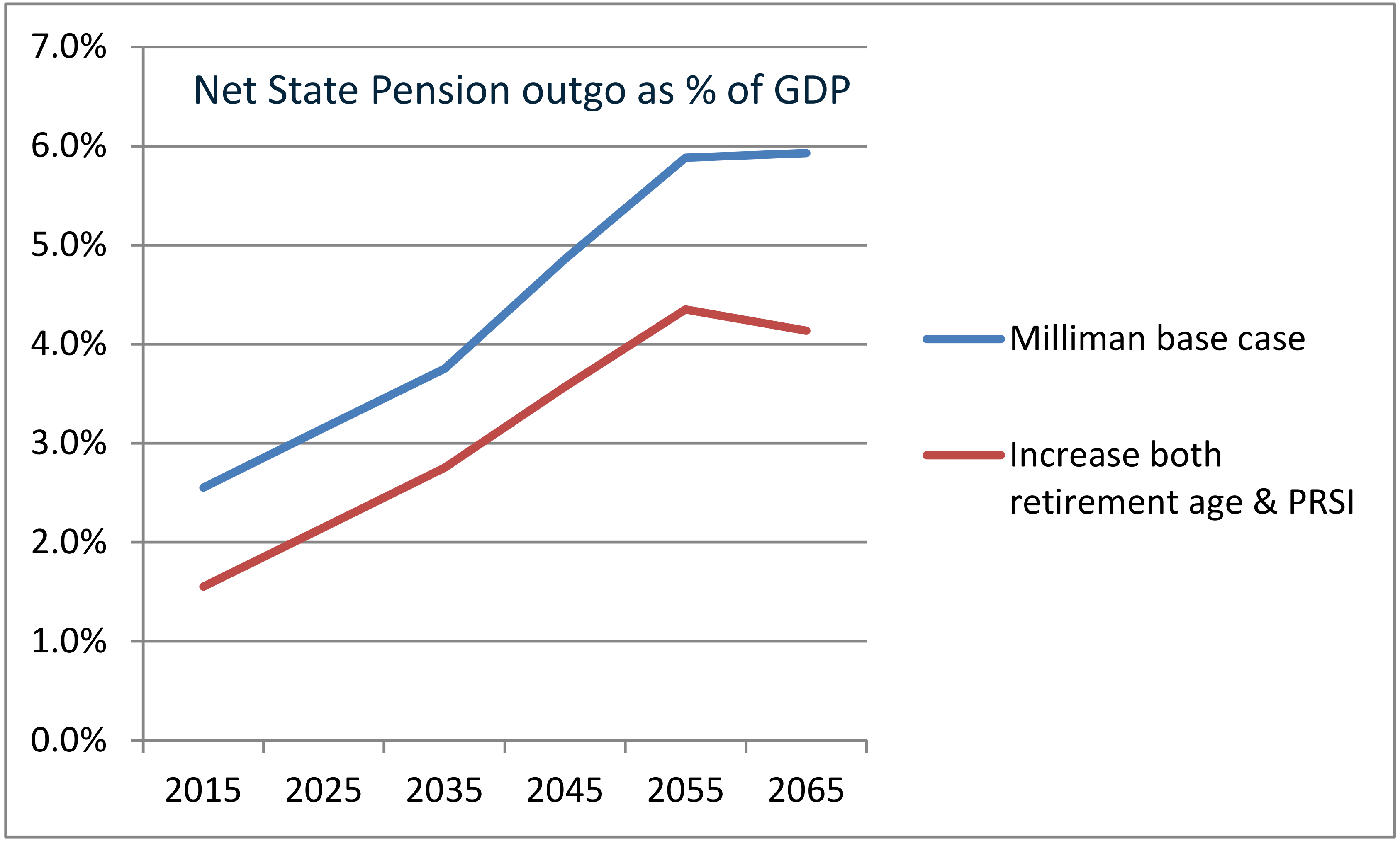


Combinations of levers – Impact on projected outgo



Increasing retirement age & PRSI contributions

Impact on pension cost net of PRSI contributions



Summary & conclusions

Summary of our findings

- Substantial projected increases in (unfunded) State Pension outgo
  - Even on wildly differing population projections

- Options to contain projected increases
  - Difficult to have meaningful impact without changing pension indexation
  - Increase in PRSI contributions could help, but unlikely to solve the problem alone
  - Retirement age increases will be needed **if** life expectancy continues to rise

Conclusions

- System unsustainable in its current form
  - Reference OECD definition of sustainability

- No easy way to improve sustainability
  - All possible options involve difficult policy choices

- Other considerations
  - Flexibility
  - Structural reform

- Finally: don’t shoot the messenger!

Milliman

IT TAKES VISION

Thank you

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Assessing retirement readiness in Ireland

3 main dimensions against which to assess pension systems

Poverty in retirement	Does the system provide an appropriate absolute minimum income level for retirees to remain out of poverty?
Standard of living adjustment	Does the system encourage a level of savings that allow households to move into retirement without having to materially reduce their standard of living?
System sustainability	Are the current system promises sustainable for future generations given projected changes in demographics and uncertainty of future market returns?

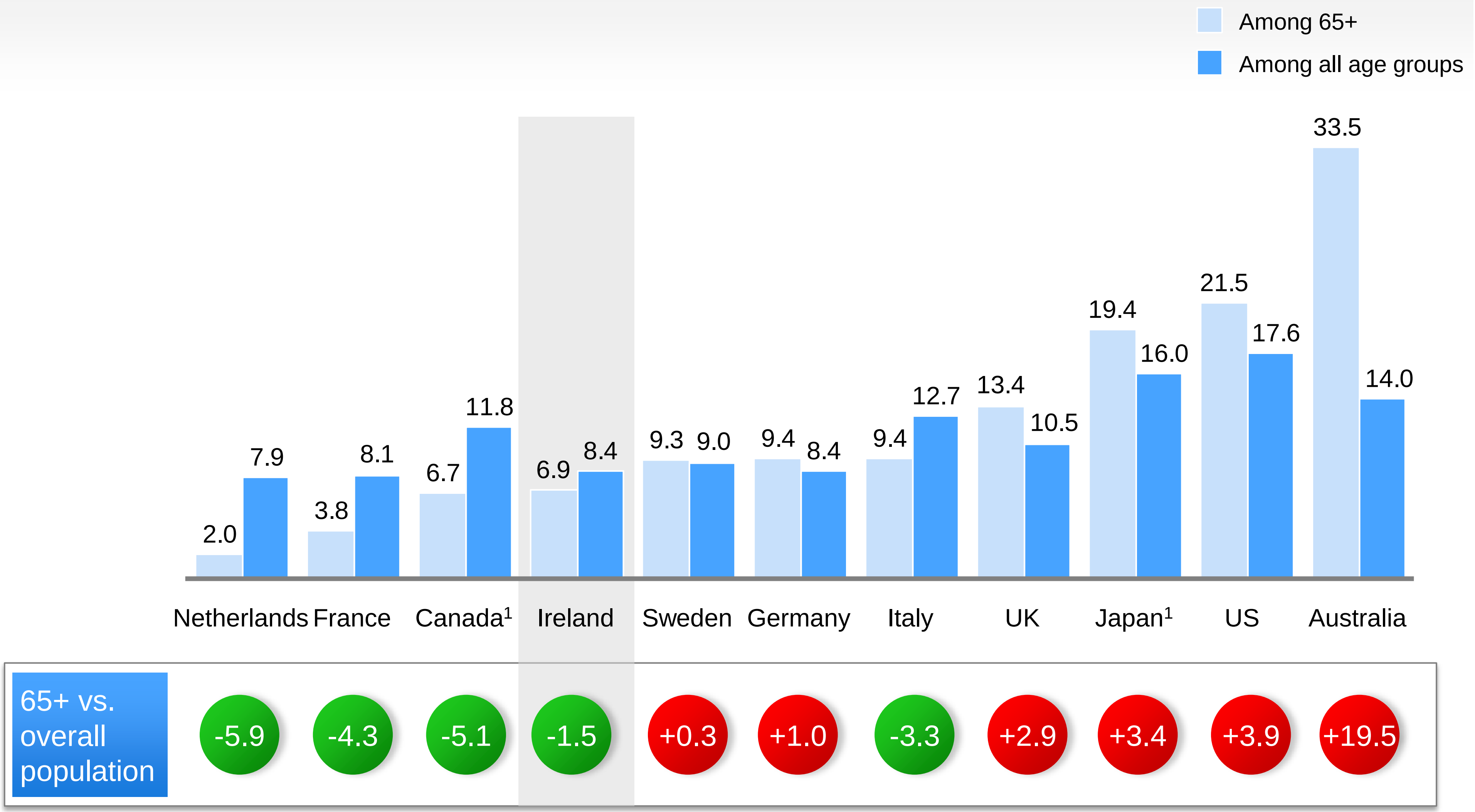
1st dimension: Poverty in retirement

Poverty in retirement

- Poverty rate in retirement stands at 6.9%, lower than most large OECD countries
- Poverty rate in retirement is lower than poverty rate of overall population (8.4% according to the OECD)

Poverty rates across select OECD countries

Percentage of individuals with equivalent incomes less than 50% of national median, 2012[1]



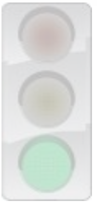
1 Data for 2011 or latest available

SOURCE: OECD 2011/12, most recent data available at time of publication

2nd dimension: Standard of living adjustment

Poverty in retirement

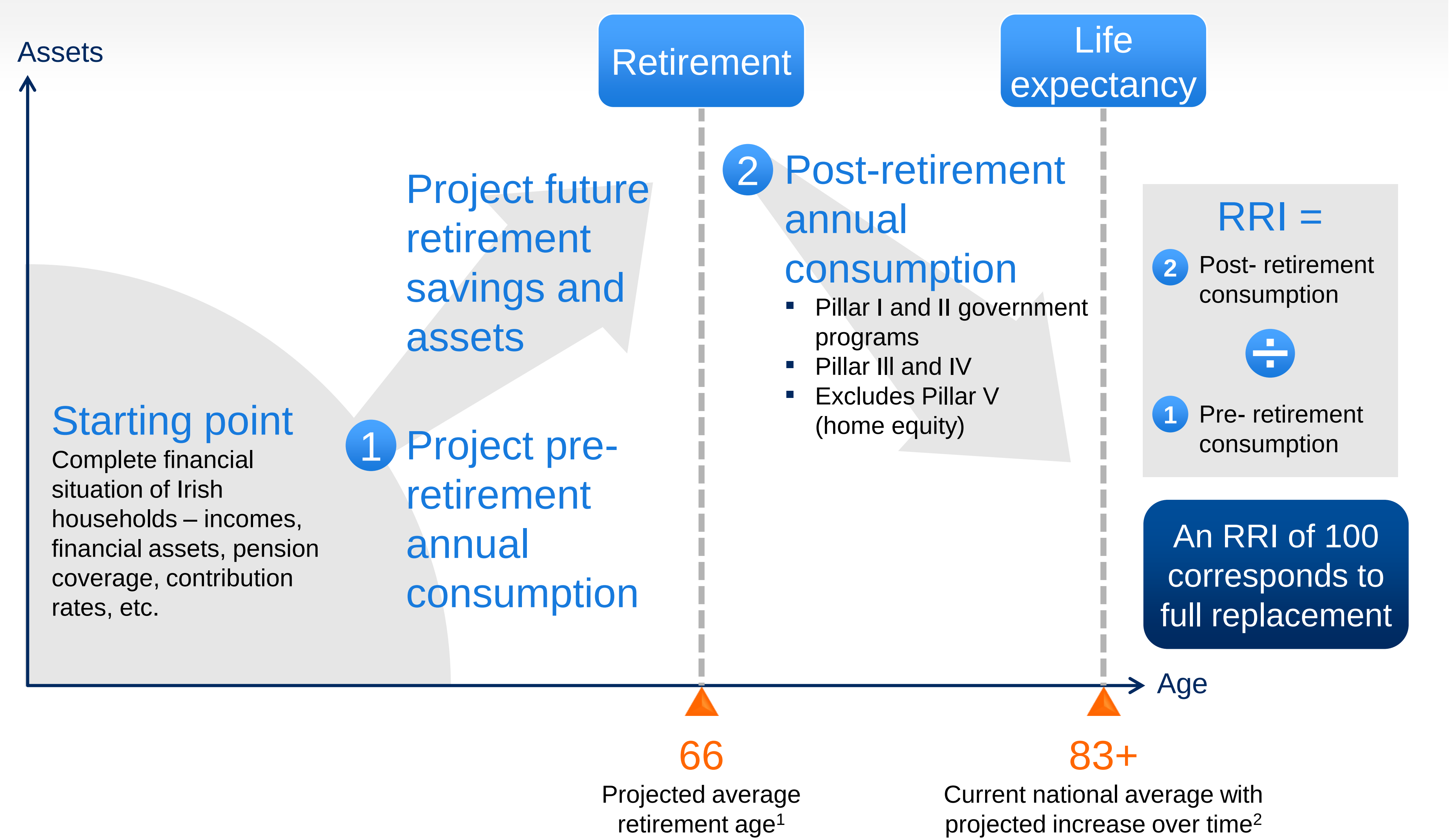
- Poverty rate in retirement stands at 6.9%, lower than most large OECD countries
- Poverty rate in retirement is lower than poverty rate of overall population (8.4% according to the OECD)



Standard of living adjustment

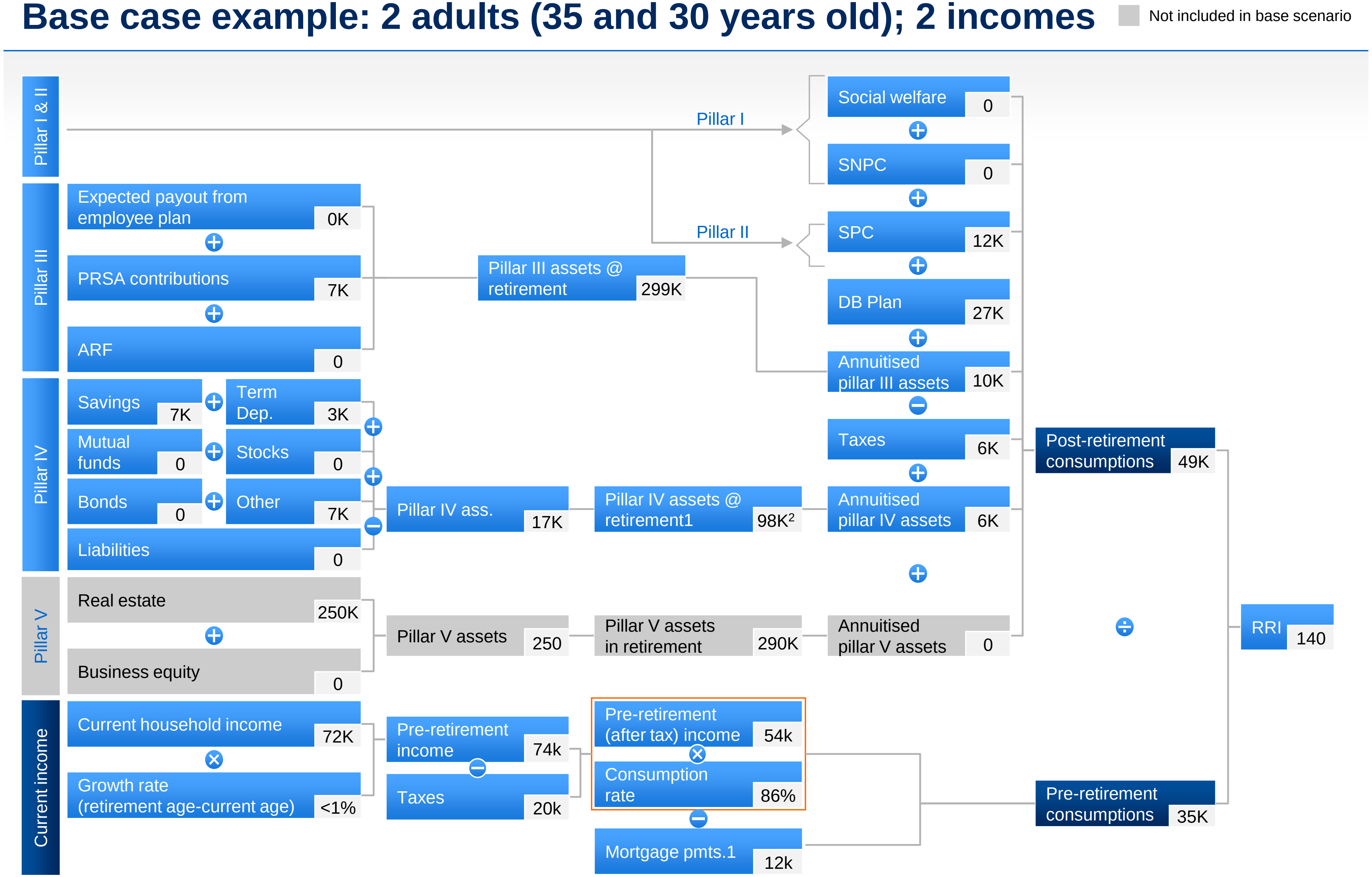
- While 71% of working households are on track to retire without significant adjustment, 29% are not
- Most of the households that are not on track are mid- to high-income and do participate in a pension plan

McKinsey's Retirement Readiness Index (RRI)



1 Increasing to 67 in 2021 and 68 in 2028
2 Conservative estimate given that male life expectancy is 78 and female is 83 according to the CSO

Base case example: 2 adults (35 and 30 years old); 2 incomes

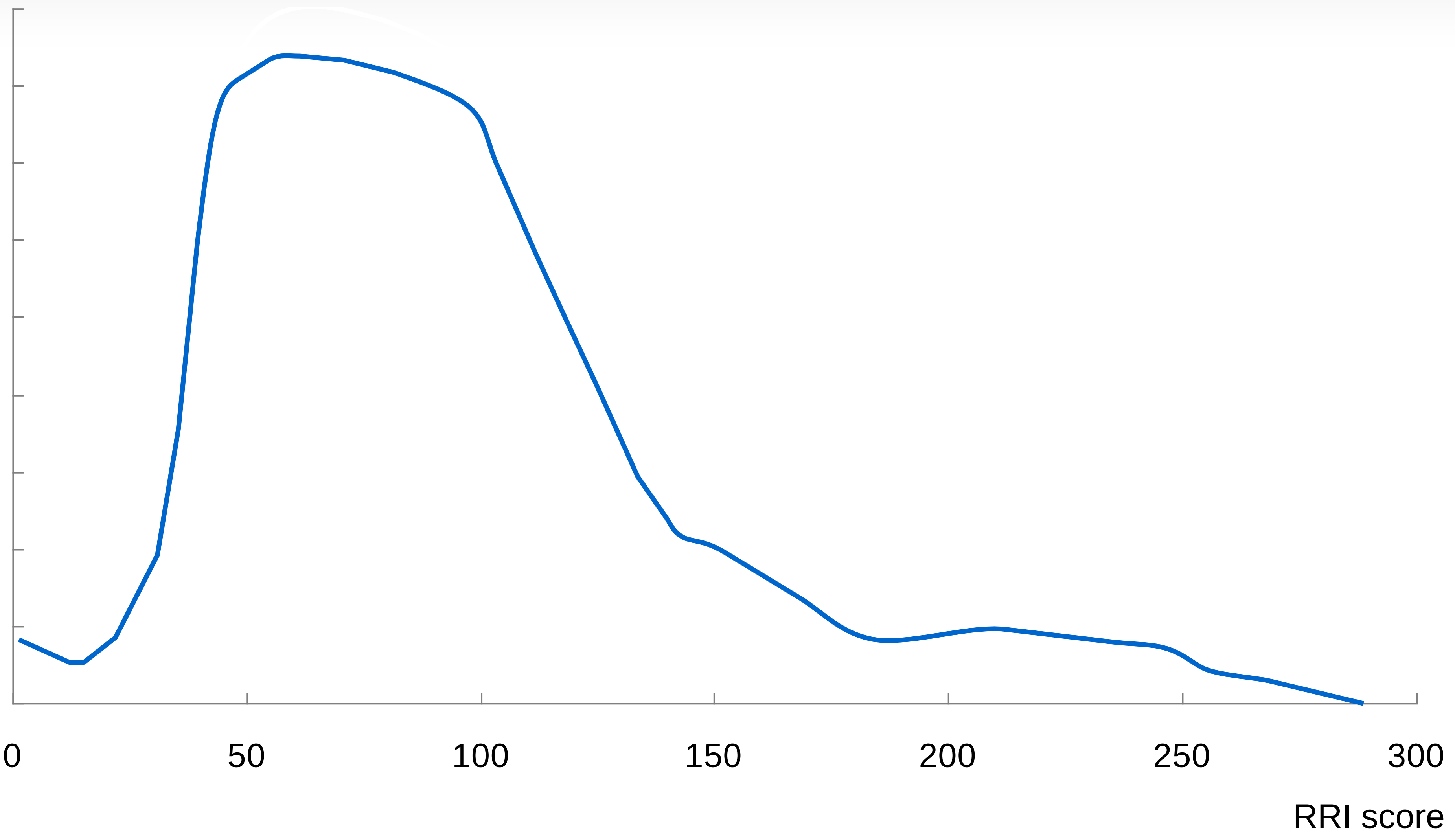


1 Assumed that once mortgage is paid off this amount is saved every year

2 Tax free lump-sum for public sector workers is applied

Distribution of retirement readiness scores in Ireland

Percentage of Irish households; RRI score



SOURCE: Retirement Readiness Index Model 2015

How much is enough in retirement?

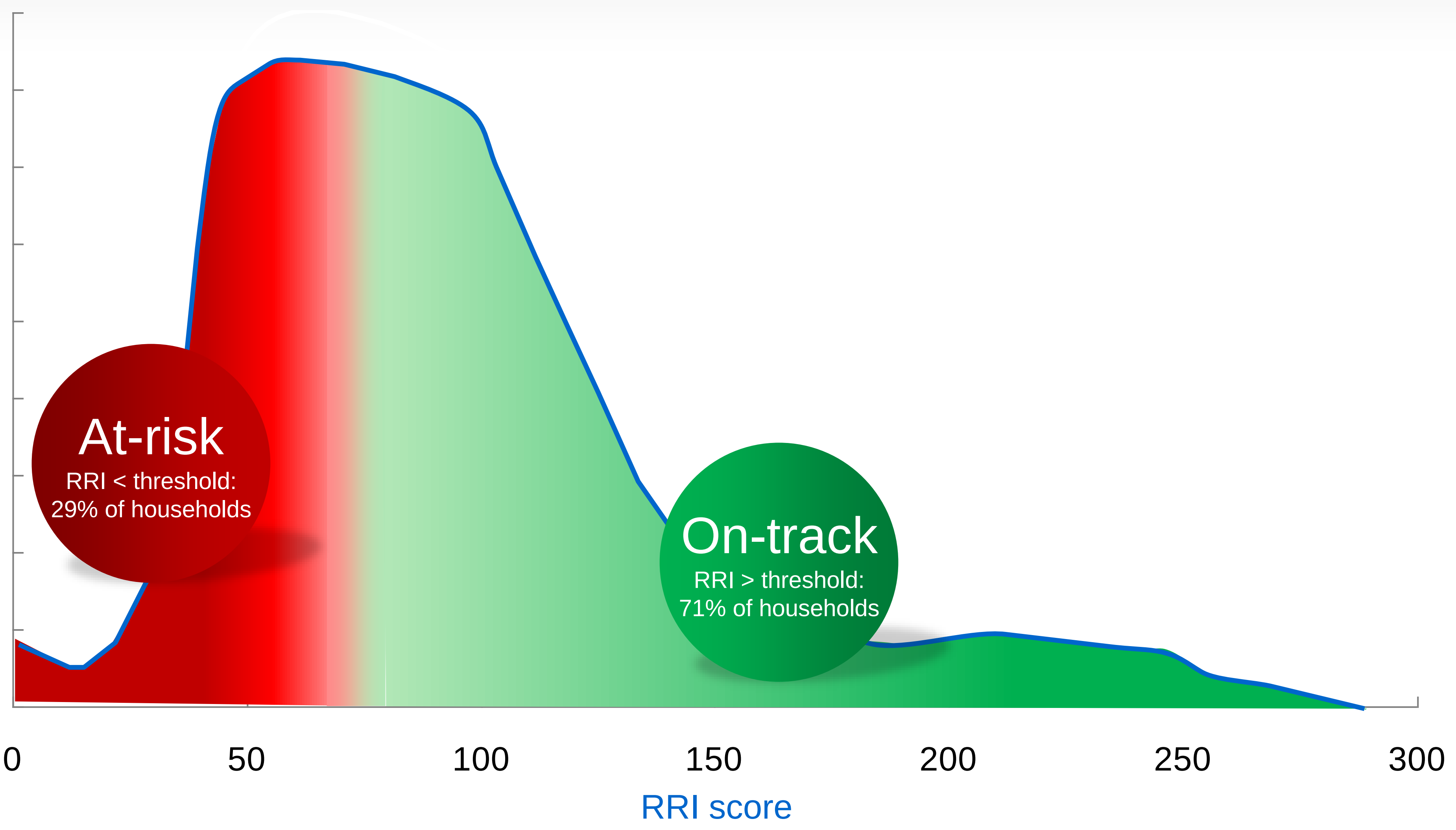
		Min RRI (low income – Q1)	Min RRI (med-high income Q2-Q5)
1 General rule used by OECD (for income)	Income replacement rates required of 73-75% (low income), and 24-35% (high income)	75 *(on income)*	35 *(on income)*
2 Analysis of compressibility by type of expense	Household consumption analysis suggests ~75% of household expenditure is not compressible at retirement[1]	75	75
3 Survey data on actual retired spend	~60-70 based on those survey respondents who decreased consumption (Q1: 70%;Q2: 67%; Q3: 72%; Q4: 60%; Q5: 66%)	70	60-66
4 Other countries	In Canada, 80% of income not compressible for quintile 1 and 65% for quintiles 2-5	80	65
		75	65

1 75% based on team analysis - data from Central Bank, Vincentian Partnership for Social Justice, and OECD

SOURCE: OECD library indicators 2013, Vincentian Partnership, Central Bank of Ireland, Canadian RRI analysis, RRI 2015

29% of Irish households are not on track

Percentage of Irish households; RRI score



SOURCE: Retirement Readiness Index Model 2015

Percentage of households on track for retirement by income quintile and age group

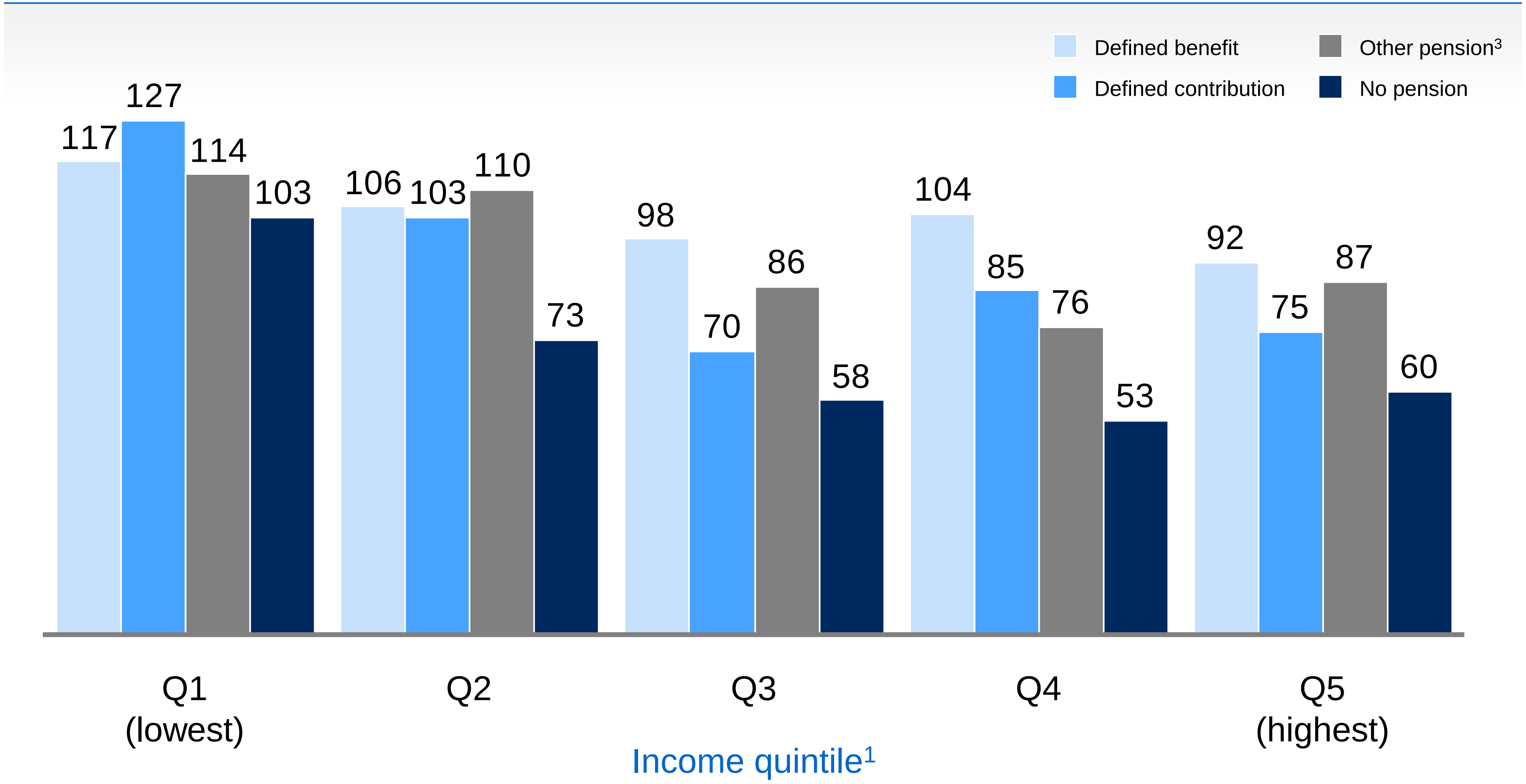
Income quintile[1]	25 - 34	35 - 44	45 - 54	55 - 64	Avg. income
Q1 *(lowest)*	94	96	93	99	EUR 13K
Q2	68	81	74	78	EUR 23K
Q3	56	60	65	54	EUR 35K
Q4	55	65	58	51	EUR 54K
Q5 *(highest)*	65	73	71	62	EUR 101K
Share of working-age population	24	37	19	19	

Age group

1 Household income cut-offs: Q1 < EUR 19K, Q2 < EUR 30K, Q3 < EUR 43K, Q4 < EUR 65K, Q5 > EUR 65K.

SOURCE: Retirement Readiness Index Model 2015

Median RRI score by quintile and pension plan type



1 Household income cut-offs: Q1 < EUR 19K, Q2 < EUR 30K, Q3 < EUR 43K, Q4 < EUR 65K, Q5 > EUR 65K
2 Sample size of 1,651. Q1: 127, Q2: 204, Q3: 323, Q4: 326, Q5: 316. 320 respondents received government transfers; 35 had invalid responses
3 PRSAs or other private pension plans

SOURCE: Retirement Readiness Model 2015

3rd dimension: System sustainability

Poverty in retirement

- Poverty rate in retirement stands at 6.9%, lower than most large OECD countries
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Standard of living adjustment

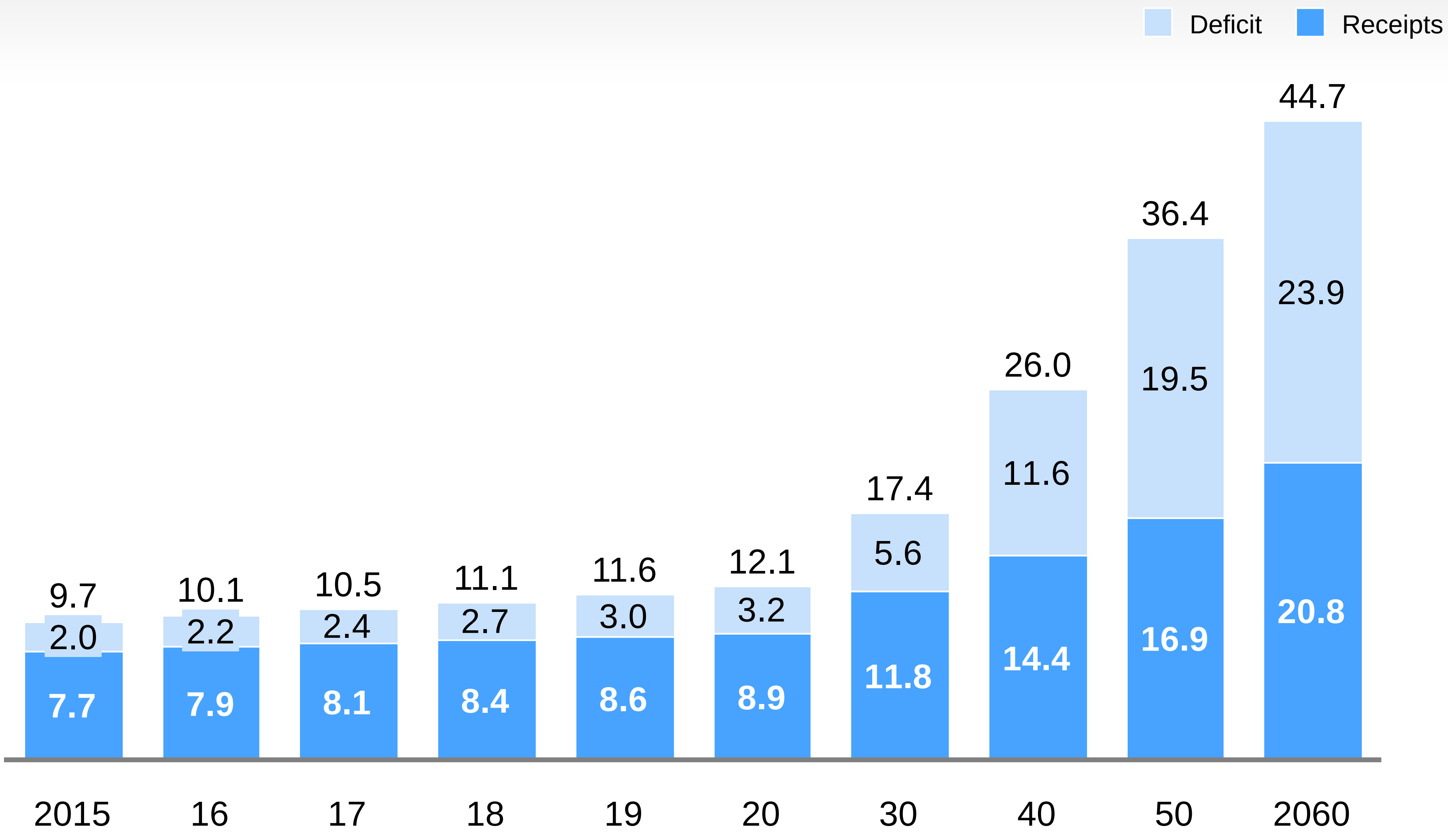
- While 71% of working households are on track to retire without significant adjustment, 29% are not
- Most of the households that are not on track are mid- to high-income and do participate in a pension plan

System sustainability

- State pension is unsustainable; before recent eligibility chances, deficit projected to stand at 35% of benefits in 2035
- Similar sustainability challenge with public sector pensions

Projected Social Insurance Fund receipts and deficits (2012 estimates)

EUR billions



Note: Assessment does not include effect of recent changes to benefit eligibility.

SOURCE: Actuarial review of the Irish pension system

Options to address the projected Social Insurance Fund deficits

Range of possible options

	Description	Implications
Reduce future benefits	To eliminate future deficit by 2035, benefits would need to be reduced by ~35% (including changes to benefit eligibility already implemented)	Share of working population with RRI score above minimum threshold would go down to only 50% if no other measure is adopted in parallel Need for other parallel measure encouraging private pension savings (e.g., mandatory auto-enrollment)
Increase contributions	To eliminate future deficit by 2035, contributions would need to be increased by ~5% of income for all workers	Material increase in SIF contributions would impact economy and would limit ability to introduce other measures to boost savings

Summary assessment of Ireland's retirement system

Poverty in retirement

- Poverty rate in retirement stands at 6.9%, lower than most large OECD countries
- Poverty rate in retirement is lower than poverty rate of overall population (8.4% according to the OECD)

Standard of living adjustment

- While 71% of working households are on track to retire without significant adjustment, 29% are not
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System sustainability

- State pension is unsustainable; before recent eligibility chances, deficit projected to stand at 35% of benefits in 2035
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Implications

- Define the solution to the system sustainability challenges first as it will inevitably have an impact on needs for pension coverage and for additional personal savings
- Encourage savings as Irish workers will need to put more aside in the future
- Preserve the elements of the system that are currently working well – amongst others a State Pension system that provides universal coverage to many individuals and a private pension system that allow many households to save sufficiently for retirement

Appendices

The pillars of the Irish retirement system

	Components	Total assets[1] EUR billions
Pillar I	▪ State pension, non-contributory (SPNC) ▪ Means-tested increase for qualified adult	20
Pillar II	▪ State pension, contributory (SPC)	
Pillar III	▪ Occupational DB plans ▪ Occupational DC plans	90
	▪ Personal retirement savings accounts (PRSAs) ▪ PRBs/buyout bonds	19
Pillar IV	▪ All non-registered financial assets	320
Pillar V	▪ All residential and investment real estate ▪ All private businesses	564

Total
~ EUR 1 trillion

1 Estimates based on most recent data available.

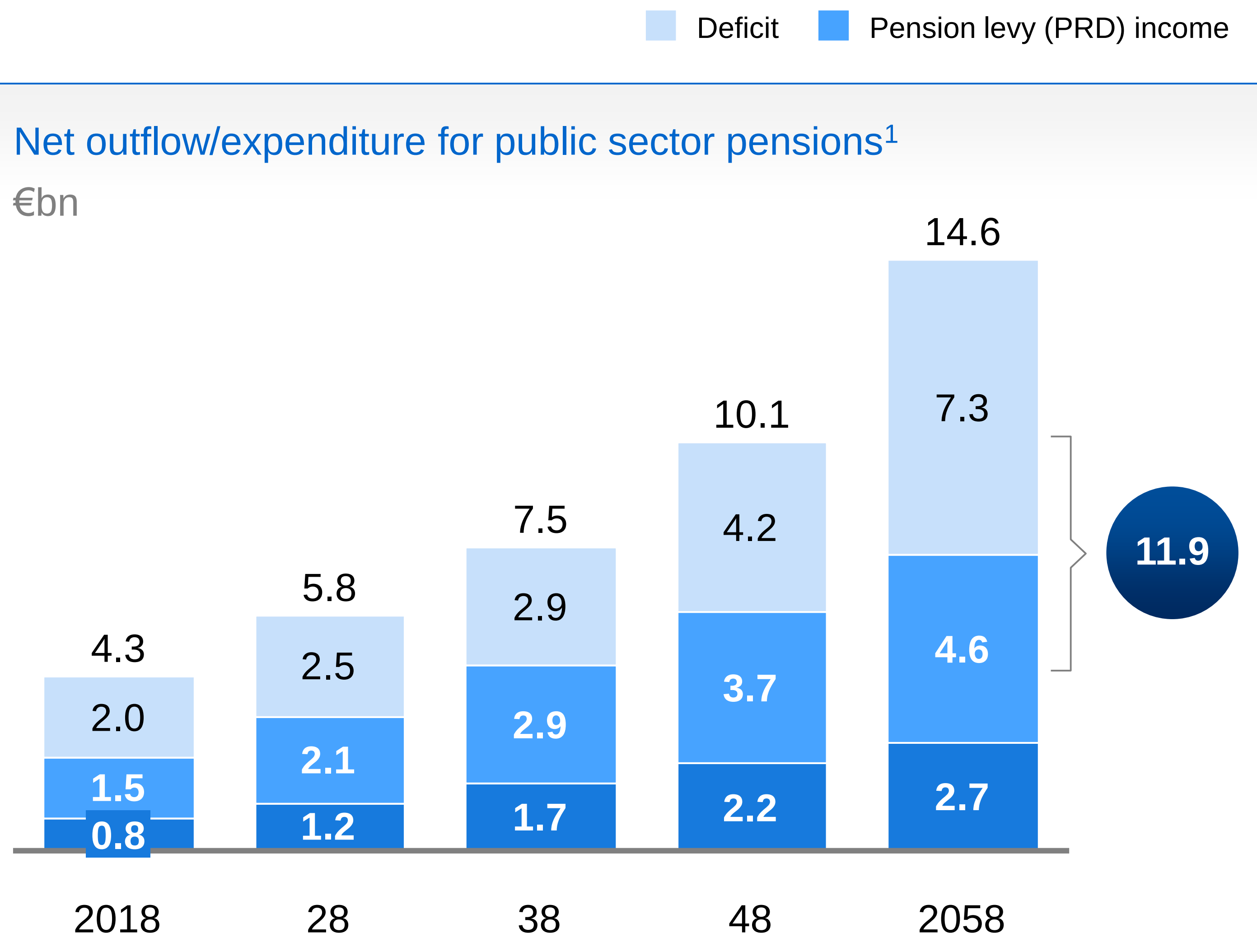
SOURCE: OECD review of the Irish Pension System, 2014; National Pensions Reserve Fund Commission Annual Report and Financial Statements; IAPF; Eurostat; Central Statistics Office; The Pensions Authority; Department of the Environment

Assumptions used for our retirement readiness assessment in Ireland

	Assumptions	Rationale
Financial growth & real estate	▪ Real growth / investment rate of 2.25% ▪ 0% liquidity of primary residence and 100% liquidity of investment properties ▪ Real mortgage rate of 3% (5% minus inflation of 2%)	▪ In line with the real growth / performance of IL funds ▪ Assumption that households do not sell their primary residence in retirement; Investment properties have more potential to be liquidated ▪ Expected rate given tracker & variable rate split
Demo-graphics	▪ Male and female life expectancy of 85 ▪ Phased retirement age of 65, 66, and 67 depending on current age ▪ If public sector years > private sector then respondent defined as "Public sector"[1]	▪ Conservative estimate given male expectancy of 83 ▪ As per approved legislation ▪ Allows for classification of individuals who have worked in both sectors
Government taxes & state pensions	▪ USC, PRSI, and SPC calculated w/ 2015 rules ▪ SNPC simplified – eligible if income < 12K ▪ Current PRSI contribution estimated to be average contribution for last 10 years	▪ As per most recent tax rules ▪ Simplified given complexity of means testing rules ▪ In line with public pension system's reliance on last 10 years of contributions
Public sector pensions	▪ 1 time tax-free lump-sum payment in retirement for DB public sector workers of up to 1.5x salary	▪ To reflect current policy of salary*(30/8)*(# years)
Private pensions	▪ 20% decrease in payout of private sector DB plans ▪ One-time tax-free lump-sum payment of DB plans (1.5x salary) and ~25% for occupational pensions	▪ As ~40% of private plans are not funded ▪ As per pension rules
Annuitisation of assets & consumption	▪ Consumption compression of 25% for Q1 and 35% for Q2 – Q5 (i.e. RRI threshold of 65-75) ▪ Pillar IV assets annuitised in retirement at 1.5% ▪ If non-mortgage debt is <20% of income then the balance is not carried through to retirement ▪ Mortgage debt carried through in retirement	▪ As observed in survey data and external sources ▪ In line with industry average annuity products ▪ As long as non-mortgage debt is not significant (< than 20% of income) and paid-off pre-retirement ▪ Only if mortgage not expected to be paid-off based on projected payments

1 If a respondent was initially labelled as public sector but didn't have a pension plan they were resurveyed to confirm whether they were indeed public sector workers or not

Public sector pension deficit of ~€1.5bn expected to rise to ~€7.9bn by 2058 assuming current public sector pension levy is maintained



- Cumulative deficit by 2058 of **€157bn**
- Deficit could rise to €11.9bn without pension levy contributions
- Updated estimates[2] in 2012 found accrued liabilities had decreased by ~16%

1 Assessment from Comptroller and Auditor General Report (2009)
2 Updated actuarial review conducted by the Department of Public Expenditure and Reform

SOURCE: Comptroller and Auditor General Special Report (2009)

Society of Actuaries in Ireland

COFFEE BREAK

Can extended working lives enhance pension sustainability?

Alan Barrett

ESRI and TILDA, TCD

11 May 2016

Longer working lives

World's longest serving flight attendant – Ron Akana, who retired in 2012 aged 83 after 63 years of flying

- Many agree (Millman included) that longer working lives must be part of the “solution” to population ageing
- The following points are typically made:
  - Remove barriers – for example, outlaw mandatory retirement
  - Remove disincentives/create positive incentives – for example, make public pensions systems actuarially fair
  - Facilitate – create “step-down” possibilities

Specifics of this talk

- What does the economics literature tells us about the causes and consequences of retirement for individuals?

- Is the extension of working lives (a) feasible; (b) good for people?

- International research

  – Four “myths”
  – Incentives and norms
  – Effects on health and cognition

- What does the Irish research say (TILDA)?
  – Changing the state pension age
  – Peer effects on happiness
  – Mental health
  – Cognition

tilda
The Irish Longitudinal Study on Ageing

Some popular myths....(according to Prof. Axel Borsch-Supan)

- Myth 1: declining health limits the capacity to work at older ages
- Myth 2: Retirement is bliss
- Myth 3: older workers are less productive
- Myth 4: keeping older workers creates unemployment for the young

Incentives and norms (1)

Average effective age of retirement: men

	1970	1980	1990	2000	2010
France	67.6	63.5	60.0	58.8	59.4
United Kingdom	*67.7*	66.0	62.8	62.4	64.1
Japan	72.3	70.7	70.4	70.1	70.1
United States	68.5	66.4	64.7	64.7	65.5
EU-27	68.4	65.1	63.1	61.5	62.5

Incentives and norms (2)

- Cross-country studies of Gruber and Wise focused on incentives
  - Identified spikes where incentives for retirement were created
- But norms seemed to matter too
  - A second spike in most countries around 65
- Question: have policy changes led to the increase in retirement ages by 2010?

Effects of retirement (1)

- On mental health the evidence is mixed, partly because this is a difficult thing to measure
- One very recent study using data from the Europe-wide version of TILDA finds negative effects of retirement on mental health in the long-term (four years)
- The paper makes the following claim: “politicians do not face a trade-off between increasing state pensions ages and improving well-being”.

Effects of retirement (2)

- Another study has an interesting parallel with the incentives facing civil servants to retire early during the downturn
- A Dutch study looked at the impact of such a policy in the Netherlands
- They found for men that early retirement decreased the probability of dying within five years by 2.5 percentage points
- Effects on cognition studied by psychologists but economists have looked at this too – “use it or lose it”

Focusing on Ireland and results from TILDA

One piece of evidence from Ireland on impact of policy change

- In 2010, the Irish government announced that it was going to raise the State Pension Age (SPA)
- From 65 to 66 in 2014, to 67 in 2021 and to 68 in 2028
- The timing of the announcement was very useful from a TILDA point of view
- We had been collecting Wave 1 from late 2009 and continued into 2011
- Hence, we could see if expected retirement ages changed in response to the policy announcement

Did expected retirement ages change in response to the change in the SPA?

- Quick answer – No!

- But we did find evidence that expected retirement ages were being influenced by the recession

- More people starting saying that “they didn’t know” when they’d retire and fewer were saying “at 65”

Evidence from TILDA on Peer Effects

- We know from earlier studies that being unemployed has a different impact depending on whether there are other unemployed people around
- In particular, the negative psychological impacts are lower if the unemployed person lives in an area of high unemployment
- We wondered if a “peer effect” like this exists among older workers when they think about retirement

What did TILDA show?

- For older people who are employed, we observed an increase in depressive symptoms as more of their peer group are not employed
- For the non-employed, the opposite holds

What about mental health?

- Mosca and Barrett analysed people in TILDA as they crossed into retirement
- They asked if their depressive symptoms increased relative to those who continued to work
- They showed increases in depressive symptoms among the retirees
- Effects was biggest for involuntary retirees and seemed to diminish over time

And what about cognition?

- Mosca and Wright come at this question from an interesting perspective
- The marriage bar of the 1970s and before
- This is a good way of isolating the effects of time out of the labour force because reverse causation is not an issue
- They find an effect on cognition of time out of the labour force but the effect is tiny.

What can we conclude?

- Internationally, the evidence is strong that incentives matter
- But norms matter too
- The paper on peer effects showed the potential for a positive upward spiral
- We need to do more to get a handle on the health and cognitive implications
- Maybe there is compatibility between the twin policy objectives of extended working lives and improved well-being

Failing to Prepare
Social Justice and the State Pension

Justin Moran

Head of Advocacy & Communications

Who are we?

- Founded in 1992 to provide a voice for older people.
- Ireland’s leading advocacy organisation on ageing issues.
- Make Ireland the best country in the world in which to grow old.
- **Find out more at www.ageaction.ie.**

AgeAction
For all older people

Failing to prepare

- National Positive Ageing Strategy
  - Published 2013. No implementation plan.
  - "By 2041 there will be an estimated 1.4 million people aged over 65…representing 20-25 per cent of the population."

- Draft Programme for Government 2016
  - Citizen's Assembly to discuss "future needs of, and the possibilities and opportunities for our ageing population".

We're not the problem

"This is not a demographic crisis, it is a policy crisis."

-- Colm McCarthy

Why do we have a State Pension?

- A fair State Pension enables older people to age with **dignity** and with **independence**, keeping them out of **poverty**.

- “The hope behind this statute is to save men and women from the rigors of the poor house as well as the haunting fear that such a lot awaits them when journey’s end is near.”

  -- Justice Benjamin Cardozo

The impact of austerity

- Between 2009 and up until last year's budget an older person on the State Pension and Household Benefits Package had lost **€13.18 a week**.
- Telephone Allowance abolished; Fuel Allowance cut, Christmas Bonus cut, Electricity payment cut
- Changes to State Pension eligibility in 2012.
- At the same time, 500% increase in prescription charges, **new taxes** on water and property, rising energy and medicine costs.

Budget 2016

- **First budget in six years to restore incomes for older people**.
- State Pension up €3; half the Christmas Bonus restored; increase in Fuel Allowance; an improvement – but **not good enough**.
- Incomes for older people still less than in 2009 while facing increased costs.

AgeAction
For all older people

Importance of State Pension

- Latest figures show increases in ‘at risk of poverty’ and ‘consistent poverty’ rates for over 65s.
- **More than one in five over 65s living alone experiences deprivation.**
- Only 50 per cent of people have a private pension.

Importance of State Pension

- For those over 65, up to three-quarters of their income is made up of public transfers (OECD, 2015).
- At Risk of Poverty Rate line is **€10,531.**
- Full State Pension is **€12,131.60.**
- State Pension for those with an average of 29 or fewer contributions is below the at risk of poverty rate.

AgeAction
For all older people

Voices of older people

- Forced to choose which drugs to take this month.
- Staying in bed most of the day to stay warm.

"I have to draw on savings every month to pay bills. When my savings run out, I can't begin to imagine what will happen."

"I'm on a survivor's pension. All it allows me to do is to survive."

"I am absolutely terrified of what charge will be introduced next"

Future of the State Pension

- **Legislative benchmark** for the State Pension
  - "In order to maintain this aim of preventing poverty for older people" National Pensions Framework sets target of 35% of average earnings. Currently at 32.7%.
  - Average earnings of €712.75 in Q4 2015 gives a State Pension equivalent of €249.46.
  - Milliman study works off 33%, "current policy"?
  - Facilitates proper planning, peace of mind for older workers, depoliticises the budget process.

Ensuring sustainability

- PRSI Contributions
- Reducing outgoings
- Abolish mandatory retirement

PRSI Contributions

- Measured as percentage of GDP or total taxation, Irish PRSI rates are among the lowest in the EU (EUROSTAT, 2014).
- "If Irish employers' PRSI were increased to just the EU average, it would raise an additional €8 billion." -- Michael Taft
- Milliman report suggests increase – over decades – for employees from 4% to almost 6% and for employers from 10.75% to 15.6%.

Can we cut costs?

- If there are challenges to increasing the State Pension, can we look at cutting costs for older people to tackle rising poverty rates:
  - Prescription Charges
  - Property Tax
  - Private health insurance
  - Energy and medicine costs

Abolish mandatory retirement

- Need a more flexible approach to retirement ages.
- Many older workers would choose to continue working longer if they could.
- Unanimous, cross-party, support for abolition of mandatory retirement in December.

Thank you.

Society of Actuaries in Ireland

PANEL DISCUSSION

Society of Actuaries in Ireland

SUMMARY & CLOSE

Society of Actuaries in Ireland

LUNCH