



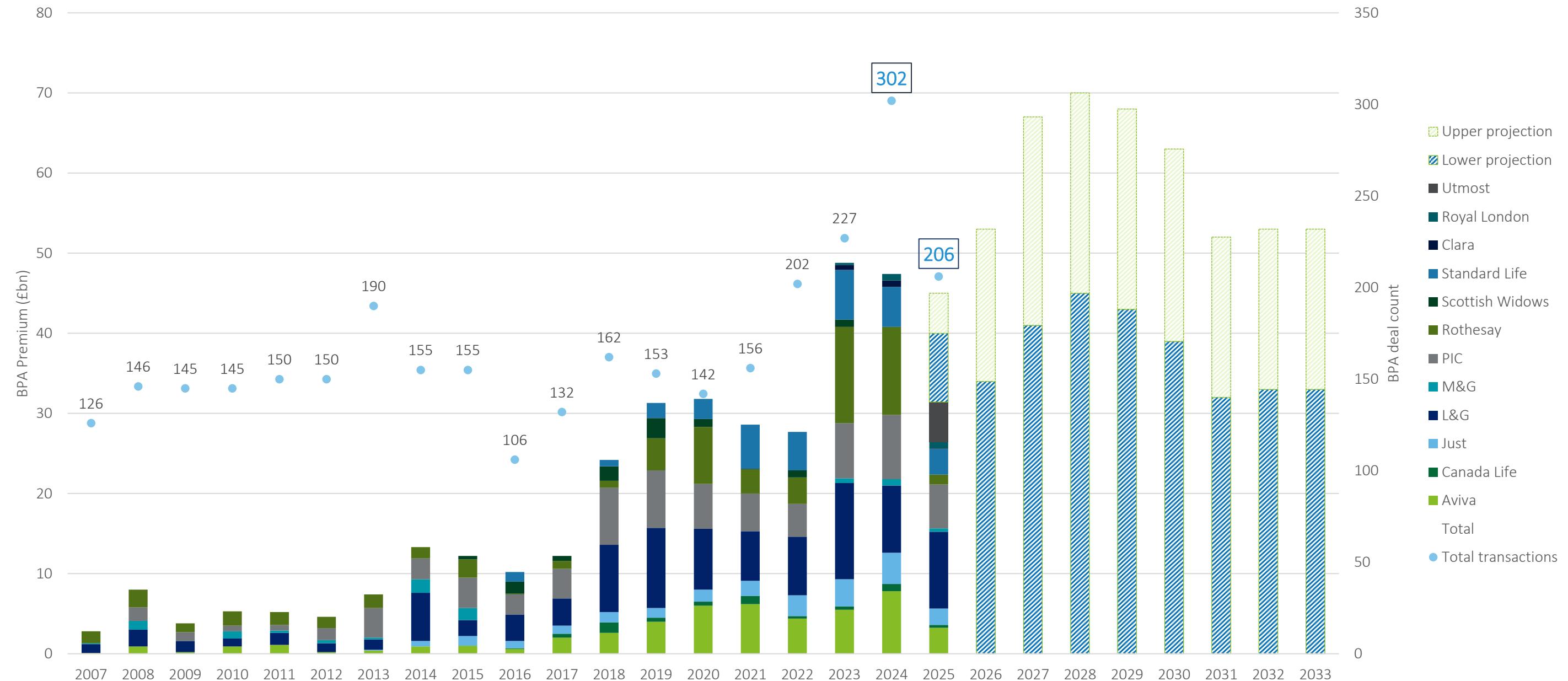
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IFoA Life Conference

Solving the UK's retirement income crisis

State of the nation

BPA is booming...



Source: XPS Bulk Annuity Tracker; Deloitte analysis
28 Oct 2025

Solving the UK's retirement income crisis



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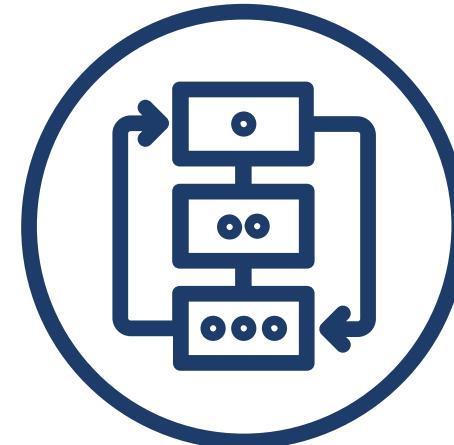
State of the nation

The BPA market is booming...

...increasing **security** for members of DB pension schemes



...driving advances in provider **sophistication** (eg risk management, investments, data, customer service)



...encouraging **innovation** in BPA alternatives (e.g. superfunds, CBJPs, run-on)



State of the nation

Whilst meanwhile...

The shift towards **Defined Contribution** is now in full swing...



Engagement levels are understood to be low and **under-provisioning** seems likely...



Insured product innovation post-Freedoms has been limited to-date.



State of the nation

Are we heading towards a retirement income crisis?

Auto-enrolment
(contribution levels)
challenges / cost of
living / inflation

 **Auto-enrolment timebomb**



Sustainability of state
pension / income
“underpin”

	RPI / CPI *	Average earnings	Triple lock **
Apr 2011	4.6%	1.3%	4.6%
Apr 2012	5.2%	2.8%	5.2%
Apr 2013	2.2%	1.6%	2.5%
Apr 2014	2.7%	1.2%	2.7%
Apr 2015	1.2%	0.6%	2.5%
Apr 2016	-0.1%	2.9%	2.9%
Apr 2017	1.0%	2.4%	2.5%
Apr 2018	3.0%	2.2%	3.0%
Apr 2019	2.4%	2.6%	2.6%
Apr 2020	1.7%	3.9%	3.9%
Apr 2021	0.5%	-0.9%	2.5%
Apr 2022	3.1%	8.4%	3.1%
Apr 2023	10.1%	5.4%	10.1%
Apr 2024	1.7%	4.1%	4.1%
Apr 2025	3.5%	4.8%	4.8%
Total	51.9%	52.7%	74.5%

Source: ONS

* Indexation with RPI in 2011; UK Government moved to CPI indexation of state benefits and public pensions thereafter.

** Triple lock temporarily suspended in April 2022 following dramatic growth in earnings Summer 2021, because of the Covid furlough scheme.

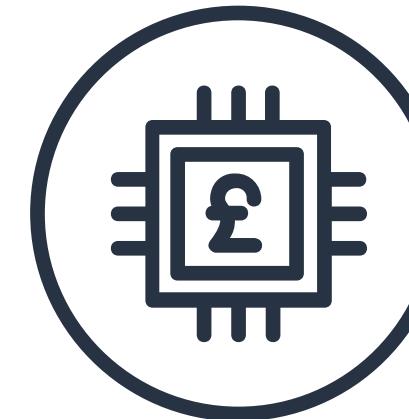
Call to arms...

What is the role of insurers, other providers and actuaries?

**Use of balance
sheet**



**BPA-related
“technology”**

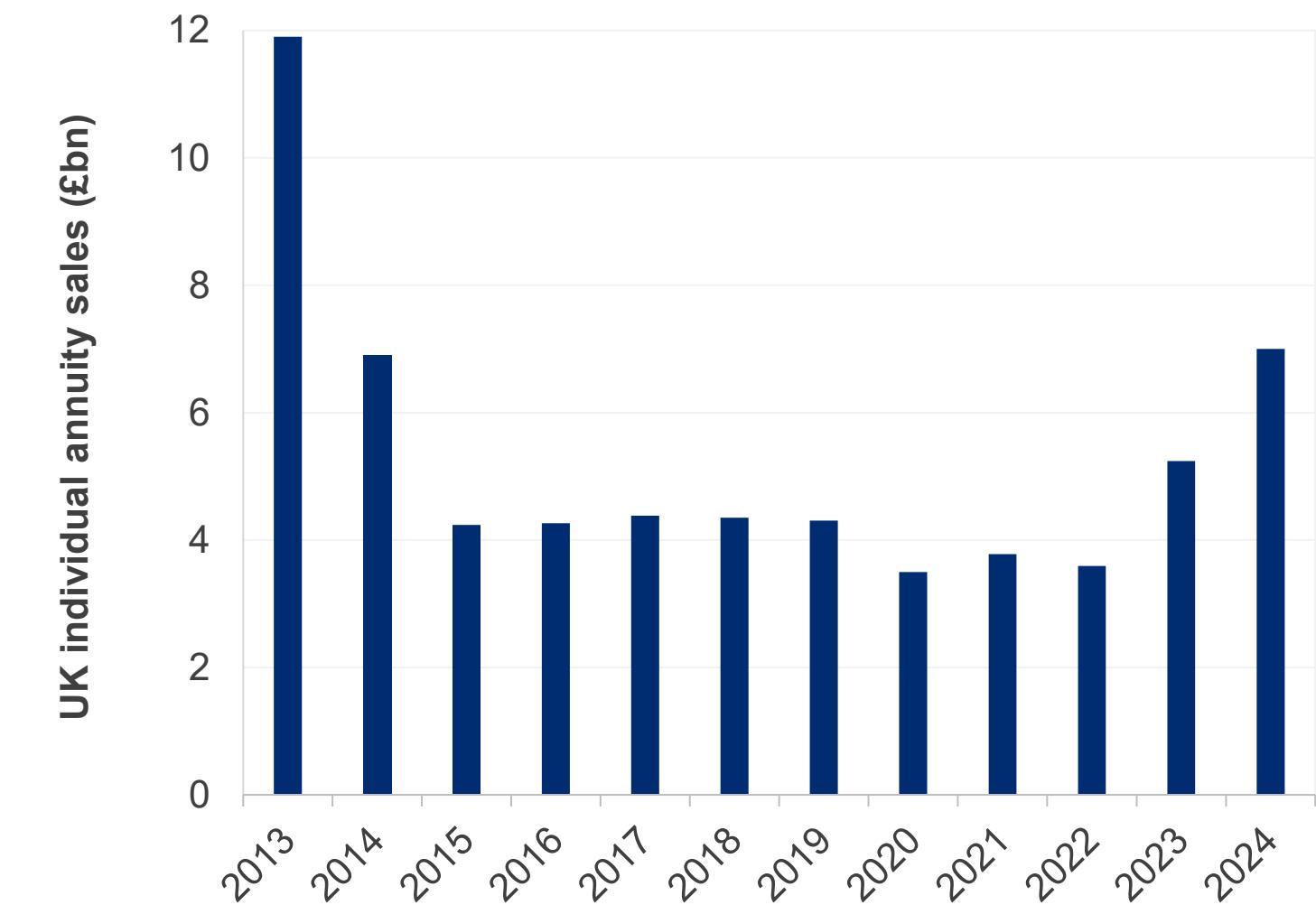
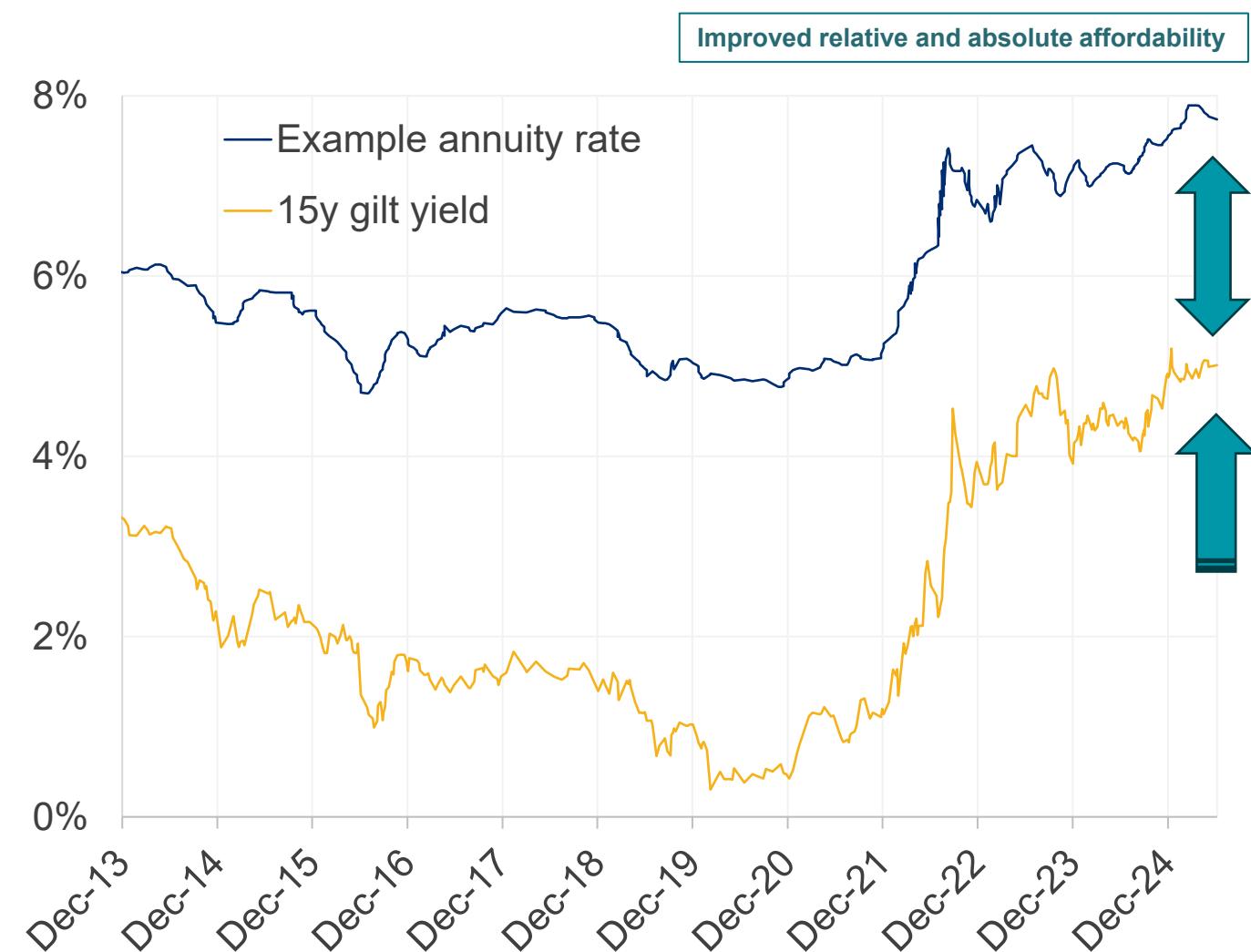


**Product
development**



Why is innovation needed?

Sales of guaranteed income products have increased in recent years...



Source: Bloomberg, Sharing Pensions

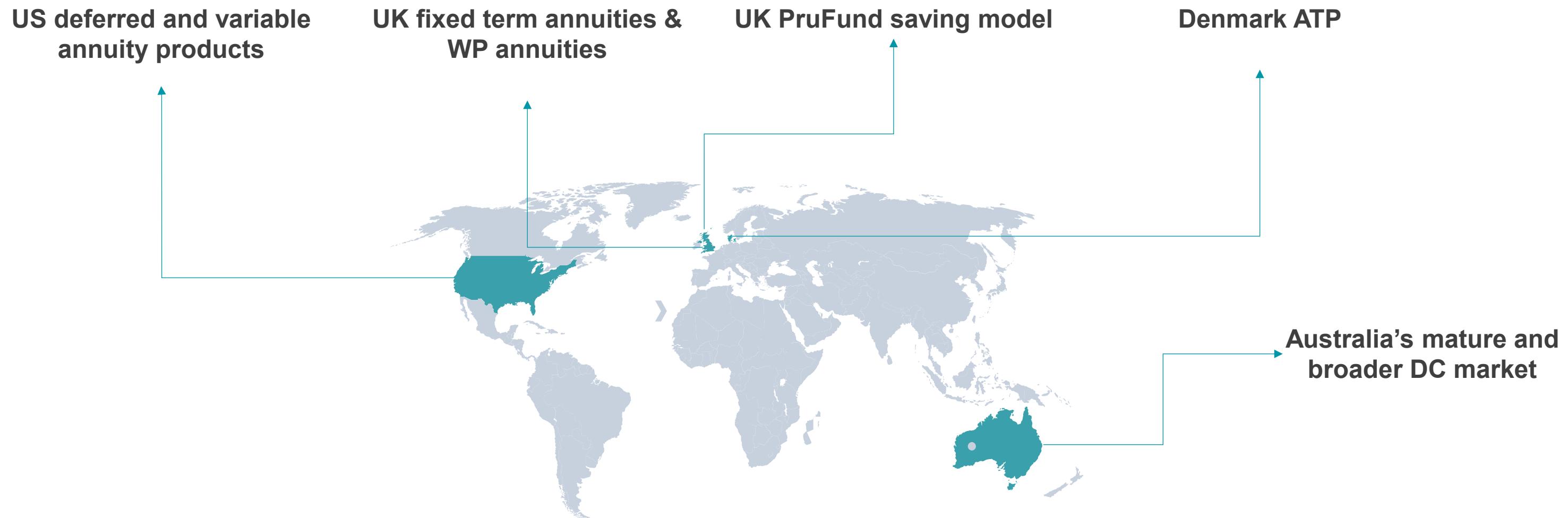
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Why is innovation needed?

What's available already?



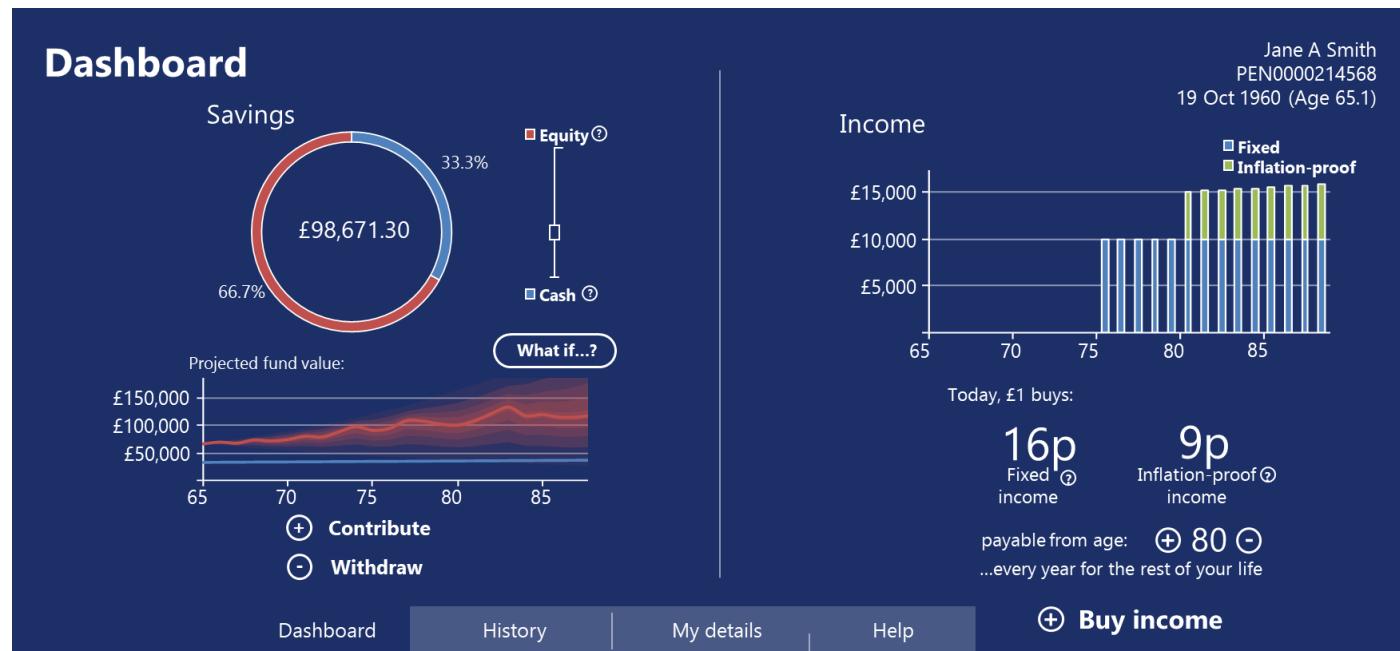
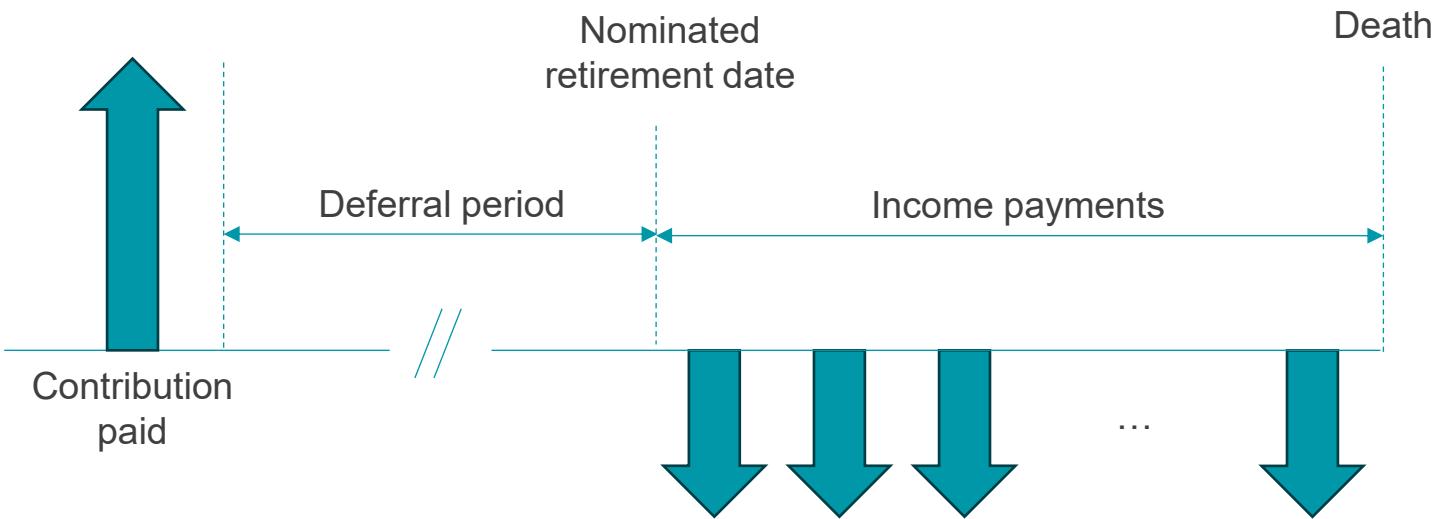
Why is innovation needed?

What are we trying to solve for...?

	Individual	Provider	Government / other
Under-saving	“Under-appreciation” of savings required / “cost of living” constraints	Legacy DB costs (employer), lack of (private) g’ted savings products	Auto-enrolment contribution levels / future burden on the state
Exposure to investment risk	Financial education: too much / too little risk	Blended / algorithmic allocations. Sufficient levels of personalisation?	Push for UK investment
Exposure to income conversion timing risk	Annuitisation “bad reputation” re: exposure to prevalent market conditions / lack of effective “hedging” in DC pot	Lack of smoothed / deferred options	Pension freedoms, changes to state pension age
Risk / complexity exposure in later life	“Flex then fix”, longevity risk	Mis-selling risks / vulnerable customers	-
Inheritance tax	vs. “loss” of capital on “early” death post-annuitisation	Managed with alternative products / riders	DB scheme and BPA-related tax receipts dwindling
Sales process / advice	Propensity to seek / pay for advice declining?	Skewed towards “advisor-friendly” products?	Gov’t / regulator role
Other sources of wealth / income	Decreasing levels of wealth?	Lower ERM volumes	Future of the state pension
Value for money	Trade-off between security and cost, required flexibility / liquidity (e.g. surrender)	How to prove...?	Consumer protection vs. stifled innovation

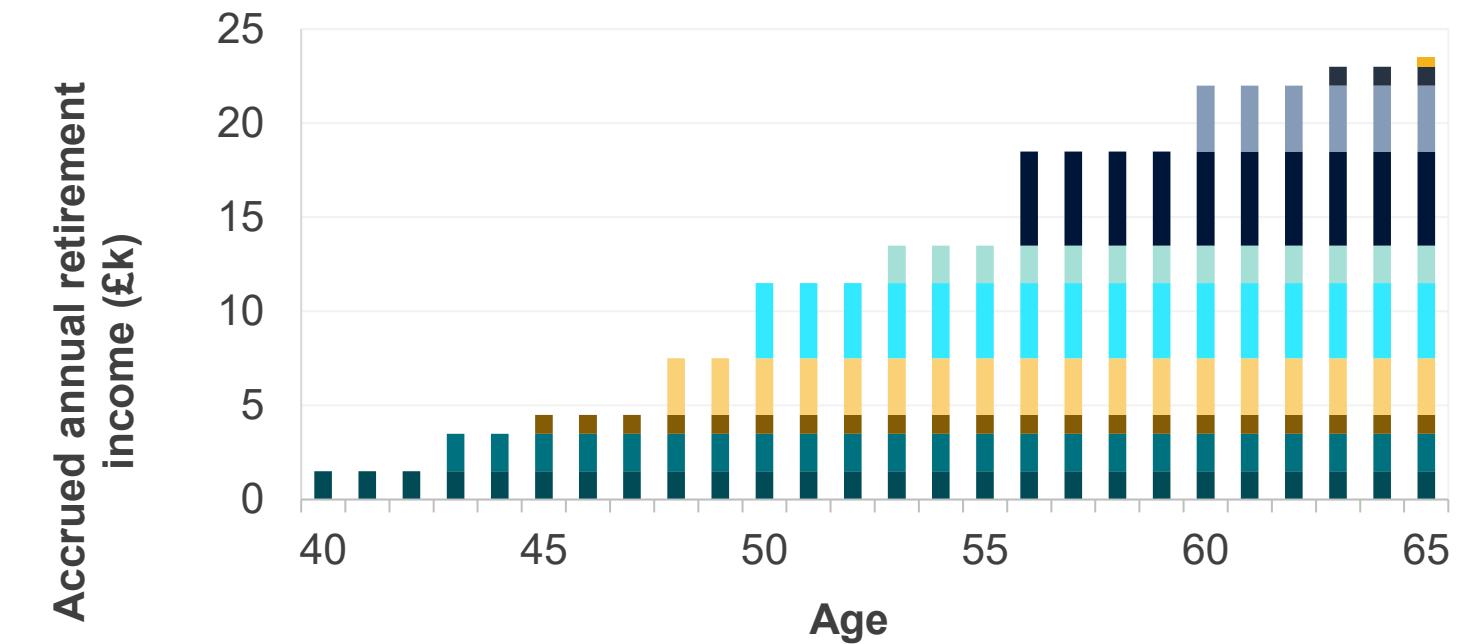
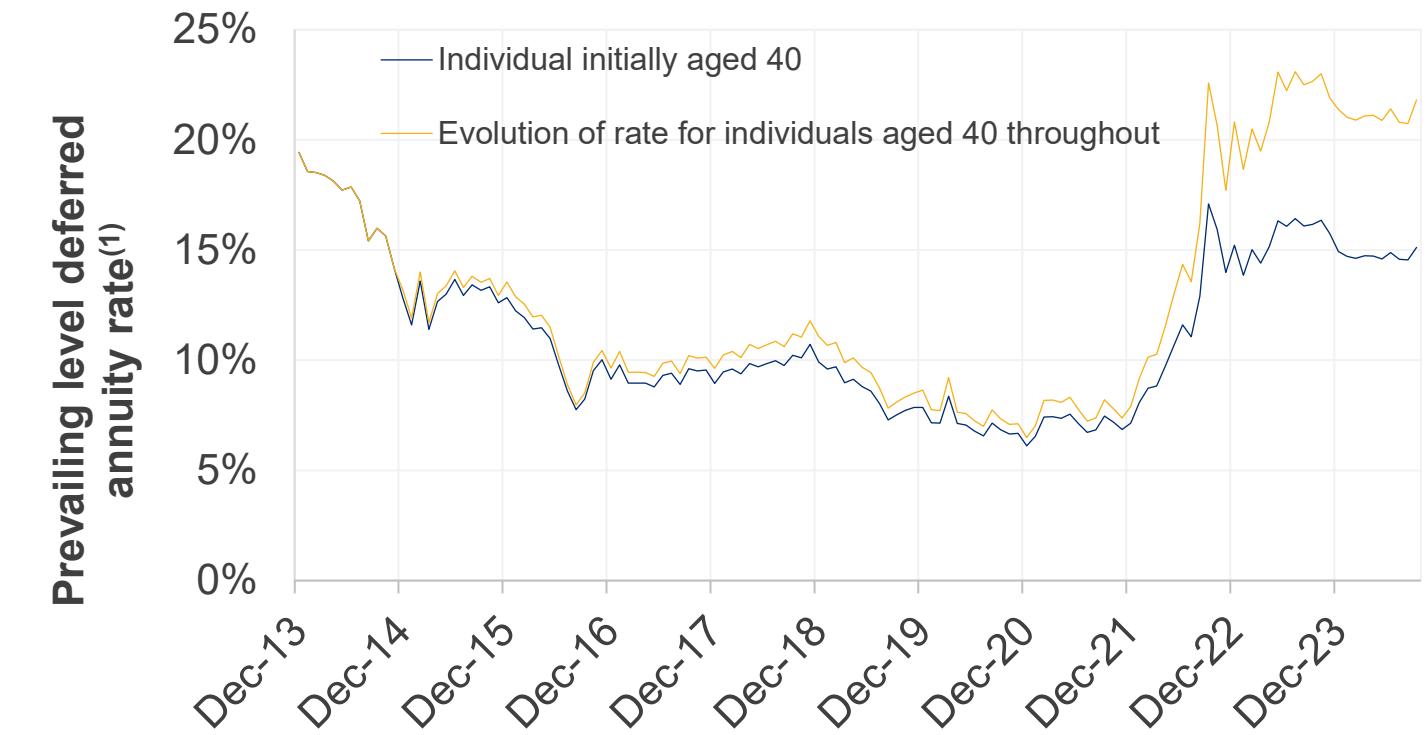
Case study

Deferred annuities



Source: Bloomberg, NatWest analysis

Notes: (1) Modelled non-participating deferred annuity rates for individuals retiring at age 65



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Case study: deferred annuities

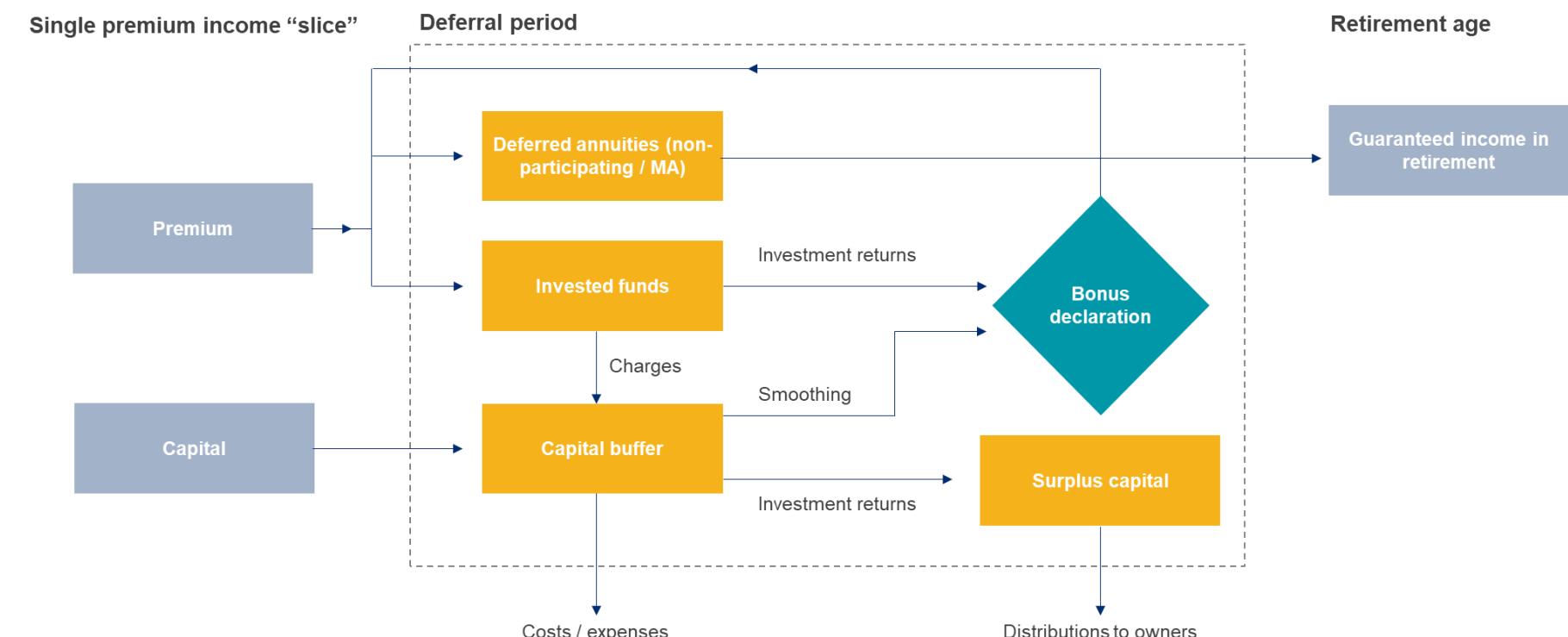
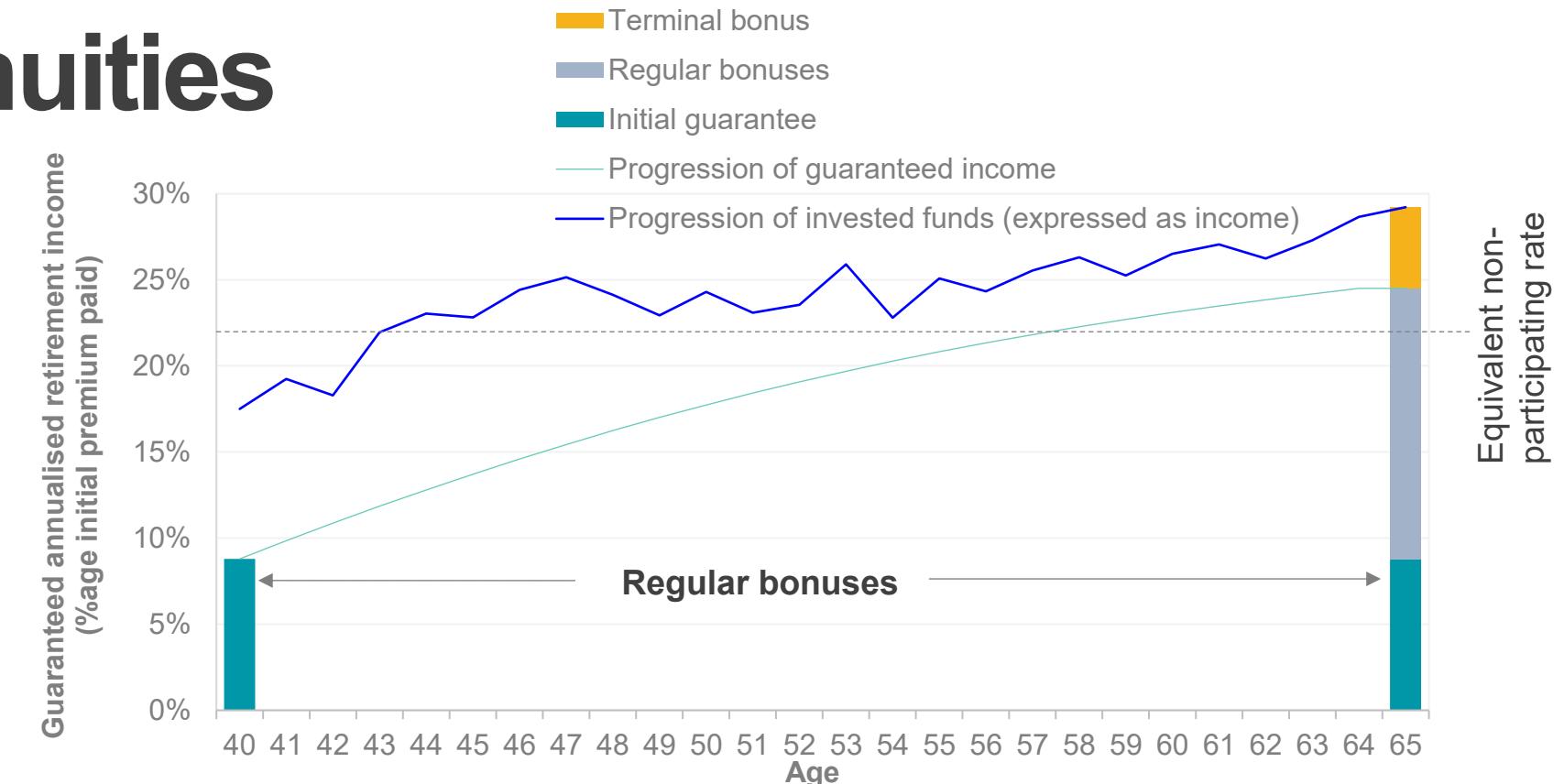
Do they address the challenges?

	Individual	Provider	Government / other
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Case study: deferred annuities

Adding returns participation...

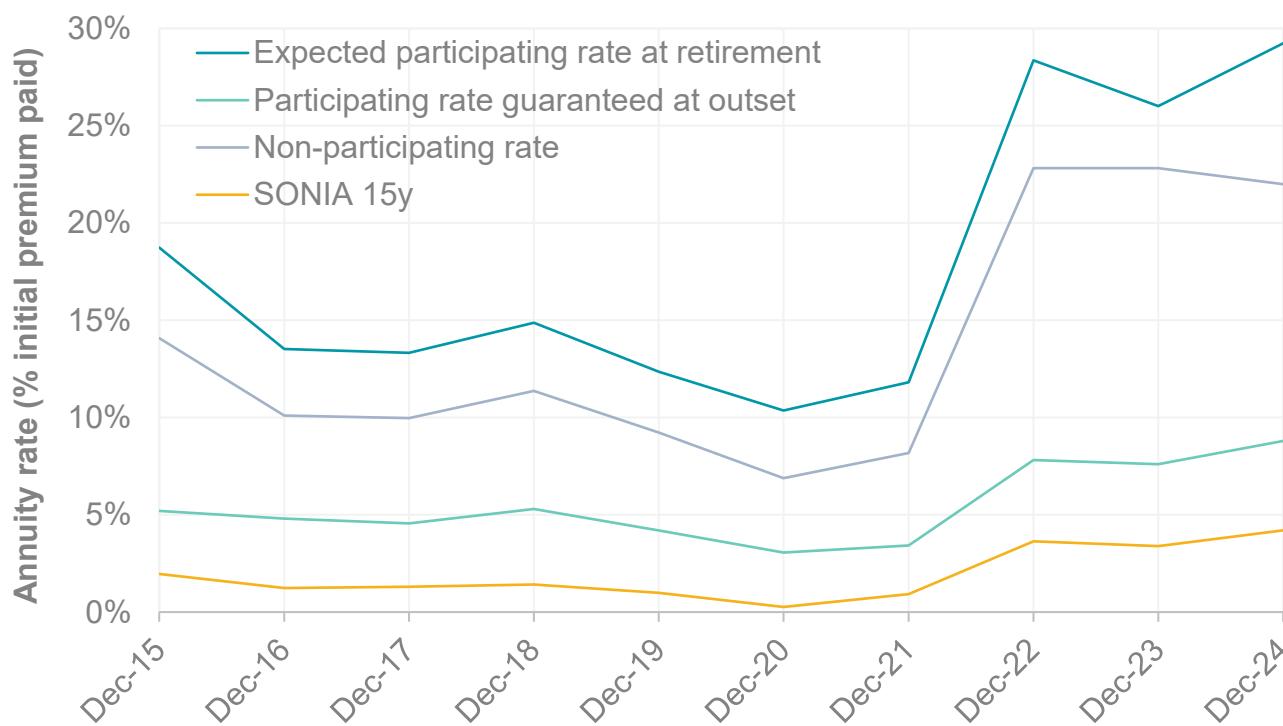
- ...allows policyholders to benefit from exposure to a **broader range of risk premia** (reducing reliance on supply of MA assets)
- Excess return on “invested funds” is automatically used to buy incremental (deferred) **retirement income** over time
- We embed a **minimum underpin**, whereby the amount of retirement income only able to increase
- Uses the insurer’s **capital** to **smooth returns fluctuations** over time



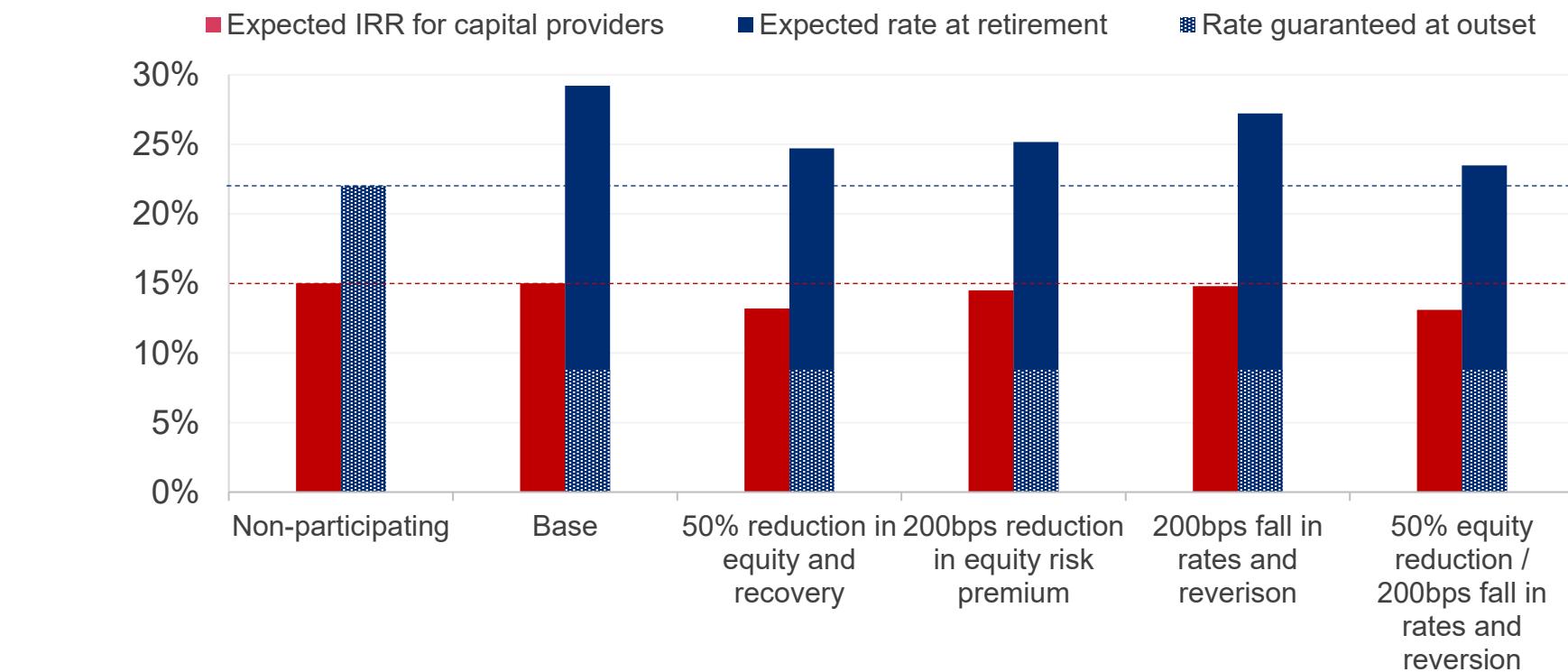
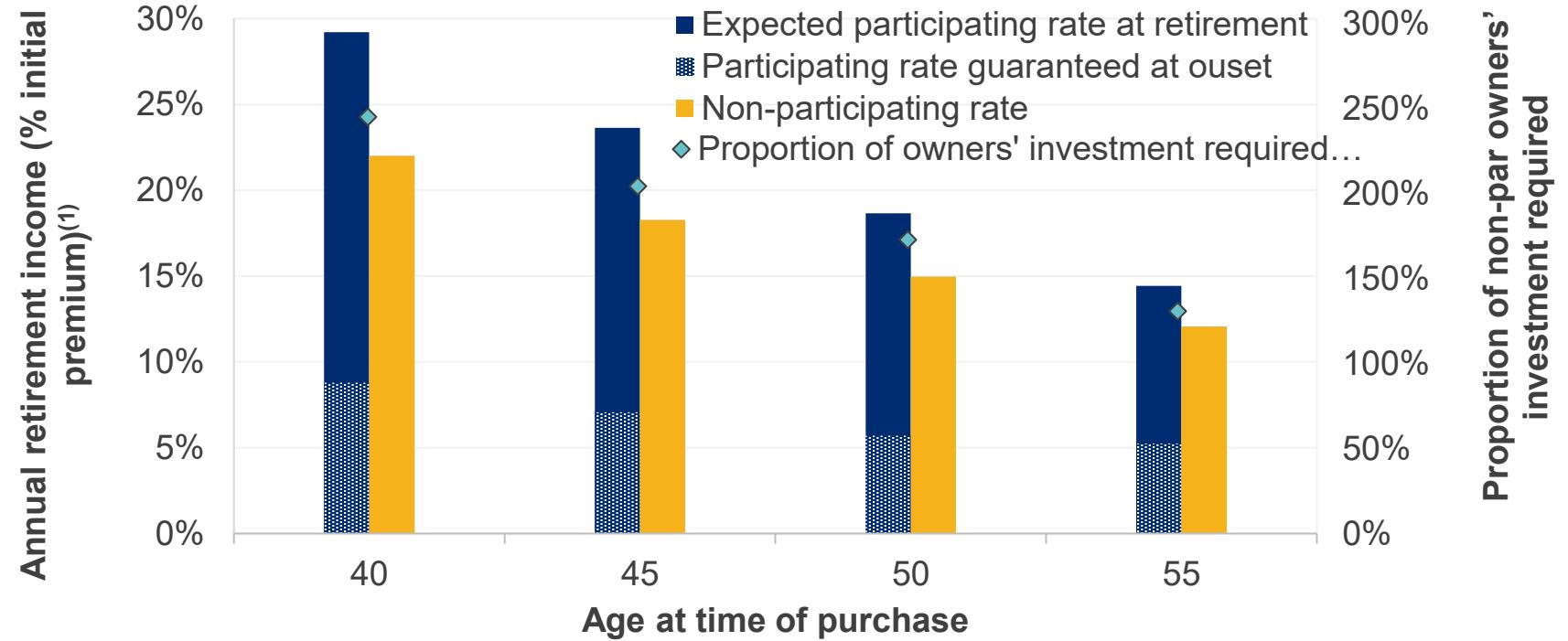
Case study: deferred annuities

Participation may...

- ...improve outcomes for policyholders
- ...deliver attractive returns for capital providers
- ...be resilient to stresses and evolving economic conditions
- ...embed risk management techniques



Notes: (1) For individuals retiring at age 65, such that the insurer's capital providers attain a 15% IRR



Case study: deferred annuities

Complex... but exciting?

Transfer risks back from individuals to experts / institutions

Additional security for individuals...

“what is worth paying for?”

Solving **meaningful problems** for individuals and writing “purposeful” business

“what are intuitive decisions and trade-offs for consumers?”



Product development

Who else is thinking outside the box?

M&G re-entered the BPA market with new offerings:

BPA value share and new with-profit annuity products for both bulks and individuals



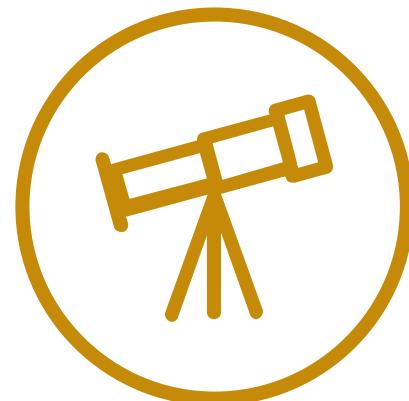
Just has continued to develop their retail offering:

Fixed term investment, secured lifetime income, blended solutions



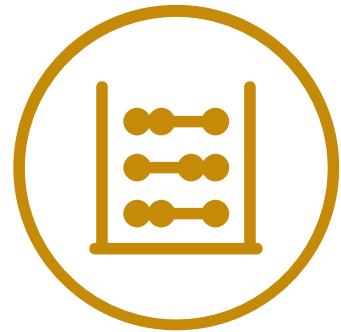
Potential delivery and competition from the **pensions landscape**

Default decumulation, CDC structures



Conclusion

A call to arms...



“Solving” retirement: **the ultimate actuarial challenge?**

- Building on modern **investment** and **risk management** capabilities developed to support the BPA market
- Utilising structures “unique” to insurers (specifically, **balance sheet / capital support**)
- **“Blending”** solutions alongside a range of savings and investment options
- Applying **actuarial expertise** to design products that manage financial risk on behalf of individuals

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Andrew Kenyon: andrew.kenyon@natwest.com

Owen Griffiths: osgriffiths@deloitte.co.uk

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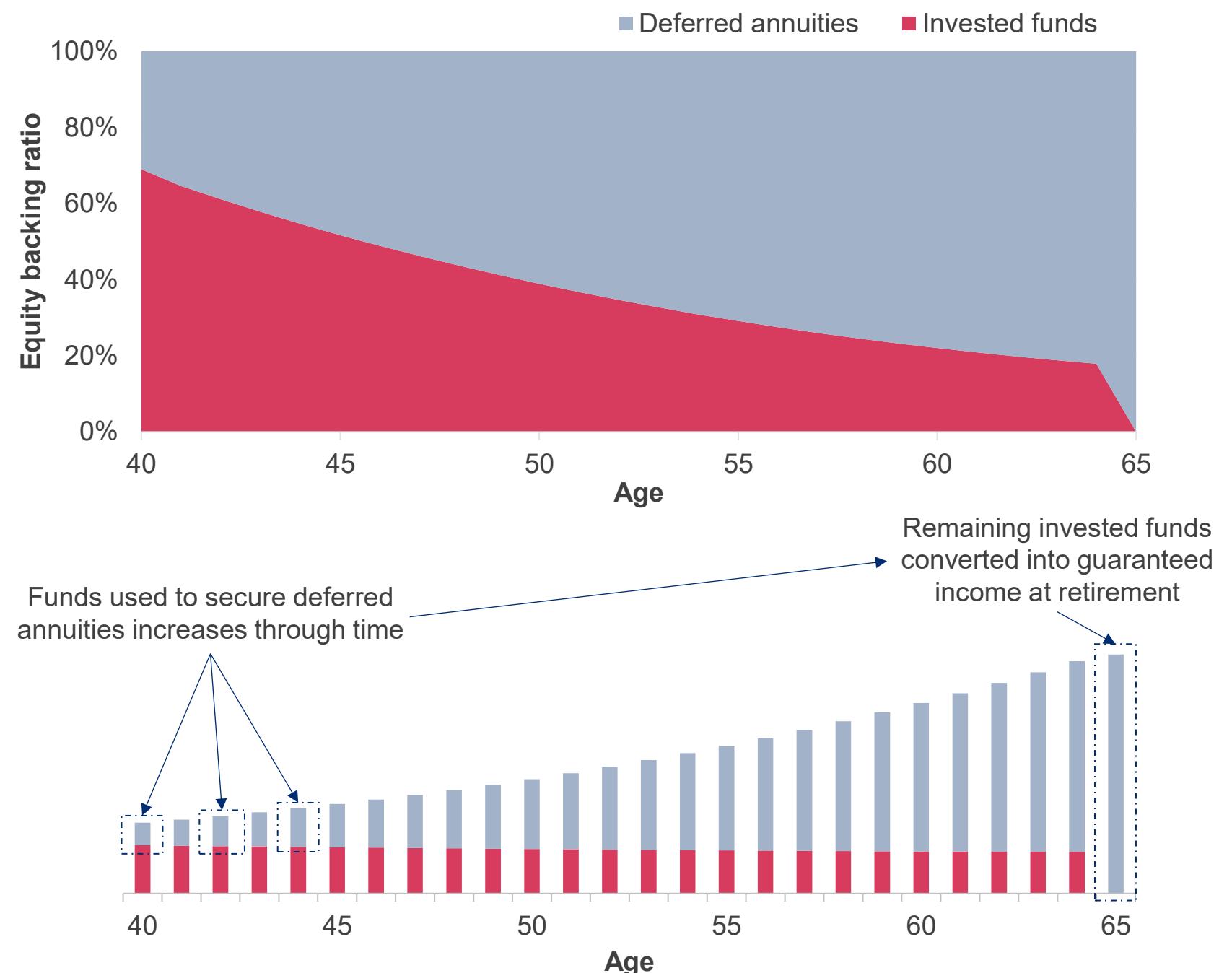
Appendix

Solving the UK's retirement income crisis

Participating deferred annuities

Illustrative asset mix through time

- At outset, the policyholder has their premium invested in a mix of **equities** and non-participating **deferred annuities** (which can be written into the MA fund)
- The insurer will adjust the **equity backing ratio** through time to manage the **costs of any guaranteed and expected retirement income**
- As the policyholder nears retirement, and the amount of guaranteed income increases, the backing ratio naturally **trends downwards**
- At retirement, **all assets** will have been **converted** to (non-participating) deferred annuities

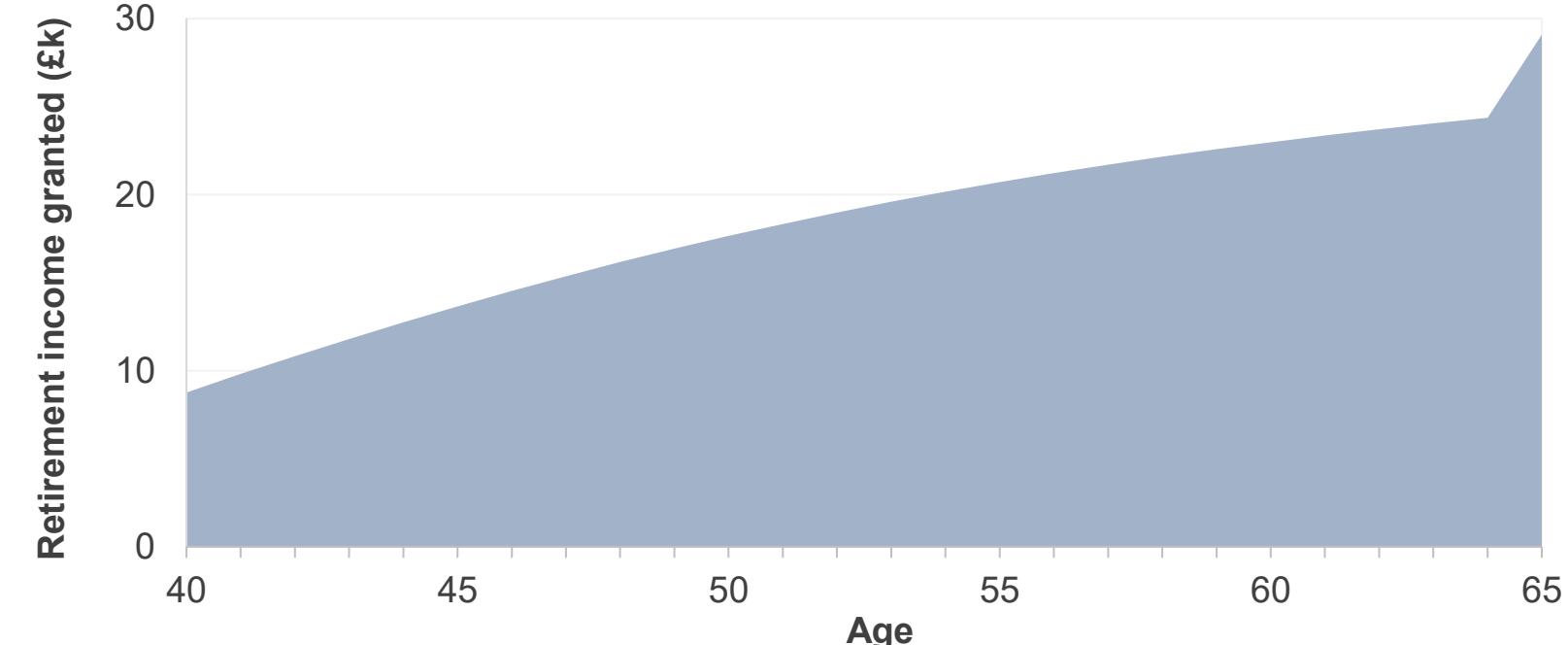
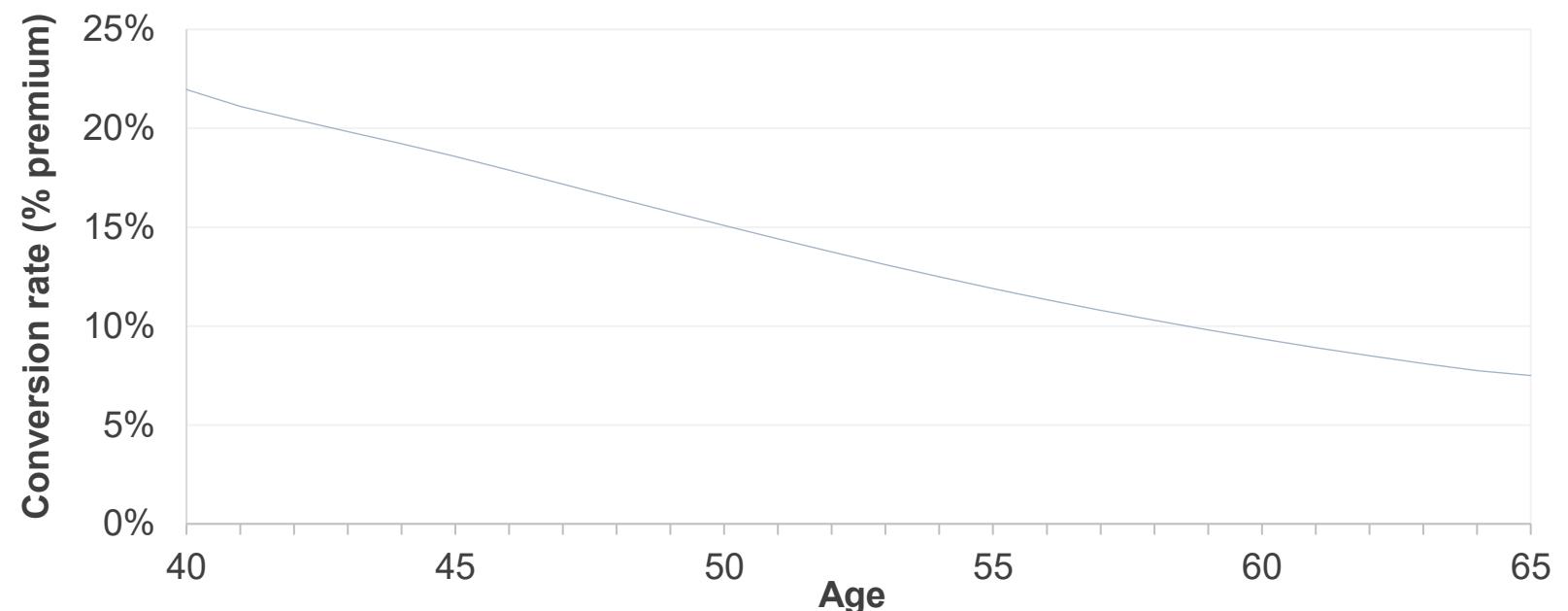


Participating deferred annuities

Granting incremental retirement income

- Investment returns on the policyholder's invested funds are **converted** into guaranteed income at the prevailing **conversion rate**
- The conversion rates are calibrated to estimates of the prevailing **non-participating deferred annuity rates**, and will change with **prevailing market conditions**
- Bonuses can be smoothed both in times of **outperformance** and **underperformance**:
 1. Through the **returns credited** to the policyholder
 2. By **adjusting the rate** at which income is converted

Policyholder age	40	41	42	...	65
A Amount converted (£)	39.9	5.0	4.9	...	62.8
B DACR	22.0%	21.1%	20.5%	...	7.5%
A × B Annual income guaranteed (£)	8.8	1.0	1.0	...	4.7

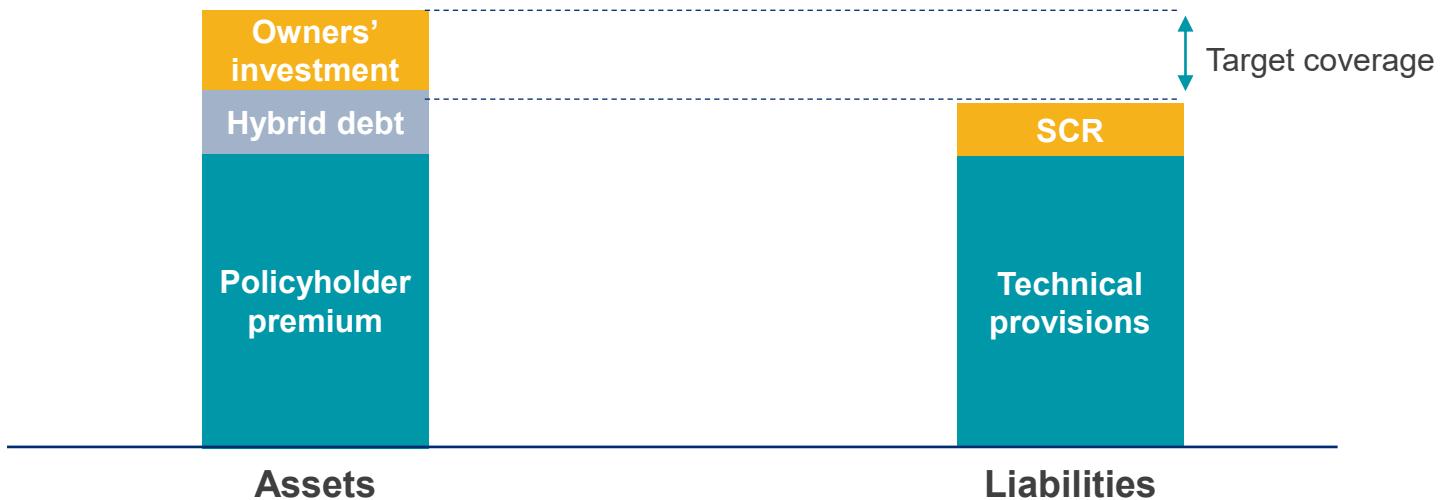


Participating deferred annuities

Owners' perspective

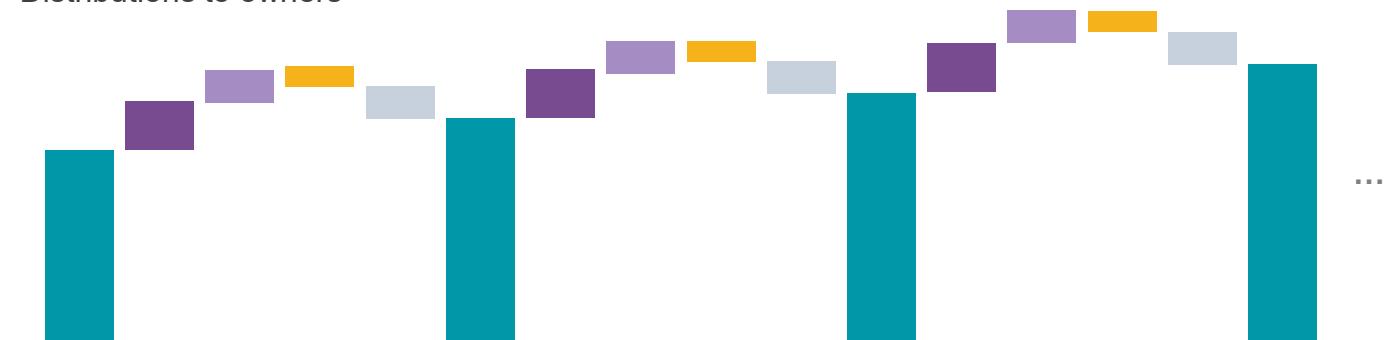
- We assume that the insurer targets a **minimum coverage ratio**
- On day 1, the owners **invest** enough capital such that the business is expected to remain above target coverage throughout the projection
- An **optimised** capital structure is used, with **Tier 2 capital** raised up to 40% of the SCR through time
- We assume that this capital is entirely invested in **gilts**
- Charges are applied to the policyholder's invested funds through time for **asset management** and the **cost of guarantee**

Illustrative day 1 balance sheet⁽¹⁾



Illustrative projection of owners' investment through time⁽¹⁾

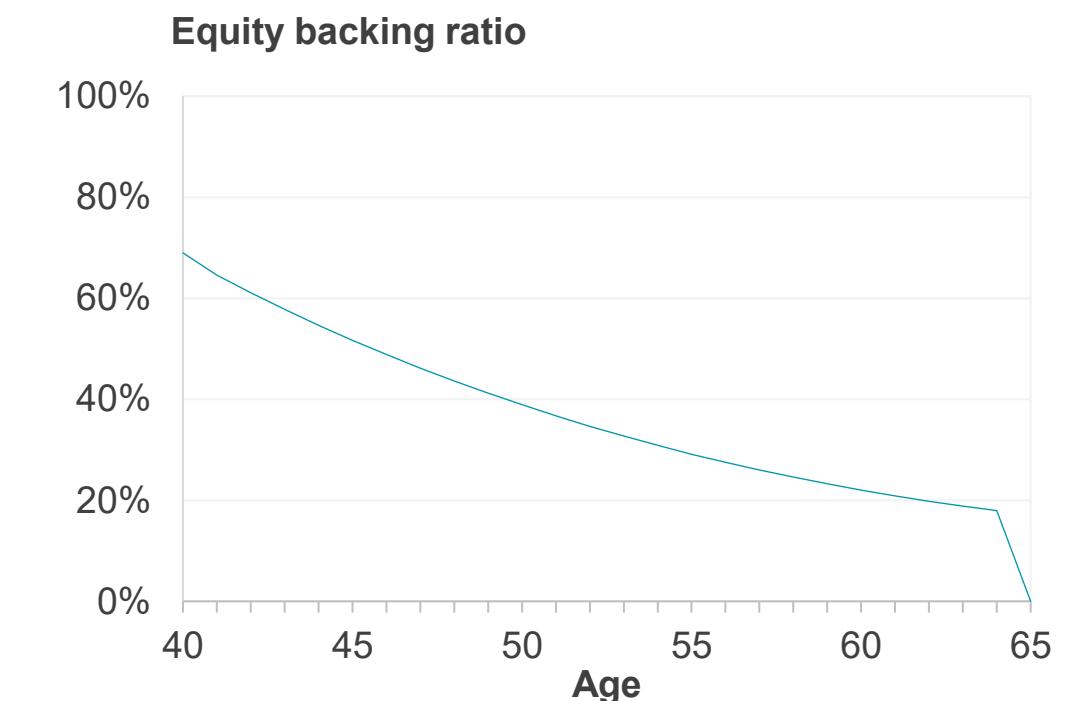
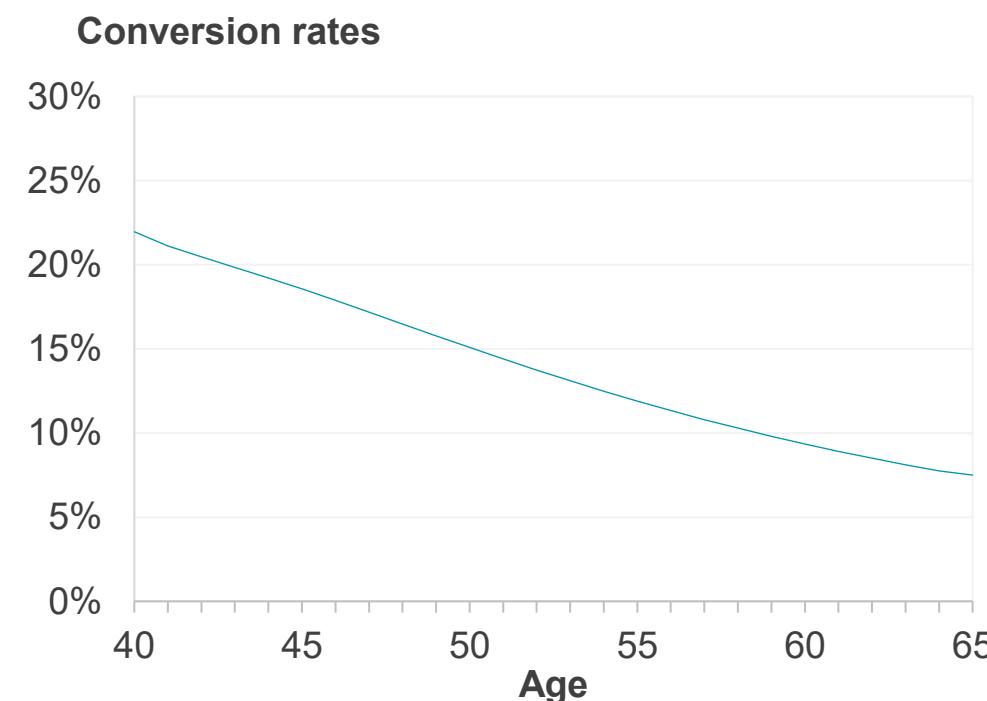
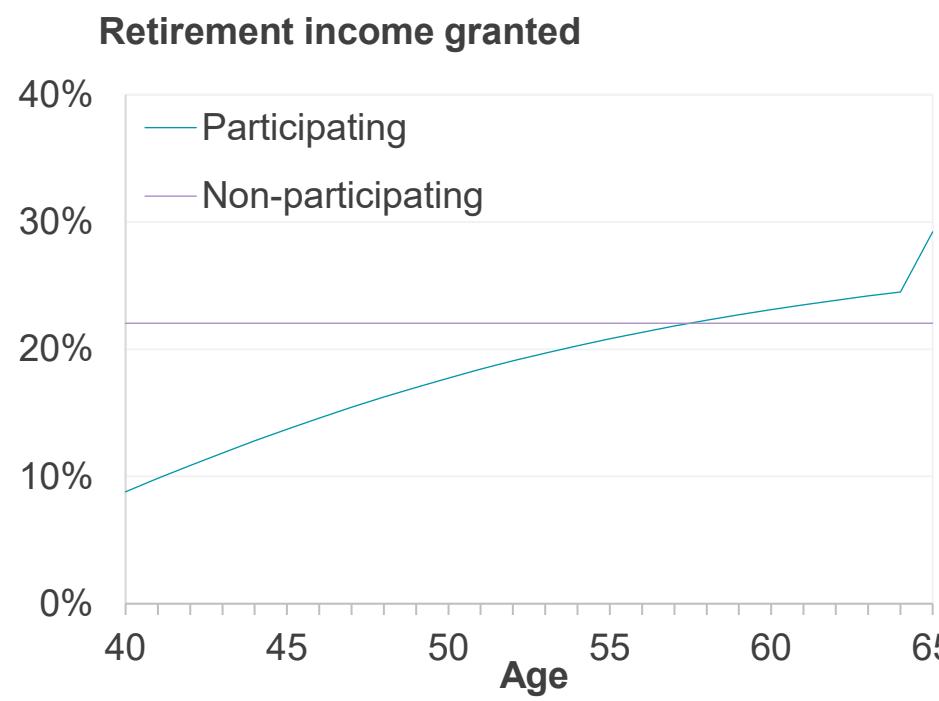
- Overall owners' investment
- Investment returns
- Charges and release of fundamental spread
- Finance costs
- Distributions to owners



Notes: (1) Not intended to be to relative scale

Participating deferred annuities

Variables in “base” scenario



Participating deferred annuities

Actions undertaken in equity and rates down stress

