

Managing Longevity Uncertainty: A new world of opportunity



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A Hymans Robertson Company

Agenda

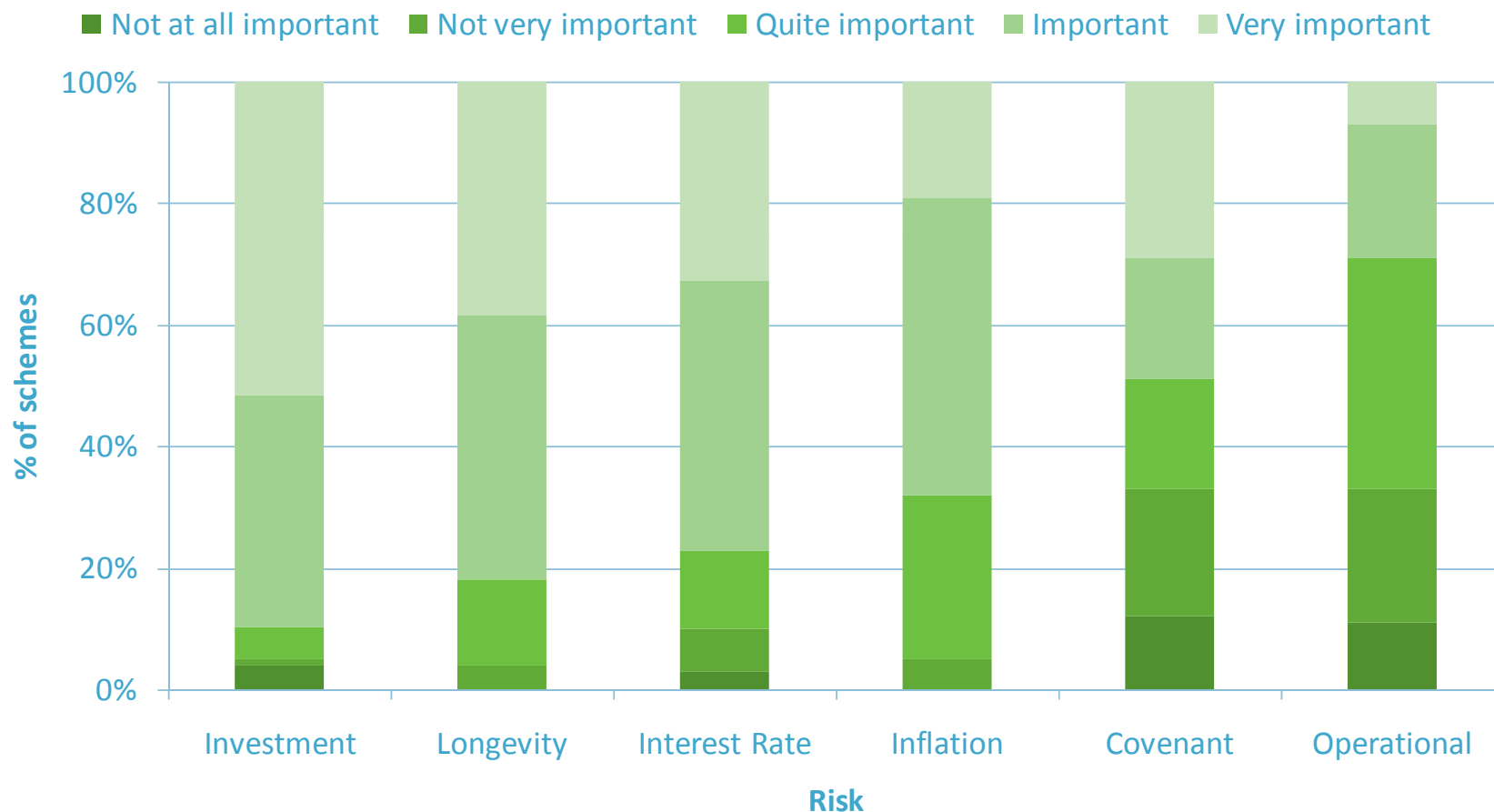
1. Developing a new market
2. Improvements in occupational pension schemes
3. New consulting opportunities
4. Tailoring funding plans for longevity

1. Developing a new market



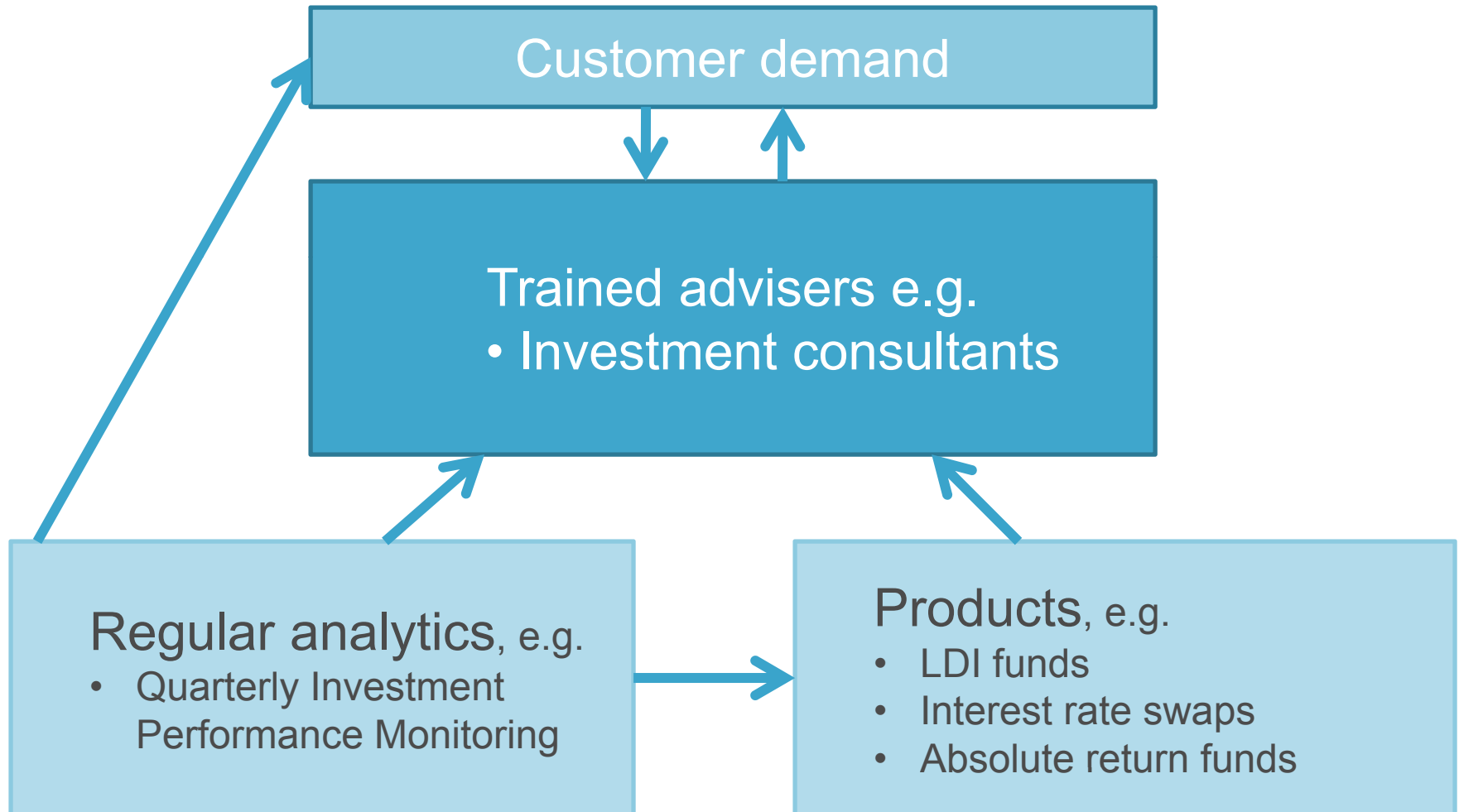
2nd biggest risk?

Schemes' Perceptions of Risk

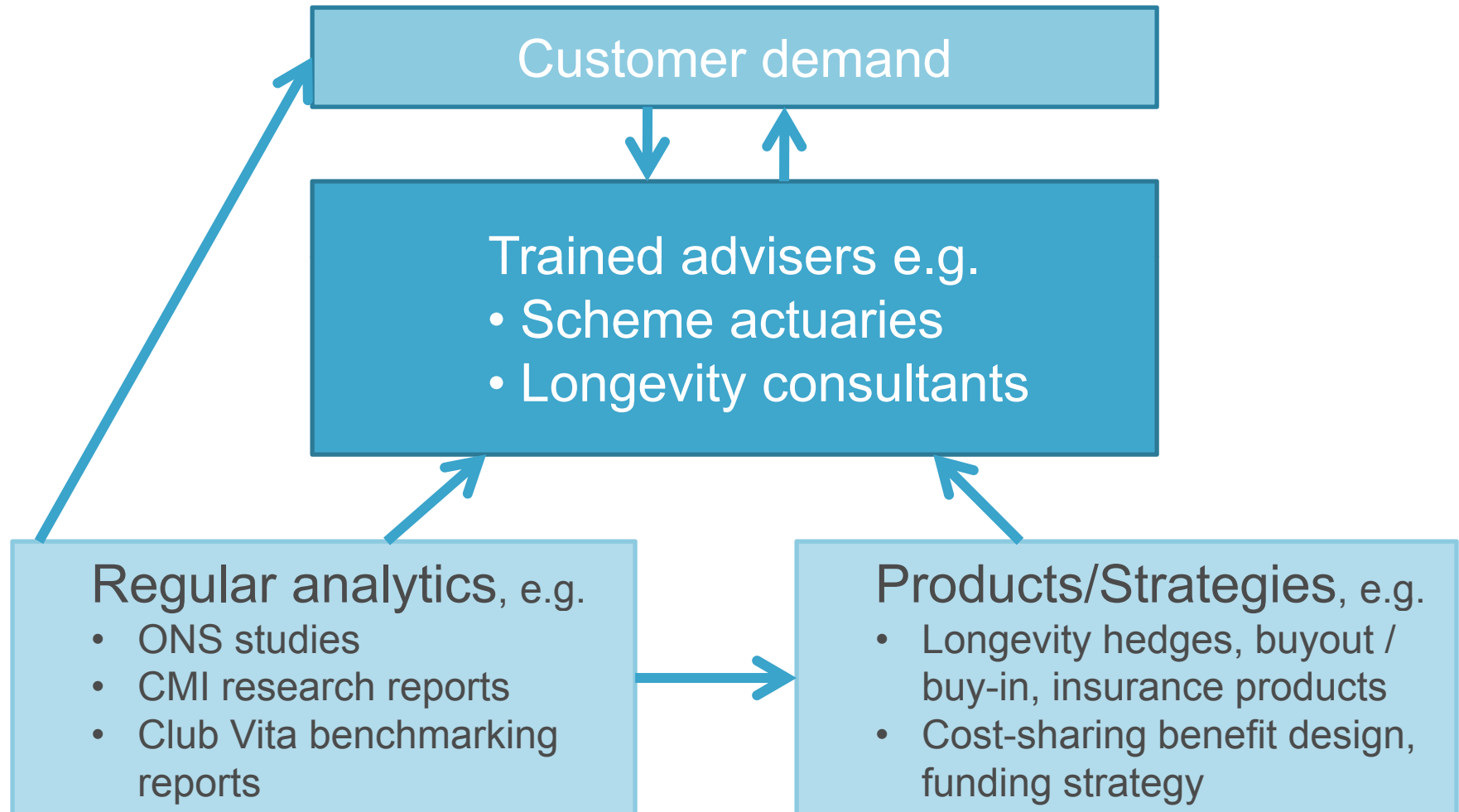


Source: "Living with Longevity", Edinburgh University research for Aberdeen Asset Managers, November 2008

Investment consultancy model



Longevity consultancy model

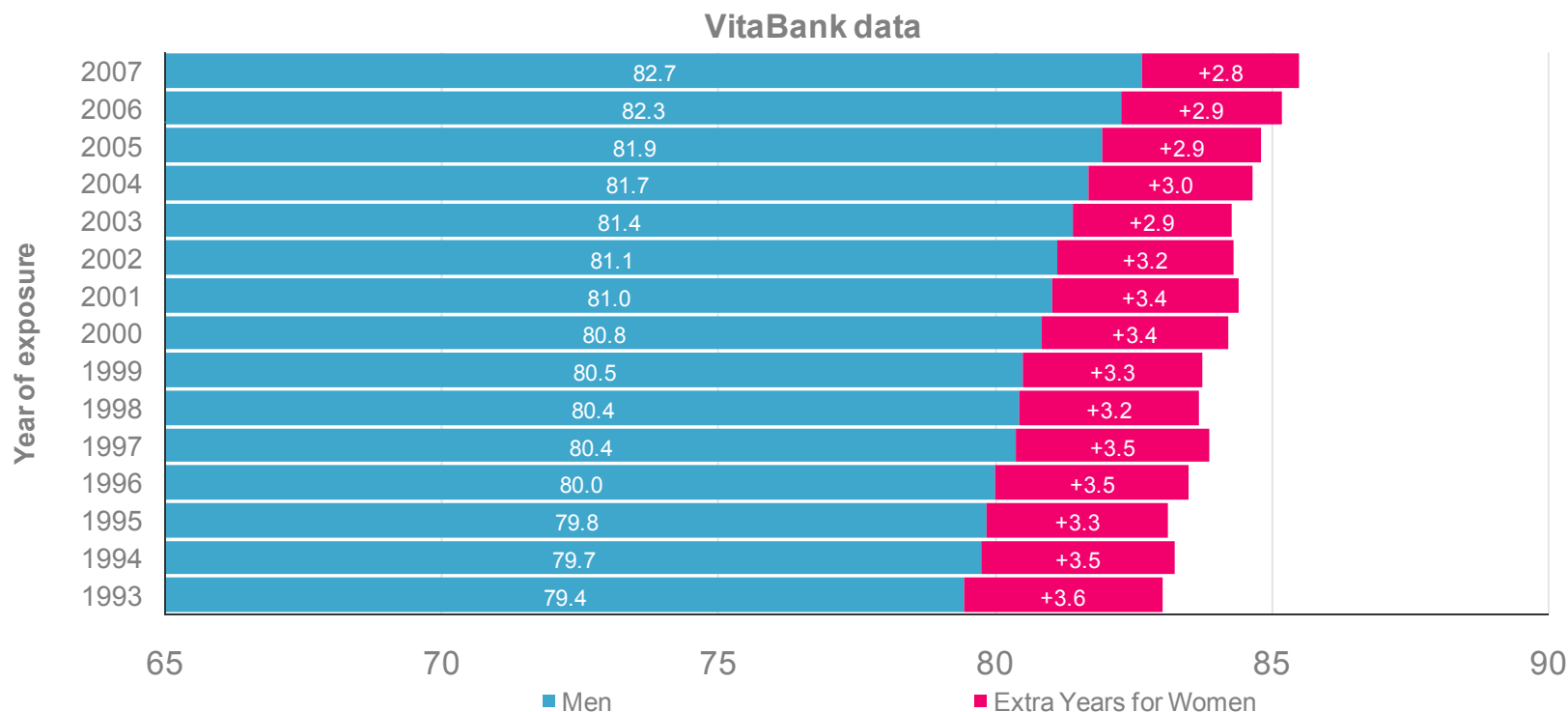


2. Longevity improvements in occupational pension schemes



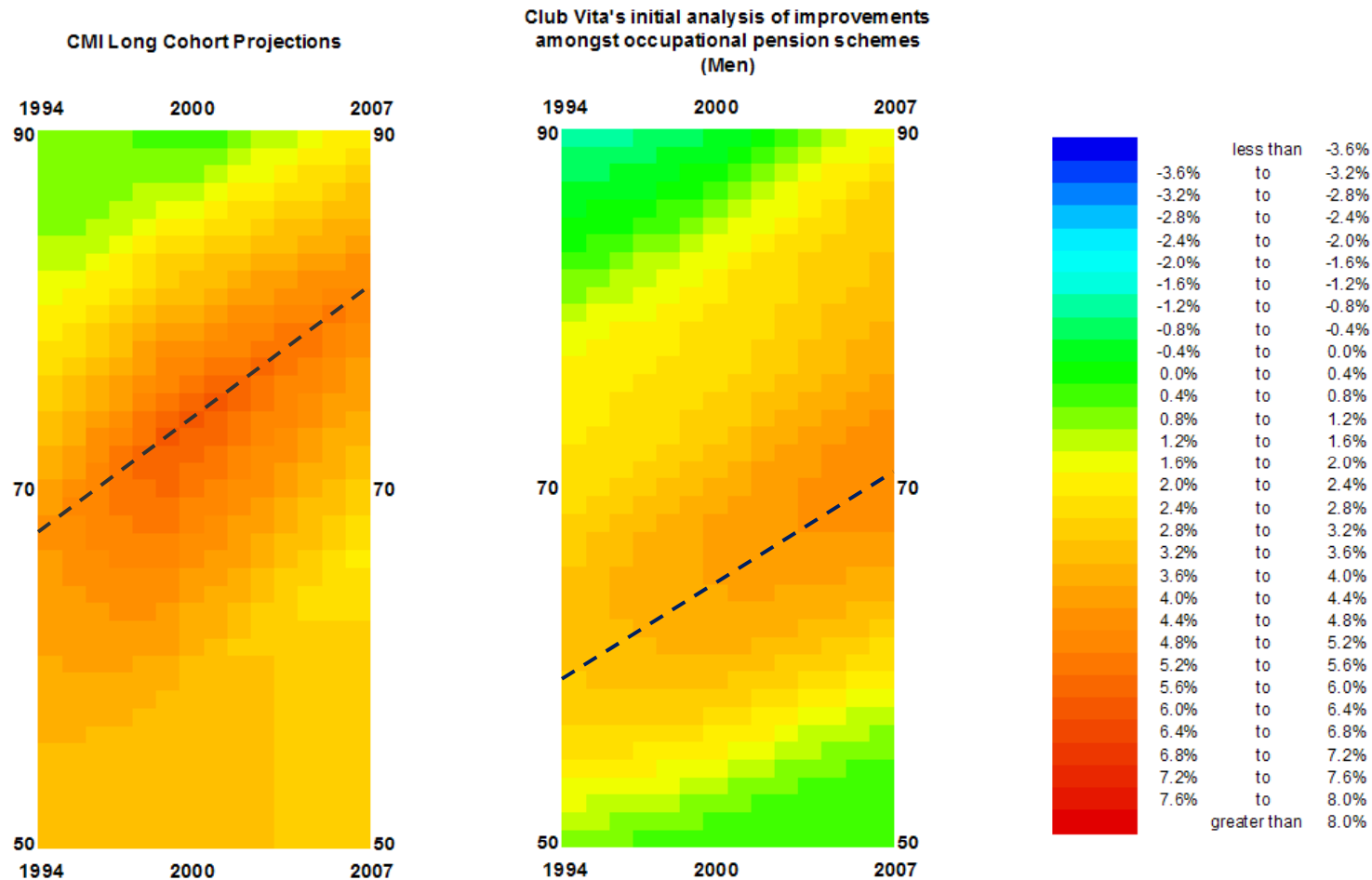
Life expectancy - trend over time

Period expectations of life derived from calculated crude mortality rates
Expected age at death of a 65 year old, based on crude mortality rates in year of exposure



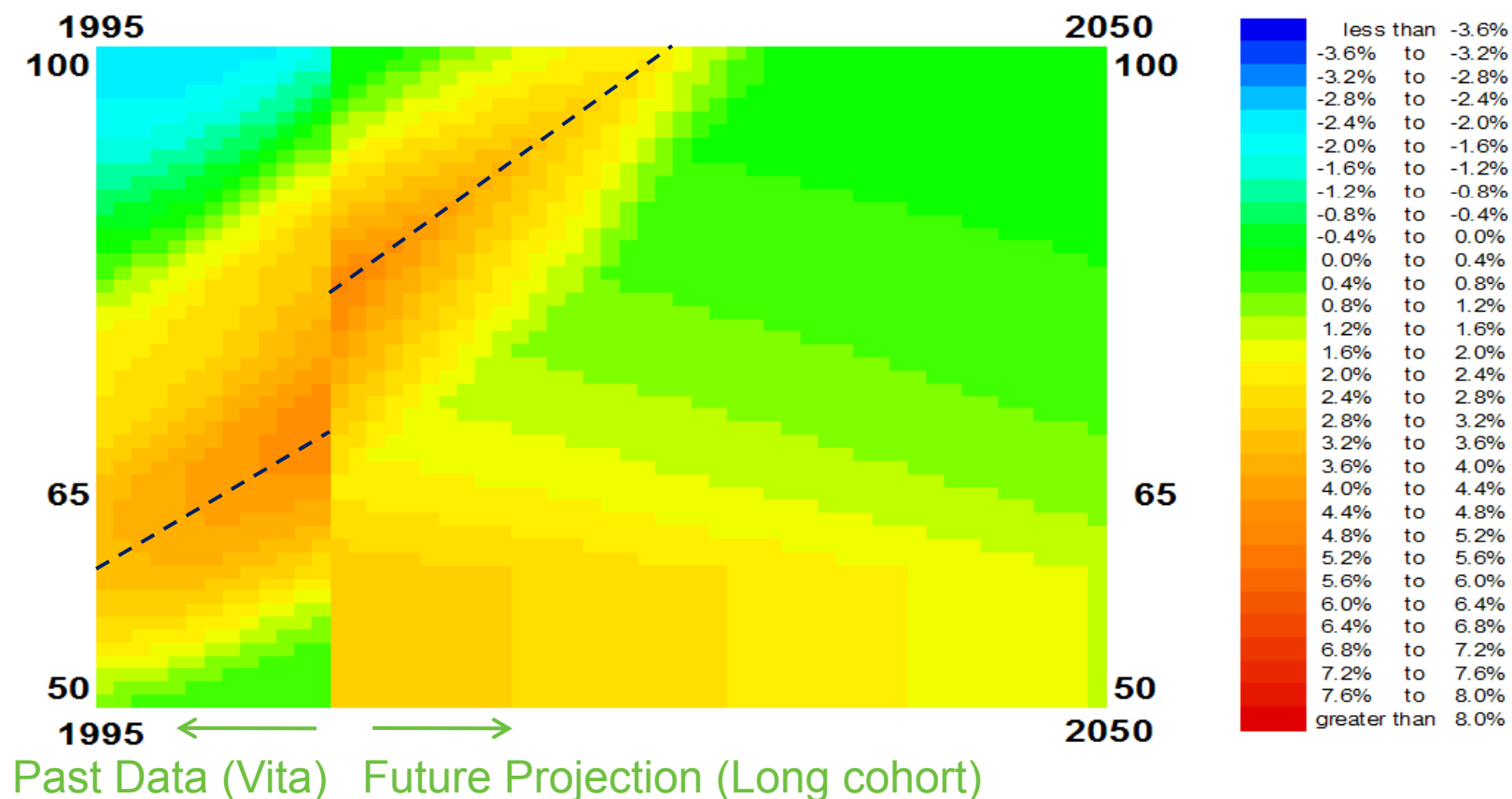
Source: VitaBank as at 13 October 2008

Smoothed rates of improvement (men)

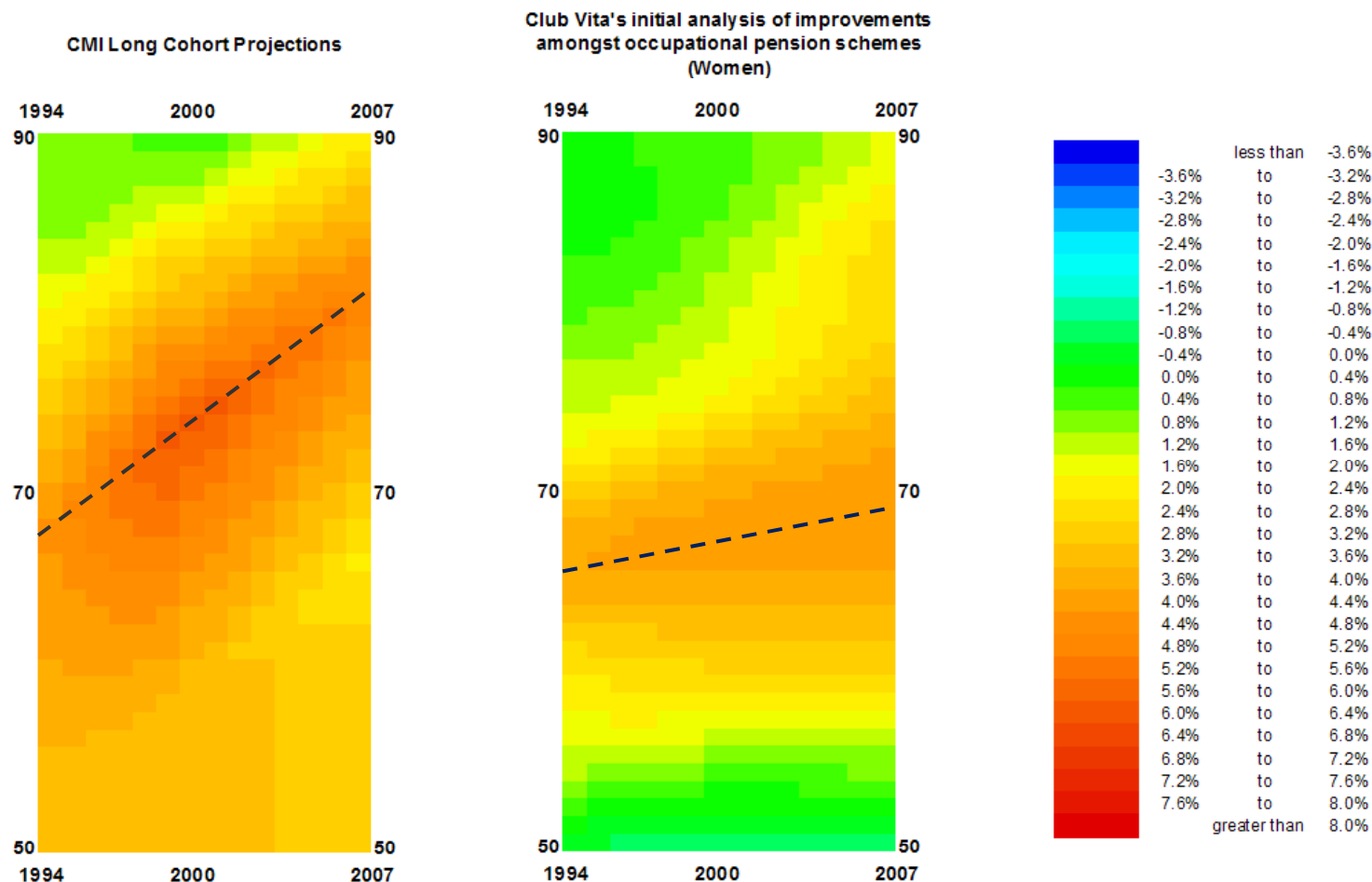


Source: Club Vita research based on VitaBank as at 21 September 2008

The long cohort in future?



Smoothed rates of improvement (women)



Source: Club Vita research based on VitaBank as at 21 September 2008

3. Consulting opportunities



More than just 3 yearly valuations

- ◆ Trustee knowledge and understanding
- ◆ Risk management protocols
- ◆ Assessment of longevity hedges
- ◆ Cost-sharing changes to benefit design
- ◆ Longevity-linked deficit recovery plans

Product innovations

- ◆ Innovations in traditional annuities
 - ◆ buy-ins
 - ◆ auctions
- ◆ Longevity hedges
 - ◆ indemnities or swaps
- ◆ Idiosyncratic risk
 - ◆ 'big elephants'

Risk management

Economic threats

Sponsor strength

Management risks

Demographic Risks

	Your scheme		Your peer group	
	2008	2007	2008	2007
Actual compared with expected - numbers of deaths - amount of pension ceasing				
Proportion of 65 year olds expected to survive to - 75 - 85 - 95				
Change in average death rate				
Average age of new retirements				
Proportion of new pensions commencing on grounds of ill health				
Proportion of members' deaths, leading to new survivor's pension				
Average age gap between member and surviving spouse				

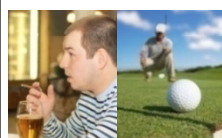
Cost-benefit analyses



4. Longevity & scheme funding



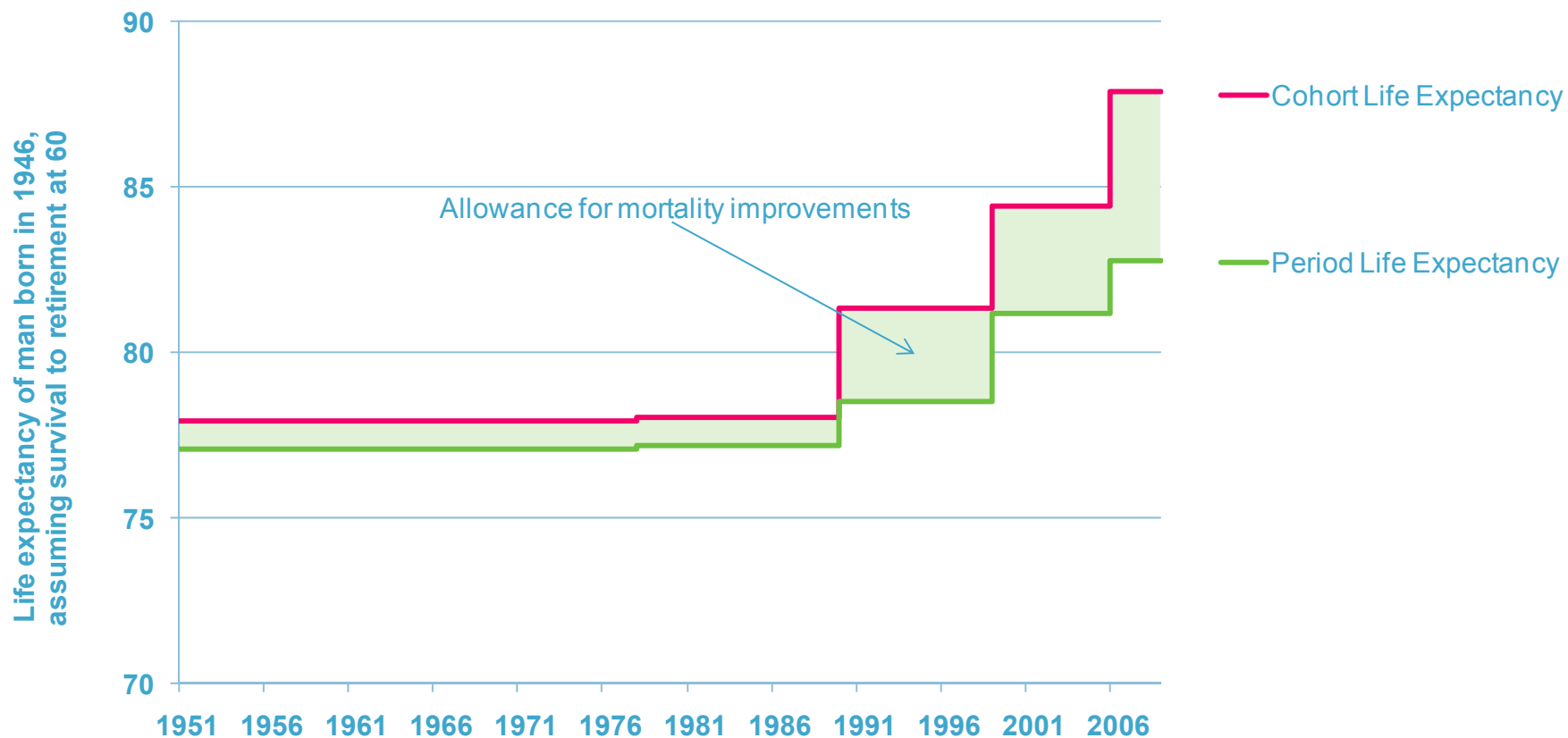
Increased analytics for base assumptions

Variable \ Source	Gender	Own experience	Employment type	Retirement type	Affluence measures	Postcode / Lifestyle
						
ONS	Y					?
'00' Series	Y			Y	?	
SAPS S1	Y			Y	Y (pension)	
Postcode models	Y					Y
Experience analyses	Y	Y				
	Y	Y	Y	Y	Y (salary)	Y
Range	± 3 years	± ? years	± 2 years	± 2 years	± 4 years	± 4-5 years

Source: Club Vita research. Note that ranges quoted do not exclude correlations. Combined impact of multiple variables cannot be determined by addition.

The elastic baby boomer

Male born in 1946



Source: Club Vita calculations based on published mortality tables

a(55)m (1951) – Period life expectancy based on a(55)m tables rolled back to 1947-48; Cohort life expectancy based on a(55)m tables

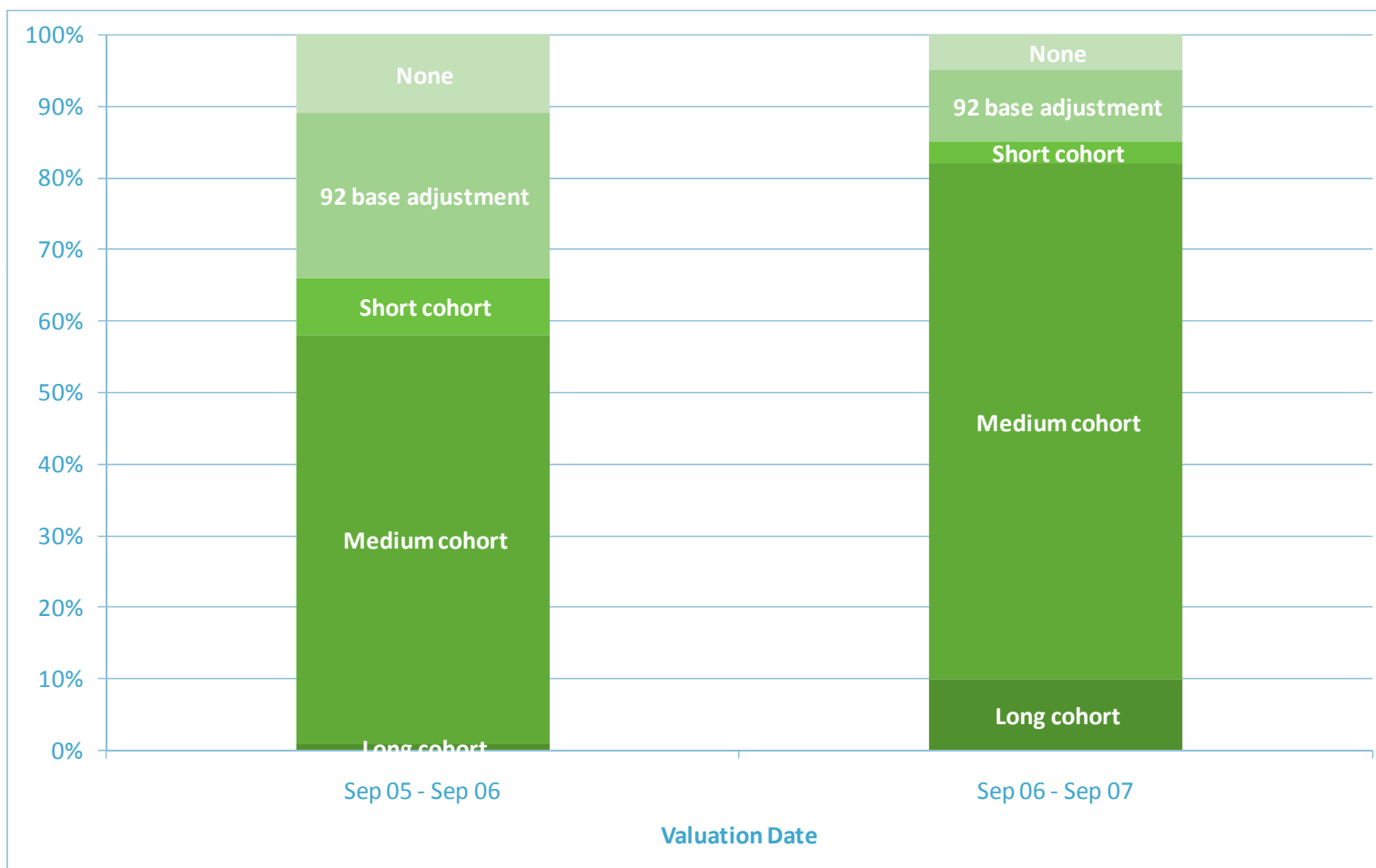
PA(90)m (1978) – Period life expectancy based on Peg67-70mA; Cohort life expectancy based on PA(90)m tables

PMA80 (1990) – Period life expectancy based on PMA80base; Cohort life expectancy based on PMA80 with year of birth projections

PMA92 (1999) – Period life expectancy based on PMA92base; Cohort life expectancy based on PMA92 with year of birth projections

PNMA00 (2006) – Period life expectancy based on PNMA00; Cohort life expectancy based on PNMA00 with year of birth long cohort projections

Longevity improvements adopted



Source: "Scheme funding: An analysis of recovery plans and clearance applications" – The Pensions Regulator December, 2008

Managing future uncertainty

1. Buy annuities
2. Longevity hedge/swap
3. Prudent allowance for improvement
4. Lower improvement allowance + monitoring + plan B
5. (a) Future service: No allowance for improvement + monitoring + longevity adjuster
(b) Past Service: Improvement allowance + monitoring or longevity swap

Thank you

◆ Any Questions?

