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## 10 longevity insights that I wish I'd known sooner

Conor O'Reilly FFA  
Head of Analytics  
Club Vita

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### Club Vita

- Records for over **2.9 million** UK pensioners, covering **1 in 4** UK DB pensioners
- Relationships with over **230** pension schemes with over **£300 bn** of liabilities
- Over **1.5 million** deaths stretching back **25+ years**
- Segments by **affluence, postcode, health** and more



04 June 2019



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2

## Party like it's 1999

- Simpler times!
- Standard base tables
  - e.g. 92 series tables (1991-94 experience)
- Standard improvements
  - e.g. 92 series (unisex)
- High net discount rates meant that mortality didn't really matter

## 2010s

- A bit more complex
- Custom base tables?
  - No longer 'one size fits all'
- Less standard improvements
  - CMI model opened up more flexibility
  - Steady improvements looked to be here for good

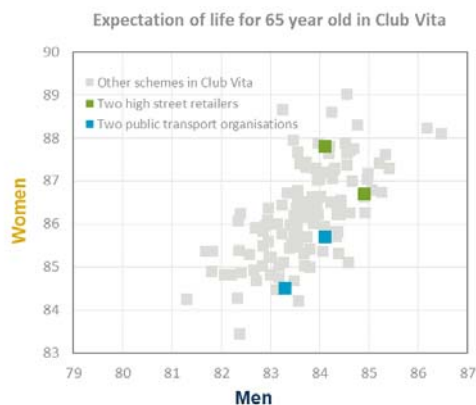
## 2020 vision (almost)

- Increasingly complex
- Custom base tables
  - Postcode models widely used
- Varying improvements
  - No longer one size fits all?
  - Variable experience – blip or trend?
- Low net discount rates, and hedging strategies mean that mortality can be biggest risk



## Baseline mortality

### 1. Diversity is captured by member characteristics



Source: Club Vita data. For more details see [Club Vita's Top Charts issue 3](#)

- Wide range of life expectancy across different schemes
- Even within the same industry (or geography) there can be considerable differences
- Important to consider individual member characteristics rather than broad assumptions



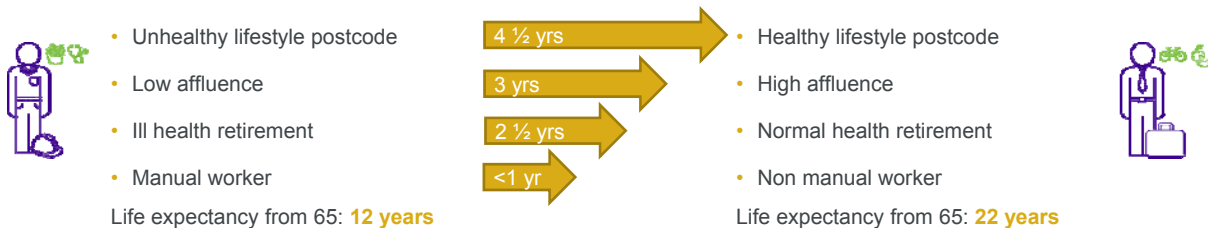
Wide range of life expectancy across different schemes



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### 1. Diversity is captured by member characteristics

- VitaCurves baseline model captures a difference of c10 years in life expectancy at age 65



Source: Club Vita analysis of 2014-16 data

- Other factors such as geography, private/public sector not significant when controlled for above



Wide range of life expectancy across individual lives



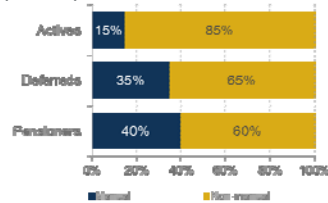
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## 2. Scheme profiling can show demographic drift

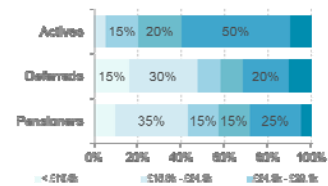
Case study: a changing workforce

- Long established company
- Traditionally workforce heavy manual
- Current workforce sales, marketing, finance, higher tech production lines
- Historically had set assumptions using scheme experience
- Implicitly assumed non-pensioners similar to pensioners i.e. heavy manual
- Reflecting true mix of membership increased liabilities by c3%

- Occupation profile



- Salary profile



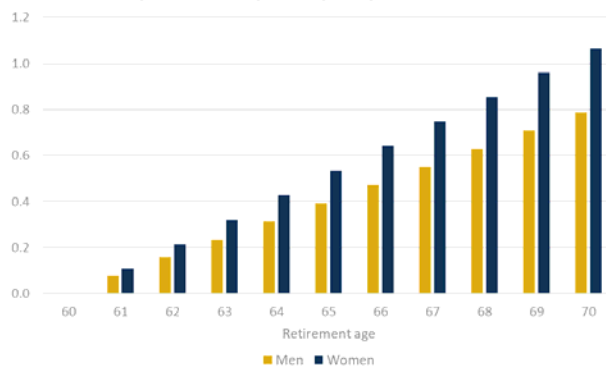
Scheme socio-economic profiles can change over time



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## 3. Work longer, live longer (or vice versa)?

Extra years of life expectancy compared to retirement at 60



Source: Modelled from fitted life expectancy based on Club Vita data (2013-15)



Retiring later coincides with living longer



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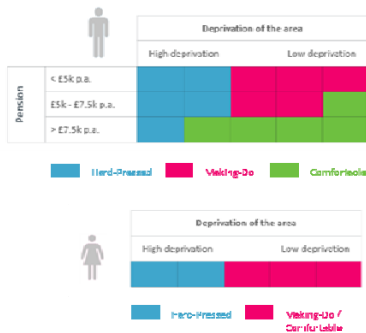
## Longevity trends

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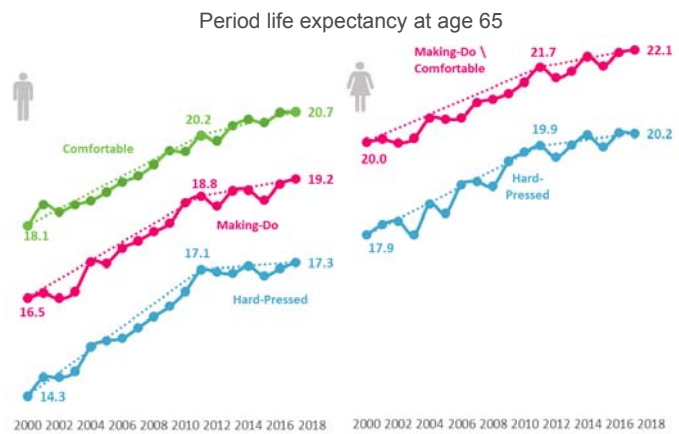
11

### 4. Trends are not being experienced uniformly

#### VITASEGMENTS



Source: Club Vita analysis.  
 For more details see [Club Vita's Three years forward, two steps back webinar](#)



Most schemes have liabilities dominated by Comfortable members



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12

### 4. Trends are not being experienced uniformly



Group	Annualised mortality improvements (age standardised)		
	2001-06	2006-11	2011-16
England & Wales	3.0%	2.6%	0.9%
Comfortable	2.0%	2.6%	1.5%
Making-Do	2.9%	2.9%	1.1%
Hard-Pressed	2.6%	3.1%	0.7%

Source: Club Vita analysis. Mortality rates age-standardised over 65 to 95 based on E&W population in 2010. 3 year averaging applied to each calendar year. For more details see [Club Vita's Three years forward, two steps back webinar](#)

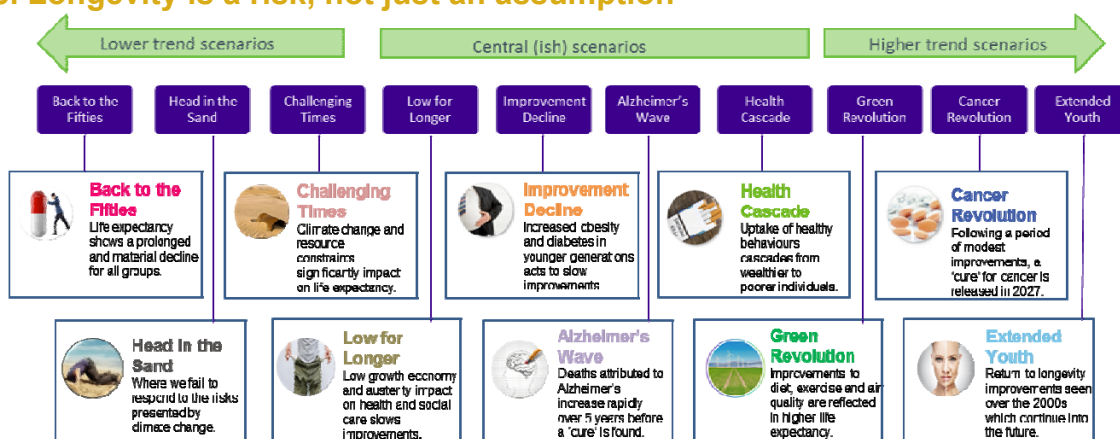


VitaSegments have seen different trends over time



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### 5. Longevity is a risk, not just an assumption



Note that we do not suggest that some of these scenarios are more likely than others, that they represent a best estimate or even place outer boundaries on what we might expect in the future.



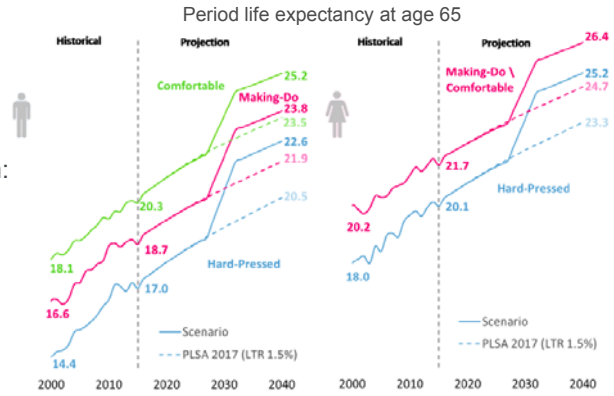
Considering impact of scenarios can help schemes understand risks



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## Cancer revolution scenario

- Cancer accounts for
  - 20% deaths below age 55
  - 40% deaths ages 55-79
  - 25% deaths above 80
- A step change in cancer treatment resulting from:
  - Effective national screening (both traditional and genetic)
  - "Pill" developed to target hard to reach cancers
- New treatments available in 2027
- Fully taken up over the following five year period
- Lower socio-economic groups will see larger gains:
  - Overall death rates are higher, so cancer death rates are assumed to be higher
  - Currently benefit less from preventative lifestyles



Source: PLSA / Club Vita analysis.  
For more details see [Longevity Trends: Does one size fit all?](#)



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15



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## Survivors

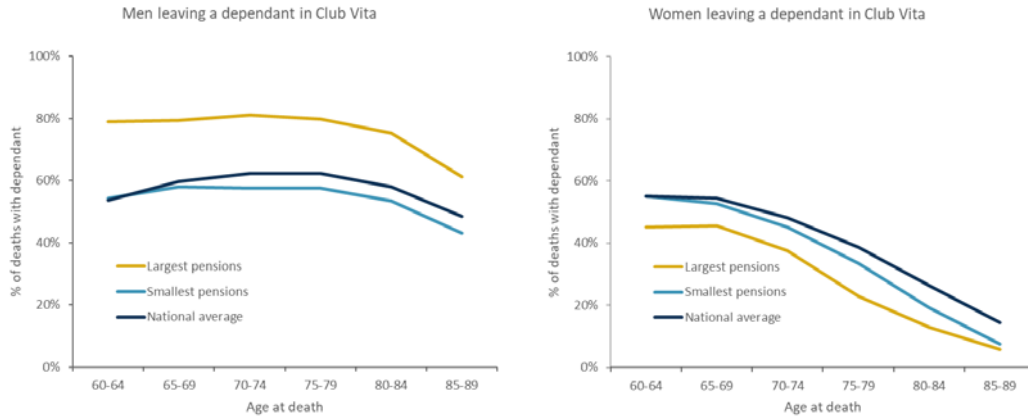


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16



## 6. Survivor proportions vary by pension amount

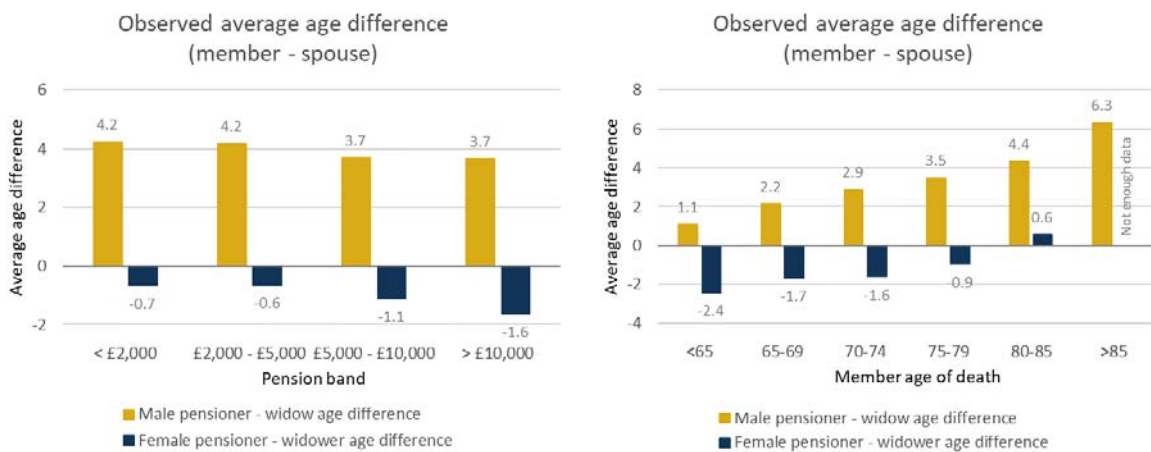


Wealthier men more likely to be married, opposite for women



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## 7. Age differences vary by pension and age



Source: Club Vita data extract 2011-2015. For more details see [Club Vita's Top Charts Issue 11](#)

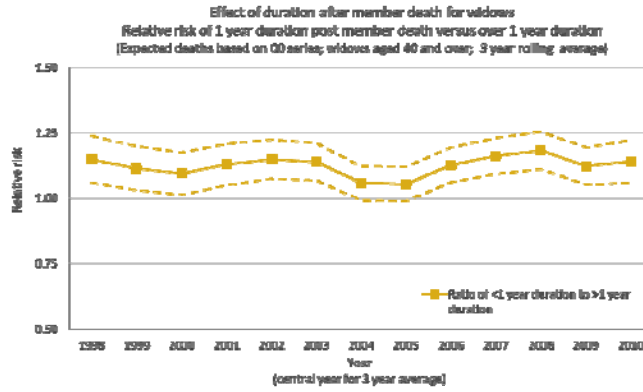


Older pensioners have younger spouses at death



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## 8. You can die of a broken heart



Relative risk is a comparison of mortality rates. For example a relative risk of 1.3 would suggest that mortality is typically 30% heavier amongst recently bereaved widows than those who have been widowed for more and 1 year

Source: Club Vita analysis published in 2014. For more details see [Club Vita's Grieving widows paper](#).



### Mortality rates jump in the year after death of a spouse

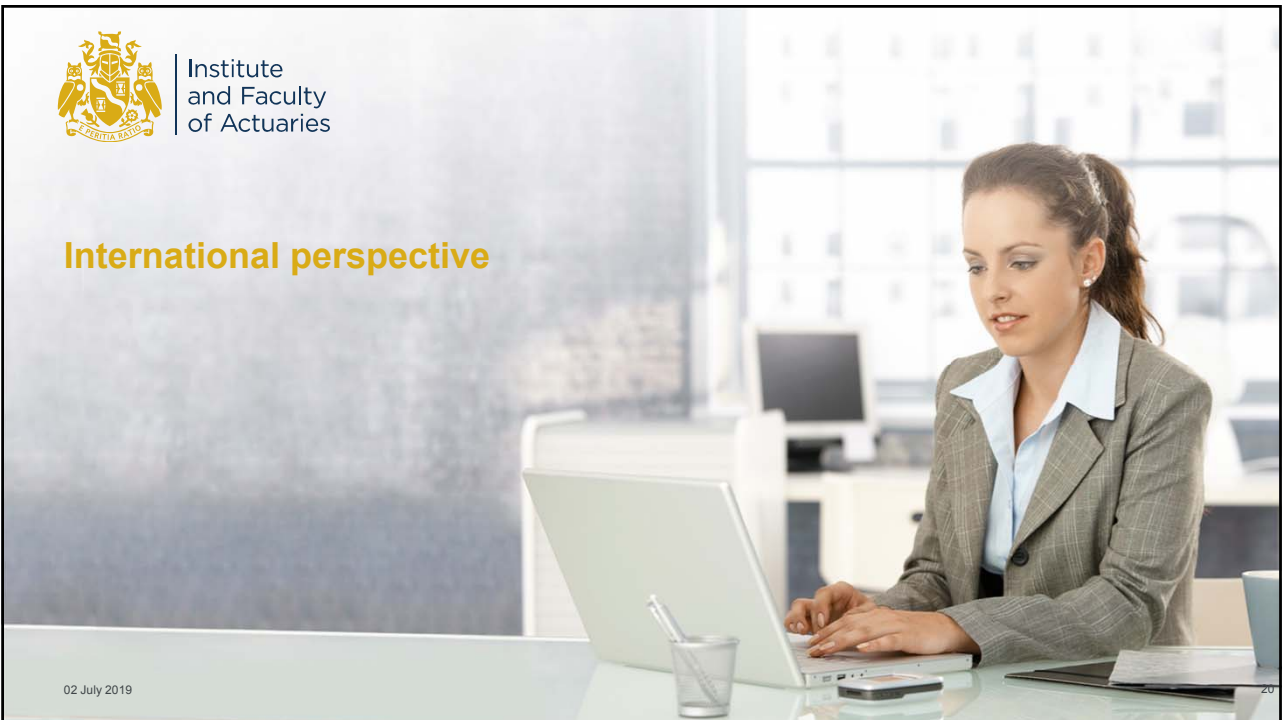


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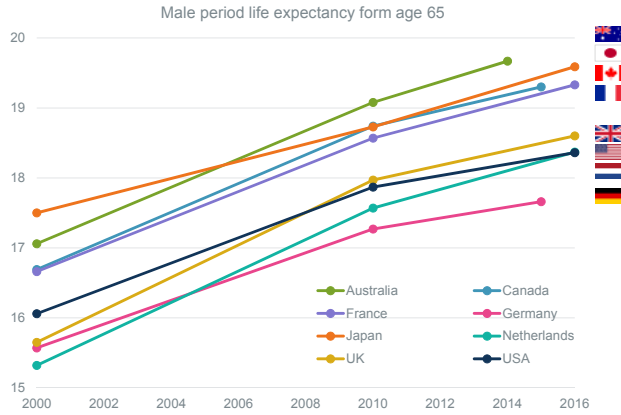


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## International perspective



## 9. Life expectancy trends vary internationally



- Significant (and continuing) increases across all countries
- Slowdowns seen in Germany, USA and Canada, as well as UK
- Potential for UK to catch up with leading nations

Source: Club Vita analysis. For more details see [Club Vita's Top Charts Issue 8](#)



Life expectancy trends vary significantly between 'similar' countries



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21



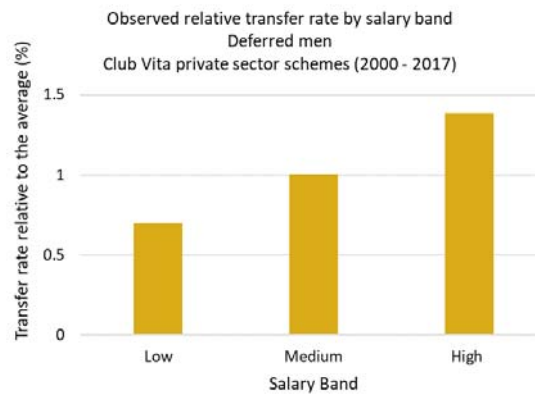
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## Non pensioners

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22

## 10. Transfers out vary by pension amount



## 10 insights

1. Diversity is captured by member characteristics
2. Scheme profiling can show demographic drift
3. Work longer, live longer (or vice versa)?
4. Trends are not being experienced uniformly
5. Longevity is a risk, not just an assumption
6. Survivor proportions vary with pension amounts
7. Age differences vary by pension and age
8. You can die of the broken heart
9. Life expectancy trends vary internationally
10. Transfers out vary by pension amount

What insights will the next 10 years bring?



**Questions**



**Comments**

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