



SOCIOECONOMIC DIFFERENCES IN MORTALITY AND RETIREMENT

Paris, June 8, 2016

*Conference on Research Challenges for Global Pensions:
Trends and Heterogeneity*



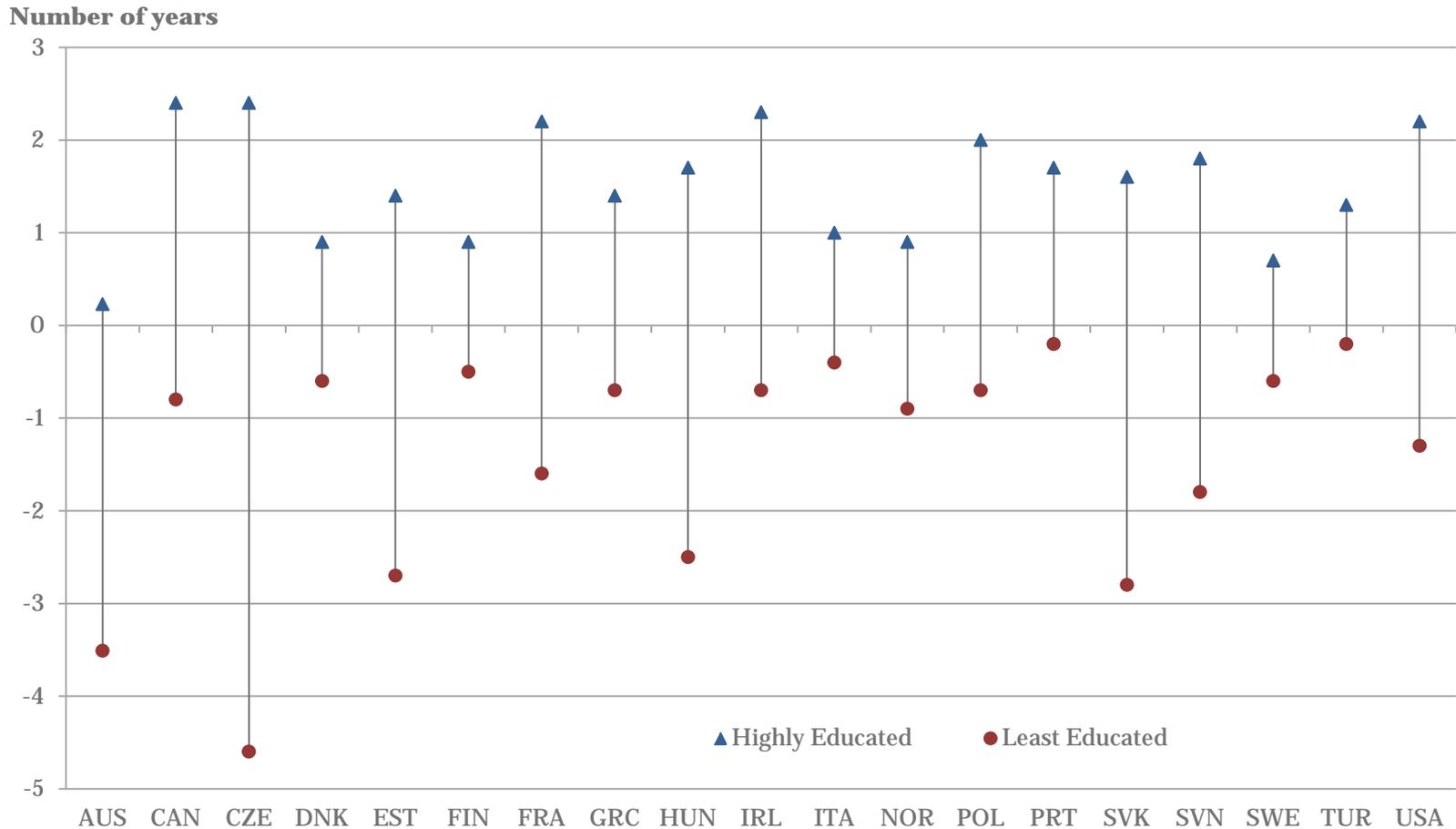
Outline for today's presentation

- Evidence of differences in life expectancy across socioeconomic groups
 - Education
 - Income
 - Occupation
- Implications for pensions and insurance
 - Challenges to manage and mitigate longevity risk
 - Opportunities for product innovations to meet the needs of different segments
- Policy considerations



Evidence: Education, gap

Difference in the level of life expectancy at age 65 between the most and least educated males





Evidence: Education, trend

Annualised difference in the change of life expectancy at age 65 between the most and least educated

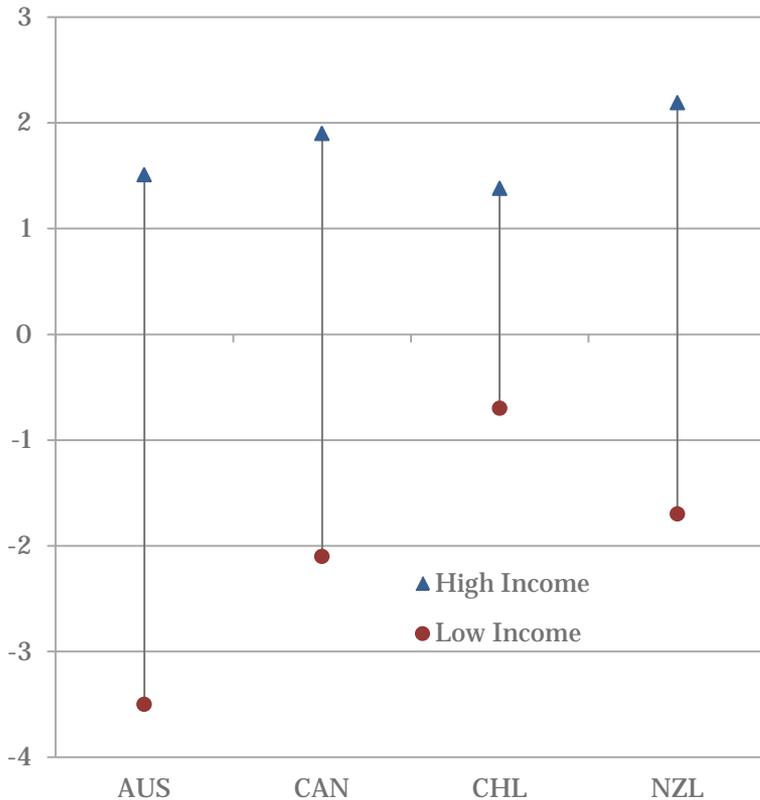
Months per year



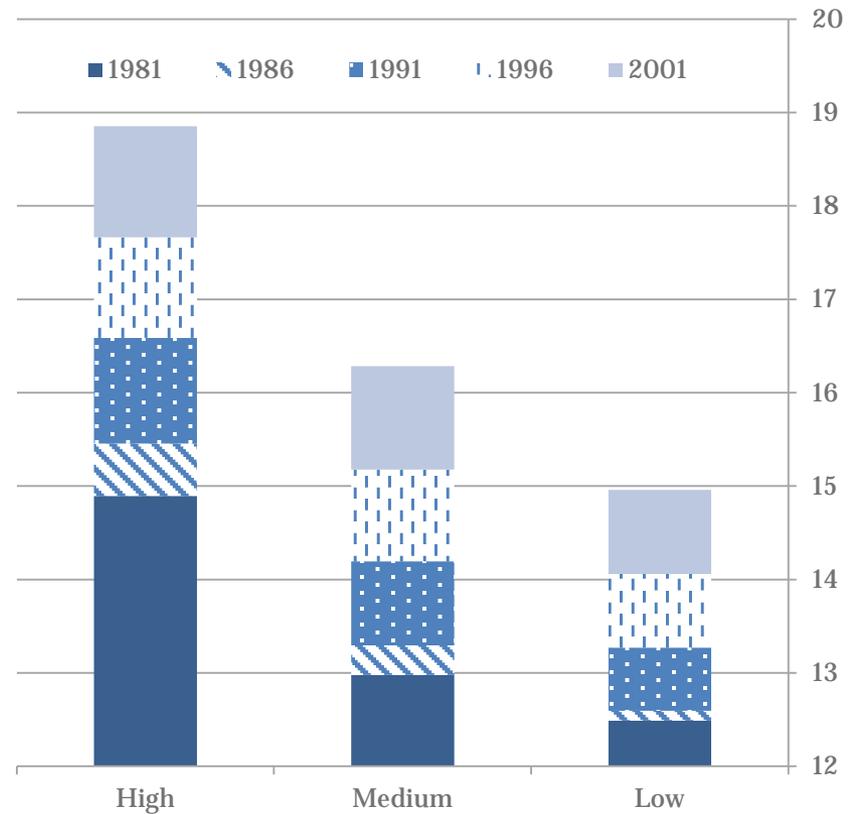


Evidence: Income

Difference in the level of life expectancy at age 65 between the males with the highest and lowest incomes



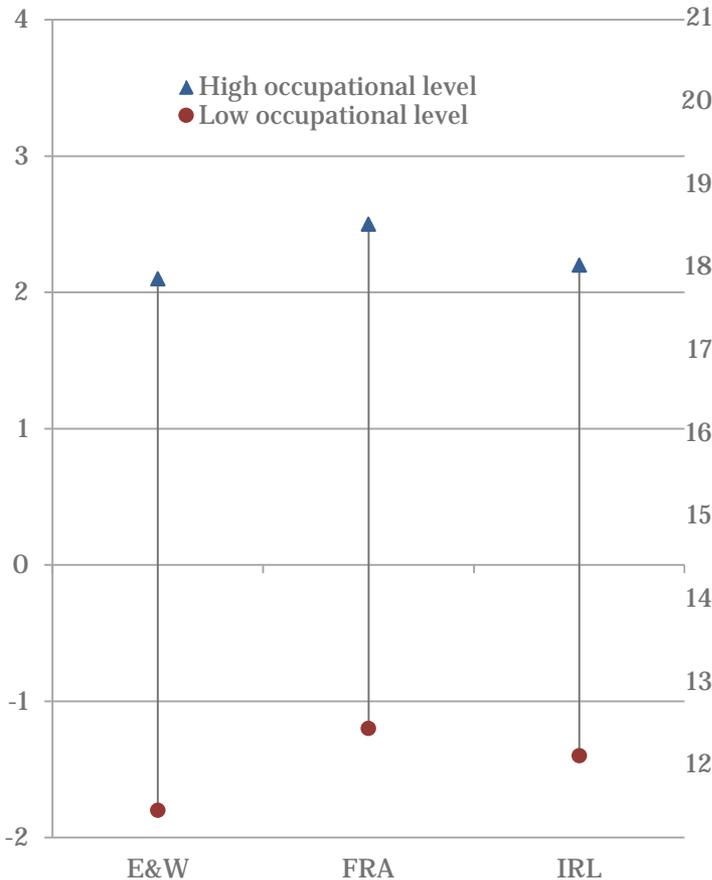
Evolution of life expectancy at 65 for males in New Zealand by income tertile



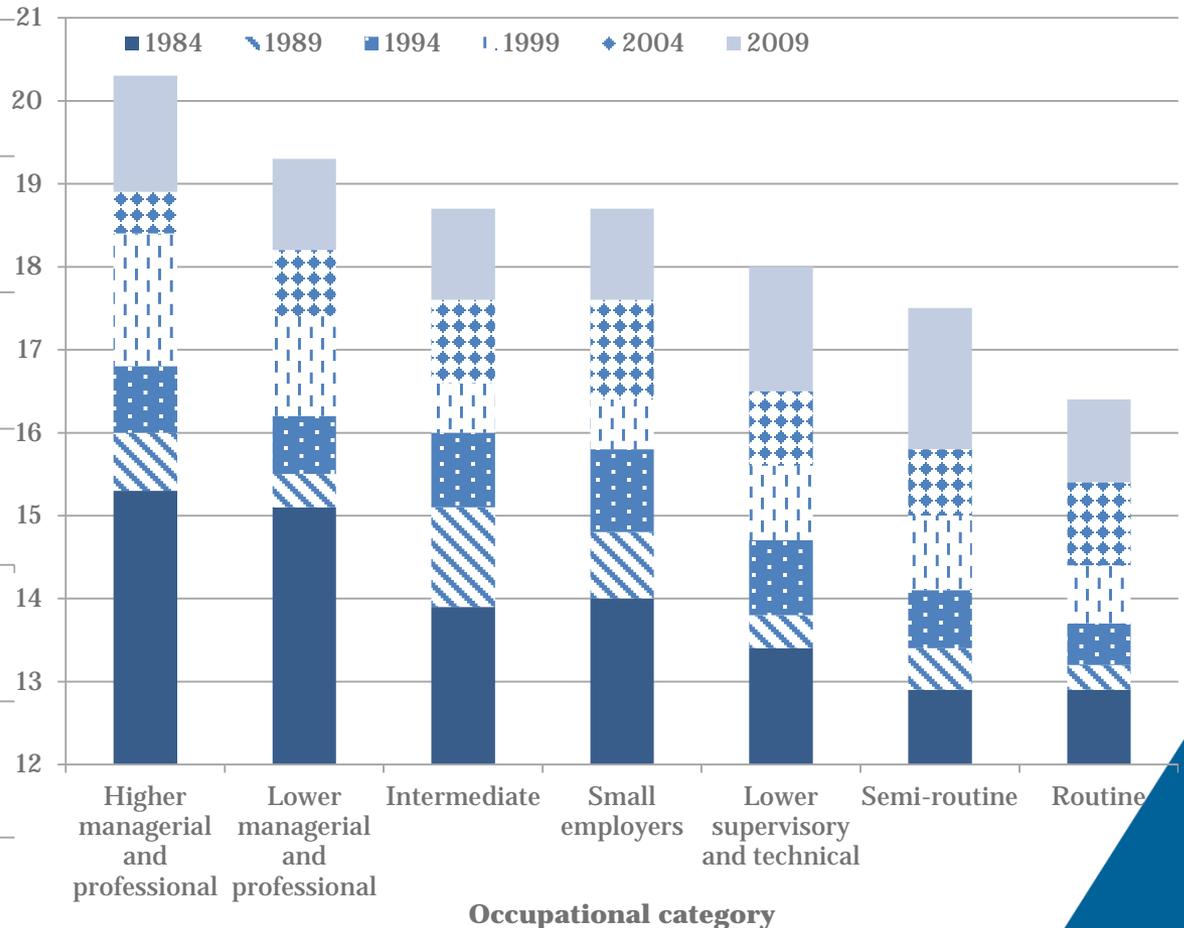


Evidence: Occupation

Difference in the level of life expectancy at age 65 between the males at the highest and lowest occupational levels



Evolution of life expectancy at 65 for males in England & Wales by occupational category





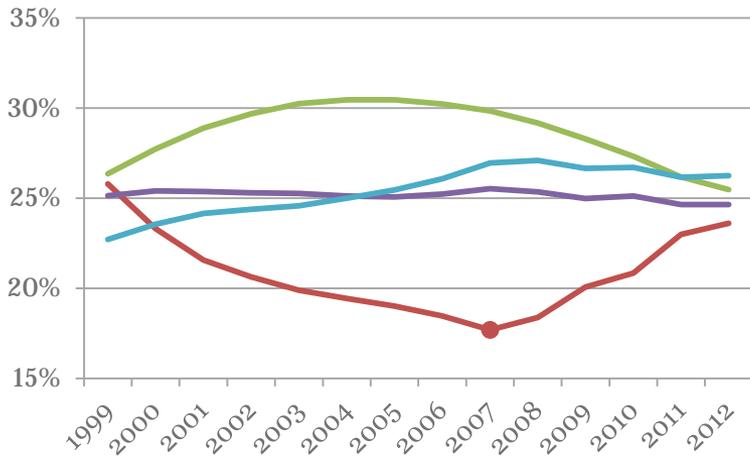
Challenges to establishing mortality assumptions

- Lack of sufficient data for mortality improvement assumptions
 - Base on general population
 - Base on combined sub-populations, e.g. across occupations
- External shocks may change underlying demographics
 - 2008 pension reform in Chile
 - 2014 pension freedoms in the UK



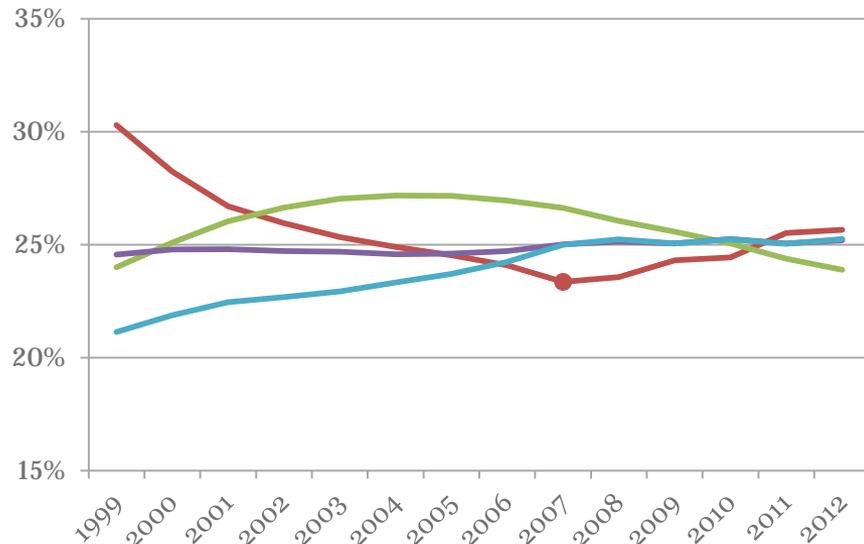
Chile: 2008 pension reform

Males



- 2008 pension reform increased coverage for lower income individuals
- Increased coverage for lower income individuals increased overall mortality for pensioners
- Implied mortality improvements of pensioner population understated

Females





United Kingdom: 2014 removal of requirement to purchase an annuity

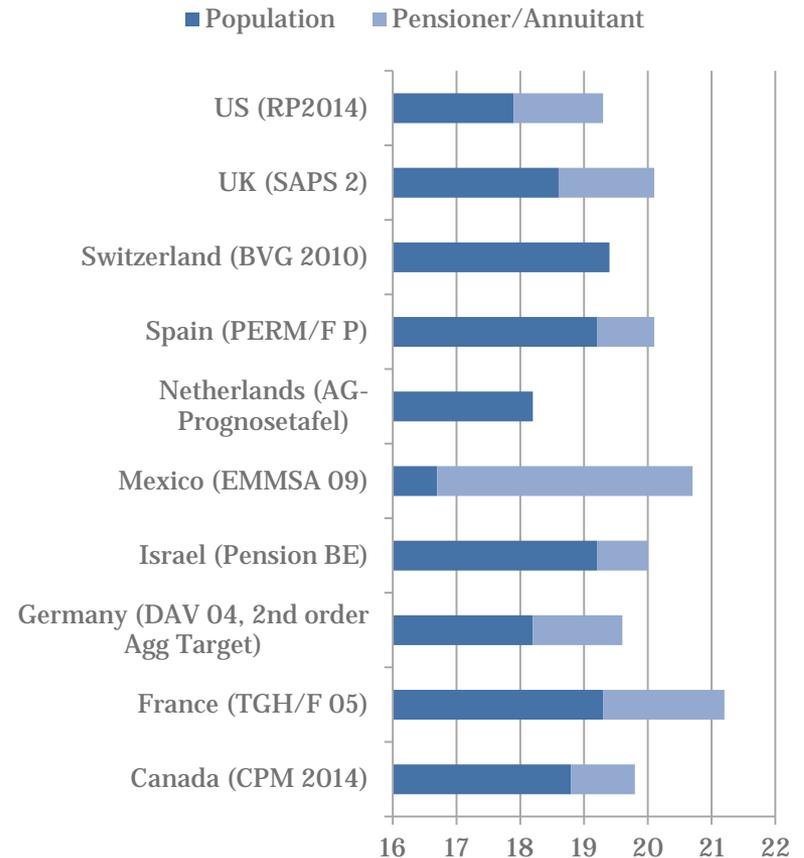
- **2012**
 - **25% of annuities sold to existing customers were for pension pots less than 5,000 GBP**
- **July-September 2015**
 - **90% of individuals not taking a guaranteed annuity rate had pension pots less than 10,000 GBP**



Challenges to the mitigation of longevity risk

- Pensioners and annuitants generally skewed towards higher socioeconomic groups
 - Higher risk that mortality improvements will be higher than assumed
 - Higher risk premium charged by reinsurers
 - Lack of diversification could result in limited reinsurance capacity

Male life expectancy at age 65





Instruments for longevity risk transfer

- **Bulk Annuities**
 - **Full Transfer of all risks including investment risk**
 - **Buy-ins, buy-outs**
- **Longevity Swaps**
 - **Transfer of longevity risk only**
 - **Fixed payments made by the pension fund/annuity provider in exchange for floating payments based on the evolution of underlying mortality**
 - **Bespoke or index-based**



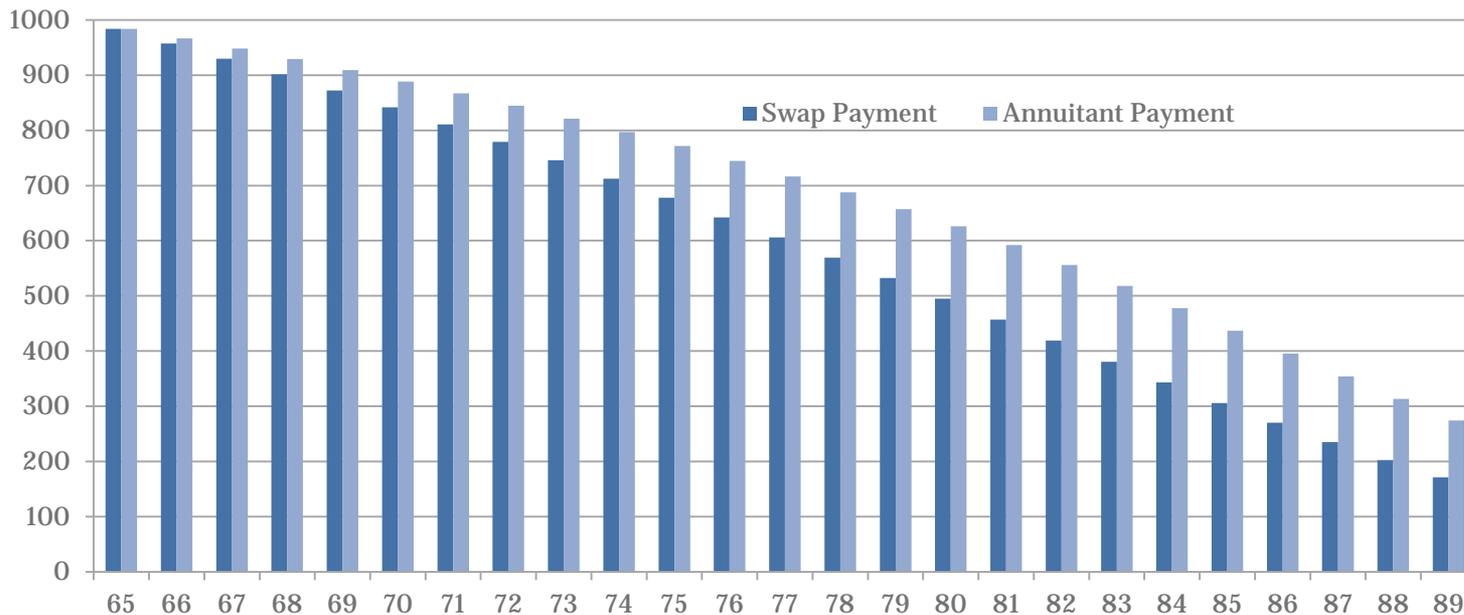
Passing longevity risk to the capital markets

- Misalignment of incentives between pension fund/annuity provider and investor
 - **Several barriers for capital markets investors taking bespoke transactions**
 - Asymmetrical information
 - Time consuming to perform the risk analysis
 - Very long duration
 - **Pension funds and annuity providers would prefer a bespoke hedge**
 - Risk is fully hedged; no basis risk
 - Limited data available on which to measure and assess basis risk
- **Index-based instruments** could resolve this misalignment and are by nature more transparent and standardised than bespoke transactions



Challenges to the development of a market for longevity risk

- Uncertainty around the effectiveness of an index-based hedge
 - Indexing to the general population mortality less likely to cover additional payments to pensioners/annuitants





Opportunities to better meet varying consumer needs for retirement

- Lower socioeconomic groups
 - e.g. enhanced annuities offer higher levels of income for consumers having lower life expectancies due to behaviours such as smoking or health issues
- Higher socioeconomic groups
 - e.g. variable annuities offer higher levels of flexibility and liquidity for consumers more comfortable with investing and a desire to maintain control of assets



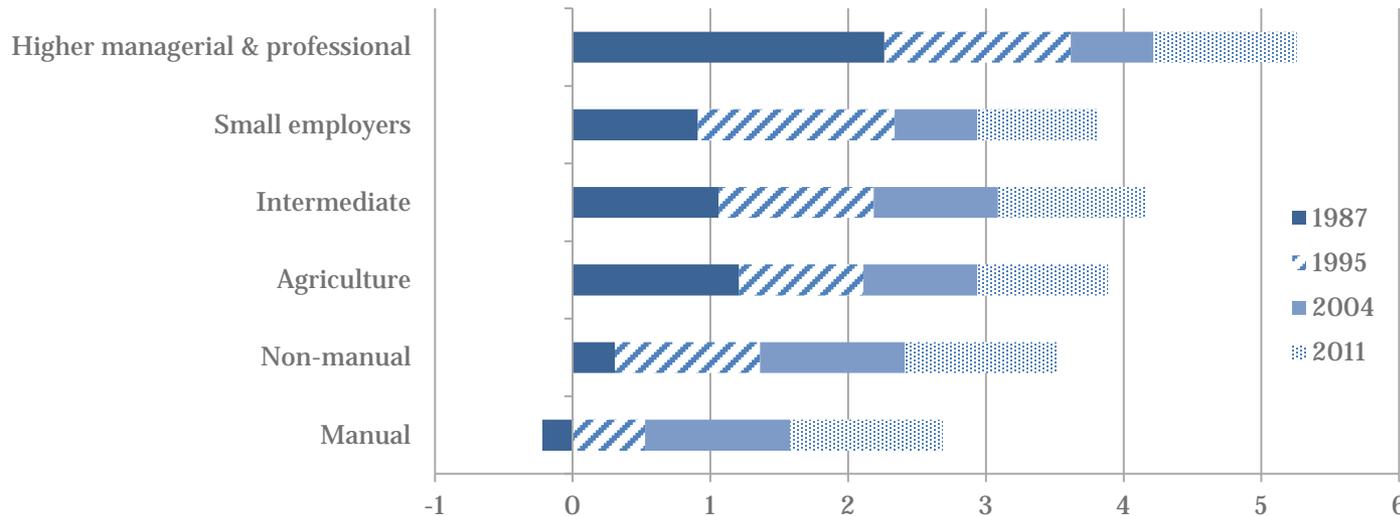
Policy considerations (1/2)

- Facilitate the measurement and management of longevity risk
 - Timely and accurate data by socioeconomic indicator should be made available
- Encourage the development of sustainable products to meet the needs of various segments
 - Carefully consider any ban on risk factors used for pricing
 - Appropriate reserve requirements
 - Encourage demand through the provision of information



Policy considerations (2/2)

- Ensure that rules governing access to pensions do not penalize lower socioeconomic groups
 - **Maximum withdrawal limits**
 - **Annuitization requirements**
 - **Minimum age to gain full access**



The additional years beyond age 65 to maintain a ratio of years in retirement to years working at 0.33 in France



Key takeaways

- Higher socioeconomic groups live longer
- Challenges for pension providers
 - Setting mortality assumptions
 - Mitigating longevity risk
- Opportunities for pension providers
 - Adapt retirement product offerings to different market segments
- Challenges for policy makers
 - Creating sustainable pension policies to address longer life expectancies which consider the heterogeneity of the population's mortality



THANK YOU!
QUESTIONS OR COMMENTS?

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