

Report on Longevity Risk Research Workshop and Forum in Sydney and an update on related research

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### Longevity Risk Research Workshop Sydney February 15, 2017

Focus on:

- Older age mortality,
- Modelling mortality heterogeneity and frailty,
- Modelling health status as well as incorporating improvement trends and uncertainty,
- R software package easily used to fit mortality models.

42 registered attendees, researchers and industry practitioners

- High-age mortality and frailty: Implications for actuarial modeling, Ermanno
  Pitacco
- Insights from Modelling Old-age mortality and Heterogeneity, Severine Arnold
- Frailty and the risk of heterogeneity in a life annuity portfolio, Annamaria Olivieri
- StMoMo: An R Package for Stochastic Mortality Modelling, Andres Villegas
- Multi-State Actuarial Models of Functional Disability, Adam Shao
- Impact of Systematic Trend and Uncertainty on Mortality and Disability Transition Rates, Michael Sherris
- Longevity and Health can we have both?, Carol Jagger



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### Longevity Research Forum at UNSW Sydney February 16, 2017

Focus on:

- current and future research on modelling of longevity risk
- applications to the managing of longevity risk including costing and design of income stream products and long term care insurance

Over 35 registered attendees, both practitioners and academic researchers

### **3 Sessions**

- Longevity risk: mortality models, trends, uncertainty, continuous and discrete time models, multi-population models, data sources, life expectancy
- Health status: models of health status, functional disability, health life expectancy, morbidity compression and expansion, incorporating trend and uncertainty
- Managing longevity and morbidity risk: individual risk management (variable annuities, risk sharing), corporate risk management for insurer and superannuation funds (longevity swaps, derivatives, natural hedging)



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Update on related research

Presentations from the Workshop and the Forum are available from CEPR website

- <u>Workshop</u> click on paper titles for full paper
- Forum click on presentation titles for slides

#### **CEPAR working papers 2017**

Income-indemnity long-term care insurance: selection, informal care and precautionary savings, Shang Wu, Hazel Bateman, Ralph Stevens, and Susan Thorp

The Norwegian Pension Reform, An External Perspective, George Kudrna

Life Annuities: Products, Guarantees, Basic Actuarial Models, Ermanno Pitacco

Optimal Surrender of Guaranteed Minimum Maturity Benefits under Stochastic Volatility and Interest Rates, Boda Kang and Jonathan Ziveyi

Pricing of GMWB Options in Variable Annuities under Stochastic Volatility, Stochastic Interest Rates and Stochastic Mortality via the Componentwise Splitting Method, Nikolay Gudkov, Katja Ignatieva and Jonathan Ziveyi

The Impact of Demographic Change on Labour Supply and Economic Growth: Can APEC Meet the Challenges Ahead?, Rafal Chomik, John Piggott and Peter McDonald

Pricing and Hedging Guaranteed Minimum Withdrawal Benefits under a General Levy Framework using the COS Method, Jennifer Alonso Garcia, Oliver Wood and Jonathan Ziveyi

Selection in Employer Provided Health Insurance, Elena Capatina

Upcoming conference: <u>25th Colloquium of Superannuation Researchers</u> When: 6th and 7th July, 2017 Where: Colombo Theatre, UNSW Sydney

