



Actuarial
Research Centre
Institute and Faculty
of Actuaries

The Actuarial Research Centre (ARC) *Delivering industry relevant research*

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IFoA Asia Conference, Hong Kong



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Outline

- Introducing the Actuarial Research Centre (ARC)
- Current research programmes
- Engaging with the ARC – how you can get involved

Introducing the Actuarial Research Centre (ARC)

- The IFoA typically has around 100 research activities at any one time:
 - Volunteer working parties
 - Short term commissioned (funded) research
 - Collaborative projects (e.g. with think tanks, other professional bodies)
- The **Actuarial Research Centre (ARC)** complements these activities through sponsorship of larger research programmes and PhD studentships
- **Vision:** A global network of researchers addressing industry relevant issues in actuarial science
- Research programmes **bridge academic rigour with practitioner needs**
- Working collaboratively with academics, other actuarial bodies and the end user community (industry, policymakers and others)



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Actuarial Research Centre Activities

- Originally supported PhD studentships co-funded by the IFoA and industry
- Now also supports structured, multi-discipline research programmes - some are co-funded with other partners
- In 2015, the IFoA published a set of “Key Questions”:
 - Basis of a Call for Research
 - Led to the IFoA underwriting GBP 3.1m (~HKD 31m) in research funding – a significant change in how the actuarial profession supports research
- All research must be **open access** – free to all to use
- Research must be relevant to the actuarial user community – not theoretical, must have **practical application**



ARC Directors

Panel of senior actuarial researchers, who provide academic leadership:

- Oversee progress and delivery of the ARC's research programmes
- Provide quality assurance of research
- Ambassadors of ARC
- Develop a wider actuarial network by attracting the best actuarial consortia



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Current Research Programmes in the ARC

Minimising Longevity and Investment Risk while Optimising Future Pension Plans

- Led by Heriot-Watt University and Cass Business School, in collaboration with Blackrock and Danica Pension (Denmark), with a UK life insurer seeking to sponsor
- Aims:
 - Development of future pension products that produce a real income in retirement while minimising the cost to the customer
 - Identify blend of risk-sharing between customers, with excess risk transferred to an insurer
 - Quantifying trade-off between the performance and stability of pension income
 - Consideration of investment market timing into the investment strategies
- Find out more at bit.ly/arc2142



Use of Big Health and Actuarial Data for understanding Longevity and Morbidity

- Led by University of East Anglia, with assistance from technical experts at Aviva
- Aims:
 - Identify and quantify key factors affecting mortality (lifestyle, medical, interventions)
 - Modelling temporal changes in factors affecting morbidity and mortality
 - Future scenarios in mortality trends arising from medical advancements, lifestyle changes
 - Tools to forecast longevity risk arising from these scenarios
- Find out more at bit.ly/arc2173



Modelling, Measurement and Management of Longevity and Morbidity Risk

Co sponsored with the Society of Actuaries and the Canadian Institute of Actuaries

- Led by Heriot-Watt University, with researchers from Cass Business School, University of Southampton, Aarhus University, University of California Santa Barbara, Longevity Ltd.
- Aims:
 - Developing next generation of mortality models
 - Modelling drivers of mortality
 - Better understanding of options to manage longevity risk
 - New methods for pricing and reserving for Critical Illness Insurance
- Find out more at bit.ly/arc2165



26 April 2017

Join the discussion: 2017 ARC webinars

- Free to IFoA members (with CPD) and non-members
- Broadcast online
 - 09.00 (UK time)/16.00 (Hong Kong time)
 - 17.00 (UK time)/00.00 (Hong Kong time)



17 May 2017	Modelling, Measurement and Management of Longevity and Morbidity Risk
13 June 2017	Use of Big Health and Actuarial Data for understanding Longevity and Morbidity
14 June 2017	Minimising Longevity and Investment Risk while optimising Future Pension Plans

- Book your place today: bit.ly/arcwebinars2017



Forthcoming programmes

Behavioural Finance

- To explore decision-making of institutional investors, particularly insurers and pension schemes
- Consideration of company culture, human psychology, politics

Award of programme is expected in May 2017

Economic Modelling

- Research currently underway to understand current use of economic theories in actuarial profession
- Expected to lead to a wider research programme on economic modelling

Initial research expected summer 2017



Find out more at www.actuaries.org.uk/arc



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Engaging with the ARC

Ensuring a global research agenda

Developing an internationally relevant programme of research through:

1. **Subject matter:** identifying the relevant gaps in research and asking questions that reflect the needs of the global actuarial community
2. **Research partnerships:** supporting research teams from around the world and collaborating with industry partners who define the problems

Your opportunity to shape the ARC's research agenda for the IFoA

Questions for you:

- What do you think are the main areas of research that IFoA should seek to address through the ARC over the next:
 - a) Year?
 - b) 1-3 years?
 - c) Beyond 3 years?
- Which organisations in the Asia region could become part of the ARC network?



Get involved in the ARC

- **Partner on research**
 - Does your organisation have actuarial problems that could be addressed through the ARC?
 - Would your own organisation be interested specifying the ARC research and becoming a sponsor?
- **Be part of a research team**
 - Are you part of a university department or research-led organisation?
 - ARC research opportunities are open to applications from around the world: bit.ly/foacalls
- **Help to scope and oversee research programmes**
 - Opportunities are advertised on IFoA's volunteer vacancies: bit.ly/foavolunteer
 - Feedback always welcome – arc@actuaries.org.uk
- **Knowledge exchange**
 - Join the ARC webinars: bit.ly/arcwebinars2017
 - Research outputs offer CPD opportunities
 - Content for conferences and events



Useful links and resources

- Actuarial Research Centre: www.actuaries.org.uk/arc
- ARC webinar series bit.ly/arcwebinars2017
- More detail on the ARC programmes? Contact: arc@actuaries.org.uk
- IFoA research programme, including the ARC: www.actuaries.org.uk/research
- Sign up to the IFoA's research newsletter: research@actuaries.org.uk
- For more information about collaborating in the ARC, contact:



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Thank you



The views expressed in this presentation are those of the presenter.

