32ND COLLOQUIUM ON PENSIONS AND RETIREMENT RESEARCH

27-28 November 2024

Colombo House Theatres

UNSW Business School

Enquiries: cepar@unsw.edu.au | cepar.edu.au

The Colloquium, co-hosted by CEPAR and the School of Risk & Actuarial Studies in the UNSW Business School, is a unique annual event, bringing together academia, government and industry to discuss the latest research on pensions, superannuation and retirement.

To view the program online:

- scan the QR code with your phone camera
- or visit the conference website via your web browser at **cepar.edu.au/news-events/events/colloquium-2024**

Add the tag **#ceparColloquium** for content posted on **social media** relating to the Colloquium, and tag CEPAR:

- **X**: @CEPAR_research
- **LinkedIn**: linkedin.com/in/cepar-research-centre

Dietary Requirements: During catering breaks, please check for labels to match dietary requirements or ask a catering staff member.

Public Transport: The UNSW Kensington Campus is easily accessible via public transport. Call the Transport Infoline on 131 500 or visit transportnsw.info.

Paid casual and visitor parking is offered via the CellOPark App and ‘pay by plate meters’ at various locations. Parking is free after 7.30 pm weekdays and on weekends and public holidays. Further information is available at estate.unsw.edu.au/getting-here/parking-campus.

There are two major carparks on UNSW Kensington Campus:

- Barker Street Carpark – Entry via Gate 14, Barker Street.
- Botany Street Carpark – Enter via Gate 11, Botany Street.

Internet access: Visitors can access Wi-Fi across all UNSW campuses by connecting to the UNSW Guest Network. Please note, Guest Wi-Fi is not intended for existing staff or students. If you are an existing UNSW staff or student, please use the Wi-Fi for Staff and Students service. In order to connect to the guest wi-fi network please follow the following steps:
Step 1 - Navigate to Wi-Fi settings and connect to the '**UNSW Guest**' Network.
Step 2 - You will be redirected to a registration screen and be asked to provide your name and e-mail details. You will also need to accept the T&Cs and Privacy Statement before proceeding.
For further information, please visit www.myit.unsw.edu.au/services/guests/wi-fi-guests or contact the IT Service Centre at (02)9385 1333 or ITServiceCentre@unsw.edu.au.

Media representatives may be in attendance.

Assistance: If you require any assistance at the showcase, please visit the registration desk or email cepar@unsw.edu.au.

Day 1 Program (subject to changes)

<table>
<tr><th colspan="4">Day 1: Wednesday, 27 November</th><th>Venue</th></tr>
<tr><td>8.30-
9.00am</td><td colspan="3">Arrival and Registration</td><td>Foyer</td></tr>
<tr><td>9.00-
9.10am</td><td colspan="3">Opening Remarks
John Piggott, CEPAR Director, UNSW Sydney
Bernard Wong, IRIS Knowledge Hub Co-Director, Head of School of Risk & Actuarial Studies, UNSW Sydney</td><td>Colombo
A</td></tr>
<tr><td>9.10-
10.40am</td><td colspan="3">Session 1: How to improve Australia’s pension system, using the Mercer CFA Global Pension Index as a guide?
Chair: David Bell (Conexus Institute)
Reflections on Sixteen Years of the Global Pension Index
David Knox AM (Senior Partner, Mercer)
Panel Session
David Knox (Mercer)
Deborah Ralston (Non-Executive Director)
Katrina Ellis (Super Consumers Australia)
Brnic Van Wyk (Australian Retirement Trust)</td><td>Colombo
A</td></tr>
<tr><td>10.40-
11.10am</td><td colspan="3">Morning Tea</td><td>Foyer</td></tr>
<tr><td>11.10am-
1.10pm</td><td>Session 2A: Retirement Incomes 1
Chair: Katja Hanewald (Risk & Actuarial Studies, UNSW)
Venue: Colombo A</td><td>Session 2B: Choice Architecture
Chair: Rafal Chomik (CEPAR, UNSW)
Venue: Colombo B</td><td>Session 2C: Pension Finance
Chair: Jonathan Ziveyi (Risk & Actuarial Studies, UNSW)
Venue: Colombo C</td><td>Colombo
A, B, C</td></tr>
<tr><td>11.10-
11.40am</td><td>Experience of an Innovative Retirement Income Stream: ART Lifetime Pension
Kathryn Spragg (Australian Retirement Trust)</td><td>Kiwisaver: Opportunities for Improvement
Michelle Reyers (Retirement Commission, New Zealand)</td><td>Term Annuity Bonds: The Ideal Pension Investment
Eckhard Platen (UTS)</td><td></td></tr>
<tr><td>11.40am-
12.10pm</td><td>Innovation in The Retirement Income Space: Long Service Pension
Dennis Yang (State Super)</td><td>An Analysis of White Label Funds in Public Pension Plans
Susan Thorp (University of Sydney)</td><td>Feasibility and Welfare Impact of Flexible Tontine Design
Adam Butt (ANU)</td><td></td></tr>
</table>

12.10-12.40pm	**Meaningfully Comparing Retirement Solutions** Chris Michael (Deloitte)	**Diverse Effects of Targeted Messages on Retirement Savings Decisions: Evidence From an Experiment** Nguyen Bang Chau (Victoria) Hoang (University of Sydney)	**Optimal Consumption and Annuity Equivalent Wealth with Mortality Model Uncertainty** Yang Shen (Risk & Actuarial Studies, UNSW)	
12.40-1.10pm	**Enhancing Retirement Confidence: The Impact of Lifetime Income on Drawdown Behaviour** Estelle Liu and Rose Hasna (AMP)	**Utilizing Superannuation Funds for First Home Purchase** Himasha Warnakulas ooriya (Monash University)	**Optimal Dynamic Systematic Longevity Risk Hedge for Group Self-Annuity Portfolios With Basis Risk** Yawei Wang (Risk & Actuarial Studies, UNSW)	
1.10-2.00pm	**Lunch**			**Foyer**
2.00-3.30pm	**Session 3A: Retirement Incomes 2** *Chair: Pip O'Keefe (CEPAR, UNSW)* *Venue: Colombo A*	**Session 3B: Aged Care** *Chair: Bei Lu (CEPAR, UNSW)* *Venue: Colombo B*	**Session 3C: Home Equity** *Chair: Katja Hanewald (Risk & Actuarial Studies, UNSW)* *Venue: Colombo C*	**Colombo A, B, C**
2.00-2.30pm	**Enabling Singaporeans to Retire with Peace of Mind** Yan Jun Wong (Central Provident Fund, Singapore)	**The Relationship between Regional Spending on Aged Care and Informal Caring** Anam Bilgrami (Macquarie University Centre for the Health Economy)	**Variable Rate Reverse Mortgage Risk, Rating, Structuring and Pricing** Josh Funder (Household Capital)	
2.30-3.00pm	**A Longitudinal Study of Drawdown Behaviour of Superannuation Members: Responses to Behaviours, Anchors, Investment Performance and Cost of Living** Jimin Eun (Aware Super)	**Housing Price as a Determining Factor of Aged Care Accommodation Payment Choices** Dandan Yu (Macquarie University Centre for the Health Economy)	**Financing Aged Care with Home Equity Allowing For Government Age Pension and Aged Care Support** Lingfeng Lyu (Risk & Actuarial Studies, UNSW)	

3.00-3.30pm	**Longevity Uncertainty: How and When to Manage** Aaron Minney (Challenger)		**Toy Calculators: Planning for retirement in Australia** Anthony Asher (Risk & Actuarial Studies, UNSW)	
3.30-4.00pm	**Afternoon Tea**			**Foyer**
4.00-5.30pm	**Session 4A: Retirement Outcomes** *Chair: Susan Thorp (University of Sydney Business School)* *Venue: Colombo A*	**Session 4B: Health State Modelling** *Chair: Andres Villegas (Risk & Actuarial Studies, UNSW)* *Venue: Colombo B*	**Session 4C: Economy-wide Effects of Pension Reform** *Chair: Yang Shen (Risk & Actuarial Studies, UNSW)* *Venue: Colombo C*	**Colombo A, B, C**
4.00-4.30pm	**Measuring Member Outcomes for Defined Contribution Retirement Plans: A Cohesive Approach Using Retirement and Income Confidence Scores** Young Tan (Aware Super)	**Estimating Transition Probabilities using Repeated Cross-Sectional Data** Salvatory Kessy (IAG)	**Long-Run Effects of Employment-Related Pensions: PAYG vs. Funded Pensions** George Kudrna (UNSW)	
4.30-5.00pm	**Can we Count on them? Assessing the Usefulness of Super Fund Calculators** Katrina Ellis (Super Consumers Australia)	**Modelling Joint Life Functional Disability and Mortality and Joint Insurance Pricing** Xingying Yu (Risk & Actuarial Studies, UNSW)	**Superannuation Taxation: Options for Best Practice Reform** M Scott Donald (Private and Commercial Law, UNSW) and Rodney Brown (Accounting, Auditing and Taxation; UNSW)	
5.00-5.30pm	**Green Paper: A Retirement Licensing Regime** David Bell (Conexus Institute)	**Longevity Risk Sharing for Income-Based Mortality Heterogeneity** Gayani Thalagoda (Risk & Actuarial Studies, UNSW)	**Informality, Gender, Heterogeneity and Pension Reform in Emerging Asia: A Life-Cycle Model Analysis for Ageing Vietnam** Huyen Hoang (Economics, UNSW)	
5.30-7.00pm	**Reception**			**Foyer**

Day 2 Program (subject to change)

<table>
<tr><th colspan="4">Day 2: Thursday 28th November</th><th>Venue</th></tr>
<tr><td>8.30-9.00am</td><td colspan="3">Arrival and Registration</td><td>Foyer</td></tr>
<tr><td>9.00-9.05am</td><td colspan="3">Opening Remarks</td><td>Colombo A</td></tr>
<tr><td>9.05-11.05am</td><td colspan="3">Session 5: Retirement Insights
Chair: Katja Hanewald (Risk & Actuarial Studies, UNSW)</td><td>Colombo A</td></tr>
<tr><td>9.05-9.35am</td><td colspan="3">Crafting Epic Retirements: Insights from Allianz Retire+ Research on Retirement Attitudes and Engagement Strategies
Yannick Pfitzer (Allianz)</td><td></td></tr>
<tr><td>9.35-10.05am</td><td colspan="3">Retirement Literacy, Confidence and Wealth Transfer: Insights from how Australia Retires 2024 Survey
Junhao Liu (Vanguard Australia)</td><td></td></tr>
<tr><td>10.05-10.35am</td><td colspan="3">Lost at Sea or Swimming to Shore? How People in their Sixties Think about Work and Retirement
Susan Bell (Susan Bell Research)</td><td></td></tr>
<tr><td>10.35-11.05am</td><td colspan="3">Lost in Translation: How to Talk Retirement
Kaye Fallick (Staying Connected)</td><td></td></tr>
<tr><td>11.05-11.30am</td><td colspan="3">Morning Tea</td><td>Foyer</td></tr>
<tr><td>11.30am-1.00pm</td><td>Session 6A: Supporting Decision Making
Chair: Hanlin Lou (CEPAR, UNSW)
Venue: Colombo A</td><td>Session 6B: Mortality and Longevity
Chair: Chelle Wang (Risk & Actuarial Studies, UNSW)
Venue: Colombo B</td><td>Session 6C: Retirement Incomes 3
Chair: George Kudrna (CEPAR, UNSW)
Venue: Colombo C</td><td>Colombo A, B, C</td></tr>
<tr><td>11.30am-12.00pm</td><td>Older Adults’ Access to and Adoption of Robo-Advice: Exploratory Research
Xinye Cao (Griffith University)</td><td>Socio-Economic Inequalities in Life Expectancy and Functional Disability amongst Older Americans
Michelle Vhudzijena (Risk & Actuarial Studies, UNSW)</td><td>Multi-State Contingent Mortality Pooling: A Heterogeneous, Actuarially Fair, and Self-Sustaining Product
Yuxin Zhou (Risk & Actuarial Studies, UNSW)</td><td></td></tr>
</table>

12.00-12.30pm	**Expensive Babysitters or Trusted Professionals? Financial Advice and Portfolio Rebalancing in Retirement Saving Accounts** Thomas Hendry (Griffith University)	**Bayesian Analysis of Cancer Mortality: Socioeconomic Disparities, COVID-19 Impact and Future Impact** Ayse Arik (School of Risk & Actuarial Studies, UNSW)	**The Retirement Income Covenant: A Powerful Regulatory Tool or a Solution in Search of a Problem?** Ross Clare (ASFA)	
12.30-1.00pm	**The Importance of Inclusive Design in Financial Education** Tracey West (Griffith University)	**Longevity Beliefs Elicitation: Full Distribution and Visual Support** Andre Lot (University of Sydney)	**Explaining Lifetime Income Product Demand Using the Decision States Model** Jiamin Jamie Yan (Risk & Actuarial Studies, UNSW)	
1.00-2.00pm	**Lunch**			**Foyer**
2.00-4.00pm	**Session 7: Current Issues in Superannuation and Retirement** *Chair: George Kudrna (CEPAR, UNSW)*			**Colombo A**
2.00-2.30pm	**Post-retirement Age Mortality in Australia: A Quantification of Socio-Economic Differences** Fei Huang and Andres Villegas (Risk & Actuarial Studies, UNSW)			
2.30-3.00pm	**Gender Retirement Gaps** Alice Volz (Federal Reserve Board)			
3.00-3.30pm	**Climate Signalling in Australian Superannuation Fund Annual Meetings** M Scott Donald (Private and Commercial Law, UNSW)			
3.30-4.00pm	**Systemic Impacts Of ‘Big Super’** Geoff Warren (ANU and Conexus Institute)			
4.00pm	**Closing Remarks** Katja Hanewald (Risk & Actuarial Studies, UNSW)			**Colombo A**

OPENING REMARKS

Scientia Professor John Piggott AO FASSA is Director of CEPAR at UNSW Sydney, where he is Scientia Professor of Economics. A former Australian Professorial Fellow, he has published widely on issues in retirement and pension economics and finance, and in public finance more generally; his research has appeared in the leading international economics and actuarial academic journals. From 2008-2010, John was Visiting Scholar at the Wharton School of Business, and in 2018 was awarded a Rockefeller Residency to undertake research into ageing and inequality in Asia. He has worked with various governments, in Asia and elsewhere, on pension policy. In 2019, he was appointed co-chair of the Think20 (T20) Task Force on Aging Populations during Japan's G20 Presidency and is currently a Commissioner on the US National Academy of Medicine's International Commission on Healthy Longevity. In 2020, he was appointed an Officer of the Order of Australia for contributions to population ageing research and public policy development.

Professor Bernard Wong is Head of the School, Risk and Actuarial Studies at the University of New South Wales, Australia, which has grown to be one of the largest and most successful risk and actuarial departments in the world in both its education and research programs, including being global ranked #1 business school in risk, insurance and actuarial research. He is a Fellow of the Institute of Actuaries of Australia, a Fulbright Scholar, and obtained his PhD from the Australian National University. His current research interests span two interrelated main areas: AI/ML enhanced actuarial methods for risk modelling, and capital modelling for risk and insurance businesses - especially under climate change, dependence, and extremes. Bernard is co-lead of the Innovations in Risk, Insurance, and Superannuation (IRIS) Knowledge Hub, a chief investigator in the UNSW Institute of Climate Risk and Response, and founding member of the Business AI Lab. His research is funded via Australian Research Council Linkage and Discovery Project schemes, and he has been recognised via the award of numerous prizes, including the Melville Practitioner Prize, Hachemeister Prize (twice) and the Taylor-Fry Silver Prize. Bernard has taught most of the courses corresponding to the professional actuarial syllabus, with a particular focus in recent years in the areas in innovations in the areas of actuarial data science, and in quantitative models of enterprise risk management. Bernard is currently on the Board of ASTIN, the non-life insurance section of the International Actuarial Association, and previously also served on the Australian Actuaries Institute Data Analytics (Data Science) Practice Committee.

SESSION 1

SESSION 1: How to improve Australia's pension system, using the Mercer CFA Global Pension Index as a guide?
Chair: David Bell (Conexus Institute)

Reflections on Sixteen Years of the Global Pension Index
David Knox AM – Reflections on sixteen years of the Global Pension Index

Panel Session
- David Knox (Mercer)
- Deborah Ralston (Non-Executive Director)
- Katrina Ellis (Super Consumers Australia)
- Brnic Van Wyk (Australian Retirement Trust)

David Knox is a Senior Partner at Mercer and Senior Actuary for Australia. He is the National Leader for Research and currently the actuary to the Victorian and Tasmanian governments, the Western Australian public sector pension plan and was the industry expert of the three person team who conducted a review of Military Superannuation for the Australian Government. He is author of the Melbourne Mercer Global Pension Index.
Before joining Mercer in 2005, David was at PricewaterhouseCoopers and prior to that was the Foundation Professor of Actuarial Studies at The University of Melbourne. In his two decades in academia, he acted as a consultant to a range of financial organisations, in both the private and public sectors, specialising in the superannuation and retirement incomes area. He has spoken and written widely in this area and has served on many Government and industry committees.
David was an independent Board member of Australian Prudential Regulation Authority from 1998 to 2003 and President of the Institute of Actuaries of Australia in 2000.

Deborah Ralston is a researcher and thought leader in financial services, with interests in digital disruption, superannuation, and financial regulation. She holds several non-executive director positions including Chair of the SMSF Association and is a member of the Reserve Bank of Australia's Payments System Board. She was the inaugural Chair of ASIC's Digital Finance Advisory Committee (DFAC) and is a member of the YBF FinTech Hub Advisory Board. She is a Professorial Fellow at Monash University.

Katrina Ellis has over 20 years experience in the financial sector. As the Deputy Director of Super Consumers Australia, she is passionate about ensuring that the super system works for everyone. Prior to joining Super Consumers, Katrina had a long career at the Australian Prudential Regulation Authority in a range of leadership roles. In particular, she led teams who implemented many of the key regulatory changes in the superannuation industry over the last decade. She was an academic in Australia and the US and has a PhD in finance from Cornell University.

Brnic Van Wyk leads the development of the Australian Retirement Trust's asset liability management framework, member data analysis, models and governance structures. The Australian Retirement Trust, previously known as QSuper, is one of the largest superannuation funds in Australia, managing approximately AUD265billion on behalf of more than 2.4 million members. Van Wyk is a member of the leadership group for the newly formed retirement division and his team is responsible for designing the cohort structure and managing investment strategies for the default accumulation MySuper product, QSuper lifetime, and the ongoing operational, actuarial and solvency management of the asset pool for the lifetime pension product.

SESSION 2A

SESSION 2A: Retirement Incomes 1
Chair: Katja Hanewald (Risk & Actuarial Studies, UNSW)
Venue: Colombo A

Experience of an Innovative Retirement Income Stream: ART Lifetime Pension

Kathryn Spragg (Australian Retirement Trust)

Abstract: As the superannuation system matures and more members are retiring with greater amounts of financial assets, the desire for better retirement solutions continues to grow. To help cater for the needs of retirees, legislation introduced a new class of retirement product with 'innovative retirement income streams' and Australian Retirement Trust was the first superannuation fund to launch this new type of product.
In 2021, QSuper (now called the Australian Retirement Trust) launched Lifetime Pension as a means for retirees to have an income for life by pooling idiosyncratic longevity risk. Design principles were to be simple and compelling, focusing on satisficing, rather than optimising.

Unlike traditional annuities, pensions in payment are adjusted annually based on the actual experience of the pool, without smoothing, which removes the need for any reserving or subjective judgement. The annual pension adjustment process ensures ongoing solvency of the product.
This presentation covers the design features and initial learnings from this style of retirement product. It highlights the challenges of starting a new lifetime income stream (compared to theoretically modelling steady state) which includes matters such as member behaviour, scale, mortality experience, and the provision of guarantees.

Bio: Kathryn Spragg is a Fellow of the Institute of Actuaries of Australia and a Chartered Enterprise Risk Actuary who specialised in Global Retirement Income Systems. She has been part of the Asset Liability Management team at Australian Retirement Trust for over 10 years where her high-level responsibilities have involved the development and setting of strategies for accumulation and retirement products. This has included the development and ongoing monitoring and solvency management of the ART's Innovative Retirement Income Stream product, Lifetime Pension.

Innovation in The Retirement Income Space: Long Service Pension
Dennis Yang (State Super)

Abstract: State Super is the trustee for the defined benefit (DB) schemes which the NSW State Government operates (SASS, PSS, SSS, and SANCS) as well as the Defined Contribution funds held within the SASS scheme. Our membership consists primarily of NSW Public Sector employees, and we currently manage ~AUD$38 billion in assets with ~83,000 members. Notably, the median tenure of our members is 25+ years compared to a median tenure of 7 years in the wider NSW public sector (NSW Public Service Commissioner, 2023) and a median tenure of less than 5 years in the general employed population (Australian Bureau of Statistics, 2024).
This phenomenon is not unique to NSW as there are also international examples of similar retention differentials emerging between cohorts within and outside of a DB plan (National Institute on Retirement Security, 2023). However, historically, this retentive ability of a DB offering has come at unsustainable costs to the sponsoring employer, resulting in a shift away from DB to DC retirement solutions. In recent years, the NSW state government has seen an increase in staff attrition and challenges in talent attraction which has led to staffing shortages in several key areas (NSW Department of Education, 2023). Considering this context which empirically demonstrates the retentive ability of a DB offering and the talent challenges facing the NSW Government, State Super has been exploring the viability of a quasi-DB benefit in the form of a lifetime pension bearing similar characteristics to a Group-Self-Annuity. The objective of this benefit would be to target public-sector essential workers to capture part of the substantial talent retention ability of a DB offering without the associated risks from a traditional DB benefit.
State Super has undertaken focus-group research in partnership with Woolcott Engagement and engaged in discussions with NSW Unions and various divisions of the NSW Government to determine the viability of such a benefit. Initial progress has highlighted that there is substantial appetite, and the benefit would be talent retentive, with further research warranted.

Bio: Dennis Yang is a fellow of the Actuaries Institute of Australia and a Certified Enterprise Risk Actuary who has worked across the general insurance, life insurance, and superannuation industries. More recently, Mr Yang has focused his attention on retirement income solutions and defined benefit products within the Superannuation industry with his time at the Australian Prudential Regulation Authority and most recently at State Super.

Meaningfully Comparing Retirement Solutions
Chris Michael (Deloitte)

Abstract: The complexities of the decumulation phase have long been identified and acknowledged, however, there remains a desire to compare and contrast retirement solutions to help with decision making and to provide consumers with better value as they attempt to meet their retirement needs.
First, we examine the differences between the accumulation and decumulation phases of superannuation, both in terms of customer circumstances and preferences, as well as the challenges associated with a product versus holistic solution view.
Following on from this, we take a fresh approach to the comparison problem, and weave in elements from the Retirement Income Covenant, the Treasury consultation into the retirement phase of super, as well as recent industry thought leadership.
To bring these concepts to life, the presentation will conclude with a live demonstration to showcase practical examples of how to apply these principles. You'll see firsthand how to:
-Assess a retirement solution in terms of its ability to achieve and balance the Covenant objectives; and
-Calibrate a retirement solution based on customer preferences.

Bio: Chris Michael is a Manager in the Actuaries and Investment Specialists practice at Deloitte. Prior to joining Deloitte in May 2021, Chris worked at Rice Warner, where he contributed to the development and maintenance of the Superannuation, Pension and Retirement Outcomes (SPROUT) model which now forms the basis of Deloitte's annual Superannuation Market Projections Report. He also regularly deploys stochastic models to assist clients with developing their strategic asset allocations. Recently, Chris has focussed on supporting funds with their Retirement Income Covenant obligations, including comparing various retirement solutions and managing a suite of digital tools for funds, such as retirement planners and insurance needs calculators.

Enhancing Retirement Confidence: The Impact of Lifetime Income on Drawdown Behaviour
Estelle Liu and Rose Hasna (AMP)

Abstract: In response to the Retirement Income Covenant's requirements, AMP developed a Retirement Income Strategy and has made material progress in implementing the strategy over the last 2 years. This includes launching the award winning MyNorth lifetime income solutions in October 2022. MyNorth lifetime was developed to assist the achievement of the three objectives by balancing maximising income, reducing longevity and inflation risks, and provide flexible capital access.
The Australian Government Treasury commissioned Retirement Income Review Final Report published in July 2020 stated that more than half of Australian retirees have been drawing down at the statutory minimum due to fear of outliving their savings.
In this presentation, we will provide insights derived from the member take-up data of MyNorth lifetime income solutions since launch to understand how lifetime income streams could enhance retirees' confidence to drawdown at higher and more sustainable rates. Our average MyNorth Lifetime client has improved their income by ~50% through a combination of high Lifetime rates, higher age-pension eligibility, and increased drawdown from account-based pensions. The majority of Lifetime members no longer draw the minimum from their account-based pensions when this was previously not the case. Over FY24, we saw lifetime members drawing down on average 63% higher than the statutory minimum rates for age 60 to 64 group, and the uplifts were 54% and 41% higher for age 65 to 74 group and age 75 to 79 group respectively. This reflects members expressing a willingness to spend more freely and enjoy greater retirement living standards once they have overcome the fear of running out of savings.

Bios: Estelle Liu is the Head of Retirement Solutions at AMP. She is an actuary and has been the chair of the Actuaries Institute Superannuation Projections and Disclosure Sub-committee since 2019, and a member of the Superannuation and Investments Practice Committee and Data Analytic Practice Committee since 2022. Prior to joining AMP, Estelle led the Actuarial Practice at Aware Super with key contributions and focus on all thing's financial projections, defined benefit and actuarial advice to inform retirement income strategy and its implementation.

Rose Hasna is a Senior Product Manager for Retirement Solutions at AMP Australia. With over 10 years of experience in product innovation and development across wealth, fintech, and tech, in both corporate and VC-backed start-ups, Rose is passionate about delving deep to understand consumer problems and pain points to design and develop sustainable, market-leading solutions. Rose led the product development and implementation of the award-winning MyNorth Lifetime solution, a first-of-its-kind Innovative Retirement Income Stream, contributing to improved retirement outcomes for members of the fund. Rose is currently focused on continuing to enhance the retirement outcomes of Australians through her work on new and innovative solutions currently in design and development at AMP.

SESSION 2B

SESSION 2B: Choice Architecture
Chair: Rafal Chomik (CEPAR, UNSW)
Venue: Colombo B

Kiwisaver: Opportunities for Improvement
Michelle Reyers (Retirement Commission, New Zealand)

Abstract: KiwiSaver was the world's first auto-enrolment, opt-out, national, portable retirement saving scheme. As it enters its eighteenth year it is timely to assess how KiwiSaver is functioning. The paper makes use of administrative data and findings from additional research to uncover previously unknown data and trends. The paper considers how current settings are working and identifies opportunities for improvements by assessing settings for joining, contributing, and withdrawing.

In terms of joining KiwiSaver, we find very high levels of membership. Many design features that encourage participation by self-employed already exist. We conclude the settings for joining are working as intended.

From the perspective of contributing to KiwiSaver we find a large portion of those in paid employment, particularly those earning salaries and wages, are already contributing. The majority of those who are not currently contributing are those not able to due to low or no income.

We conclude there is no evidence base for compulsion. However, there is room for improvement. The current design of KiwiSaver lends itself to making use of choice architecture, using defaults and opt-outs, to encourage higher savings rates for those in a position to contribute more, while at the same time not disadvantaging those unable to contribute at higher levels. There are limited incentives for self-employed, an area that requires further consideration.

Considering withdrawals from KiwiSaver before age 65 we find first home and financial hardship withdrawals represent a very small portion of the funds under management and very few members make withdrawals. We conclude these settings are working as intended.

Finally turning to withdrawals from KiwiSaver after age 65, as it is still a relatively new scheme it may not be optimised to assist those who wish to drawdown their assets. We conclude that improvements can be made to assist members in the drawdown phase.

Bio: Dr Michelle Reyers is the Policy Lead at Te Ara Ahunga Ora Retirement Commission where she is responsible for providing insights and advice related to trends and issues for retired people, and those approaching retirement, to inform retirement policy development. Before joining the Commission, she was a senior lecturer in the School of Economics and Finance at Massey University, where her teaching and research focused on financial decision making and behavioural aspects connected to these decisions. She received her PhD in Finance from the University of Pretoria, South Africa. She is a CFA® Charter holder and, prior to her academic career, spent 10 years working in the finance industry.

An Analysis of White Label Funds in Public Pension Plans

Susan Thorp (University of Sydney)

Abstract: White label funds are generically named funds that include one or more underlying funds. They are often named for the broad asset class the fund invests in. While white label funds are not new, they are increasingly popular options in defined contribution retirement plans. The reasons often cited for adoption of these generically named funds by plan sponsors include menu simplification, lower fund costs, and the potential to offer plan participants more sophisticated and diversified funds that can leverage the expertise of multiple fund managers. On the other hand, some requirements, like customized participant communications and increased fiduciary responsibility, add to administrative costs that can hinder greater white label fund adoption by plan sponsors. In this study, we utilize a new database of individual-level data from public sector defined contribution retirement plans. We aim to investigate the prevalence of white label funds in the public sector and begin to explore whether they are related to different participant investment allocations. This paper provides an enhanced view of how white label funds fit into plan menus. We also add insights into the understudied public sector defined contribution market. We outline several promising avenues for future research based on these preliminary findings.

Bio: Susan Thorp is a Professor of Finance in the Business School. She has previously held positions at the University of Technology Sydney and the Reserve Bank of Australia. Susan has an honours degree in Economics from the University of Sydney, and a PhD in Economics from the University of New South Wales.

Diverse Effects of Targeted Messages on Retirement Savings Decisions: Evidence from an Experiment

Nguyen Bang Chau (Victoria) Hoang (University of Sydney)

Abstract: We implement an online experimental survey involving 1,000 Australian superannuation fund members to explore the impact of three types of targeted messages on individual saving choices. In the survey, eligible respondents in three age groups (young, middle-aged, and old) were required to complete a single-choice task after receiving the background information, including income and superannuation account balance, of a hypothetical person at a hypothetical age. Among people who are presented with the same set of initial background information, we examine whether those who receive targeted messages choose different saving options from those who receive no messages. We hypothesize that i) congratulating individuals on achieving a retirement income adequacy target discourages them to continue saving, ii) nudging individuals who could reach the target to add an extra $20 weekly into their superannuation accounts motivates them to save more, and ii) nudging individuals who could not reach the target to save an additional $20 every week does not encourage extra saving. We also hypothesize that older treated individuals are more likely to choose a larger saving option than the younger. We conduct regression analysis to estimate the average treatment effects of the message treatments. Our findings show that regardless of receiving treatment, older respondents tend to either

choose not to save or choose a saving amount larger than $20. We find minor differences in saving choices between treatment and control groups, implying insignificantly small effects of targeted messages on individuals' savings across the three age groups.

Bio: Nguyen Bang Chau (Victoria) Hoang is a PhD candidate in Consumer Finance at The University of Sydney Business School. Her research interests include retirement savings, superannuation, personal and consumer finance, behavioural economics, intertemporal decision-making, the economics of aging, and communication interventions. As part of an ARC (Australian Research Council) Linkage project, her current work explores individual retirement savings decisions when funds use interventions such as communication boosts and nudges. She is investigating the diverse impacts of a combination of retirement income projections and different targeted messages on superannuation fund members' behaviour changes. Before coming to Sydney, she graduated with a bachelor's degree in economics and an honours degree in Econometrics from the University of Queensland.

Utilizing Superannuation Funds for First Home Purchase

Himasha Warnakulasooriya (Monash University)

Abstract: This study investigates the Coalition Proposal Scheme, an Australian policy that allows first-home buyers to withdraw up to 40% of their superannuation savings, capped at AUD 50,000, to assist with home deposits. The research compares three housing scenarios: lifelong renting, purchasing a home through personal savings, and purchasing using a combination of savings and superannuation, as facilitated by the policy. Stochastic life-cycle models are employed to evaluate the impact of various factors. These factors include income, consumption, survival status, housing costs, superannuation, and savings returns, age pension benefits, and borrowing interest rates. The model focuses on an individual aged 25 in 2024, retiring at 67, with a maximum lifespan of 110. It incorporates relevant Australian tax and social security rules to capture both pre- and post-retirement financial dynamics. The findings reveal that accessing superannuation for home purchases enables individuals to acquire a home, on average, three years earlier than relying solely on personal savings. For median-income earners, the home purchase occurs at age 34, relying solely on personal savings methods, whereas under the Coalition Proposal, it occurs at age 31. Sensitivity analysis across various income levels (low, medium, high) supports this trend. However, despite the advantage of earlier home ownership, the policy results in lower individual welfare compared to purchasing without superannuation, with lifelong renting being the least favourable option. From a governmental perspective, the Coalition Proposal proves financially advantageous. It leads to reduced government expenditure relative to other housing options. The expected present value of net government cost is lowest under the Coalition Scheme, particularly when individuals prioritize personal savings and then tap into superannuation. In contrast, lifelong renting yields the lowest net income for the government. This study contributes to the ongoing debate on balancing retirement savings with housing affordability. It provides evidence-based insights that can inform policymakers and individuals in making decisions regarding home ownership and retirement planning.

Bio: Himasha Warnakulasooriya is a PhD candidate at the Department of Econometrics and Business Statistics, Monash University, Australia.
Her research interests fall within the interdisciplinary areas of actuarial science and statistics. Research interests include longevity risk management and designing pension solutions.

SESSION 2C

SESSION 2C: Pension Finance

Chair: Jonathan Ziveyi (Risk & Actuarial Studies, UNSW)

Venue: Colombo C

Term Annuity Bonds: The Ideal Pension Investment
Eckhard Platen (UTS)

Abstract: There seems to be widespread agreement that without major innovation in investment strategies for retirement, too many individuals will retire poor. Individuals are increasingly asked to take responsibility for their retirement planning in defined contribution pensions. Most of these individuals are financially not sophisticated enough to invest retirement savings in such a manner that these would secure their aspired living standard in retirement. To address these problems, the paper employs a well-diversified portfolio of stocks and the savings account to hedge very accurately a payment stream of savings account units less expensively than the classical theory would suggest. It proposes to trade such term annuity bonds in the financial market. These would simplify, in a cost-efficient way, the transfer of wealth over long periods into a defined stream of savings account units. A set of term annuity bonds could form a simple and transparent pension where an individual can predict the income stream, has the flexibility to withdraw some funds early in the case of a health shock, can bequest the remaining wealth after death, and can liquidate the funds to transfer these into a pension in another country. Most importantly, the individual needs to pay only a fraction of what a similar annuity would cost when priced and produced under the classical theory. The more general benchmark approach offers with its less expensive benchmark-neutral pricing and hedging of term annuity bonds for many individuals a potential solution to the retirement challenge for defined contribution pensions.

Bio: Eckhard Platen is a mathematician, financial economist, academic, and author. He is an Emeritus Professor of Quantitative Finance at the University of Technology Sydney. Prior to his appointment at UTS he was Head of the Sector Stochastics at the Weierstrass Institute at the Academy of Sciences Berlin and Head of the Centre for Financial Mathematics at the Institute of Advanced Studies at the Australian National University in Canberra. He is most known for his research on numerical methods for stochastic differential equations and their application in finance along with the generalization of the classical mathematical finance theory by his benchmark approach. He has authored and co-authored more than 200 publications including five books. His current research focuses on the less expensive pricing and hedging of long-term contracts with applications for pensions.

Feasibility and Welfare Impact of Flexible Tontine Design
Adam Butt (ANU)

Abstract: The feasibility and welfare impact of allowing flexible payouts in a tontine is investigated, including the impact of adverse selection by pool members after joining the pool. This is achieved by simulating an open tontine with consistent membership numbers, considering two different mortality credit distribution mechanisms. Changes in payout levels between periods are analysed across three components relating to investment uncertainty, systematic mortality uncertainty and idiosyncratic mortality uncertainty. Certainty equivalent payouts are used to measure welfare loss compared to an equivalent actuarially fair annuity. In the base scenario, the group-based distribution mechanism is preferred, with a welfare loss of 0.41% compared to the equivalent annuity, of which four-fifths is due to systematic mortality uncertainty and one-fifth is because of idiosyncratic mortality uncertainty. Potential adverse selection can also cause welfare loss and lead to a preference for a cohort-based distribution mechanism; with appropriate constraints this welfare loss is smaller than the loading applied to an equivalent insured annuity. This investigation is presented in an administratively feasible structure and hence the key findings of this paper can be broadly applied by product providers keen to innovate.

Bio: Associate Professor Adam Butt is the Head of Actuarial Studies at the Australian National University (ANU). His research interests relate to outcomes and product design in retirement. His work has been published in top journals such as “Insurance: Mathematics and Economics”, “Annals of Actuarial Science”, “Journal of Economic Behaviour & Organisation”, “The Economic Record”, “Pacific-Basin Finance Journal”.

Optimal Consumption and Annuity Equivalent Wealth with Mortality Model Uncertainty

Yang Shen (Risk & Actuarial Studies, UNSW)

Abstract: In this paper, we examine the cause of low annuity demand through the angle of mortality model uncertainty within a recursive utility framework. Through this approach, we derive the robust optimal consumption strategy and the corresponding annuity equivalent wealth. By utilizing stochastic dominance theory, we establish a series of monotonicity results about the annuity equivalent wealth with respect to ambiguity aversion parameter and other key parameters, such as interest, discount, and mortality rates. Our findings indicate that retirees may underestimate the incremental utility gained from annuitization when mortality model uncertainty is disregarded.

Bio: Yang Shen is an Associate Professor in the School of Risk and Actuarial Studies and an Associate Investigator of CEPAR. He was the first winner of DECRA (2020-2022) in the field of actuarial studies since the inception of this award. Yang obtained his PhD in Actuarial Studies from Macquarie University in 2014. He worked as a Research Fellow at CEPAR from 2013 to 2015 and an Assistant Professor at York University from 2015 to 2019. His current research interests are at the intersection of actuarial studies and financial mathematics, including retirement planning, longevity and health risk, optimal insurance and reinsurance, pricing and hedging of insurance and annuity products, portfolio optimization and game theory. Yang has published in all top-tier actuarial journals (e.g., IME, ASTIN, SAJ, NAAJ), and top journals in control theory (e.g., Automatica), and major journals in financial mathematics (e.g., SIFIN) and operations research (e.g., EJOR). According to Google Scholar, as of August 2024, his publications were cited over 1,700 times and had an h-index of 25. His research has been funded by major funding agencies and professional organisations, such as ARC, NSERC, SOA, CAS, etc.

Optimal Dynamic Systematic Longevity Risk Hedge for Group Self-Annuity Portfolios with Basis Risk

Yawei Wang (Risk & Actuarial Studies, UNSW)

Abstract: Post-retirement longevity risk management is crucial for individuals. Longevity risk pooling schemes offer an appealing solution as no risk premium is charged and no capital is required. However, due to the uncertainty of the level of longevity, the survival benefits of the longevity risk pooling schemes are volatile. To stabilise the survival benefits, this paper proposes a dynamic longevity risk hedging strategy in the presence of population basis risk in a discrete-time setting. While our proposed hedging strategy applies to longevity risk pooling schemes in general, we consider the group self-annuity to illustrate the hedging framework, which involves trading standardised longevity-linked securities dynamically. We show that the hedging problem can be formulated as a mean-variance optimisation problem and derive the mean-variance frontier, a theoretical tool for the optimal hedging strategy selection based on the fund members' risk preferences. A semi-analytic solution to the optimal hedge ratio is provided to facilitate strategy implementation. Numerical studies highlight that the hedging strategy effectively removes the benefit variances. Furthermore, the hedging strategy is robust to the hedging instrument's reference age, time-to-maturity, the hedged population, interest rate risk, and the size of the GSA pool. The proposed

framework is practical since it requires rebalancing the hedging portfolio discretely and does not require the hedging instrument to have a very long time-to-maturity to match the cash flow duration.

Bio: Yawei Wang is a third-year PhD student at the School of Risk and Actuarial Studies at UNSW Sydney and the ARC Centre of Excellence in Population Ageing Research (CEPAR). He holds certifications including Associate of China Association of Actuaries, Certified Financial Risk Manager, and Certified Public Accountant. His current research interest is retirement income product innovation.

SESSION 3A

SESSION 3A: Retirement Incomes 2
Chair: Pip O'Keefe (CEPAR, UNSW)
Venue: Colombo A

Enabling Singaporeans to Retire with Peace of Mind
Yan Jun Wong (Central Provident Fund Board, Singapore)

Abstract: Globally, countries are contending with ageing populations and rising life expectancies. Singapore is no exception – in 2023, over half of Singaporeans aged 65 are expected to live beyond age 85, with more than a third expected to exceed age 90[1].
The inherent difficulty in predicting longevity, compounded by healthcare advancements, renders timebound annuity schemes less effective. To address this, the Central Provident Fund (CPF) Board, pioneered mandatory annuitisation through CPF LIFE ("CPF Lifelong Income for the Elderly"), becoming the first country in the Asia Pacific region to do so. To help Singaporeans decumulate more effectively, CPF Board has also strengthened its educational outreach and member engagement, while introducing personalised financial guidance services.
In our presentation, we will illustrate how CPF Board helps Singaporeans achieve peace of mind during retirement through the following:

1. **CPF LIFE:** CPF LIFE is Singapore's national lifelong annuity scheme that allows Singaporeans to receive monthly payouts for as long as they live. We will share how CPF LIFE remains financially sustainable while addressing longevity and investment risks through risk pooling. Additionally, we will highlight how its three plans – Escalating, Standard, and Basic– are designed to address Singaporeans' diverse retirement needs and preferences.
2. **Financial guidance services**: CPF Board offers a suite of financial guidance services to help members make well-informed decisions throughout their retirement planning journey. We will share how our tools and guidance services help members with their financial decisions related to their CPF, ensuring they are well-prepared for a secure retirement.
3. **Public education and engagement:** CPF Board's comprehensive outreach efforts, including community programs, digital campaigns, and online resources, are crucial in raising awareness CPF products. We will share how these initiatives enhance public understanding and acceptance, in particular our efforts in educating Singaporeans on CPF LIFE and annuity products.

Bio: Mr Wong Yan Jun is the Deputy Chief Executive Officer at the Singapore Central Provident Fund (CPF) Board. He is responsible for the services and operations that contribute to Singaporeans' secure retirement, through lifelong income, healthcare financing and home financing. Yan Jun started his career with the CPF Board as a policy and research officer in 2006. Over the years, he has led departments and groups in the services,

[1] SDOS (2023), life expectancy calculator for Singapore Residents.

operations and most recently, the technology domains. Prior to his current appointment, he was the Group Director for Digital Services and concurrently the Chief Information Officer. Yan Jun graduated with a First Class Honours in Economics from the National University of Singapore. He also has a Masters in Business Administration (Beta Gamma Sigma) from Queen's University in Canada.

A Longitudinal Study of Drawdown Behaviour of Superannuation Members: Responses to Behaviours, Anchors, Investment Performance and Cost of Living
Jimin Eun (Aware Super)

Abstract: This research studies the drawdown behaviour of retired members at Aware Super, one of the largest superannuation funds in Australia. Understanding how members draw down their retirement savings provides fundamental insights to superannuation trustees for the development of retirement solutions to meet their regulatory obligations under the Retirement Income Covenant. It also contributes to the policy discussion on the future of Australia's retirement income system.
While there have been many cross-sectional analyses on the drawdown behaviour, recent empirical analysis providing a longitudinal view is missing. In this study, we use a longitudinal dataset where we track members over the 11-year period from FY13 to FY23. Our sample includes over 47,000 members who have been with the funds for at least two full years over the period.
We find on average members are conservative in drawing down their super, with the average drawdown rate similar to the rate of investment returns and leaving the capital preserved. Members with higher balances draw down at a lower rate than members with lower balances. In the meantime, there is also 30% of members drawing down aggressively. The majority of members have more liquidity than they actually needed, and they prefer relatively stable income but not guaranteed.
We see a significant proportion of members following the halved minimum drawdown rates between FY21 and FY23. Interestingly, we also find material increase in both regular drawdown and lump sum withdrawals in FY23, when halved minimum drawdown rates are still in effect since FY20. This effect is more apparent in members following the minimum rates. We also find doubled activity of accounts closure through lump sum withdrawal in early FY23, after a challenging year for financial markets in FY22 paired with higher bank savings rates.
These findings suggest there is an opportunity to improve members' retirement outcomes by guiding members to draw down their savings, aiming for a sustainable and relatively stable but not necessarily guaranteed income. It also supports the case to include longevity protection into retirement solutions by compromising some of the excess liquidity.

Bio: Jimin Eun is an Investment Analyst in the Retirement Strategy, Investment team at Aware Super. She is a major contributor to this longitudinal drawdown analysis. Jimin recently graduated from the Co-op program - Actuarial Studies at UNSW Australia, currently working towards her actuarial qualifications.

Longevity Uncertainty: How and When to Manage
Aaron Minney (Challenger)

Abstract: Milevsky (1998) shows that delaying (full) annuitisation can be optimal when the (expected) return on investment exceeds the mortality credits that can be generated by survival over period of the delay. Mortality credits increase with age and are not related to expected investment returns, so it can be preferable for retirees to delay annuitisation until the investment return cannot meet the gain from mortality credits.

This paper seeks to extend this to annuitisation decisions when the lifetime annuity includes a benefit on death. Death benefits, such as included in the Capital Access Schedule, have been a useful tool in overcoming retirees' behavioural concerns on annuitisation. This paper demonstrates that delayed annuitisation can be equally delivered through either:

- Delayed purchase of a lifetime annuity while investing the assets
- Purchasing a deferred lifetime annuity today
- Purchasing an immediate lifetime annuity that pays a death benefit for a period.

If the three approaches are theoretically equivalent, there is a need to consider other factors to determine a preferable approach for a retiree. Tax and social security settings can impact the choice of the approach and the timing of the annuitisation decision.

Bio: Aaron is the Head of Retirement Income for Challenger where he is responsible for research and advocacy for retirement income for Australian retirees. For 13 years, he has been researching ways to generate income from investments in retirement. He has worked with super funds on developing retirement solutions, has published academic research in the area and is a sought-after spokesperson on retirement income.
Aaron has 29 years' experience as an investment strategist and researcher, across a wide range of asset classes. Prior to Challenger, Aaron has held roles managing investment portfolios, led investment product innovations, and worked with clients to develop bespoke investment solutions.
Aaron is also an Honorary Fellow at the Macquarie Business School's Applied Finance Centre, where he is an adjunct lecturer in Advanced Investment Management.

SESSION 3B

SESSION 3B: Aged Care
Chair: Bei Lu (CEPAR, UNSW)
Venue: Colombo B

The Relationship between Regional Spending on Aged Care and Informal Caring
Anam Bilgrami (Macquarie University Centre for the Health Economy)

Abstract: Limited evidence exists on the relationship between government spending on aged care and informal care supply. Most literature has concentrated on the demand for informal care and formal aged care. Understanding what factors impact informal care supply can help governments formulate their long-term care policies. This is particularly important given informal care supply in developed countries will decrease further as populations age. We estimate the relationship between government spending on aged care and informal care supplied in Australia. We draw on a large nationally representative survey, linked to region-level government aged care spending data. Using individual-level fixed-effects estimation, we find a statistically significant negative relationship between government spending on aged care delivered in the home and the probability of being an extra-residential informal carer, suggesting a substitution effect. The rate of substitution depends on informal carer characteristics including age, gender, presence of dependent children, full-time employment, and cultural background. We find no significant relationship between government spending on nursing homes and informal care supply. Sensitivity analyses show the significance of the substitutive relationship between in-home aged care and informal care is robust to the influence of unobserved confounders, simultaneity bias and endogeneity from location choices of individuals. We conclude that increased government spending on in-home aged care may reduce informal care provision, thereby limiting the amount of total care received by older people.

Bio: Dr Anam Bilgrami is a Senior Research Fellow at the Macquarie University Centre for the Health Economy, who specialises in causal inference and health policy evaluation. Anam Bilgrami has over a decade of experience in economics research applied to health and aged care and is passionate about using economics to improve decision making and policy design in Australia. She has experience in both academia and industry, including previously held positions as a Senior Economist and Manager at Deloitte Access Economics. Anam completed her PhD at MUCHE and was awarded the *2020 Macquarie Business School Award for Research Excellence in Economics* for her thesis. Other awards and honours received by Anam include being a *Highly Commended Finalist for Excellence in Higher Degree Research at* the 2021 Macquarie University Staff Awards, being a *Highly Commended Finalist for ECR of the Year* at the 2023 Macquarie University Staff Awards, three *Macquarie Business School Research Impact Prizes*, and being awarded *Researcher of the Year* at the 2023 Australian Institute of Health and Innovation Staff Awards.

Housing Price as a Determining Factor of Aged Care Accommodation Payment Choices

Dandan Yu (Macquarie University Centre for the Health Economy)

Abstract: In Australia, consumers of residential aged care select from three accommodation payment options: refundable lump sum payments, daily rental-style payments, or a combination of both. As affording a large up-front lump sum payment often requires tapping into home equity, this study examines the impact of housing price fluctuations on consumers' payment choices. Utilising an administrative dataset from the Aged Care Financing Authority, combined with housing price indices from CoreLogic RP, we find that consumers in areas experiencing larger housing price increases are more likely to choose up-front lump sum payments and less likely to opt for daily payments or a combination of both. Additionally, an increase in housing price changes raises the proportion of the lump sum payment in the total accommodation price. These findings are robust to alternative housing price indices and modelling strategies. We also observe that married consumers are less affected by housing price fluctuations, probably because one spouse remains in the home while the other enters residential care. These results highlight the vulnerability of residential aged care providers to real estate market fluctuations and offer valuable insights for enhancing financial planning strategies in the sector.

Bio: Dandan Yu is a research fellow at the Macquarie University Centre for the Health Economy (MUCHE). She is specialised in data processing, econometric modelling, and Stata programming. Dandan's research interests include policy evaluation, causal inference, mental health, labour economics and aged care. Her work has been published in journals including Research Policy, Education Economics, and the Journal of the Economics of Ageing.

SESSION 3C

SESSION 3C: Home Equity

Chair: Katja Hanewald (Risk & Actuarial Studies, UNSW)
Venue: Colombo C

Variable Rate Reverse Mortgage Risk, Rating, Structuring and Pricing

Josh Funder (Household Capital)

Abstract: In 2024 Household Capital, a leading originator of home equity access mortgages in Australia, successfully completed a breakthrough rated securitisation of a variable rate reverse mortgage portfolio. This innovative financing is scalable, secured against a small fraction of the $1.3 trillion home equity owned by Australian retirees and will contribute to meeting the housing and funding needs of an aging population. Another innovative feature of the rated structure was to allow customers to continue to draw on their home equity under existing and potential increases to their credit contracts -

positioning Australian home equity access products squarely in the wealth and retirement funding sector.
The securitisation attracted widespread interest from local and global insurance, superannuation, banking, and institutional credit fund investors - indicating diversified demand for this new form of RMBS asset - and was rated by Moody's at a premium to par. The rating on the portfolio reflects a series of key differentiators of Australian equity release mortgages: higher voluntary discharge, shorter duration, lower negative equity risk and higher cash flows This paper will focus on the contribution of specific customer behaviours, reputational risk, regulatory environment, variable rate reverse mortgage discharge patterns, duration, security risk and loan-to-value ratios in the structure and rating of reverse mortgage portfolios.

Bio: Josh Funder founded Household Capital in 2016, Josh Funder has led research into way to transform ageing from being a challenge or 'grey tsunami' into being an unprecedented period of life and something to celebrate.
Josh and the early Household Capital team members worked to reframe ageing as an opportunity and to specifically look at financial adequacy, housing, health and wellbeing, community, and connectedness. They recognised a huge demand from retirees who needed more funding, and a huge pre-existing savings pool that they'd already saved in their home equity.
Prior to founding Household Capital in 2016, Josh was a co-founder, director, and former chairman of Per Capita, whose research on longevity and positive ageing formed part of the inspiration for Household Capital.

Financing Aged Care with Home Equity Allowing for Government Age Pension and Aged Care Support
Lingfeng Lyu (Risk & Actuarial Studies, UNSW)

Abstract: The Australian aged care system struggles with underfunding, impacting its ability to meet rising demand due to population ageing. We analyse individuals' risks in aged care, including investment risks, house price fluctuations, health deterioration, and inadequate subsidies. These risks are analysed within a recursive utility framework with state-dependent utilities, considering the benefit of ageing in place. Additionally, we explore wait times for the desired level of aged care to illustrate the extent of insufficient funding. By analysing wealth trajectories, we estimate the impact of insufficient funding on aged care and age pension, revealing the system's interaction between demand and supply. We also analyse home equity's role in aged care for retirees with different financial and risk profiles, examining its use in enhancing retirement savings, bequeathing, and hedging aged care risks. Our findings indicate that retirees with low and high initial net wealth prefer to enter residential aged care facilities (RACFs). When the likelihood of entering residential is non-zero, home equity can serve as a hedge against this risk. Positive hedging signifies the intention for rental income from home equity to cover RACF fees, whereas negative hedging suggests that RACFs are viewed as a safety net for increased consumption. Furthermore, insufficient Home Care Package (HCP) and sufficient residential care funding encourage wealthier retirees to utilise more home equity during the aged care phase. Results show that introducing wait times provides an allocation model for aged care funding considering health transitions and increases the concavity of wealth trajectories, aiding in understanding the retirement-savings puzzle.

Bio: Lingfeng Lyu is a last-year PhD student at the University of New South Wales (UNSW) and is affiliated with the ARC Centre of Excellence in Population Ageing Research (CEPAR). His research focuses on the role of home equity in supporting healthy ageing and aged care within the Australian context, specifically from the demand side. His research interests include the aged care system, public insurance and means-testing rules, home equity release options such as reverse mortgages, retirement-savings puzzle, and time series models.

Toy Calculators: Planning for retirement in Australia
Anthony Asher (Risk & Actuarial Studies, UNSW)

Abstract: Financial plans for retirement require decisions on how much to earn and save, where to put the savings and when to retire. The criteria for making these decisions require trade-off rules between risk and reward, money now or later, and working and leisure. Conceptually, utility functions defining the trade-offs can be elicited and mathematical models can determine optimal decisions. While some progress has been made developing the models, eliciting the utility functions has proven problematic.
In practice, the decisions are made heuristically, sequentially, and sometimes iteratively. This is evidenced by the proliferation of "toy" financial planning calculators offered by superannuation funds, particularly, often modelled on the Moneysmart calculators owned and operated by ASIC, which regulates financial planning. The calculators can be described as toys rather than plans, because, unlike plans, they cannot be saved and then adapted over time.
Insights into the issue can be gleaned from the wider literature on control theory and heuristics. It has been found that the use of heuristics in many processes is inevitable and can be effective if developed systematically. Particularly relevant to retirement, is the suggestion that optimization and stabilization be considered separately.
The Moneysmart calculators are benchmarked against the retirement modelling practice guideline and technical paper prepared by the Actuaries Institute. Some of the calculators are found to be inadequate in failing to highlight important assumptions and risks, as well as sometimes being misleading.
The paper then suggests how the different Moneysmart and other calculators could be incorporated into a holistic financial lifecycle control system. First and foremost, it should be possible to save the results to that they are plans and not toys and can thus be adapted as their users age.

Bio: Anthony Asher is an actuary and part-time Associate Professor at the UNSW Business School. His working life has been divided between university teaching and a variety of professional roles, including Chief Actuary of a life insurer, consultant actuary, and with APRA.
Within the Actuaries Institute he is currently a member of the Risk and Audit Committee and Convenor of the Retirement Incomes Working Group. He is well known in the profession for his interest in ethics in professional life, particularly the social impact of actuarial work.
He is also on the board of Fresh Hope Communities, which operates aged care facilities and retirement villages in NSW, and of PPS Mutual, which administers and distributes life and disability insurance designed for graduate professionals.
The design of post-retirement products and advice is the focus of his current research, which extends his publications in the fields of regulation, investments, and insurance.

SESSION 4A

SESSION 4A: Retirement Outcomes
Chair: Susan Thorp (University of Sydney Business School)
Venue: Colombo A

Measuring Member Outcomes for Defined Contribution Retirement Plans: A Cohesive Approach Using Retirement and Income Confidence Scores
Young Tan (Aware Super)

Abstract: Measuring member outcomes for defined contribution retirement plans is a challenging but important and meaningful task. While academic studies often rely on utility functions, practitioners, regulators, and the broader industry need something simpler and easy to interpret and communicate. In Australia, superannuation funds usually focus on two metrics: one is a retirement adequacy metric that typically measures how well a member's expected retirement income meets either the ASFA Comfortable Retirement Standard or a set percentage of their pre-retirement salary (such as a 70% replacement ratio as a target), and the other being a customer satisfaction score from regular surveys.
In this presentation, we will introduce a new approach using Retirement and Income Confidence Scores. This approach moves away from the one-size-fits-all method underpinning the retirement adequacy metric while still providing a cohesive assessment for the entire membership.
These two new metrics respond to different drivers that can influence member outcomes during both in accumulation and decumulation, such as how members contribute, invest, and draw down their retirement savings. Unlike traditional metrics, they also account for investment risks and uncertainties. Additionally, this approach allows us to attribute the overall impact to different drivers, which is not achievable under the current industry practice. The existing methods are limited because financial market movements often dominate, making it difficult to isolate the impact of other actions and activities by super funds and members. Our approach can also be seamlessly integrated into broader business planning. It serves not only as a retrospective measure of success but also as a forward-looking tool for prioritising programs of work.
We will illustrate how the approach works with some numerical examples. For accumulation members, we will show the impact of the maturity of the superannuation system, moving choice members back to MySuper and lowering admin fees. For retired members, we will illustrate the impact of introducing retirement solutions that include a longevity product and guidance on drawdown.

Bio: Young Tan is an Investment and Retirement Actuary at Aware Super with over 10 years of experience in superannuation. His role focuses on decumulation strategies and solutions for retirees, including non-guaranteed lifetime retirement income product design and pricing. Young was previously Manager of Actuarial and Research at UniSuper where he developed UniSuper's retirement income strategy and in-house capability for fund-wide retirement adequacy study and projection of members' retirement estimates. He started his actuarial career at Russell Investments, providing actuarial and strategic advice to a wide range of superannuation funds and employers. Young is a member of the Actuaries Institute's Superannuation Projections and Disclosures Sub-Committee.

Can we Count on Them? Assessing the Usefulness of Super Fund Calculators

Katrina Ellis (Super Consumers Australia)

Abstract: Figuring out how much to save for retirement is one of the most difficult questions that people preparing for retirement face.
Many super funds have a retirement calculator on their website, and two-thirds of super funds say retirement calculators are a key part of how they plan to help members with retirement.
A retirement calculator takes a person's details (age, gender, current superannuation balance) and uses that information, along with its assumptions, to predict their retirement balance and a suggested retirement income. When effective, retirement calculators can provide people with useful guidance and help people plan for retirement. We reviewed the quality of these calculators.

This research project assesses the usefulness of retirement calculators offered by 22 super funds accessed during May and July 2024. Our main findings:

- Most calculators relied on arbitrary assumptions about a person's expenditure needs that resulted in a retirement income that was not appropriate for the estimated retirement balance (either too high or too low).
- Most calculators didn't provide enough support to help people accurately calculate their expenditure needs.
- Most calculators didn't account for the higher expenditure needs of renters or support people who might still have a mortgage at retirement.
- Most calculators didn't explain minimum withdrawals of superannuation.

Based on the findings of the desktop review, fund retirement calculators cannot be counted on to always produce reasonable comparable results.
These findings point to the need to assess whether super funds are best placed to help people with retirement planning. We see a role for greater government investment in retirement guidance to properly resource retirement calculators, tailorable income projections, and budgeting tools. This service would enable people to compare the retirement income they could get across a range of funds and would therefore support more effective decision-making and competition outcomes.

Bio: Katrina Ellis has over 20 years experience in the financial sector. As the Deputy Director of Super Consumers Australia, she is passionate about ensuring that the super system works for everyone. Prior to joining Super Consumers, Katrina had a long career at the Australian Prudential Regulation Authority in a range of leadership roles. In particular, she led teams who implemented many of the key regulatory changes in the superannuation industry over the last decade. She was an academic in Australia and the US and has a PhD in finance from Cornell University.

Green Paper: A Retirement Licensing Regime
David Bell (Conexus Institute)

Abstract: The superannuation (super) system sits alongside Services Australia at the frontline in delivering income in retirement. Super provides guidance services, products, and payments to the majority of Australia's retirees. However, the super system is struggling to reach its full potential in the retirement phase. A central issue is the uneven and too-often modest progress being made by super funds despite the introduction of the Retirement Income Covenant (RIC) around two years ago. Significant dispersion in the capabilities and offerings of individual super funds is of particular concern. While the RIC requires trustees of all super funds to develop a retirement income strategy (RIS), it is highly principles-based. No guidance is provided on what is required to deliver a satisfactory RIS, and no obligation is placed on trustees to ensure that the fund's RIS caters to the widely differing needs of members in retirement in an effective manner. Something more is needed. A retirement licensing regime would be a powerful mechanism to make the super system 'match fit' for meeting the retirement needs of Australians. It would ensure that only funds choosing to apply for a license and meeting the licensing conditions would sit at the super system's retirement frontline. It would address some significant challenges that are inhibiting super funds and hence the overall super system in retirement. A licensing regime would require super funds to decide whether to commit to retirement, and if so, get moving in delivering a RIS to required standards. In this high-level paper, we outline the challenges faced by the super industry in serving retirees and discuss how a retirement licensing regime could address many of the challenges.

Bio: David Bell is the executive director of The Conexus Institute; an independent research think tank focused on improving retirement outcomes for Australians. David oversees research and policy development in the areas of retirement, superannuation, investment management and governance. David's industry career experiences include the role of CIO at Mine Super, founder, and director of his own consulting firm (St Davids Rd Advisory), and 12 years at CFS GAM (now First Sentier), mainly leading the fund-of-hedge funds investment team. David co-founded the financial newsletter Cuffelinks (now Firstlinks). Academically, David completed his PhD at UNSW, with a focus on asset allocation problems related to lifecycle modelling. David developed and, for twelve years, taught the hedge funds elective at Macquarie University's Applied Finance Centre.

SESSION 4B

Session 4B: Health State Modelling
Chair: Andres Villegas (Risk & Actuarial Studies, UNSW)
Venue: Colombo B

Estimating Transition Probabilities using Repeated Cross-Sectional Data
Salvatory Kessy (IAG)

Abstract: Estimating transition probabilities using cross-sectional data is challenging due to the lack of state-to-state transitions over time for each observed individual. We propose a five-state Markov model (health, disabled, chronically ill, chronically ill, and disabled, and dead) to calculate one-year transition probabilities using widely available general population mortality rates and annual prevalence rates derived from cross-sectional data. This results in an underdetermined system of transition probabilities which we solve by adding a set of mathematical relations between the unknown transition probabilities. We calculate annual prevalence rates and population mortality rates from five independent cross-sectional datasets from the Australian Survey of Disability, Ageing, and Carers (SDAC) and the Human Mortality Database, respectively. We use multinomial logistic regression to smooth the raw annual prevalence rates, accounting for age, gender, and time trends to remove noise. Finally, we graduate the estimated transition probabilities using the Whittaker-Henderson smoothing technique to remove the impact of data sampling fluctuations. The results show that the average occupancy probabilities across different states are highest between ages 65-74 and decline with advancing age for both genders. A healthy individual is more likely to transition to a chronic illness state than to become disabled. Conversely, a disabled individual is more likely to develop both chronic illness and disability than a chronically ill individual is to become disabled. A healthy individual is more likely to experience both chronic illness and disability than a disabled individual is to develop a chronic illness. Our proposed framework can enhance the development of longevity products in many countries because it relies on readily available population-level mortality and prevalence data to calculate transition probabilities.

Bio: Salvatory Kessy is a Research Associate at the School of Risk and Actuarial Studies. Salvatory completed his MSc degree in actuarial science at University of Southampton and bachelor's degree in actuarial science from the University of Dar-es-Salaam. Salvatory's research interests include mortality modelling, longevity risk management and the application of analytics techniques in actuarial science and finance.

Modelling Joint Life Functional Disability and Mortality and Joint Insurance Pricing
Xingying Yu (Risk & Actuarial Studies, UNSW)

Abstract: This paper investigates the dependence between the health states of married couples, along with the variables of age, gender, and time. Utilizing a three-state Markov health transition model, we consider four models, incorporating terms to capture the dependence of health states between couples. Those models are then used to examine the

pricing of LTCI products, focusing on the variations in premiums across distinct LTCI contracts, as well as the implications of best estimation reserve. We evaluate the influence of spouses' health states on the pricing of LTCI products and, consequently, the demand for these insurance contracts. Our results indicate that models with mortality and disability dependence terms provide a better fit to the data. Health transitions are notably influenced by the disability or death of a spouse, with these effects diminishing progressively over time. Specifically, spouses' death increases the mortality rates, whereas their disability lifts disability rates. Intriguingly, the negative impact caused by bereavement effect of spouse's deaths on mortality rates for males is greater than those for females. Our findings reveal the relationship between spousal health conditions and LTCI product pricing, underscoring the necessity for insurers to incorporate these factors into the design and pricing of their products. This research offers valuable insights and references for both policy makers and relevant practitioners who are aiming to develop new products for the advancement of the LTCI market.

Bio: Xingying Yu is a PhD candidate at the School of Risk and Actuarial Studies at UNSW Sydney and the ARC Centre of Excellence in Population Ageing Research (CEPAR). Her current research interests are in the areas of health transition models, mortality risks, LTCI pricing, and retirement planning.

Longevity Risk Sharing for Income-Based Mortality Heterogeneity
Gayani Thalagoda (Risk & Actuarial Studies, UNSW)

Abstract: Longevity pooling arrangements are attractive collaborative risk-sharing mechanisms that help members manage the risk of outliving their assets. While previous research has focused on risk-sharing mechanisms for homogeneous pool members, we develop a rule for members with heterogeneous life expectancy distributions due to income disparities. Using the Compensation Law of Mortality within the Gompertzian framework, we first examine the impact of mortality distribution heterogeneity on benefit payments. We then develop a new benefit-sharing rule that uses a Gini deviation measure to quantify longevity heterogeneity. The new rule explicitly allows for distributional heterogeneity within a given pool. We show how applying the rule can result in a more equitable redistribution of benefits among members. Finally, we investigate the practical problem of pooling members with different income levels given a specific pool composition.

Bio: Gayani Thalagoda is a PhD candidate at the University of New South Wales (UNSW) and a research student at the ARC Centre of Excellence in Population Ageing Research (CEPAR). Her research interests fall within the interdisciplinary areas of actuarial science and data science. Research interests include, the valuation of guarantees embedded in variable annuities and longevity risk management.

SESSION 4C

SESSION 4C: Economy-wide Effects of Pension Reform
Chair: Yang Shen (Risk & Actuarial Studies, UNSW)
Venue: Colombo C

Long-Run Effects of Employment-Related Pensions: PAYG vs. Funded Pensions
George Kudrna (UNSW)

Abstract: Pension systems typically feature either public pay-as-you-go (PAYG) or mandatory private pensions. This paper discusses the key institutional features and differences between the two employment-related pension systems, exemplified by the former in Germany and the United States, and the latter in Australia. It then develops a

general equilibrium lifecycle model with endogenous labour supply and bequest motive to examine the macroeconomic and distributional welfare effects of the two systems in the long run. The main findings are: (a) strengthening the actuarial fairness (pension rights accumulated while working) of PAYG systems positively impacts the economy and welfare of future-born generations; and (b) mandatory funded pensions are better for the economy and welfare of future-born generations than their actuarily-fair PAYG counterparts. This advantage is partly driven by the higher rate of return from funded pensions compared to PAYG pensions, as well as the inclusion of funded pensions in bequests, a feature not applicable to PAYG rights.

Bio: I am a Senior Research Economist at the ARC Centre of Excellence in Population Ageing Research (CEPAR), UNSW Business School, UNSW Sydney. I am also affiliated with the Centre for Applied Macroeconomic Analysis (CAMA), the Global Labour Organization (GLO) and UNSW Ageing Futures Institute. My research expertise lies in the areas of public economics and macroeconomics, more specifically including fiscal policy, pension economics and the economics of population ageing and applied general equilibrium modelling. I develop macroeconomic models, capturing lifecycle behaviours of heterogeneous households, to study pensions, taxation, education and housing policy, and economy-wide implications of population ageing and policy reforms, applied to developed countries such as Australia and the US, and emerging Asian economies with a large informal sector such as Indonesia. I publish, consult, and review grants on these topics both nationally and internationally. My recent publications were, for example, in *International Economic Review* and *European Economic Review*. I lead large ARC linkage grant with World Bank and Bappenas on modelling policy for ageing in emerging economies. For publication, working papers and presentations see https://sites.google.com/site/georgekudrna

---

Superannuation Taxation: Options for Best Practice Reform

M Scott Donald (Private and Commercial Law, UNSW) and Rodney Brown (Accounting, Auditing and Taxation; UNSW)

Abstract: The optimal tax system for superannuation in Australia has long been debated. Significant changes since the early 1980s highlight the difficulties in ensuring the system successfully balances simplicity, equity, and efficiency. Australia's regime continues to evolve and remains relatively unique compared to its OECD counterparts. Most recently, a 30% tax on earnings for balances exceeding $3 million was announced, and as more details are released, controversy ensues. In its 17 April 2023 submission to Treasury, CPA Australia contends "Constant and piecemeal changes undermine the community's confidence in the superannuation system and government policy. What is being proposed is a piecemeal change that should not be made in isolation." Concurrently, it is recognised that generally, higher-income earners benefit more from existing tax concessions than lower-income earners. However, the question remains as to what constitutes best practice in taxing superannuation in Australia. This study addresses this key question by undertaking a comparative study with select OECD countries to identify possible alternatives, supplemented with semi-structured interviews with key stakeholders. We put forward several recommendations for reform.

Bio: Scott Donald is an Associate Professor in the School of Private and Commercial Law. Scott joined the faculty in 2010 after a successful career in the funds management industry advising governments, superannuation funds, insurance companies and fund managers on investment strategy, governance and regulation. Scott teaches corporations, trusts, and superannuation law at both undergraduate and post-graduate level. He regularly presents at academic, professional and industry conferences in Australia and overseas and publishes in both the academic and professional press on research related to financial services regulation, governance, and superannuation policy.

Informality, Gender, Heterogeneity and Pension Reform in Emerging Asia: A Life-Cycle Model Analysis for Ageing Vietnam
Huyen Hoang (Economics, UNSW)

Abstract: The countries of emerging Asia, among the most populous in the world, face a unique challenge: they are experiencing rapid population aging coupled with high informal labor force participation. This dynamic makes them particularly susceptible to widespread old-age poverty as traditional forms of support are weakened by mass generational migration to urban areas. Policymakers in these regions are thus tasked with developing effective and sustainable social protection policies that can be accessed by informal workers as their earning capacity diminishes, often when per capita income is still relatively low.
This paper explores the development of retirement social protection policy in Vietnam, a country with a rapidly aging population of approximately 90 million, where some 80% of the workforce is engaged in informal employment (ILO, 2018) without social insurance. We construct a stochastic life-cycle model with heterogeneous agents differentiated by gender and sector, facing uncertainties in labor earnings and lifespan. Utilizing data from the Vietnam Household Living Standards Survey (VHLSS) conducted from 2014 to 2018, the model closely matches labor market observations from the VHLSS. The model is applied to assess pension reform counterfactuals, targeting formal and informal workers under varying demographic structures.
Our findings indicate that raising the retirement access age for formal workers and introducing a non-contributory social pension for all informal workers aged 65 and over would enhance welfare across all employment categories. Notably, financing the social pension through a consumption tax proves more advantageous than using a labor income tax, providing greater welfare benefits for both formal and informal workers, regardless of gender. It is also important to note that under the combined reform, men benefit more than women in the formal sector, while women tend to gain more than men in the informal sector.

Bio: Huyen Hoang obtained a PhD in Economics from the University of New South Wales, Business School in August 2024. Previously, she worked at the Ministry of Planning and Investment in Vietnam. Her research interests lie in public economics, development economics, and the economics of aging. As part of the project “Policy Modeling for Aging in Emerging Economies,” her thesis focuses on retirement social protection policy in Vietnam, a rapidly aging country with sizeable informality.

SESSION 5

SESSION 5: Retirement Insights
Chair: Katja Hanewald (Risk & Actuarial Studies, UNSW)
Venue: Colombo A

Crafting Epic Retirements: Insights from Allianz Retire+ Research on Retirement Attitudes and Engagement Strategies
Yannick Pfitzer (Allianz)

Abstract: As the landscape of retirement continues to evolve, understanding the aspirations and expectations of pre-retirees and retirees has become paramount for delivering effective retirement income solutions. This presentation delves into the findings of the recent Allianz Retire+ research report, "How to Make Retirements More Epic," which highlights key factors that contribute to fulfilling and secure retirements. Supporting this, we will explore the results of qualitative research focusing on attitudes towards retirement and their preferred modes of engagement and communication.
Attendees will gain a comprehensive understanding of the current sentiments and desires of those approaching retirement age, including their financial concerns, lifestyle aspirations, and the types of support they value most. The session will also provide actionable insights

into crafting communication strategies that resonate with this demographic, ensuring they feel informed, supported, and confident in their retirement planning journey.
By integrating quantitative data from the Allianz Retire+ report with qualitative insights, this presentation aims to equip the audience with the knowledge to better serve the evolving needs of retirees, ultimately helping them achieve truly epic retirements.

Bio: Yannick Pfitzer, Manager, Group Retirement Solutions, Allianz Retire, is a dedicated financial services professional with a passion for developing and sustaining institutional partnerships that deliver value and enhance outcomes for Australians. Specializing in risk transfer solutions within the life insurance sector, Yannick focuses on lifetime income solutions that address the evolving financial needs of retirees.
In his role as Manager, Group Retirement Solutions at Allianz Retire+, Yannick is instrumental in leveraging the global expertise and capabilities of the Allianz Group to benefit Australian superannuation funds. His efforts are centred on providing innovative solutions that meet the financial needs of members during retirement.
With a decade of experience working for leading financial organizations both in Australia and internationally, Yannick brings a multidisciplinary approach to his work. His expertise spans sales, account management, customer experience, reinsurance, and operations, enabling him to provide comprehensive support and insights to our partners.

Retirement Literacy, Confidence and Wealth Transfer: Insights from how Australia Retires 2024 Survey

Junhao Liu (Vanguard Australia)

Abstract: This study aims to improve our understanding of retirement confidence, retirement literacy, and the role of intergenerational wealth transfer in retirement in Australia. We leverage the detailed data from a national survey (How Australia Retires 2024) from 1,800 Australians. We employ OLS, logistic, and ordered logit regressions to study three topics with preliminary findings below:

1. Financial and retirement system literacy and longevity expectations:
    a. Many Australians do not have adequate knowledge about the retirement system,
    b. There are gender gaps in both types of literacy, and the gap in retirement system literacy is narrower due to the lower level of understanding of retirement topics compared to general finance topics among male respondents.
    c. Over half of respondents had not thought about or were unsure about how long they will live and how long they will need to plan for in retirement.
2. Retirement confidence and planning:
    a. Higher retirement confidence is associated with having a clear plan, higher retirement system literacy, and home ownership without a mortgage.
    b. Changes in household financial positions in the past 12 months have a great impact on longer-term retirement confidence.
    c. The level of adequate retirement planning is concerning, with 32% retired Australians not having a plan prior to retirement.
    d. Most people plan with their partner as a couple, while there is still about 1 out of 3 retirees planned on their own.
3. The role of inheritance in retirement planning:
    a. About half of respondents have received or expect to receive an inheritance.
    b. 75% retirees have either planned to set aside some assets as an inheritance or are willing to leave an inheritance if there is money “leftover”.
    c. More than half Australians agree that retirees should enjoy their savings before leaving inheritance, especially among Baby Boomers (ages 58-77).

Bio: Junhao Liu is an investment strategy analyst in Vanguard's Investment Strategy Group, conducting research in retirement and investor behaviour in Australian and U.S. Prior to joining Vanguard, he spent three years as a postdoctoral research associate at the University of Sydney. His research on retirement savings, mortgage decisions, and financial literacy has been published in the *Journal of Economic Behavior and Organization, Journal of the Economics of Ageing, Journal of Risk and Insurance, Journal of Consumer Affairs*, and *Journal of Financial Literacy and Wellbeing*.
He is an associate investigator at the ARC Centre of Excellence in Population Ageing Research (CEPAR), with a PhD in risk and insurance from the University of Wisconsin-Madison, a MSc from the University of Cambridge, and a BSc from the University of Hong Kong.

Lost at Sea or Swimming to Shore? How People in Their Sixties Think About Work and Retirement

Susan Bell (Susan Bell Research)

Abstract: This paper will present the findings from recent qualitative research that I have conducted with upcoming and current retirees in Australia, all of whom were in their sixties. My purpose in conducting this research was to add to our collective knowledge about retirement decision-making by placing it in the context of what is happening in people's lives at a time when their lives and relationships are undergoing significant change.
The research was informed by the concept of liminality. Liminality is a term used in anthropology to describe those 'betwixt and between times' when people undergo a change in social identity. According to this theory, people feel uncertain and anxious during liminal times. How they manage this uncertainty is a significant driver of behaviour. Retirement is a liminal time. People approaching retirement age can feel full of doubt and concern about how to make this decision. The period after retiring involves considerable adjustment. Even people who say they will never retire can become unsettled by other people's expectations about them.
Using this lens of liminality helps us see and understand how differently people of the same age and socio-economic group behave. A key difference is in how people cope with the stress of the retirement experience. Some cope through denial and procrastination. Others become determined to take control of how they feel. Instead of feeling 'lost at sea', they become determined to 'swim to shore'. It is within this context that they make choices about funding their retirement, for example, the decision to retain an accumulation fund rather than convert to a pension, or the decision to return to work.
The interviews were structured to cover the six resource domains recommended by Wang and Shultz (2010) and Wang et al (2011): physical, financial, social, emotional, cognitive, and motivational. The paper will describe the relative importance of these resources in the lives of these respondents.

Bio: Susan Bell is the CEO and founder of Susan Bell Research – an agency that specialises in retiree insights and communications testing. Susan Bell Research was established in 1994.
Susan has designed and conducted research with upcoming and current retirees for government, not-for-profit organisations, and a range of superannuation funds.
Susan has presented her research on retirement at Australian and international conferences.
She is a Fellow of The Research Society, a member of the International Plain Language Association and is a past member of the Research Society Board.
Susan's academic qualifications are BA (Hons) English Literature and Linguistics (University of Reading) Graduate Diploma Psychology (Monash University). She is also an occasional student in Anthropology.

Lost in Translation: How to Talk Retirement
Kaye Fallick (Staying Connected)

Abstract: You'll be very aware of the number of Australians entering retirement over the next 10 years – about three million.
This means that talking and writing retirement is a dynamic, competitive, hotly contested space.
There are so many different stories to tell.
Some are academic, some government, some 'commentary' and many commercial.
The motives of these retirement story tellers also vary.
Some may wish to gain more attention for years of research or to influence policy decision-making. Others may want to build their voice, to expand their following, to sell books, drive media engagement or promote products and services. Or perhaps a mix of the above?
Sadly, however, there is someone who has become increasingly lost in this talkfest – and that's the ordinary Australian retiree.
The 60-something who is approaching preservation age and has no idea what that even means. Instead, they are bewildered by an array of retirement income 'solutions' clamouring for their attention.
This archetypical man or woman has little knowledge of the full range of levers at their disposal, namely the Age Pension, super drawdown, work income, private investments, and home equity.
They have also lost faith in the (rapidly shrinking) advice industry and doubt they can afford advice any time soon, regardless.
The result is that they are frozen in the headlights of their impending retirement, unsure of where to go and what to do to plan and manage a reasonable level of retirement funding.
Does your solution to the retirement income puzzle deserve greater attention?
This paper explores ways that research and industry participants might cut through the noise to explain their ideas, findings, and contribution to this debate.

Bio: With 20+ years' experience publishing for baby boomers, Kaye is the founder of STAYINGconnected website and publisher, SuperConnected ageing demographics enewsletter.
She is also a freelance writer on topics relevant to lifestage changes including planning retirement, downsizing/rightsizing, aged care, government policy, superannuation, and Age Pension entitlement.
Kaye is also owner and content director for digital retirement income tools, PensionChecker and RetirePlanner

SESSION 6A

SESSION 6A: Supporting Decision Making
Chair: Hanlin Lou (CEPAR, UNSW)
Venue: Colombo A

Older Adults' Access to and Adoption of Robo-Advice: Exploratory Research
Xinye Cao (Griffith University)

Abstract: Robo-advice holds the promise of affordable financial advice to assist older adults with managing their finances and securing additional retirement income, thereby reducing their reliance on age pensions. However, current research on robo-advice has neglected to focus on the elderly. Adopting a qualitative approach, this research reports on surveys and interviews with academic and industry experts in the field of robo-advice. This study elucidates the factors that may hinder older adults from accessing and adopting robo-advice,

highlighting the limitations of this FinTech service in improving financial inclusion among older adults. Given that the Australian government encourages more private retirement contributions, our research holds policy implications. It provides a reference for the government on utilising robo-advice to assist older Australians in obtaining financial advice and preparing for retirement.

Bio: Candice is a PhD candidate at Griffith University. Her research focuses on the access, adoption, and continued use of robo-advice (i.e., digital advice) in the context of Australia's lack of affordable and accessible financial advice. She is particularly interested in how older adults interact with digital advice, how robo-advice retains customers, and how individuals can utilise robo-advice to prepare for retirement.
She has investigated what influences young people's trust in robo-advice through qualitative research. Last year, she interviewed robo-advice industry experts and related academic specialists in Australia, using this expert data to explore what factors affect older Australians' access to and adoption of robo-advice. In the future, she will continue to focus on robo-advice, personal digital financial decision-making, and how robo-advice can serve retirees.

Expensive Babysitters or Trusted Professionals? Financial Advice and Portfolio Rebalancing in Retirement Saving Accounts
Thomas Hendry (Griffith University)

Abstract: The value of financial advice to clients has been debated in both the literature and public discourse. High profile advice and product failures, together with various studies have also demonstrated negative impacts of financial advice on client wealth. This study examines the impact of financial advice in a modern regulatory environment where financial advisors possess a strong fiduciary duty, adhere to strict disclosure obligations, and where conflicted remuneration has been regulated largely out of existence. Utilizing a sample of over 55,000 retirement portfolio rebalances, we empirically examine (i) who seeks financial advice prior to rebalancing, and (ii) whether financial advice affects retirement portfolio outcomes. Our results suggest that financial advice in this setting is related to lower risk and less concentrated rebalances with marginally higher risk-adjusted returns compared to self-directed rebalances. Financial advice is typically used by wealthier, older, and female investors. We find no evidence that financial advisors recommend higher fee funds.

Bio: Thomas is a PhD candidate at Griffith University. His research is in the field of household finance, particularly on the relationship between behavioural biases and decision making. He has presented at finance and economics conferences locally and internationally.

The Importance of Inclusive Design in Financial Education
Tracey West (Griffith University)

Abstract: Financial education is often spouted as important for addressing low financial literacy levels in Australian youth. However, despite the inclusion of financial education in the national curriculum, financial literacy levels are declining. This research explores the financial knowledge and experiences of high school students in Australia, aged 14 to 18, to understand how financial education is currently being delivered and how it can be improved. Using a qualitative approach, we find evidence that current teaching and assessment approaches to financial literacy may disadvantage some students. We conclude by offering recommendations to improve the delivery of financial literacy education within the curriculum.

Bio: Dr Tracey West has a strong background in household finance, with several publications on household finance, financial literacy, and financial planning issues. Recent work has been published in Economic Notes, Financial Counselling and Planning, Financial Planning Research Journal, Journal of Family and Economic Issues, JASSA, the Consumer Interests Annual. This work contributes to knowledge on investor behaviour, informing curriculum development and guidance for advisors in the financial services industry.

SESSION 6B

SESSION 6B: Mortality and Longevity
Chair: Chelle Wang (Risk & Actuarial Studies, UNSW)
Venue: Colombo B

Socio-economic Inequalities in Life Expectancy and Functional Disability Amongst Older Americans

Michelle Vhudzijena (Risk & Actuarial Studies, UNSW)

Abstract: The main aim of this study is to quantify differences in life expectancy and time spent in functional disability at ages 65 and 85 amongst older Americans using socioeconomic status. The secondary aim is to determine the pricing implications of these life expectancy and functional disability differentials on long-term care. There are many studies that investigate the association between individual socioeconomic indicators and either mortality or functional disability in the literature. However, there are very few studies that quantify the effects of cumulative socioeconomic indicators on life expectancy differentials and the risk of functional disability amongst the older population. Moreover, not many studies delve into the impacts of varying life expectancy on insurance products that can manage health risks such as long-term care insurance. The primary outcomes for this study are life expectancy and time spent disabled for males and females for different socioeconomic groups at ages 65 and 85. The secondary outcome is the cost of long-term care for males and females at ages 65 and 85. Our study provides an analysis of the population structure by socioeconomic status, age, and sex. We relate these outcomes to policymaking and the generation of insurance portfolios.

Bio: Michelle Vhudzijena is a Senior Research Associate at the ARC Centre of Excellence in Population Ageing Research in Sydney. She has a PhD in Actuarial Studies from the University of New South Wales, Sydney, Australia. She graduated from Harvard University with a Bachelor of Arts in Biomedical Engineering. Before her doctoral studies, she worked as an actuarial consultant and biomedical engineering researcher. Her research interests include mortality modelling using multiple health and socioeconomic risk factors, cause of death mortality modelling, long-term care, predictive models, and survival analysis. Most of her work involves unsupervised learning and analysis of individual-level longitudinal data.

Bayesian Analysis of Cancer Mortality: Socioeconomic Disparities, COVID-19 Impact and Future Impact

Ayse Arik (School of Risk & Actuarial Studies, UNSW)

Abstract: Understanding cancer risk trends and disparities is critical for insurance purposes, influencing pricing and reserving in health insurance areas such as critical illness insurance and care provision. This study examines mortality trends for two major cancer types, breast and lung cancer, using general population data in England. We use a Bayesian hierarchical framework to model patterns in cause-specific cancer mortality, considering age, gender, regions of England, income deprivation, average age-at-diagnosis, and non-smoker prevalence. Future mortality rates are then projected using Bayesian forecasting, through a time series random-walk with drift for period-related effects. Given the significant healthcare disruptions caused by the COVID-19 pandemic, we also evaluate how delays in cancer diagnosis might shape future mortality outcomes. We estimate future excess type-

specific cancer deaths, based on scenarios involving an increase in average age-at-diagnosis.
The analysis reveals persistent socioeconomic inequalities in lung cancer mortality. Our research also found that delays in cancer diagnosis, can result in significant excess in lung cancer mortality, that additionally differs by age, region, and deprivation. Meanwhile, marginally significant regional differences are indicated for breast cancer mortality in future years.

Bio: Ayşe Arık has recently joined the School of Risk and Actuarial Studies at University of New South Wales, Australia, as a senior lecturer. Prior to this, she was a research fellow in the Department of Actuarial Mathematics and Statistics, Heriot-Watt University, UK, from December 2020 to September 2024, and a post-doctoral researcher from January 2018 to December 2020.
Her recent research mainly focuses on modelling and understanding health inequalities. She holds a PhD from Hacettepe University, Ankara, Turkiye, awarded in November 2016, with her thesis focussed on pricing pension buy-outs. Additionally, she is an associate member of the Institute and Faculty of Actuaries, and a fellow of the Actuarial Society of Turkiye.

Longevity Beliefs Elicitation: Full Distribution and Visual Support
Andre Lot (University of Sydney)

Abstract: We investigate subjective longevity beliefs in a large sample of the Swiss adult population, using the Click-and-Drag interface, a tool to empower subjects to intuitively submit full belief distributions. We collect data on longevity beliefs on archetypes, on a series of different health scenarios, and for themselves. We implement both a CDF elicitation task -- in line with most of the literature -- and a PDF version for the same task. Our results show that participants' estimate elicited with a PDF interface were more accurate than those using the CDF interface. We show additionally that providing participants with a visual support in the form of an average longevity distribution, substantially helps to improve accuracy and debias estimates. Moreover, providing visual aid right away clearly outperformed helping after a first unguided estimation. Our findings show the promise of eliciting full distributions, reveal a surprising outperforming of the PDF over the CDF visualisation, and show that providing visual guidance is a powerful tool for improving longevity predictions.

Bio: Andre Lot is a Lecturer (Assistant Professor) of Finance at the University of Sydney Business School since January 2024. He has completed his PhD at the Norwegian School of Economics in 2023. His research focuses on Household Finance and has recently used experimental methods to investigate retirement decision-making, including projects on longevity beliefs and life-cycle optimisation, precautionary savings, and the design of savings incentives.

SESSION 6C

SESSION 6C: Retirement Incomes 3
Chair: George Kudrna (CEPAR, UNSW)
Venue: Colombo C

Multi-State Contingent Mortality Pooling: A Heterogeneous, Actuarially Fair, and Self-Sustaining Product
Yuxin Zhou (Risk & Actuarial Studies, UNSW)

Abstract: There is a growing need for higher retirement incomes to cover the higher long-term care (LTC) costs when retirees become functionally disabled or ill. However, most of the existing mortality pooling products in the literature do not consider the health status of

members. Hence, they do not provide higher retirement incomes to members who have LTC needs due to deteriorated health conditions. To address this issue, we propose a health-contingent mortality pooling product that is actuarially fair and self-sustaining, featuring health-state-dependent income payments. The proposed framework allows free transitions between health states so that recovery from functional disability is allowed. The framework has the flexibility to allow any number of health states, while we use a five-state model with the health states constructed from two dimensions, which are functional disability and morbidity. Moreover, the product allows heterogeneity so members can have different ages, contributions, initial health states, joining times, and rates of investment returns. Allowing heterogeneous members to join helps increase the pool size and generate more stable income payments. We find that the proposed health-contingent pooling product consistently provides significantly higher retirement incomes to members with functional disability and morbidity, while the costs to healthy members are relatively low. We also find that the jump in income payments happens immediately when there is a transition to a less healthy state, allowing members to quickly obtain higher incomes to cover the higher costs incurred by being functionally disabled or ill. Meanwhile, if the member recovers from functional disability, the income payments will decrease to reflect the reduced LTC cost.

Bio: Yuxin Zhou is a PhD candidate at the School of Risk and Actuarial Studies at UNSW Sydney and the ARC Centre of Excellence in Population Ageing Research (CEPAR). His current research interests are in the areas of longevity risk management, long-term care (LTC) risk management, retirement products, risk sharing, mortality modelling, and multi-state health modelling. Yuxin has published in top actuarial journals, such as the *Scandinavian Actuarial Journal*, *North American Actuarial Journal*, *and Annals of Actuarial Science*. Prior to the commencement of his PhD, he obtained Bachelor of Actuarial Studies (Honours Class 1) from UNSW in 2019.

The Retirement Income Covenant: A Powerful Regulatory Tool or a Solution in Search of a Problem?
Ross Clare (ASFA)

Abstract: The paper will examine the design features of the Retirement Income Covenant, the problems it seeks to address, and its success (or not) to date along with its likely future impact. The paper also will present data on superannuation balances and drawdowns of fund members during the retirement phase and evidence on the extent to which it can be claimed that retirees either overspend or underspend their superannuation savings.

Bio: Ross Clare is Director of Research at the Association of Superannuation Funds of Australia (ASFA). In this role he has been responsible for preparation of research papers across a range of superannuation and retirement income issues, including adequacy of retirement income and the structure of the Australian retirement income system.
He was responsible, amongst other things, for the development of the ASFA Retirement Standard, which is now very commonly used.
Prior to joining the staff of ASFA he held senior positions with the Australian Treasury and an Australian Government research agency, the Economic Planning Advisory Commission.
Ross has degrees in Economics and Law from the Australian National University.

Explaining Lifetime Income Product Demand Using the Decision States Model
Jiamin Yan (Risk & Actuarial Studies, UNSW)

Abstract: Lifetime income products can insure against longevity, inflation, and investment risks, yet their take-up remains low internationally. We adopt the 'Decision States Model' (DSM) to explore a new explanation for the low demand for lifetime income products. The

DSM posits that individuals move through a series of decision states based on their awareness, interest, and capability before they are ready to make a purchase decision. We designed and fielded an online survey to a representative sample of 1,190 Australians aged 50-75 to elicit membership of decision states for the purchase of lifetime income products and to collect a wide range of data on personal characteristics, perceptions, and knowledge. We found that 57.5% of the sample were unaware of lifetime income products, 8.3% aware but not interested, 7.1% interested but not capable, and only 27.2% aware, interested, and capable of making a decision about the purchase lifetime income products. Using regression analysis to predict decision state membership we found that poor financial literacy, a failure to plan for retirement and a restricted opportunity to learn about lifetime income products were associated with being unaware. Movement to and through decision states closer to capability was further impeded by poor perceptions of lifetime income products, low numeracy skills and pessimistic later life survival. Membership of the aware, interested, and capable state was associated with accurate perceptions of the characteristics of lifetime income products, good numeracy skills and having a bequest motive, as well as being the household decision maker. Our findings can inform the development of more targeted strategies to move individuals through the decision states, ultimately positioning them to make informed decisions, rather than assuming that all retirees are aware, interested, capable, and ready to make a decision about the purchase of lifetime income products.

Bio: Jiamin (Jamie) Yan is a PhD candidate at the School of Risk and Actuarial Studies at UNSW Sydney and the ARC Centre of Excellence in Population Ageing Research (CEPAR). She obtained a Bachelor of Science and a Bachelor of Economics in 2021. Her current research interests are in financial decision making, retirement products, and behavioural economics.

SESSION 7

SESSION 7: Current Issues in Superannuation
Chair: George Kudrna (Economics, UNSW)
Venue: Colombo A

Post-retirement Age Mortality in Australia: A Quantification of Socio-Economic Differences
Fei Huang and Andres Villegas (Risk & Actuarial Studies, UNSW)

Abstract: The Australian superannuation system's retirement phase requires further development to meet the objective of delivering income for a dignified retirement, alongside government support, in an equitable and sustainable way. A key step in this direction is the creation of retirement income products that can help retirees manage their longevity risk. It is well known that mortality rates vary by socio-economic factors such as income, occupation, education, and marital status. However, in Australia, the extent of this knowledge is limited, despite its crucial importance for developing longevity products that allow for differences in mortality between cohorts of retirees in an equitable manner.
Part of this gap in knowledge is due to the fact that only a small fraction of Australians invest in longevity products, limiting our understanding of mortality rates among those in pooled annuity schemes. This data scarcity presents limitations for providers when pricing longevity risk. Typically, insurers rely on their own client mortality data to inform assumptions for pricing. When internal data is insufficient, industry-wide studies are consulted. However, the early stage of the Australian market means that local industry data is not comprehensive, leading to a reliance on international findings or assumptions based on general population statistics.
This paper aims to understand sub-group retirement mortality in Australia based on the general population experience. Although there has been research on sub-group mortality

both in Australia and globally, this is the first study to explore retirement-age mortality across a variety of subgroups using an individual-level linked mortality dataset of the entire Australian population (2016-2017). We investigate the mortality experience of the Australian population across various socio-economic factors, including age, gender, socio-economic advantage, and disadvantage (SEIFA), income, marital status, and homeownership. The results can enhance the development of longevity products, providing more equitable treatment between participants, and improve the understanding of longevity risks faced by Australian retirees.

Bios: Fei Huang is a Senior Lecturer in the UNSW School of Risk and Actuaries Studies and Lead - Data and AI Tech at UNSW Business AI Lab. Fei's research focuses on responsible AI and data-driven decision making for insurance. She has published in top-tier actuarial journals and received the Carol Dolan Actuaries Summit Prize and ASTIN Colloquium Best Paper Award for her research. She was a recipient of the Actuaries Institute's Volunteer of the Year Award and the UNSW Business School SDG Research Impact Award.

Andrés Villegas is an Associate Professor at the School of Risk and Actuarial Studies at UNSW Sydney and an Associate Investigator at the ARC Centre of Excellence in Population Ageing Research (CEPAR). Andrés's research interests include mortality modelling, longevity risk management, and applications of analytics techniques in actuarial science and finance. Andrés is the developer and maintainer of the R Package StMoMo for stochastic mortality modelling, which has achieved 64,000+ downloads and is now being used by researchers, risk managers, insurance supervisors and students around the world. Andrés stays actively connected with actuarial practice through several research and education projects with the actuarial profession in the USA, Australia, and Colombia.

Gender Retirement Gaps

Alice Volz (Federal Reserve Board)

Abstract: Significant research has focused on the enormous shifts in the labor market of women, but less on whether a convergence of retirement preparation has occurred (Lehrer, Pan and Finnie, 2023, is a recent exception). Even though women have less access and less generous pensions than men, they have experienced significant gains in retirement assets, particularly those from [private] defined benefit pension plans. Employment- and market-based retirement savings are some of the resources that older Americans rely on to fund retirement consumption; Social Security, the public pension program that provides a fixed payment in retirement, is particularly critical for elderly women. Thus, estimates of Social Security wealth completes the picture for retirement assets accumulated over the life-cycle, and any gender comparison of retirement resources would be particularly incomplete without it. This study leverages the detailed household balance sheets measured by the Survey of Consumer Finances with gender-based wealth estimates from Bricker et al (2020) with Social Security wealth estimates from Jacobs et al (2021). Taking a comprehensive lens to examining gender disparities in wealth accumulation, particularly assets earmarked for retirement consumption, requires having information on public and private pensions, and also an image of the non-retirement household balance sheet. This study finds some improvement in retirement asset accumulation for women, in comparison to men, but this finding is primarily limited to tax-advantaged plans designed for retirement savings.

Bio: Alice Henriques Volz is a section chief of the Microeconomic Surveys section at the Federal Reserve Board, which oversees the Survey of Consumer Finances. She will be a visiting scholar at University of Canterbury (NZ) from October 2024-February 2025. Her research interests focus on inequality and retirement. Current research projects include measuring retirement preparation across cohorts and the wealth distribution, measuring and understanding trends in wealth inequality (including how differences in ownership across genders affects wealth inequality), and estimating the returns to private business assets. She received her Ph.D. in economics from Columbia University and a B.A. from University of California at Berkeley.

Climate Signalling in Australian Superannuation Fund Annual Meetings
M Scott Donald (Private and Commercial Law, UNSW)

Abstract: The trustees of public-offer Australian superannuation funds are required to hold Members' Meetings annually and to answer publicly all questions put to them at those meetings. This paper considers, for the first time, the information content of the questions posed in that context. The paper finds that climate change is one of the most common themes in the questions posed by members, but that trustees should be wary of trying to draw inferences from what they perceive as the tone of those questions. It thus contributes to the burgeoning literature addressing the intra-institutional discourse in relation to climate change.

Bio: Scott Donald is an Associate Professor in the School of Private and Commercial Law. Scott joined the faculty in 2010 after a successful career in the funds management industry advising governments, superannuation funds, insurance companies and fund managers on investment strategy, governance and regulation. Scott teaches corporations, trusts, and superannuation law at both undergraduate and post-graduate level. He regularly presents at academic, professional and industry conferences in Australia and overseas and publishes in both the academic and professional press on research related to financial services regulation, governance, and superannuation policy.

Systemic Impacts Of 'Big Super'
Geoff Warren (ANU and Conexus Institute)

Abstract: We investigate the systemic effects of a large superannuation system containing large funds, considering a range of aspects that may have widespread implications for the Australian economy, Australian financial markets, or Australians at large. We conclude that Australia is much better off with a large super industry, as it facilitates a significant pool of retirement savings and allows those savings to be professionally managed. However, there are also impacts that are less beneficial or debatable, and risks to be addressed. Areas to watch include: heightened member exposure to economic risk through (appropriately) seeking market risk premiums; potential for super to act as a fluctuating source of funding in some sectors; questions over the quality of operational support systems within the industry; and risks related to cybercrime and scams; exposures arising from foreign exchange hedging; concentration among the service providers to super funds; how large funds might use their influence; and expansion of overseas operations. Nevertheless, we view super as an unlikely propagator of systemic risk across the economy or financial system, with any problems encountered by one super fund likely to be felt by members of that fund but remaining localised. We are relatively sanguine about industry concentration as the largest super funds are not very large relative to either the super industry or the overall economy; and about super funds investing in a similar manner as financial markets remain populated by a wide range of participants. We conclude with a range of recommendations for policymakers and regulators.

Bio: Dr Geoff Warren is Research Fellow at the Conexus Institute and Honorary Associate Professor with the Australian National University. He is a member of various investment and research advisory boards including: ASIC Consultative Panel, Atlas Infrastructure, ANU Student Managed Fund, Brandes Center, the Salvation Army and Super Consumers

Australia. Geoff's research has an applied and policy emphasis with particular focus on superannuation, retirement, and fund management. He has spent over 20 years as an investment practitioner spanning stock research, investment strategy, head of research, equity portfolio management and asset consulting.

CLOSING REMARKS

Katja Hanewald is an Associate Professor in the UNSW School of Risk and Actuarial Studies and Vice President of the Asia-Pacific Risk and Insurance Association (APRIA). Her research models longevity and healthy ageing trends and develops risk management and insurance responses to population ageing. She has published over 30 peer-reviewed articles in leading insurance, actuarial, economics, and medical journals, is a Co-Editor of the *North American Actuarial Journal*, an Editor of the *Journal of Pension Economics and Finance,* and is a member of the editorial boards of the *ASTIN Bulletin, the Risk Management and Insurance Review*, and the *Journal of Retirement*. Katja obtained her PhD in Economics from Humboldt-Universität zu Berlin in 2010 and worked as an Economist at the German Federal Ministry of Finance from 2013 to 2015.