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

The theme for 2020 is '**Pensions, superannuation and retirement in a post COVID-19 world**'.

The Colloquium will also host a **special session on 'Pensions and COVID-19: The Global Experience'**, sponsored by the **International Pension Research Association (IPRA)**.

Papers submitted to the Colloquium and the IPRA sponsored session on 'Pensions and COVID-19: The Global Experience' will be considered for inclusion in a **Special Issue of the Journal of Pension Economics & Finance on Pensions and COVID-19.**

PROGRAM COMMITTEE

Professor Hazel Bateman, CEPAR Deputy Director, UNSW Sydney
David Bell, CEPAR Associate Investigator, The Conexus Institute
Inka Eberhardt, CEPAR Research Fellow, UNSW Sydney
Dr Katja Hanewald, CEPAR Associate Investigator, UNSW Sydney
Dr George Kudrna, CEPAR Senior Research Fellow, UNSW Sydney

COLLOQUIUM CO-CHAIRS:

Professor Hazel Bateman, CEPAR Deputy Director, UNSW Sydney
Scientia Professor John Piggott AO, CEPAR Director, UNSW Sydney

Program

View the program online at https://cepar.edu.au/news-events/events/28th-colloquium-pensions-and-retirement-research

Day 1 will take place in person on-site at the Colombo House Theatres, UNSW Sydney in a COVIDSafe environment, with limited places (subject to the COVID-19 caveat with regard to government and university restrictions in place at this time).*

Day 1 will also be online live-streamed for off-site delegates and presenters.*

Days 2 and 3 will be held entirely online.

PROGRAM: MONDAY, 7 DECEMBER

Time Zone: Australian Eastern Daylight Time (AEDT)

Format, Day 1: Face-to-face/on-site at UNSW Sydney (optional), as well as live-streamed online for off-site delegates

AEDT	
9:20 – 10:20	*Arrival and registration for onsite delegates*
10:20	**WELCOME AND OPENING REMARKS** John Piggott AO, CEPAR Director, Scientia Professor of Economics, UNSW Business School *Venue: Colombo Theatre A (LG03) & live-stream*
10:25 – 12:20	**SESSION 1: IMPACT OF COVID-19** *Chair: Hazel Bateman, UNSW Sydney, CEPAR* *Venue: Colombo Theatre A (LG03)* & live-stream Portfolio Management for Insurers and Pension Funds and COVID-19: Targeting Volatility for Equity, Balanced and Target-date Funds with Leverage Constraints Michael Sherris (UNSW Sydney, CEPAR) Portfolio Choice for Retirement Savings: The Impact of Market Volatility During the COVID-19 Pandemic Shang Wu (Aware Super) Determinants of Early-Access to Superannuation: Lessons from the Australian Government response to the COVID-19 Pandemic Ben Newell (UNSW Psychology) Retirement Investment and Drawdown Decisions During Crises: Australian Evidence Paul Gerrans (University of Western Australia)
12:20 – 13:30	*Lunch Break*

13:30 – 15:00

CONCURRENT SESSION 2

Session 2A

RETIREMENT SAVING AND INVESTING

Chair: George Kudrna

Venue: Colombo A (LG03) & live-stream

Scenarios-Based Portfolio Construction: From Theory to Practice

David Bell (Conexus Institute)

Wealth and Homeownership in Germany and Australia: The Role of Tax and Retirement Income Policy

George Kudrna (UNSW Sydney, CEPAR)

More Than a Safety Net: The Role of the Age Pension in Australia's Retirement Income System

Brendan Coates (Grattan Institute)

Session 2B

RETIREMENT OUTCOMES

Chair: Katja Hanewald

Venue: Colombo B (LG04) & live-stream

Optimal Strategies for Retirees in Australia with Realistic Risk Transfer

Adam Butt (ANU)

Using the Adjusted Pension Multiple to Measure Retirement Outcomes

Aaron Minney (Challenger)

Follow the Rating? How Mandatory Information Disclosure Affect Retirement Income Product Choices

Inka Eberhardt (UNSW Sydney, CEPAR)

15:00 – 15:30

Afternoon Tea Break

Venue: Colombo Foyer

15:30 – 17:00

CONCURRENT SESSION 3

Session 3A

IMPACT OF COVID-19 II

Chair: Hazel Bateman

Venue: Colombo A (LG03) & live-stream

Impact of COVID Early Release Payments on Retirement Outcomes, Fund Liquidity and Investment Allocations

Ross Clare (ASFA)

Session 3B

HOUSING WEALTH AND HOME EQUITY RELEASE

Chair: David Bell

Venue: Colombo B (LG04) & live-stream

Income-Poor but Asset-Rich: Effects of Housing Wealth on Older Adults' Healthcare Utilization

Michelle Tran (University of Queensland)

	Effects of COVID-19 Early Release of Pension Funds: The Case of Chile Miguel Lorca (UNSW Sydney)	Demand for Reverse Mortgages: The Role of Mental Accounting and Choice Bracketing Tin Long Ho (UNSW Sydney, CEPAR)
	How Older Australians are Coping with the Financial Impact of COVID-19 - Evidence from the Life in Australia Survey Diana Warren (Australian institute of Family Studies)	Explaining Annuity Puzzle in the Australian Context Estelle Liu (Aware Super), Paddy McCrudden (Magellan Financial Group), and Michael Berg (Rice Warner)

PROGRAM: TUESDAY, 8 DECEMBER

Time Zone: Australian Eastern Daylight Time (AEDT)

Format, Day 2: All online

AEDT			
8:25	**Opening remarks** Hazel Bateman, CEPAR Deputy Director, School of Risk & Actuarial Studies, UNSW Business School		
8:30 – 10:00	**CONCURRENT SESSION 4**		
	Session 4A **INVESTMENT STRATEGIES** Chair: Katja Hanewald	**Session 4B** **RETIREMENT SAVINGS** Chair: Inka Eberhardt	**Session 4C** **PENSION AND FISCAL POLICIES** Chair: George Kudrna
8:30	Do Pension Funds Manage Cash Efficiently Sidita Hasa (Institute of Financial Analysis, University of Neuchatel, Switzerland) *(CET 10.30pm, Monday 7th, Switzerland)*	Behavioural Responses to Tax Subsidies on Contributions to Individual Retirement Accounts Todd Morris (Max Planck Insitute for Social Law and Social Policy, Germany) *(CET 10.30pm, Monday 7th, Germany)*	Collective Savings Pension Policy in an Economy with Heterogeneity and Informality Agustin Arias (Central Bank of Chile, Chile) *(CLST 6.30pm, Monday 7th, Santiago, Chile)*
9:00	Investment Governance and Investing in Illiquid Assets Stefano Cavaglia (Virtual Asset Management, CFA Institute), Reece Zachariah (CFA Institute, Department of Premier and Cabinet)	Is More Information Always a Good Idea? The Role of Pension Calculators in Influencing Savings Behaviour: The Case of Chile. Ricky Kanabar (University of Bath, UK) *(GMT 10.00pm, Monday 7th, UK)*	Age-Dependent Risk Aversion: Re-evaluating Fiscal Policy Impacts of Population Ageing Phitawat Poonpolkul (CAMA, ANU, CEPAR)
9:30	Industry Affiliation and the Value of Portfolio Choice	Breaking the Commitment Device: The Effect of Home Equity Withdrawal on	Age-Dependent Taxation in Australia

	Joachim Inkmann (University of Melbourne)	Consumption, Saving, and Welfare Patrick Moran (University of Copenhagen, Denmark) *(CET 11.30pm, Monday 7th, Denmark)*	David Rodgers (UNSW Sydney, CEPAR)
10:00 – 10:30	*Break*		
	SESSION 5: PANEL DISCUSSION **RETIREMENT INCOME REVIEW IN AUSTRALIA** *Chair: Marc de Cure, Adjunct Professor UNSW Business School, CEPAR Advisory Board Chair*		
10:30 – 12:00	*Panel members;* · Deborah Ralston (Professorial Fellow, Monash University) · Deanne Stewart (CEO, Aware Super) · Joshua Funder (CEO, Household Capital Pty Ltd) · John Piggott (Director, CEPAR, UNSW Sydney)		
12:00 – 13:00	*Break*		
13:00 – 15:00	**CONCURRENT SESSION 6**		
	Session 6A **MORTALITY** Chair: Hazel Bateman	**Session 6B** **AGEING** Chair: Inka Eberhardt	
13:00	Modelling Life Tables with Advanced Ages: An Extreme Value Theory Approach Fei Huang (UNSW Sydney)	The Support of Entrepreneurship to Ageing Economic Independence Muliadi Widjaja (University of Indonesia, Indonesia) *(WIB 9.00am, Tuesday 8th, Jakarta, Indonesia)*	
13:30	Stacked Regression Ensemble Learning for Mortality Forecasting	Intrinsic Capacity: Validation of a New Who Concept for Healthy Ageing	

	Salvatory Kessy (UNSW Sydney, CEPAR)	Katja Hanewald (UNSW Sydney), Yafei Si (CEPAR, UNSW Sydney)
14:00	Time is the Bottom Line David Williams (mylongevity.com.au)	Does Retirement Lead to Life Satisfaction? Causal Evidence from Fixed Effect Instrumental Variable Models Ha Nguyen (Telethon Kids Institute, University of Western Australia)
14:30		Effects of Means Testing the Age Pension on Populations with Self-Control Preferences Daniel Wheadon (UNSW Sydney, CEPAR)

PROGRAM: WEDNESDAY, 9 DECEMBER

Time Zone: Australian Eastern Daylight Time (AEDT)

Format, Day 3: All online

AEDT		
8:25	Opening remarks Hazel Bateman, CEPAR Deputy Director, School of Risk & Acturial Studies, UNSW Business School	
8:30 – 10:00	**SESSION 7: PLENARY** Chair: Hazel Bateman	
8:30	Financial Vulnerability and Retirement Planning: Evidence from Representative Samples of Workers in 16 Countries Gordon Clark, Stefania Innocenti (both University of Oxford, UK) *(GMT 9.30pm, Tuesday 8th, UK)*	
9:00	Motivated Saving: The Impact of Projections on Retirement Saving Susan Thorp (University of Sydney)	
9:30	A Six-Component Integrated Approach to Addressing the Retirement Funding Challenge Robert C. Merton (MIT Sloan School of Management, USA) *(EST 4.30pm, Tuesday 8th, Boston, USA)*	
10:00 – 10:30	*Break*	
10:30 – 12:30	**CONCURRENT SESSION 8**	
	Session 8A **RETIREMENT INCOMES** Chair: David Bell	**Session 8B** **FUNDING CHALLENGES AND DECISIONS** Chair: George Kudrna
10:30	Tontines - Sharing is Caring Vivian Dang, Young Tan (both UniSuper)	Reference-dependent Preferences, Time Inconsistency and Unfunded Pensions Qing Liu (Iowa State University, USA) *(CST 5.30pm, Tuesday 8th, Iowa, USA)*

11:00	Reforming Financial Advice – Providing Data Anthony Asher (UNSW Sydney)	How Effective are Matching Schemes in Enticing Low-Income Earners to Save More for Retirement Cain Polidano (University of Melbourne)
11:30	Optimal Default Retirement Saving Policies: Theory and Evidence from OregonSaves Mingli Zhong (NBER, USA) *(EST 7.30pm, Tuesday 8th, Boston, USA)*	Challenges for Sustaining a Pension Fund: Determinants of Defaulting from a Contributory Pension Scheme in Sri Lanka Weraduwage Indralal De Silva (University of Colombo, Sri Lanka) *(IST 6.00am, Wednesday 9th, Colombo, Sri Lanka)*
12:00	Optimal Portfolio Choice with Longevity and Health Insurance: A Developing Country Context Cheng Wan (UNSW Sydney, CEPAR)	The Impact of Mortgage Brokers on Consumer Preferences and Perceptions Junhao Liu (University of Sydney)
12:30 – 13:30	*Break*	
13:30 – 15:00	**SESSION 9: PLENARY** Chair: Hazel Bateman	
13:30	The Equity of Government Support for Retirement Income David Knox (Mercer)	
14:00	No Free Lunch: Higher Super Means Lower Wages Matt Cowgill (Grattan Institute)	
14:30	Redefining Superannuation - SMSFs, YFYS and other acronyms that will define the next fifteen years Richard Dunn, Michael Rice (Rice Warner)	
15:00	**CLOSING REMARKS**	

SESSION 1: IMPACT OF COVID-19

Portfolio Management for Insurers and Pension Funds and COVID-19: Targeting Volatility for Equity, Balanced and Target-date Funds with Leverage Constraints

Michael Sherris (UNSW Sydney, CEPAR)

Abstract: Insurers and pension funds face the challenges of historically low interest rates and volatility in equity markets, that have been accentuated due to the COVID-19 pandemic. Recent advances in equity portfolio management with a target volatility have been shown to deliver improved on average risk adjusted return, after transaction costs. This paper studies these targeted volatility portfolios in applications to equity, balanced and target-date funds with varying constraints on leverage. Conservative leverage constraints are particularly relevant to pension funds and insurance companies, with more aggressive leverage levels appropriate for alternative investments. We show substantial improvements in fund performance for differing leverage levels, with the return per unit of risk relatively constant with respect to the leverage constraints. Of most interest to insurers and pensions funds, we find that the highest return per unit of risk is in targeted volatility balanced portfolios with equity and bond allocations. Furthermore, we demonstrate the outperformance of targeted volatility portfolios during the COVID-19 pandemic.

Bio: Michael Sherris is a part time Professor in the School of Risk and Actuarial Studies having retired in 2016. His part time role concentrates on research, research student supervision and mentoring of early career researchers particularly through the ARC Centre of Excellence in Population Ageing Research where he is a Chief Investigator and Director of Industry Engagement. He was Head of Actuarial Studies at UNSW until 2010 having been appointed to UNSW in 1998 to establish the Actuarial Studies program. He is a Fellow of the Institute of Actuaries of Australia, the Institute of Actuaries (UK) and the Society of Actuaries (North America). His research focuses on longevity, health and functional disability risk modelling, long term care insurance and longevity risk management. His research has won a number of awards including the International Actuarial Association Bob Alting von Gesau AFIR Prize, Casualty Actuarial Society (CAS) annual prize for the most valuable contribution to casualty actuarial science published in American Risk and Insurance Association (ARIA) literature, a Geneva Association/IIS Research Program Shin Research Award For Excellence, the Redington Prize of the Society of Actuaries, Best Paper prize for the North American Actuarial Journal and the H M Jackson Memorial Prize of The Institute of Actuaries of Australia. In 2007 he was awarded Australian Actuary of the Year in recognition of his contributions to actuarial research and education both internationally and within Australia.

Portfolio Choice for Retirement Savings: The Impact of Market Volatility During the COVID-19 Pandemic

Shang Wu (Aware Super)

Abstract: This paper studies how DC plan members respond to market volatility by making active investment decisions during the COVID-19 pandemic period. Using administrative data of 21,500 members from a large DC plan in Australia, we analyse the investment option switching behaviours made by members from February to April 2020, during which time equity markets dropped at an unprecedented rate. We find switching behaviour increased significantly and started to be dominated by defensive switches from late February when equity markets started to fall. Around 77% of the switches were defensive in nature, most commonly from a default investment option to cash. We also find that members who are nearing or in retirement, have higher balances or have actively chosen their investment options were more likely to make a switch. Members with greater access to financial advice were less likely to switch their investment options. Using another sample from an online survey undertaken by the same DC plan members, we find that both risk attitudes and the risk level of members' investment portfolio do not explain the decision to switch itself, though risk attitudes have predictive power over which direction a member will switch to. Our findings shed light on the importance of guidance and advice in reassuring members and helping them stay the course during periods of market stress, particularly for pre-retirees and retired members who have reasonable balances and are more engaged.

Bio: Shang Wu is a Senior Investment Analyst in the Investment Strategy team at Aware Super, formally known as First State Super. Shang joined Aware Super in August 2017 and in this time has focused on retirement strategy research including the development of retirement solution for the fund. He is responsible for member outcomes modelling and the collaboration between the fund and academia. Shang also provides research support to the fund's national-wide financial planning network and contribute to the active asset allocation process of the fund. Shang has over 7 years of experience in the retirement strategy research. Prior to joining Aware Super, Shang was a Senior Research Associate at the University of New South Wales where he obtained his PhD in Actuarial Studies. His academic research focuses on financial decision making in retirement. He has published several papers in leading international economic journals. Shang is also an Associate Investigator of the Australian Research Council Centre of Excellence in Population Ageing Research (CEPAR) and is a member of the Retirement Income Working Group of the Actuaries Institute.

Determinants of Early-Access to Superannuation: Lessons from the Australian Government response to the COVID-19 Pandemic

Ben Newell (UNSW Psychology)

Abstract: By mid-August 2020, Australian superannuation fund members had made more than 3 million applications to withdraw retirement savings under the COVID-19 Superannuation Early Release Scheme, supporting more than $30B in payments. The relaxation of conditions for early release of superannuation savings changed a fundamental feature of the Australian retirement savings system. Responses of members to the early release scheme highlight the effectiveness of the standard superannuation preservation rules. Early withdrawals have short-term and long-term consequences for individual members who take payments under the scheme, and for society as a whole. We report results of a survey of over 3,000 members of Cbus, a leading industry fund, who withdrew some or all of their superannuation savings under the COVID-19 early release scheme and match these to responses of 500 otherwise eligible members who did not withdraw. Major findings from the sample of early withdrawers include:

-Surveyed COVID-19 early release scheme applicants expressed urgent short-term need for funds and substantial uncertainty about the long-term consequences of their decision.

-The $10,000 limit both guided and constrained withdrawal amounts.

-Around 25% of surveyed members withdrew almost their entire account balance.

-Immediate financial need (59%) and concerns for future expenditures (27%) were the main reasons members gave for accessing savings.

-Those who had not experienced reduced working hours were more likely to withdraw for future concerns or to protect their savings.

-Around 30% of survey ER applicants were unsure of, or unconcerned about, the long-term consequences of their withdrawal.

-Around 50% of surveyed applicants either underestimated, or didn't estimate, the impact of the withdrawal on their superannuation balance at retirement.

-For the 30-39 age group, a conservative estimate of the average reduction in retirement wealth as a consequence of COVID-19 early release withdrawal is $16,460.

-Members who collected information from Cbus and from other sources, such as news services or social media, were half as likely to decide to withdraw within one day or less than members who used no information sources.

Bio: Ben Newell is Professor of Cognitive Psychology and Deputy Head of the School of Psychology at UNSW Sydney. His research focuses on the cognitive processes underlying judgment, choice and decision-making and the application of this knowledge to environmental, medical, financial and forensic contexts. Ben has worked with industry and government partners on projects including climate change communication, child protection, and retirement wealth-planning. A key theme of much of this work is over-coming the myopic thinking that tends to cloud our judgment when we are making decisions about an uncertain future. Ben is currently Academic Co-Lead of the UNSW Grand Challenge on Thriving in the Anthropocene and is a member of the Academic Advisory Panel of the Behavioural Economics Team of the Australian Government.

Retirement Investment and Drawdown Decisions During Crises: Australian Evidence

Paul Gerrans (University of Western Australia)

Bio: Paul Gerrans is a Professor of Finance at The University of Western Australia. Paul's research focuses on consumer financial decision making, particularly within a retirement savings context, and the role of financial literacy in these decisions. This research has been aided by transaction databases provided by a number of large retirement savings funds. Paul teaches personal finance and financial planning and undertakes related research into financial literacy and financial advice seeking. He has an interest in all aspects of financial literacy with an emphasis on the acquisition of financial literacy by young adults (e.g. undergraduate students) and the interaction of financial literacy and cognitive decline among older adults. Paul has previously been a member of federal government retirement savings advisory bodies, a member of the MoneySmart Teaching Evaluation Steering Committee at the Australian Securities and Investments Commission, and presently is a member of the Super Consumers Australia Research Committee, OECD/INFE Research Committee, and the OECD PISA Expert Group

Session 2A: RETIREMENT SAVING AND INVESTING

Scenarios-Based Portfolio Construction: From Theory to Practice

David Bell (Conexus Institute)

Abstract: The COVID-19 crisis has created heightened uncertainty in many areas including future economic and market outcomes. This challenges current investment decision-making frameworks, which are predominantly based on expected returns. Portfolio managers may be more inclined in the present environment to consider scenarios rather than expectations when making portfolio decisions.

Working within the setting of two market scenarios and two asset classes (cash and equities), we illustrate alternative techniques for incorporating scenarios into portfolio decisions. We use an expected utility framework to identify the opportunity costs of different approaches. We find that an approach which samples from both scenarios maximises expected utility, while other approaches can incur significant utility cost.

We then explore the problems faced by institutional investors to see whether it is practical for them to shift to a scenarios-based portfolio construction approach. They have access to a large menu of assets and may identify more than two scenarios. This results in a far more complex portfolio optimisation problem and goes some way to explaining the anecdotal observation that scenario-based approaches are rarely applied in practice.

Bio: David Bell is the executive director of The Conexus Institute, a recently launched independent research institute focused on improving Australia's retirement system. David is an active researcher (industry and academic) in the areas of retirement, superannuation, investment management, and governance. David recently completed his PhD at UNSW. David's industry career experiences include 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 led the development of MDUF (the Member's Default Utility Function), was a co-founder of financial newsletter Cuffelinks (now Firstlinks), and developed and taught the hedge funds elective at Macquarie University's Applied Finance Centre.

Wealth and Homeownership in Germany and Australia: The Role of Tax and Retirement Income Policy

George Kudrna (UNSW Sydney, CEPAR)

Abstract: Although Germans and Australians have very similar incomes per capita, Australians hold significantly more wealth than Germans. In addition, they typically own their place of residence while in Germany a majority of households are renters. The question is to what extent these differences in wealth levels and patterns are induced by national tax and transfer policies. In order to shed light on this issue, we apply an overlapping generations model with tenure choice where households face labour income and lifespan uncertainty. The model is calibrated to Germany featuring unfunded pension benefits based on individual earnings points accumulated during the working phase and a dual income tax system. Then the Australian tax and pension structures are implemented sequentially in order to distinguish the impact of higher capital taxation as well as means-tested and funded pensions. Our simulation results indicate that the Australian tax and pension design has a dramatic impact on asset levels and structures, explaining more than two thirds of the observed differentials in asset levels and homeownership rates. While capital taxation and means-testing shift the asset structures towards residential properties, the superannuation system increases the overall wealth level

Bio: I am a Senior Research Fellow at the ARC Centre of Excellence in Population Ageing Research (CEPAR), located in the UNSW Business School at the University of New South Wales. I am also affiliated with the Centre for Applied Macroeconomic Analysis (CAMA) and the Global Labor Organization (GLO). My research interests include public economics and policy, pension economics and the economics of population ageing, and applied general equilibrium modelling. I am currently involved in research projects on taxation of private pensions, means testing public pensions, role of housing in an ageing society, economic implications of population ageing and policy reforms in Australia and also Indonesia.

More Than a Safety Net: The Role of the Age Pension in Australia's Retirement Income System

Brendan Coates (Grattan Institute)

Bio: Brendan's research focuses on tax reform, economic and budget policy, retirement incomes and superannuation, housing, transport infrastructure and cities. Before Grattan, Brendan worked as a macro-financial economist with the World Bank in Indonesia and Latin America, and prior to that, he undertook a number of roles with the Australian Treasury in areas such as tax-transfer system reform, financial and commodities markets analysis and macro-economic forecasting, including as part of the Treasury's China Policy Unit. Brendan holds a Masters of International Development Economics from the Australian National University and Bachelors of Commerce and Arts from the University of Melbourne.

Session 2B: RETIREMENT OUTCOMES

Optimal Strategies for Retirees in Australia with Realistic Risk Transfer

Adam Butt (ANU)

Abstract: We investigate optimal investment and drawdown decisions for Australian retirees, allowing for a range of risk transferring options that could be implemented by superannuation funds. Retirees can allocate their wealth between a life annuity, deferred life annuity, and growth and defensive portfolios in an account-based pension. The preferred asset mix varies significantly with balance and home ownership, and preferences as modelled using both loss aversion and constant relative risk aversion utility. We find that strong loss aversion leads to hedging strategies to secure the target consumption, as reflected in high desire for annuities and subsequent asset allocation and drawdown decisions. Desire for annuities also emerges under risk aversion to both smooth consumption and limit its decline after exhaustion of the account-based pension. We also highlight

interactions between the Age Pension and the decisions of Australian retirees. Our results have implications for the design of comprehensive income products for retirement in the Australian market.

Bio: Adam Butt is an Associate Professor and Head of Actuarial Studies at the Australian National University. Adam's research interests focus on superannuation and personal financial decision making, and actuarial education. He has received a number of grants for his projects, including: CSIRO Data 61 funding to investigate superannuation and retirement living standards; and Centre for International Finance and Regulation grants to examine default superannuation arrangements. Adam's research has been published in a number of top-ranked actuarial and other journals including *Insurance: Mathematics and Economics, Annals of Actuarial Science, The Economic Record*, and *Journal of Economic Behaviour & Organisation*.

Using the Adjusted Pension Multiple to Measure Retirement Outcomes

Aaron Minney (Challenger)

Abstract: Designing an appropriate indicator of retirement outcomes is a challenge because of the need for the measure to be both accurate and easy to understand by the average retiree. Recent ideas such as MDUF and GOFI achieve the accuracy requirement but are difficult for the average retiree to understand. This paper presents a simple proposal, the pension multiplier which captures level of income achieved at each future retirement year as a multiple of the government provided social security pension. In Australia with a means-tested age pension, this pension multiplier provides an intuitive measure of retirement income level that is easy for retirees to assess the quality of life offered through such a pension multiplier. By using the average pension multiplier across all future retirement years, we can measure the overall level of retirement income, and at the same time, for each retirement year, we also calculate the potential short-fall from the average pension multiplier. The average short-fall from the average pension multiplier is a good measure of the possible drop in income during retirement. By using these two indicators: average pension multiplier and average short-fall, we demonstrate that some typical irrational draw down strategies can be shown to be undesirable drawdown strategies. The adjusted pension multiplier can be calculated from a robust stochastic model of retirement outcomes. The SUPA model developed by the CSIRO is used to demonstrate the calculation of adjusted pension multiplier and is used to compare different retirement drawdown strategies.

Bio: Aaron is the Head of Retirement Income Research for Challenger. In this role, he is responsible for the development and dissemination of research on investment and portfolio construction strategies to deliver an appropriate income stream to retirees. Aaron has 25 years' experience as an investment strategist and researcher, across a wide range of asset classes. In his previous roles across CFSGAM, IAG and Macquarie, Aaron has been responsible for the evaluation and strategic development of investment capability; portfolio management, asset allocation strategy; and an economic analysis across his career. Aaron is an Honorary Fellow at the Macquarie Applied Finance Centre where he is an adjunct lecturer in Life Cycle Investments. He is a collaborative participant in an ARC-linkage grant by CSIRO and Monash university into the drawdown of savings in retirement. He was previously a member of the advisory committee to first after-tax return performance index for the Australian equity market.

Follow the Rating? How Mandatory Information Disclosure Affect Retirement Income Product Choices

Inka Eberhardt (UNSW Sydney, CEPAR)

Abstract: Voluntary annuitization from defined contribution pension plans is uncommon, and in many countries, retirees self-insure against retirement risks by holding on to and even building up assets. Lack of awareness of retirement income products and their design and financial impact is a key reason for low take-up of annuity products. Using an online discrete choice experiment we test how a Fact Sheet presenting standardised information on key product features - income, risk, access to capital and death benefits - affects stated choices from a menu of annuity, phased withdrawal and bundled retirement income products. Our setting is Australia where retirees can choose how to decumulate their retirement savings. When using the Fact Sheet, participants chose the lifetime annuity and bundled annuity products most often, which is contrary to the actual behaviour of Australian retirees who predominantly take phased withdrawal products. Of five Fact Sheet information items, choices were mostly driven by the Product Rating (a 1-7 rating of protection against a fall in income due to inflation, market and longevity risk) and Average Annual Income. The lifetime annuity and the bundled lifetime annuity/phased withdrawal products were more likely to be chosen where Fact Sheets used graphs and tables to present information, and where the Product Rating is more salient. However perceptions of risk and control were more important to product choices than actual product knowledge or understanding of the Fact Sheet information. Our findings suggest that Fact Sheet information items, especially the prescribed Product Rating and the associated information on inflation, longevity and market risk decisions drive both perceptions and choice of retirement income product and must be carefully designed.

Bio: Inka Eberhardt is a CEPAR Research Fellow, located in the UNSW Business School. She joined the Centre in October 2018. Inka is interested in the interface between behavioral economics and pension systems. She uses field experiments and online surveys to research the effectiveness of pension communication on savings behavior and retirement decisions. The aim of her research is to improve communication and to enable consumers to make better choices.

Session 3A: IMPACT OF COVID-19 II

Impact of COVID Early Release Payments on Retirement Outcomes, Fund Liquidity and Investment Allocations

Ross Clare (ASFA)

Abstract: COVID early release payments from superannuation have had a substantial impact on retirement outcomes and also on fund liquidity and investment allocations. They also have involved a lot of work for superannuation funds. As at 8 November initial applications were 3.3 million and repeat applications were 1.4 million since the inception of the scheme. $35.0 billion paid had been paid since inception. At the individual level withdrawal of up to $20,000 in total by individuals will have a substantial impact on final retirement outcomes, particularly for younger fund members. In many cases individuals will not catch up with additional contributions for the amounts withdrawn. The presentation estimates the typical impact on retirement savings and retirement incomes. Funds also have had to move a significant amount of assets to cash in order to make the payments. While funds have been able to manage their liquidity very effectively, selling assets when equity prices are depressed has implications for the members obtaining early release payments and for the membership of funds more generally. The presentation explores these impacts.

Bio: Ross Clare is Director of Research, Association of Superannuation Funds of Australia (ASFA). Ross Clare joined ASFA in 1996 and has been Director of Research since 2006. 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. He has contributed papers at nearly all of the Colloquiums of Superannuation Researchers that have been held, including the last 25 or so in a row, which must be a record for the Colloquium. 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.

Effects of COVID-19 Early Release of Pension Funds: The Case of Chile

Miguel Lorca (UNSW Sydney)

Abstract: Amid the extraordinary economic effects of COVID-19, some policymakers have turned to retirement savings accounts to support individuals in financial hardship. Given the haste, the long-term impacts and their distribution across the population have scarcely been analysed. Using Monte Carlo simulations on the Chilean Social Protection Survey linked with administrative pension data, this study quantifies the effects of a 10% early release of pension funds. Considering the stipulated minimum and maximum amounts, this policy results in an average withdrawal of 22.78% from individual accounts. Each USD 1 withdrawn brings a 1.66 times higher loss in future retirement savings, reducing estimated monthly life annuity benefits by 7.26%. This policy raises income inadequacy and inequality in retirement: it would take 4.71% higher government expenditure to counteract these effects for retirees aged 65. Given the resulting increased pressure on welfare systems, we explore several alternatives to mitigate these effects and address the current challenges of most defined contribution pension schemes. Enforcing worker pension contributions and eliminating the related tax evasion show the biggest impacts. Providing incentives to delay retirement by at least one year or increasing contributions combined with an intra-generational solidarity component has a slightly lower effect.

Bio: Master and B.A. degree in Economics at the University of Chile and Ph.D. candidate in Economics at University of New South Wales (UNSW), Sydney, Australia. Extensive experience on public sector and academia, with a range of publications in Microeconomics, Labor Market, Pension System and Productivity.

How Older Australians are Coping with the Financial Impact of COVID-19 - Evidence from the Life in Australia Survey

Diana Warren (Australian institute of Family Studies)

Abstract: While the economic impacts of COVID-19 have been felt by Australians across the life course, it has created particular challenges for older Australians. This paper uses data from the Families in Australia Survey to provide insights into the financial impact of COVID-19 on Australians aged 60 and over-the actions taken as a result of these impacts, and their feelings about their current and future financial security. A mixed-methods approach is used, with multivariate analysis examining differences in actions taken as a result of the financial impacts of COVID-19, according to family type, individual and couple-level changes in employment, and reported changes in income, controlling for socio-demographic characteristics. Open text responses about the impact of COVID-19 on the family's employment and financial situation provide additional insights into how financial well-being has been affected. Preliminary results indicate that the COVID-19 crisis has impacted the financial wellbeing of older Australians in a variety of ways. The most common actions taken have been reductions in spending on essential and non-essential items and using savings to pay for everyday expenses. Many older Australians are providing financial assistance to family members, particularly their adult children. Among retirees, actions taken as a result of the financial impact ofCOVID-19 included reducing superannuation drawdowns and applying for the Age Pension and Commonwealth Seniors Health Care Card–actions made possible because of measures introduced as part of the Government stimulus package. Among those who had experienced a reduction in income, there were high levels of concern about their family's current financial situation; and even among those whose income had not changed, many were concerned about their family's future financial situation. Responses to open text questions show that these concerns included reduced superannuation balances, the timing of retirement and concerns about the financial wellbeing of adult children.

Bio: Dr Diana Warren is an economist who joined the Institute as a Research Fellow early in 2014. Her research focuses on the application of longitudinal data analysis for complex survey data, particularly using the data from the Longitudinal Study of Australian Children (LSAC) and the Household Income and Labour Dynamics in Australia (HILDA) Survey. Her main research interests are economics of education and labour economics. Prior to joining AIFS, Diana worked as a Research Fellow at the Melbourne Institute of Applied Economic and Social Research at the University of Melbourne, where her research work focused mainly on retirement decision-making and, more recently, early childhood education.

Session 3B: HOUSING WEALTH AND HOME EQUITY RELEASE

Income-Poor but Asset-Rich: Effects of Housing Wealth on Older Adults' Healthcare Utilization

Michelle Tran (University of Queensland)

Abstract: Do wealthier individuals use more healthcare services than those less affluent? We investigate this question by exploiting the booms and busts in the U.S. housing market – a natural experiment that generated considerable gains and losses for homeowners. We estimate the effect of wealth on older adults' healthcare utilization using the Instrumental Variables (IVs) approach with the county - year variations in house prices to construct an instrument. Using data from the 1996-2016 Health and Retirement Study (HRS), we find that an increase in wealth increases the use of medical treatment such as prescription drugs, outpatient surgery, and dental services. On the other hand, we do not find evidence of wealth effects on hospital admission. At the intensive margin, the number of doctor visits increases in response to positive wealth shock, but there is no significant effect on the number of nights in hospital. Overall, we find consistent evidence with wealth effect literature that wealthier individuals consume more health services. However, this change in healthcare utilization is not a result of the depreciation in health.

Bio: My (Michelle) Tran is a PhD candidate at School of Economics, University of Queensland (UQ). Michelle's research interest includes Health Economics, Economics of Education and Applied Econometrics. Michelle completed her Bachelor of Economics degree with First Class Honours at the University of Queensland in 2017. Her research paper, completed as part of the degree, investigates the role of performances and gender in the choice of STEM subjects, university degrees and occupations. In 2018, she started a 4-year PhD program working on the project "Economics of Aging, Health Outcomes and Workforce Planning". Michelle's doctoral research aims at establishing causal effects of family's health, economic resources and health policies on older adults' health and healthcare utilization.

Demand for Reverse Mortgages: The Role of Mental Accounting and Choice Bracketing

Tin Long Ho (UNSW Sydney, CEPAR)

Abstract: Australian households hold a large part of their wealth in housing. Reverse mortgages allow households to access this wealth without having to sell their house and move. Economic theory suggests that these products should be popular, but reverse mortgage markets are small internationally. Using an online survey administered to a sample of 1,000 Australian homeowners aged 60-80, we explore the role of behavioral factors – specifically mental accounting and narrow choice bracketing – as an explanation for this 'reverse mortgage puzzle'. 43% of our sample state that they would use a reverse mortgage on average of 13% of their housing wealth, with the proportion of housing assets used greatest in the treatment designed to address mental accounting over the use of different components of the household portfolio to finance retirement. We also find non-housing wealth, non-retired participants, perception of using housing wealth for retirement financial planning and subjective COVID-19 impact are associated with the stated demand for a reverse mortgage. This research provides new evidence about how to address the behavioral barriers to the use of reverse mortgages to finance retirement.

Bio: Tin Long Ho is an Associate of Institute of Actuaries of Australia and a Scientia PhD candidate from the School of Risk and Actuarial Studies of UNSW. His research focuses on the optimal retirement financial decisions of older households and the design of retirement financial products including long-term care insurance and reverse mortgages. He completed his Bachelor (Honours) Degree from the University of Melbourne.

Explaining Annuity Puzzle in the Australian Context

Estelle Liu (Aware Super), Paddy McCrudden (Magellan Financial Group), and Michael Berg (Rice Warner)

Abstract: The aim of the research is to contribute to the explanation of the annuity puzzle in the Australian context. This research investigates why the actual demand on annuities has been lower than what the theory suggests with the presence of Age Pension and retirees' preference for accessing liquidity when alive and leaving bequest upon death. The research utilises stochastic modelling of retirement outcomes and assesses the outcomes using the member default utility function (MDUF) framework and its modified version to account for retirees' needs for liquidity when alive and varying strength of residual benefit motive. A range of life annuities products and strategies considered include immediate life annuities purchased at retirement, deferred life annuities and deferral purchase of life annuities in later retirement. The research derives optimal annuitisation ratios considering the range of life annuities products and strategies with and without liquidity constraints and for a range of members' balances, marital status and homeownerships. The optimal annuitisation ratios are also derived considering alternative drawdown behaviours from members including the following the average retirees' drawdown levels suggested by member data, the statutory minimum drawdown rules, targeting consistent income streams and following 'optimal' drawdown strategies. The research also investigates retirees' revealed preferences over liquidity/bequest by comparing actual demand to derived optimal annuitisation ratios. The preliminary results of the research suggests Australian retirees have relatively high implied preferences of liquidity/accessible capital and bequest. This will have important implications to the design of retirement solutions for Australian retirees that are likely to add value to members retirement outcomes and be successful considering members' take up.

Bios:

Estelle Liu is Manager, Actuarial Practice, at Aware Super. Estelle joined Aware Super (formally First State Super) as the Actuarial Practice Lead in August 2020. Estelle is specialized in retirement solutions, superannuation and investment matters and her prior experiences include retirement solutions design, member outcome assessments, investment strategies, member benefit projections and disclosure. Prior to join Aware Super, Estelle was a consultant at Rice Warner and prior to that a quantitative analyst at Mine Super. Estelle is a Fellow of the Institute of Actuaries of Australia (FIAA) and a Chartered Enterprise Risk Actuary (CERA). Estelle is currently the Convenor of the Actuaries Institute's Superannuation Projection and Disclosure Sub-committee.

Paddy McCrudden is Head of Retirement Solutions and Data Science, at Magellan Financial Group. Paddy joined Magellan in 2017 as the Head of Retirement Solutions and Data Science. Before that, Paddy worked for 16 years at BlackRock. From 2015 to 2017, Paddy was based in New York where he led a team building quantitative models for global equities and worked as a lead strategist for active equities. Between 2010 and 2015, Paddy was the head of portfolio management for Australian equities based in Sydney, overseeing index, active and long-short funds. Between 2001 and 2010, Paddy was a portfolio manager and trader in a team responsible for multi-asset portfolios. Prior to the finance industry, Paddy worked as a lecturer in pure mathematics at McGill University in Québec and Macquarie University in Sydney. Paddy earned a CFA in 2005 and holds a Bachelor of Science (hons) from Sydney University and a Ph.D. in pure mathematics from Macquarie University.

Michael Berg is Senior Consultant, at Rice Warner. Michael joined Rice Warner as a Senior Consultant in January 2014. He has over 20 years' global experience in advising on a wide range of superannuation and investment issues. Michael brings a strong focus on understanding what decisions need to be made, and helping clients to use financial models combined with practical insights to help make these decisions. Previous roles include being a Senior Manager at PwC and a Partner at Lane Clark & Peacock, a leading UK actuarial firm. His experience includes numerous high impact assignments in a wide range of areas including mergers & acquisitions, investment strategy, defined benefit funding, investment risk modelling, retirement income product design and reviews of significant service providers. Michael holds a Masters of Applied Finance from Macquarie University and is a Fellow of the Institute of Actuaries of Australia, a Fellow of the Faculty of Actuaries and a CFA Charter Holder.

Session 4A: INVESTMENT STRATEGIES

Do Pension Funds Manage Cash Efficiently

Sidita Hasa (Institute of Financial Analysis, University of Neuchatel, Switzerland)

Abstract: Using unexplored data on Swiss pension funds, we study whether pension funds manage their cash efficiently. While a share of cash is held to meet certain operational and investment needs, the remaining is accumulated from past activity and slowly invested. Most of the variation observed in pension fund cash holdings is, however, attributable to pension fund-specific time-invariant factors rather than to differences in pension funds' needs. We estimate that pension funds with excessive cash holdings hold an average of 8.4% of total assets in excess cash. Investing this excess cash in a representative portfolio of assets could translate into an additional expected annual return of 30 basis points. Furthermore, we show that pension funds in a deccumulation phase, as well as large pension funds, are more efficient in managing their cash and that the introduction of negative interest rates by the Swiss National Bank triggered a systematic reduction in pension fund cash holdings.

Bio: I am Sidita Hasa and I come from Greece. I have a Bachelor in Finance and Accounting from Athens University of Economics and Business. After completing my bachelor, I came in Switzerland and I worked as a scientific collaborator at the Federal Office of Statistics for about six months. Then, I did a Master in Finance at the University of Neuchatel in Switzerland and started my PhD right after. My research is basically focused on Swiss pension funds and their asset allocation.

Investment Governance and Investing in Illiquid Assets

Stefano Cavaglia (Virtual Asset Management, CFA Institute), Reece Zachariah (CFA Institute, Department of Premier and Cabinet)

Abstract: In Australia the recent COVID-19 crisis produced a unique combination of events which generated concerns around super fund liquidity. Traditional market stresses (falling markets, reduced liquidity, a falling currency and heightened member switching activity) were accompanied by a spike in unemployment (resulting in lower contributions), early release of super provisions (which permitted withdrawals for those experiencing financial stress), and impairment to some unlisted assets unaffected by previous crises (for example airports and office space). While all cashflow demands were met by super funds this is a reminder that investing in illiquid assets creates a range of challenges for trustees of pooled savings vehicles (PSV's). In a crisis environment the first order issue is the ability to meet cashflow liquidity demands. Additionally, there are a range of second-order issues, namely the quality of the remaining portfolio, the performance impact of raising and restoring portfolio quality, and unit price inequalities associated with stale pricing effects. These second order issues often receive less attention but are undoubtedly important; they are also complex and subjective. This presentation details a range of interactive models developed to assist trustees of PSV's determine an appropriate portfolio exposure to illiquid assets. We consider and frame issues such as portfolio quality, maximum cost to meet liquidity demands and restore portfolio quality, and the tolerance for unit price inequity. Each of these issues is packaged as a governance constraint. These constraints are then used to imply maximum level and characteristics of illiquid assets. We also explore which of these constraints proves to be the binding constraint. Finally, we consider appropriate practice for out-of-cycle valuations, whereby unlisted assets are reviewed outside of their regular valuation schedule to manage stale pricing effects.

Bio: Reece is a senior associate with the Department of Premier and Cabinet, working in commercial projects. He has had experience in consulting, investment management and private banking. He completed a Bachelor of Commerce at the University of Sydney and is currently a 2020 Level III CFA Candidate.

Industry Affiliation and the Value of Portfolio Choice

Joachim Inkmann (University of Melbourne)

Abstract: In the presence of inter-industry wage differentials, the value of portfolio choice varies across otherwise identical households employed in different industries. Using 30 years of data, I solve a dynamic portfolio choice model for households in 72 industries and investigate the impact of the joint distribution of industry-specific earnings growth and stock return on certainty equivalent consumption. I find that inequality in certainty equivalent consumption mirrors inequality in initial earnings. Substantial cross-sectional heterogeneity in the value of portfolio choice is explained by variation in the covariance structure of earnings growth and stock return and cyclical skewness in cumulative earnings growth.

Bio: Joachim Inkmann is Senior Lecturer in the Department of Finance at the University of Melbourne. Joachim currently works on topics of household finance in the intersection of labour economics and finance. He is particularly interested in life-cycle savings and portfolio choice decisions of households. His work has been published in leading academic journals including the Review of Financial Studies, the Journal of Econometrics and the Journal of Risk and Insurance. Joachim currently teaches PhD-level subjects in investment theory, household finance and empirical finance at the University of Melbourne. Joachim is a Fellow of the Network for Studies on Pensions, Aging and Retirement (Netspar). He previously held academic positions at Tilburg University and the London School of Economics and Political Science. After graduating with a doctoral degree in economics from the University of Konstanz, he worked as an investment consultant for defined benefit pension plans at Siemens Financial Services in Munich before returning to academia.

Session 4B: RETIREMENT SAVINGS

Behavioural Responses to Tax Subsidies on Contributions to Individual Retirement Accounts

Todd Morris (Max Planck Insitute for Social Law and Social Policy, Germany)

Abstract: As the population ages, governments are using tax incentives to boost private retirement savings, but such incentives may harm public finances if they have little impact on net savings. We shed light on this tradeoff in the context of contributions to individual retirement accounts, exploiting large and abrupt changes in limits on tax-preferred contributions in Australia. Using tax-register data, we show that higher limits increase the retirement contributions of high earners. However, as around two-thirds of this response is financed by positive income responses, with little crowding out of other savings, there is no significant cost to public finances.

Bio: Todd Morris is a postdoctoral research fellow in the Max Planck Society at the Munich Center for the Economics of Aging. Todd is an applied microeconomist and his research largely focuses on the economics of aging. He will present joint research on income and saving responses to changes in the cap on tax-preferred contributions to superannuation in Australia. During his PhD at the University of Melbourne (completed last year), Todd worked on the impact of raising women's eligibility age for Australia's Age Pension on labor supply and inequalities in household income. For his paper "The Unequal Burden of Retirement Reform: Evidence from Australia", Todd received the award for the best presentation by a PhD student at the 2018 Colloquium.

Is More Information Always a Good Idea? The Role of Pension Calculators in Influencing Savings Behaviour: The Case of Chile.

Ricky Kanabar (University of Bath, UK)

Abstract: Using a unique and rich large-scale dataset from the Chilean Superintendence of Pensions we show the effects of giving personalized pension projections to members of a DC pension scheme in Chile. We estimate the impact that personalized information has on individual's future savings and investment decisions using appropriate evaluation methods. We differentiate between distinct types of users based on pre-treatment saving behaviour and also by their behaviour when using the simulator, as we can identify the way in which users modify particular assumptions such as future voluntary savings, investment decisions including equity exposure and retirement age. Early findings suggest personalised forecasts can affect saving behaviour in the short and medium term; albeit we find significant heterogeneity in the magnitude of these effects. Our findings have a number of important implications for policymakers and industry professionals seeking to improve pension communication and boost pension saving among working age individuals.

Bio: Ricky Kanabar is an assistant professor of Social Policy at the University of Bath. His research interests cover ageing, health, inequality and social mobility. He is more generally interested in the application of microeconometric methods to public policy issues. Alongside his academic research, Ricky has contributed to multiple government reports in the UK and acted as a consultant to the OECD.

Breaking the Commitment Device: The Effect of Home Equity Withdrawal on Consumption, Saving, and Welfare

Patrick Moran (University of Copenhagen, Denmark)

Abstract: Financial innovation and deregulation have given households an unprecedented ability to access home equity. To what extent is this beneficial? On one hand, access to home equity enables households to better smooth consumption and self-insure against risk. On the other hand, if housing acts as a savings commitment device, then more liquidity may weaken commitment. In this paper, we evaluate the costs and benefits of greater access to home equity by estimating a model that captures these two opposing channels. Model estimates are validated using a reform that abruptly legalized home equity withdrawal in Texas. In both the data and the model, we observe a 3% increase in nondurable consumption following the reform. According to our estimates, weakened commitment and consumption smoothing each account for half of the observed increase in consumption. Finally, we find that the cost of weakened commitment dominates and that welfare has declined due to the introduction of home equity withdrawal.

Bio: Patrick Moran is an Assistant Professor of Economics at the University of Copenhagen. His research spans macroeconomics, household finance, and applied microeconomics, with a focus on the distributional and behavioral consequences of financial innovation and economic policy. His research has been published in the Journal of Monetary Economics and International Economic Review. Patrick is a member of the Center for Economic Behavior and Inequality (CEBI) and a visiting scholar at the Institute for Fiscal Studies (IFS). He has held previous positions at the Federal Reserve Board, Norges Bank, and Bank of England. He received a PhD and MPhil from the University of Oxford and a BA from the University of Chicago.

Session 4C: PENSION AND FISCAL POLICIES

Collective Savings Pension Policy in an Economy with Heterogeneity and Informality

Agustin Arias (Central Bank of Chile, Chile)

Abstract: Demographic changes and social demands put increasing pressure on existing pension regimes, especially in developing economies. We examine the effects of alternative pension policies in a macroeconomic model with heterogeneous worker skills and an informal labor market. We compare fully funded individual defined contribution (IDC) and unfunded pay-as-you-go (PAYG) schemes with a collective defined contribution (CDC) scheme. The latter consists of a fully funded pension plan under which contributions of workers from a given cohort are invested in capital markets and repaid to that cohort upon retirement; its collective nature arises from an intragenerational progressive redistributive rule. Our quantitative results show that the CDC scheme has similar macroeconomic effects as an IDC plan, including a moderate positive effect on the formal labor market, aggregate savings, and output. Like the IDC plan, the CDC scheme's solvency is robust to population ageing, the main shortcoming of unfunded PAYG systems. Critical for the success of the CDC scheme is conditioning benefits on contributions, in order to incentivize formal labor status for lower-income households, those with more participation in informality. We conclude that a CDC policy stands as an economically sustainable and politically viable alternative for countries with significant labor informality and income inequality.

Bio: My name is Agustín Arias, I work as a senior economist at the modelling department of the Central Bank of Chile since 2015. I've been also teaching bayesian econometrics at the Universidad Católica de Chile for the last two years. Previously, I did my PhD in economics at the University of Mannheim, working on macroeconomics and on expectations fromation more specifically. While I continue to work on those topics, more recently I began working with OLG models which I used to study pension systems and migration issues.

Age-Dependent Risk Aversion: Re-evaluating Fiscal Policy Impacts of Population Ageing

Phitawat Poonpolkul (CAMA, ANU, CEPAR)

Abstract: This study revisits optimal fiscal policies in response to population ageing by introducing an age-dependent increasing risk aversion assumption into an OLG model with risk-sensitive preferences. Under this specification, the policy evaluation factors in the welfare cost of policy-induced uncertainties and suggests that, based on future generations' welfare, financing population ageing by either reducing social security benefits or extending the retirement age may not be as strongly preferred over raising the payroll tax rate as prior studies have suggested. Varying risk aversion also emphasises the role of precautionary savings that causes individuals to respond slightly differently to changes in demographic structures and price variables. This, in turn, influences the redistribution of life-cycle variables and transition dynamics of aggregate variables.

Bio: Phitawat Poonpolkul is a PhD candidate in economics at the Centre of Applied Macroeconomics Analysis (CAMA) in Crawford School of Public Policy. He is also an ARC Centre of Excellence in Population Ageing Research (CEPAR) affiliated research student. His primary research interests are on macroeconomics and demographic changes. In particular, he researches on overlapping generation models to explain the implications of demographic changes on the macroeconomy in aspects of asset allocation, monetary policy, and fiscal sustainability. Prior to his study, he has more than four years of experience as a senior economist at the central bank of Thailand.

Age-Dependent Taxation in Australia

David Rodgers (UNSW Sydney, CEPAR)

Abstract: The idea of taxation that differs by age has a long history in the public finance literature but there remains little explicit age dependence in the tax systems of most advanced countries.1 In Australia, there is a tax break for older workers, but it is small relative to average earnings (ATO (2020)). The paper asks what the optimal set of age-dependent income tax rates are in Australia. As part of the same question, it seeks to measure the welfare gains that could be possible from switching to age-dependent taxation. To answer these questions it builds, and runs experiments with, an overlapping generations model of the Australian economy. These questions have been examined in the context of the tax systems of other countries, for example, the United States. Welfare gains from shifting to age-dependent taxation are large in most models, for example, Karabarbounis (2016) and Weinzierl (2011). At least one model suggests more limited gains, when the period of transition to new tax arrangements is taken into account (Heathcote et al. (2017)). The mechanisms underlying welfare improvements from age-dependent taxation can be classed into two broad strands. The first works through the insurance implicit in the redistribution provided by tax systems. Tax and transfer systems provide insurance against the labour income risk that household face. Making taxes age-dependent means that the degree of insurance can vary across the lifecycle, matching the changing amount of labour income risk at different ages. This is the mechanism emphasised by Weinzierl (2011). The other key mechanism is the standard efficiency argument for taxation: labour income taxes distort labour supply decisions, so tax should be higher for those less likely to respond. There is a significant amount of evidence that labour supply elasticities differ by age (Keane (2011)). This is the mechanism emphasised by Gervais (2012) and Karabarbounis (2016).

Bio: David Rodgers is studying for a PhD in economics at the University of New South Wales, where he is affiliated with the School of Economics and CEPAR. His PhD research is on the macroeconomic consequences of population ageing. David has worked as an economist at the Reserve Bank of Australia and the Australian Prudential Regulation Authority, and in credit risk and stress testing roles at CBA and HSBC.

SESSION 5: PANEL DISCUSSION

RETIREMENT INCOME REVIEW IN AUSTRALIA

Chair: Marc de Cure, Adjunct Professor UNSW Business School, CEPAR Advisory Board Chair

Panel members;

Deborah Ralston, Professorial Fellow, Monash University

Dr Deborah Ralston is a Professorial Fellow, with over 25 years of board level experience across commercial and public sectors with particular experience in the banking, superannuation, and education industries. She was a panel member of the Retirement Income Review in Australia. She is currently a Reserve Bank of Australia Payments System Board Member, and was recently Chair of the SMSF Association. In 2018 she was appointed to the Comprehensive Income Products for Retirement (CIPRs) Framework Advisory Committee. She was also the inaugural chair of ASIC's Digital Finance Advisory Committee and is a member of the YBF Fintech Hub Advisory Board. From 2004 to 2018 she was a non-executive Director of ASX-listed company, Mortgage Choice. From 2009 to 2015 she was the Executive Director of the Australian Centre for Financial Studies, in her role as a Professor of Finance with the Monash University Business School. She was the Principal Investigator of the CSIRO-Monash Superannuation Research Cluster. Prior to her engagement at Monash University, she was Pro Vice-Chancellor of Business, Law and Information Sciences at the University of Canberra, and prior to that Dean of Business at the University of the Sunshine Coast. She holds a Doctor of Philosophy in financial regulation, and a Master of Economics in small business finance. She is also a Fellow of CPA Australia (FCPA) and the Australian Institute of Company Directors (FAICD). Deborah has taught in the areas of economics, corporate finance, credit risk management, financial statement analysis and financial institutions management. She has published in a range of journals including the Journal of Banking and Finance, the Journal of International Financial Markets Institutions and Money, the Economic Record and is a co-author of the text Financial Institutions Management.

Deanne Stewart, CEO, Aware Super

As one of Australia's largest super funds, Deanne has led Aware Super's drive to be a 'Force for Good' through its responsible investment philosophy and focus on providing its members with the best guidance and advice for retirement. Deanne has led the integration of Aware Super's financial planning business Aware Financial Services Australia Limited; the successful merger with Victorian-based super fund VicSuper, and the launch of the Fund's new brand, Aware Super. In 2019, Deanne was also honoured as a Workplace Gender Equality Agency Pay Equity Ambassador. An experienced financial services industry leader, Deanne is passionate in her belief that a strong culture and clearly defined purpose drives business success. Before joining Aware Super, Deanne was Chief Executive Officer of MetLife Australia. Before this she held senior roles within BT Financial Group including as General Manager for Superannuation, Marketing and Direct Channels. Deanne has more than 25 years' leadership experience in financial services in superannuation, wealth and insurance sectors in Australia and internationally. This includes time as Managing Director with Merrill Lynch Investment management in New York, and as an Engagement Manager with McKinsey and Company in London. Deanne is a graduate from the University of NSW with a degree in Commerce (Finance and Marketing). Deanne also holds an MBA from the Yale School of Management in the United States as a Fulbright Scholar.

Joshua Funder, CEO, Household Capital Pty Ltd

Josh Funder is CEO and Managing Director of Household Capital. Prior to founding the company in 2016, he was a director of Celladon Inc (NASDAQ: CLDN) and spent over a decade as a partner at GBS, Australia's largest venture funds management firm. Josh has served as chairman and director of US and Australian companies including Peplin (ASX: PLI) and Spinifex Inc and is a winner of the AVCAL early stage investment award. He previously worked at Infinity Inc (NASDAQ: INFI) in Boston, and at the Boston Consulting Group in San Francisco. Working with the Clinton Foundation HIV/AIDS Initiative, Josh helped successfully negotiate reduced prices for anti-retrovirals and initiate pharmaceutical supplies across eastern and southern Africa. Josh is 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. He is also the author of the novel, Watson's Pier (MUP 2015). Joshua earned B.Sc. and LL.B. degrees at Melbourne University, an LL.M. degree at the London School of Economics and a D.Phil in intellectual property for biotechnology from Oxford University, where he studied as a Rhodes Scholar.

John Piggott (Director, CEPAR, UNSW Sydney)

John Piggott AO FASSA is Director of the Australian Research Council Centre of Excellence in Population Ageing Research (CEPAR) at the University of New South Wales, 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 leading international economics and actuarial academic journals. Internationally, Professor Piggott worked with the Japanese government for nearly a decade from 1999 on pension and population ageing issues. In 2004, he was tasked with evaluating World Bank assistance on pension reform in the Asian region for the Bank's Operations Evaluation Department. He has been Visiting Professor at Zhejiang University in China since 2007, and from 2008-2010 was Visiting Scholar at the Wharton School of Business. In 2018, he was awarded a Rockefeller Residency to undertake research into ageing and inequality in Asia. Professor Piggott was appointed co-chair of the Think20 (T20) Task Force on Aging Population during Japan's G20 Presidency in 2019, and is a Commissioner on the US National Academy of Medicine's International Commission on Creating a Global Roadmap for Healthy Longevity. At a national level, he was a member of both the Henry Tax Review Panel (2008-2009) and the Australian Ministerial Superannuation Advisory Committee (2007-2011). Scientia Professor Piggott is appointed an Officer of the Order of Australia (AO) in the 2020 Australia Day Honours List for his distinguished service to education, to population ageing research and to public finance policy development.

Session 6A: MORTALITY

Modelling Life Tables with Advanced Ages: An Extreme Value Theory Approach

Fei Huang (UNSW Sydney)

Abstract: We propose a new model–we call it a smoothed threshold life table (STLT) model–to generate life tables incorporating information on advanced ages. Our method allowsa smooth mortality transition from non-extreme to extreme ages, and provides objectivelydetermined highest attained ages with which to close the life table.We proceed by modifying the threshold life table (TLT) model developed by Li, Hardy& Tan (2008). In the TLT model, extreme value theory (EVT) is used to make optimal useof the relatively small number of observations at high ages, while the traditional Gompertzdistribution is assumed for earlier ages. Our novel contribution is to constrain the hazardfunction of the two-part lifetime distribution to becontinuous at the changeover pointbetween the Gompertz and EVT models. This simple but far-reaching modification notonly guarantees a smooth transition from non-extreme to extreme ages, but also providesa better and more robust fit than the TLT model when applied to a high quality Netherlandsdataset. We show that the STLT model also compares favourably with other existingmethods, including the Gompertz-Makeham model, logistic models, Heligman-Pollardmodel and Coale-Kisker method, and that a further generalisation, a time-dependent dynamicsmooth threshold life table (DSTLT) model, generally has superior in-sample fittingas well as better out-of-sample forecasting performance, compared, for example, with theCairns, Blake & Dowd (2006) model.

Bio: Fei joined the School of Risk and Actuarial Studies in July 2020 as a Senior Lecturer. She received her BSc. in Mathematics from Xiamen University in 2009, MPhil in Actuarial Science from the University of Hong Kong in 2011, and PhD in Actuarial Studies from the Australian National University in 2015. Before joining UNSW, she worked at the Australian National University as a Lecturer (2015-2018) and Senior Lecturer (2019-2020). Fei's main research interest lies in predictive modelling and data analytics. She applies machine learning techniques and statistical methods for various actuarial applications, such as mortality modelling and forecasting, macroeconomic and investment forecasting, and general insurance pricing

Stacked Regression Ensemble Learning for Mortality Forecasting

Salvatory Kessy (UNSW Sydney, CEPAR)

Abstract: A stacked regression ensemble is a method that optimally combines different mortality models to improve prediction accuracy. It uses a meta-learner to approximate the optimal combination weights by minimizing the cross-validation criterion. Using 44 populations from the Human Mortality Database, stacking mortality models together decreased the prediction errors. Across the countries and genders, stacking achieved the gains in an average accuracy of 13 − 49% and 20 − 90% over the individual mortality models for males and females, respectively. Our results confirm the superiority of stacked regression ensemble over the individual methods in forecasting the mortality rates.

Bio: Salvatory Kessy is a second-year Ph.D. student in the department of Risk and Actuarial Studies at the University of New South Wales. His research is at the frontier of statistical machine learning and actuarial science. He applies advanced data analytics techniques to human mortality data to increase the prediction accuracy of the mortality rate forecasts. He holds a Master of Science in Actuarial Science from the University of Southampton (UK), and a Bachelor of Science in Actuarial Science from the University of Dar-es-Salaam (Tanzania).

Time is the Bottom Line

David Williams (mylongevity.com.au)

Abstract: Ethical professional personal advisers in all fields – health, superannuation, finance, employment, aged care, estate planning and end of life - want people to make the best of the rest of their life. To achieve this, they and their members/clients need to know what the rest of their life might look like. As people get older, they are increasingly different from each other. Advisers need to identify the important differences that will help each person make good choices about their future. The choices and the trade-offs people make help them commit to their journey. Properly informed and committed clients/members are more likely to stay on track and continue to make good decisions about their future. It all starts with a time discussion. Time is the bottom line. Drawing on interactions with over 180,000 individuals and their advisers, this presentation will explain why, and how this concept can improve all decision making from midlife onwards, in the context of a lifetime longevity plan.

Bio: David Williams founded My Longevity Pty Limited in 2007. It has provided a unique, free longevity information service for over 180,000 users of the SHAPE Analyser at www.mylongevity.com.au. The latest development is the Longevity Plan, available by subscription through the website. After a career as a process scientist and senior executive with CSR, David became a financial planner and Marketing Director of RetireInvest in 1985 (subsequently ASX listed), then CEO of Bridges Financial Services, then General Manager of Diversified Portfolio Managers. David chaired the Standards Australia committee which contributed to publication of the first international profession-based ISO Standard ISO:22222 – Personal Financial Planning (2005). Awarded the FPA Distinguished Service Award, he is a Fellow of the Institute of Company Directors, Associate of FINSIA and a member of the Australian Association of Gerontologists. He has tertiary qualifications in science, securities and financial planning.

Session 6B: AGEING

The Support of Entrepreneurship to Ageing Economic Independence

Muliadi Widjaja (University of Indonesia, Indonesia)

Abstract: On entering retirement age, financially independence is dependent on assets capable of generating income, to support daily necessities. The Act No. 11 of 1992 about Pension Fund, stipulates 55 years as the normal retirement age. In Indonesia, only civil servants are guaranteed retirement income as their pension fund is state regulated, while private or state owned enterprises apply various pension schemes, to help their workers' achieve independency through personal retirement income earning assets. Hence, entrepreneurship has become one of the alternatives for these workers. This article discusses the potential of workers aged above 20 years to become entrepreneurs, using the General measure of Enterprising Tendency (GET) developed first in 1987-1988 by SallyCaird and Mr. Cliff Johnson at Durham University Business School. This article also analyzes the asset portfolios of workers, as they prepare to retire. The assets analyzed in this article comprises of savings or investments in forms of saving account, deposit account, mutual fund, corporate stock, pension fund, insurance, obligation, saving in cooperatives, non-bank financial institutions and community/individual. The tendency of becoming an entrepreneur is determined by entrepreneurial background of the family, participation in entrepreneurship trainings and depth of knowledge regarding entrepreneurship. However, workers' inadequate knowledge of the financial sector becomes an obstacle as regards their future retirement plans, further lowering their financial independence after retirement. Generally, ageing people in Indonesia depends on their children or family, although their entrepreneurial tendency increases their probability of starting an enterprise. Early education for workers as regards preparation for retirement is a necessity,as financial literacy emphasizes the importance of financial independence while preparing for retirement, with various alternatives of income sources including the startup of an enterprise.

Bio: Dr. Muliadi Widjaja received his PhD degree from Georgia State University, USA, in 2008. His background is Economics and Public Finance. Dr. Widjaja's research are in the area of Pension, Social Protection, Ageing, and Public Finance. He has published in several academic journal, such as Palgrave Pension: An International Journal; Journal of Pension Economics and Finance; Asean Economic Bulletin; Indonesian Economic and Finance. As a researcher, Dr. Widjaja has been consultant to BPJS (Indonesian Social Security Agency) for Labor and for Health since 2014. In 2017, he won co-working research grant between Australia and Indonesia for one year with CEPAR UNSW as the host. Dr. Widjaja also has been speakers for many national and international seminars. In 2018, He gave speech for Ministry of Finance, Republic of Indonesia, regarding civil servants pension reform. In 2019, Dr. Widjaja presented his research findings for BPJS Labor seminar. Between 2015-2108, for 4 years in a row, Dr. Widjaja also has been invited as speakers in OECD and Korea OECD Pension Expert Meeting in South Korea. Dr. Widjaja is currently work as an assistant professor at Universitas Indonesia. He is an adjunct researcher for Demographic Institute, Universitas Indonesia and a research associate for Center of Social Protection Studies, Universitas Indonesia.

Intrinsic Capacity: Validation of a New WHO Concept for Healthy Ageing

Katja Hanewald (UNSW Sydney), Yafei Si (CEPAR, UNSW Sydney)

Abstract: In its “World report on ageing and health”, the WHO proposed a public health framework for action on population ageing. Central to the report is a new conceptual model for ‘Healthy Ageing’ that centres on the notion of functional ability: the combination of the ‘Intrinsic Capacity’ of the individual, the environments in which they live, and the interaction between the individual and these environments. Our study aims to validate the structure and predictive value of the Intrinsic Capacity measure suggested by Beard et al. (2019) using nationally representative de-identified data from the China Health and Retirement Longitudinal Study (CHARLS) 2011 and 2013. We apply incrementally related structural equation modelling to identify the construct of Intrinsic Capacity and assess the construct validity and predictive validity of Intrinsic Capacity. We find that the Intrinsic Capacity measure is an accurate composite of physical, social and mental capacities in the Chinese populations, sub-categorized as locomotor, cognitive, psychological, sensory, and vitality. The Intrinsic Capacity measure is sensitive to subtle physical, social and mental capacity changes in over time and provides valuable predictive information on an individual’s subsequent functioning and care dependence. When used longitudinally, the Intrinsic Capacity measure strongly promotes the transition towards a preventative model of medicine.

Bios:

Katja Hanewald is a Senior Lecturer in the School of Risk and Actuarial Studies and the Coordinator of the Actuarial Co-op Program at UNSW Sydney. She is also the Director of Research of the Ageing Asia Research Hub, which is hosted by the ARC Centre of Excellence in Population Ageing Research (CEPAR). Her research addresses risk management and insurance responses to population ageing. Katja has published in all leading international insurance and actuarial journals (including the Journal of Risk and Insurance, Insurance: Mathematics and Economics and the ASTIN Bulletin) and several major economics journals (including the Journal of Economic Behavior & Organization). Her current research investigates optimal retirement financial decisions of older households and the design of retirement financial products such as reverse mortgages, long-term care insurance, and annuities. She teaches risk management courses.

Yafei Si is a research student at ARC Centre of Excellence in Population Ageing Research (CEPAR) and first-year PhD student in Health Economics and Actuarial Studies at the University of New South Wales (UNSW Sydney). He is also a Research Fellow of Global Labor Organization (GLO). His research focuses on public policies and economics related to long-term care, health inequality, health insurance, quality of health care, population aging, and climate change and health. He has a strong record of publications in high impact journals, including The Lancet, Social Science & Medicine, and International Journal for Equity in Health. He was a Postgraduate Fellow at Yale University and obtained his M.Phil. and B. Admin in Health Economics and Policy from Xi’an Jiaotong University.

Does Retirement Lead to Life Satisfaction? Causal Evidence from Fixed Effect Instrumental Variable Models

Ha Nguyen (Telethon Kids Institute, University of Western Australia)

Abstract: This paper explores the causal impact of retirement on life satisfaction by employing a fixed effect instrumental variable model, which exploits the discontinuity in the eligibility ages for state pension to construct an instrument for retirement, and 18 waves of high-quality Australian panel data. It presents robust evidence that retirement improves overall life satisfaction which is subsequently explained by improvements in satisfaction with one's financial situation, free time, health, and participation in local community activities. Furthermore, while the positive wellbeing impact of retirement is sizable initially, it fades after the first 3 years. We find that the improvements in financial satisfaction upon retirement are entirely driven by low-income individuals. The results moreover suggest that failing to adequately account for the endogeneity of retirement would result in a downward-biased estimate of a positive wellbeing impact of retirement. We also explore several potential explanations for our findings.

Bio: Ha Nguyen is a Senior Research Fellow at the Telethon Kids Institute. He also holds an adjunct Senior Research Fellow position at the Centre for Child Health Research, the University of Western Australia. He received his PhD in economics from the Australian National University. His general research interests have focused on applied econometrics, particularly in the fields of health economics and labour economics. He has published widely in both academic and policy outlets, with articles appearing in high-ranking economics journals, including Journal of International Economics, Health Economics, American Journal of Health Economics, Journal of Population Economics, Social Science & Medicine, Labour Economics, IZA Journal of Labor Economics, International Migration Review, Journal of Development Studies and Economic Record. He has collaborated on a number of research projects funded through grants awarded by the Australian Research Council and the Australian Housing and Urban Research Institute.

Effects of Means Testing the Age Pension on Populations with Self-Control Preferences

Daniel Wheadon (UNSW Sydney, CEPAR)

Abstract: There is growing recognition that agents are often subject to different forms of myopia or present bias and fail to allocate their resources over time to optimise their long run utility. This can lead them to save too little for retirement. This may be a justification for government intervention in the form of an age pension or a social security system. However the existence of present bias can also affect the costs and benefits of particular design choices within an age pension system. In this paper, I use an overlapping-generations model to examine how the existence of a particular type of present bias, known as self control preferences, could influence household behaviour when the public age pension is means tested, and how these can affect the costs and benefits of a means-tested the pension compared with a universal pension.

Bio: Daniel Wheadon completed a B.Ec (hons) at the University of New South Wales in 2001 and an M.Ec in 2014. From 2002 to 2017, Daniel worked as a Senior Analyst at the Reserve Bank of Australia in the Economic Analysis, Banking and Payments Policy departments, with responsibilities that included from analysis of commodity prices, financial aggregates, housing and innovations in payments technologies, as well as anti-money laundering compliance and regulatory oversight of Australia's real-time gross settlement (RTGS) system. Daniel is currently a CEPAR PhD candidate at UNSW, researching optimal pension design.

SESSION 7

Financial Vulnerability and Retirement Planning: Evidence from Representative Samples of Workers in 16 Countries

Gordon Clark, Stefania Innocenti (both University of Oxford, UK)

Abstract: As pension systems around the world are under strain, there is an increasing need for employees to prepare for retirement. At the same time, individual and household financial vulnerability is increasing in OECD countries and beyond. This paper documents the long-term effect of liquidity constraints on individual abilities to plan for retirement. Using an original survey based upon representative samples of working individuals in 16 countries, we show that those who experienced shortfalls in earned income, could not save in the past, or suffered from ill health are significantly less likely to make plans to secure their long-term welfare. Our results show that only those who can afford it concentrate on their future financial wellbeing.

Bios:

Gordon L Clark DSc FBA is Professorial Fellow at St Edmund Hall, Oxford University. With expertise in organisation theory, financial decision making, and pensions he has held appointments at the John F. Kennedy School of Government at Harvard University, Harvard Law School, the University of Chicago, Carnegie Mellon University, and Monash University. He has also been a Mellon Fellow at the National Research Council of the US National Academy of Sciences. One aspect of his research seeks to better understand how and why people anticipate financial risks to their long-term pension welfare. Recent papers have focused on who seeks advice and why, experience and financial literacy, those who gamble in DC pension plans, and those who take precautions regarding their future wellbeing. With Stefania Innocenti and Sarah McGill, he has co-led a multi-year research programme on financial behaviour across 18 countries funded by Zurich Insurance. Gordon has also been an employer-nominated trustee on one of Oxford's pension plans for more than 10 years.

Dr Stefania Innocenti is a Senior Research Associate in Behaviour, Finance and Social Statistics at the Smith School of Enterprise and the Environment (SSEE) and the William Golding Junior Research Fellow at Brasenose College at the University of Oxford. Her work clarifies the role of bounded rationality, self-views, and individual and collective learning as possible drivers of, or impediments to, institutional change and its impact on economic outcomes. Her interest includes behavioural and experimental economics, institutional economics, applied econometrics, development economics, mathematical and computational models of social interactions. Prior to joining SSEE, Stefania obtained her Ph.D in Economics from Maastricht University. She has also worked at the European University Institute, University of Florence, UN International Labour Office in Geneva and at the Italian Ministry of Economics and Finance.

Motivated Saving: The Impact of Projections on Retirement Saving

Susan Thorp (University of Sydney)

Abstract: Many pension plan participants find it hard to judge what their current balance means for retirement provision. The results of a field study and a choice experiment show that pension plans that give both income and balance projections are likely to motivate higher voluntary savings by participants. In the field study, conducted by a large pension plan in 2013-14, members of the treatment group received current balance, projected retirement balance and projected retirement income information, while members of the control received only current balance information. Within one year of the treatment, the frequency, and average amount, of additional savings by treated plan participants rose significantly, as did the rate of interactions with the plan. These effects persisted into the second year of the trial among the first-year treated group and emerged for the group of members who were newly treated in the second year. In the related choice experiment conducted in 2017, we tested the relative effect of (i) current balance; (ii) current balance and projected retirement balance; (iii) current balance and projected retirement income; and (iv) current balance, projected retirement balance and

retirement income. Consistent with the field trial, the combination of balance and income projections motivates a significantly higher retirement accumulation after a sequence of ten savings decisions than current balance information alone. The effects of balance or income projections, while positive, are not significant. In the field trial, older respondents save at a higher level and respond more to the treatment. By contrast, in the online experiment, younger respondents are more sensitive to income and balance projections than the older survey respondents.

Bio: Susan Thorp is Professor of Finance at the University of Sydney. She researches consumer finance, focusing on retirement savings. She uses theoretical, empirical and experimental techniques to test consumer responses to advice, disclosures and choice architecture. Her research has been published in leading international academic journals including Management Science, the Review of Finance and the Economic Journal, and has attracted over four million dollars in public and industry funding. Susan is a member of the Steering Committee of the Mercer CFA Institute Global Pensions Index, a member of the Research Committee of the OECD/International Network on Financial Education and a Director of Super Consumers Australia.

A Six-Component Integrated Approach to Addressing the Retirement Funding Challenge

Robert C. Merton (MIT Sloan School of Management, USA)

Abstract: This paper offers an integrated approach to addressing the global retirement funding challenge, especially in light of the coronavirus shock that has created an unanticipated and unprecedented impact on lifetime income/consumption. It frames the problem in a six-component approach to the funding challenge with an integrated package presented in a transparent, detailed modular fashion, so that any one module can be replaced with a different version and the rest of the system works. This also means that all six components need not be employed simultaneously, but can be done in a secular fashion. Finally, it develops and proposes in detail a new financial instrument, SeLFIES (Standard-of-Living indexed, Forward-starting, Income-only Securities)-- a single financial innovation that provides greatly improved efficiency of implementation to four of the six components. SeLFIES can help complete financial markets and could be a timely innovation given the coronavirus crisis because they are beneficial to governments that seek long-term, local currency debt financing.

Bio: Robert C. Merton is the School of Management Distinguished Professor of Finance at the MIT Sloan School of Management and John and Natty McArthur University Professor Emeritus at Harvard University. Merton's research focuses on finance theory, including lifecycle and retirement finance, optimal portfolio selection, capital asset pricing, pricing of derivative securities, credit risk, loan guarantees, financial innovation, the dynamics of institutional change, and improving the methods of measuring and managing macro-financial risk. In 1997, Merton received the Alfred Nobel Memorial Prize in Economic Sciences in 1997 for a new method to determine the value of derivatives. He is past president of the American Finance Association, a member of the National Academy of Sciences, and a Fellow of the American Academy of Arts and Sciences. Merton received a B.S. in Engineering Mathematics from Columbia University, a M.S. in Applied Mathematics from California Institute of Technology and a Ph.D. in Economics from Massachusetts Institute of Technology and holds honorary degrees from nineteen universities.

Session 8A: RETIREMENT INCOMES

Tontines - Sharing is Caring

Vivian Dang, Young Tan (UniSuper)

Abstract: Tontines have been in existence for centuries, although not for the reasons that they are most commonly associated with in fictional media. This paper briefly explores historical tontine designs and considers their intention (both from the perspective of issuer and the purchaser). Recent research developments are then described along with considerations of how concepts could be applied to the Australian superannuation market. It concludes with modelling results for a typical account-based pension plus tontine/longevity pool. The authors hope to shed light on what tontines were, what they can be, and the tontine benefits for a typical design through an actuarial lens.

Bios:

Vivian Dang is an Actuary with over 10 years experience in superannuation consulting. He is currently working as a Senior Strategy Analyst at UniSuper and was previously Senior Consultant at MLC Wealth and a Consulting Actuary at The Heron Partnership and Russell Investments, providing actuarial and strategic advice to a wide range of superannuation funds and employers. Vivian is a member of the Actuaries Institute's Superannuation Practice Committee, the Life Insurance and Retirement Education Faculty and helped educate a generation of Part 3 superannuation students through course leader roles across the 6A, 6B and CAP subjects.

Young Tan is a superannuation/pension Actuary. He is currently working as a Manager of Actuarial & Research at UniSuper. He was previously a Consulting Analyst at Russell Investments before joining UniSuper in 2016 as a Product Actuary. At Russell Investments, he was closely involved with the design of a new collective defined contribution (CDC) plan for a client and has since maintained a special interest for different variations of CDC schemes across the globe. Young is a member of the Actuaries Institute's Superannuation, Projections and Disclosures (SPD) Sub-Committee, the Commercial Actuarial Practice Faculty, and the Life Insurance & Retirement Education Faculty.

Reforming Financial Advice – Providing Data

Anthony Asher (UNSW Sydney)

Abstract: There is widespread recognition that retirement planning is too complex given levels of financial literacy so that people in DC retirement schemes need financial advice. There is also widespread recognition that current planning is too expensive. At the same time, technological and regulatory developments offer promise of new ways to support more effective and affordable financial advice. This paper explores how the public can be provided with vastly improved financial advice if government and private sectors collaborate to develop the infrastructure to provide people's financial data (assets and income) in an appropriate format. It raises questions as how best to facilitate this.

Bio: Anthony Asher is an actuary well known for his interest in ethics in professional life, particularly the social impact of actuarial work. On the one hand this has led to product development, where benefits (and underlying investments) match the particular needs of the bereaved, the disabled and the elderly. On the other hand it has led to questions of professional education and regulation that support the development of judgement and justice. His current research includes various issues in financial planning, and a virtue theory approach to risk culture and overregulation.

Optimal Default Retirement Saving Policies: Theory and Evidence from OregonSaves

Mingli Zhong (NBER, USA)

Abstract: I study the optimal default savings rate in automatic enrollment retirement saving plans. If individuals tend to procrastinate to make an active decision, the optimal default rate should be high to encourage people to opt out of the default. If individuals tend to actively undersave, the optimal default rate should be low to encourage people to stay at the default. Using exogenous increases in the default savings rate in OregonSaves, the first state-sponsored auto-enrollment plan in U.S., I identify individual adherence to the default rate. Using survey data from OregonSaves-eligible workers, I estimate the degree of undersaving if workers actively switch to a non-default rate. Combining individual-level administrative data with survey data, I suggest that the optimal default savings rate 7%.

Bio: Mingli Zhong is a postdoctoral fellow at the National Bureau of Economic Fellow (NBER). Her research focuses on the optimal design of retirement saving policy, social insurance, and regulation of financial and labor markets. She studies the impact of expanding automatic enrollment retirement plans on low-income workers' financial well-being. She is also examining the impact of the COVID-19 pandemic on household spending and debt, the differential effects of unemployment insurance on younger and older workers during economic downturns, and the availability of gig economy on older workers' labor market participation. Mingli recently received her Ph.D. in Applied Economics from the Wharton School of the University of Pennsylvania. Her doctoral dissertation received the 2020 U.S. Social Security Administration Dissertation Award. She received a B.S. degree in Applied Mathematics and a B.A. degree in economics from University of Rochester.

Optimal Portfolio Choice with Longevity and Health Insurance: A Developing Country Context

Cheng Wan (UNSW Sydney, CEPAR)

Abstract: We derive the optimal portfolio for retirees in a developing country context facing uncertain lifespan, catastrophic medical expenditures, and long-term care costs. Retirees can choose from a portfolio consisting of life annuities, critical illness insurance, long-term care insurance, and bonds. For those with an average pension, we find a substantial demand for critical illness insurance. An annuity is most important for those with a low pension. The demand for long-term care insurance is small but persistent across different economic profiles. Choice of a lower health investment provides the largest welfare and reduces the demand for critical illness insurance. The model is calibrated with Chinese data. Our research finds that in emerging economies like China an optimal portfolio highly depends on a retirees' economic background. Insurers should consider product bundling for a lower price while individuals and governments should consider the next insurance to purchase or expand under budget constraints.

Bio: Cheng Wan is a 4th year 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 research currently focuses on longevity risk management, the design of retirement insurance products, and behavioural economics in retirement planning. Cheng obtained a Master degree of Statistics from Katholieke Universiteit Leuven and a Bachelor degree of Mathematics from Wuhan University. Before starting his PhD in Sydney, Cheng worked as an Associate Statistician in Willis Towers Watson Research and Innovation Centre in Wuhan.

Session 8B: FUNDING CHALLENGES AND DECISIONS

Reference-dependent Preferences, Time Inconsistency and Unfunded Pensions

Qing Liu (Iowa State University, USA)

Abstract: In the real world, public pay-as-you-go pension (PAYG) schemes have been around for a while, are quite popular, and co-exist with private retirement saving schemes. This is true even in dynamically-efficient economies where such pensions offer a return lower than on competing private assets. The classic Aaron-Samuelson result argues that, in theory, this is impossible. Later work has shown that it may be possible: when agents have “myopic” or “time-inconsistent” preferences, the government is paternalistic, and all voluntary retirement saving is fully crowded out because of a binding borrowing constraint. This paper generalizes the Aaron-Samuelson discussion to the reference-dependent utility setup of K˝oszegi and Rabin (2009). In this case, it is possible to offer a non-paternalistic welfare rationale for return dominated, PAYG pensions and private retirement saving is positive.

Bio: Born in 1987 in rural China, I witnessed the tremendous living standard improvement in the past decades. It is a great fortune for me to go abroad to pursue my Ph.D. degree in Economics at Iowa State University to have a better understanding of what I have experienced and witnessed. Expected to graduate in 2021, I am currently working on social security and development.

How Effective are Matching Schemes in Enticing Low-Income Earners to Save More for Retirement

Cain Polidano (University of Melbourne)

Abstract: Concerns over the adequacy of low and middle-income earner contributions to retirement plans have led many governments to introduce targeted matching schemes. In this study, we examine the effects of a simple and generous Australian scheme using administrative tax-filer data, exploiting longitudinal changes in eligibility and match rates. We find small increases in the proportion who contribute and bunching at the maximum eligible contribution. However, we find crowding-out of contributions from unmatched sources and that the increase in retirement income reduced contributions of high contributors. These findings highlight the difficulties of targeting and dampen the promise from simplifying schemes.

Bio: Dr Cain Polidano is a Senior Research Fellow at the Melbourne Institute of Applied Economics and Social Research at the University of Melbourne. His research involves the use of big data to understand the causal factors that shape the life trajectories of disadvantaged Australians, especially in the spheres of education, employment and retirement policy. Currently he is working on an ARC Linkage Grant with the Australian Taxation Office to use and develop ALife data to understand the impacts of retirement policies that have shifted emphasis from public to private sources of retirement income. Findings from this study will inform policy, ensuring both sustainability and adequacy of future retirement incomes.

Challenges for Sustaining a Pension Fund: Determinants of Defaulting from a Contributory Pension Scheme in Sri Lanka

Weraduwage Indralal De Silva (University of Colombo, Sri Lanka)

Abstract: Although Sri Lanka has a long history of providing social security for various segments of the population, the unexpected COVID-19 pandemic related crisis highlights the importance of ensuring adequate social security coverage for all, which can be accessed whenever people are vulnerable such as during childhood, old age, sickness, disability or employment. The objective of this study is to investigate the determinants of defaulting from a contributory pension scheme offered by the SLSSB and to explore appropriate strategies to sustain the pension fund. Apart from the available secondary data, a field survey was conducted in the Ridegama Divisional Secretariats in Kurunegala district, by interviewing 100 non-members of pension scheme and

100 persons who defaulted from their pension policy. Random sampling technique was used to identify them from the study location. The survey data provide evidence that the most individuals lack awareness and knowledge of the pension scheme, even if they were active members of the contributory pension scheme. Some significant factors are highlighted in the results explaining defaulting. A higher number of household dependents has a positive contribution to the default. The survey also highlighted that the income, assets, financial inclusion, financial literacy, and social capital factors have a significant influence for the discontinuation of their pension scheme. Strengthening service quality and extending the better premium collection mechanism is a important strategy to increase the popularity of the pension scheme. The low level of awareness among the self-employed and informal sector workers leads to low enrolment and the lack of co-ordination between the contributors and officers increases the defaulting rate. Insufficient number of field officers and poor awareness on the scheme as well as unexpected COVID-19 incidents also contributed significantly in defaulting of pension policy.

Bio: Indralal De Silva is the former Chair Professor, and a Senior Professor in the Department of Demography, University of Colombo. He was the former Dean of the Faculty of Arts during 2009-2011 and has also served as acting Vice Chancellor of the University of Colombo on several occasions. He served as the Head of the Department of Demography for six. He was a Senior Research Fellow of the National Centre for Advanced Studies in Humanities and Social Sciences, and also served as the Acting Executive Director, Regional Centre for Strategic Studies, Colombo. During his academic tenure, he has published several books and monographs and published over 80 research articles in reputed local and international journals. Professor De Silva obtained his Bachelor's Degree in Development Studies from the University of Colombo in 1977. He received his Masters and Doctoral Degrees from the Australian National University in 1985 and 1990 respectively. He was a Research Fellow at the National University of Singapore in 2004, Harvard School of Public Health during 1996-1998 and a Visiting Fellow at the Australian National University during 1990-1991. He has obtained a number of prestigious awards, including the Senior Fulbright Fellowship, Takemi Fellowship and Rockefeller Foundation Fellowship. He has acted in the capacity of a Consultant to the World Bank, Plan International and Umbrella Organizations of the United Nations such as ESCAP, WHO, UNFPA, etc. and authored/co-authored a number of research reports related to various aspects on population, and health.

The Impact of Mortgage Brokers on Consumer Preferences and Perceptions

Junhao Liu (University of Sydney)

Abstract: We model the influence of broker-advisers on consumers' willingness to pay for home mortgage attributes in a choice experiment conducted in 2019. We identify two clusters of consumers who have used mortgage brokers and a cluster of consumers who have not used mortgage brokers and estimate the association between consumer type and preferences for mortgage attributes. Our model accounts for heterogeneity in consumer preferences and capability, and the confusion/importance individual consumers place on key mortgage attributes. Estimates of willingness to pay for mortgage attributes varies significantly among groups of broker-advised and unadvised consumers. Overall, consumers prefer mortgages from "Big 4" lenders, shorter (versus longer) loan terms, variable (versus fixed or hybrid) interest rates, lower establishment fees, principle and interest (versus interest-only) repayment schedules and the flexibility of early repayments. Compared to non-advised consumers, younger and more educated broker-advised consumers will accept longer loan terms, place less value on principal-and-interest repayment schedules (compared with interest only repayments) and place less value on the ability to make extra loan repayments. Older broker-advised consumers will pay more to avoid higher establishment fees than unadvised consumers. Compared with non-advised consumers, broker-advised consumers express preferences that align with broker incentives to tilt clients to high-volume, longer-term home loans.

Bio: Junhao Liu is a postdoctoral research associate at the University of Sydney Business School, supervised by Professor Susan Thorp. He is also an associate investigator at the ARC Centre of Excellence in Population Ageing Research (CEPAR). His research interests are household finance and public economics, focusing on personal finance decision making and insurance regulation. He is on a research team studying consumer's choice of mortgage loans.

His other research projects explore the early access to superannuation in 2020 and the regulation of insurance contracts and prices. Before moving to Sydney, Junhao received a Ph.D. in Risk and Insurance at the University of Wisconsin–Madison. Prior to that, he studied mathematics and statistics at the University of Hong Kong and the University of Cambridge and worked in actuarial consulting in Shanghai, China.

SESSION 9

The Equity of Government Support for Retirement Income

David Knox (Mercer)

Abstract: In recent years there has been considerable public discussion around the equity of the taxation concessions provided to individuals with superannuation. Whilst there is no doubt that superannuation tax concessions are important and a significant cost to the Federal budget, it should also be recognised that the means-tested Age Pension received by many retirees is also a significant cost.

In general terms, lower income earners receive more Age Pension during retirement whereas higher income earners receive more value from the superannuation tax concessions but much less from the Age Pension. In terms of Government support for retirement income, it is necessary to add these two items together to determine a complete picture across different income levels. This paper will build on the work by Treasury that formed part of the Consultation Paper for the Retirement Income Review. It will demonstrate how the results vary considerably by the long term assumptions used and discuss certain policy options that will result in a much fairer distribution of Government support for retirement income. It will also consider whether the support of retirement income should be level across all incomes, progressive or even regressive.

Bio: David is a Senior Partner at Mercer and Senior Actuary for Australia. He is the National Leader for research and policy; actuary to the Tasmanian and Western Australian public sector superannuation plans; and lead author of the Mercer CFA Institute Global Pension Index, now in its twelfth year. Before joining Mercer, David was at PricewaterhouseCoopers and prior to that he 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 pensions and retirement incomes. 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.

No Free Lunch: Higher Super Means Lower Wages

Matt Cowgill (Grattan Institute)

Abstract: Workers overwhelmingly pay for increases in compulsory superannuation contributions through lower wages. This working paper uses administrative data on 80,000 federal workplace agreements made between 1991 and 2018 to show that about 80 per cent of the cost of increases in super is passed to workers through lower wage rises within the life of an enterprise agreement, typically 2-to-3 years. And the longer-term impact is likely to be even higher. The trade-off between more superannuation in retirement but lower living standards while working isn’t worth it for most Australians. Our new empirical analysis reinforces that the planned increase in compulsory super, from 9.5 per cent now to 12 per cent July 2025, should be abandoned. Most Australians are already saving enough for their retirement. The paper directly measures the super-wages trade-off for nearly a third of Australian workers – those on federal enterprise agreements. But it shows that other workers are also likely to bear the cost of higher compulsory super in the form of lower wages growth. Despite the claims of some in the superannuation industry, it is unlikely that future super increases will be different from past increases. It’s true that wages growth has slowed in recent years, but nominal wages are still growing by more than 2 per cent a year, so employers have plenty of

scope to slow the pace of wages growth if compulsory super contributions are increased. And none of the plausible explanations for lower wages growth – whether slower growth in productivity, technological change, globalisation, an under-performing economy, or weaker bargaining power among workers – helps explain why employers would foot any more of the bill for higher compulsory super this time around. If employers aren't willing to offer large pay rises today, it's hard to imagine why they would pay for higher super. In fact, if workers' bargaining power has fallen, employers are even *less* likely to pay for higher compulsory super than in the past.
Grattan's 2018 report, *Money in retirement: more than enough*, found that the conventional wisdom that Australians don't save enough for retirement is wrong.
Now this working paper finds that the conventional wisdom that higher super means lower wages is right. Together, these findings demand a rethink of Australia's retirement incomes system.

Bio: Matt Cowgill is an economist with a focus on Australian public policy, particularly the labour market. Matt joined Grattan Institute in July 2018. He previously spent 3 years as a Chief Technical Adviser for the International Labour Organization, before which he worked as an economist for the Australian Council of Trade Unions and in government and the not-for-profit sector. Matt has a Masters in economic policy from the University of London, as well as a Bachelor of Economics and a Bachelor of Arts (Honours) from the University of Western Australia.

Redefining Superannuation - SMSFs, YFYS and other acronyms that will define the next fifteen years

Richard Dunn, Michael Rice (Rice Warner)

Abstract: The Australian Superannuation system is fast approaching an inflexion point. Rice Warner's modelling suggests that the assets held within the retirement phase of superannuation will have doubled in real terms by 2040, driven largely by the shift of the baby-boomers into the retirement income phase. Despite this business opportunity for superannuation funds and mild regulatory pressure to encourage longevity products, there has been little progress made in retirement income product design.

In this presentation we will look at the retirement landscape with a mind to motivate discussion on the next steps for the industry. We will:

- Canvas the contemporary framework for the retirement phase of superannuation to unpack the building blocks that are available and postulate on why we have not solved the retirement "problem".
- Motivate discussion, by quantifying the improvement in members outcomes which could be achieved through improving retirement solutions.
- Present a framework for communicating with and then assisting members approaching retirement.

Bios:

Michael Rice specialises in providing strategic advice to financial institutions, fund managers, government agencies, industry associations and large superannuation funds. Michael is the Chief Executive Officer of Rice Warner, which he founded in December 1987.
Michael heads up Rice Warner's public policy work. He has undertaken pioneering research into Age Pension dependency and trends. He has a keen interest in the integration of social security and superannuation, as well as measuring the adequacy of retirement incomes.
Other activities include:

- Michael is a member of the Advisory Board of the ANU College of Business and Economics.
- Chairman of QSuper's Investment Committee from January 2009 to June 2013 and remained an independent investment expert on the Committee until March 2016.
- Former Councillor of the Actuaries Institute (1999-2001) and convenor of the Public Policy Council Committee for five years (2014-2019). Michael was awarded Actuary of the Year for 2017.

- Michael was on the StatePlus Board from October 2016 to May 2019.
- Michael has been made an Officer of the Order of Australia in the Australia Day honours January 2020

Richard Dunn joined Rice Warner in June 2015 while putting the final touches on his thesis in Quantitative Risk. Now graduated, Richard focuses on advising Rice Warner's clients in the wealth management sector through:

- Producing a range of Rice Warner's Public Policy submissions, particularly regarding the development of retirement products and assessing the long-term sustainability of the superannuation sector.
- Leveraging data analytics to improve member outcomes through Rice Warner's *Super Insights*
- Reviewing and providing guidance on the behaviour and performance of various investment strategies.
- Providing strategic advice to superannuation funds regarding their market position, potential member retention strategies, mergers and acquisitions.

In addition to a combined Bachelor of Commerce and Bachelor of Science (Adv. Math) degree from the University of New South Wales Richard has qualified for fellowship of the Institute of Actuaries Australia (FIAA). During this study Richard specialised in Investment Management and Finance and was subsequently awarded two Andrew Prescott Prizes for the highest performance in each examined course. In his spare time Richard researches artificial intelligence, spends hours in the kitchen and is currently training for an Ironman triathlon.